

# Capital Structure and Firm Performance of Non-Bank Financial Institutions (NBFIs) in Ghana

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## Abstract

The study examined the relationship between capital structure and profitability of NBFIs in Ghana. A total of 42 NBFIs were sampled and data extracted from the financial reports from 2006 to 2015. Return on assets (ROA) and return on equity (ROE) were used as the dependents variables whiles capital structure measured as total debt to capital ratio (DR) is the main independent variable with firm size (SIZE), assets composition (ACOMP), credit risk (CRISK) and age of the firm as control variables. The descriptive analysis revealed that NBFIs are highly leveraged with 70% of their capital being liabilities and customers deposit the main source of finance. The Pearson correlation as well as the regression results revealed that capital structure (DR) is positively associated with profitability of NBFIs in Ghana but statistically significant with only return on assets. On the control variables, firm size and assets composition were all positively associated with profitability of NBFIs in Ghana. The results suggest that so long as NBFIs can turn those deposits into loans (assets), their profitability will be enhanced as evidenced from the positive relationship with both assets composition and debt ratio. The results confirms that expectations of agency theory and is contrary to previous studies on the subject matter in Ghana on commercial banks. It can be concluded that NBFIs in Ghana are more efficient in granting and recovering loans from their liabilities which improves their overall profitability.

**Keywords:** capital structure, performance, Non-bank Financial Institutions

## 1. Introduction

Capital structure concerns how business organizations finance their operations. According to Niresh (2012) and Awunyo-Victor and Badu (2012), capital structure refers to a mix of debt and equity that a business organization uses to finance its operations. Abor (2005; 2008) and Hossain and Hossain (2015) assert that the capital structure decision is a strategic decision that requires careful consideration of a number of business and other non-business factors. For instance, Hossain and Hossain (2015) argue that the capital structure decision is a very delicate decision, which impacts the ability of a business organization to compete or deal with the competitive business environment. Adding to this, Anarfo (2015) argue that the successful firm is one that can find the optimum or the right mix of debt and equity. Therefore, an optimum capital structure is the best debt-to-equity ratio (Awunyo-Victor and Badu, 2012; Dare and Sola, 2010; Saedi and Mahmoodi, 2011).

Owing to its importance to the proper functioning of a business organization, various studies have investigated the effects of the components of capital structure on profitability. For example, Dare and Sola (2010), and Fareed et al. (2014) find that the benefits which accrue to shareholders of an equity-financing organization are greater than those of a debt-financing organization. Hence, to these studies, while both elements of capital structure have a positive impact on profitability, equity has a stronger effect. Chandrakumarmangalam and Govindasamy (2010), and Chechet and Olayiwola (2014) find opposing evidence to those found by Dare and Sola (2010), and Fareed et al. (2014). These studies found an inverse relationship between debt to equity ratio and profitability. In summary, the relationship between capital structure and profitability is an important topic but one which has remained highly debatable in the literature.

Non-bank financial institutions (hereafter NBFIs) form an integral part of any financial services system especially in the developing world (Ofoeda and Abor, 2012). NBFIs facilitate alternative financial services such as investment (both collective and individual), risk pooling, financial consulting, brokering, money transmission and cheque cashing. NBFIs serve mostly the economic active informal population and offer tailored products to suit this category of the population. They have taken advantage of banks' neglect of the financial needs of the informal sector to serve the sector and this has boosted operations and increased their competitiveness. Given the overall importance of NBFIs to the financial system of the economy, it is prudent that their optimal capital structure is determined as these financial resources (capital structure) are a major determinant on how a business operates. The decision is important because of the need to maximize returns to various organizational constituencies, and also because of the impact such a decision has on a firm's ability to deal with its competitive environment (Abor, 2005). This is also to prevent a fall in the quality of services and products offered to customers in these institutions.

Over the years, there has been a drastic increase in the number of NBFIs in Ghana. As at December 2006 the number of NBFIs in operation was 36. However in June 2015, this number shot up to 63. This represents a 75 percentage increase over the years. The assets of NBFIs constituted 9.8 percent of total assets of the industry as stated by the annual report of the bank of Ghana in 2015. In cedi terms this percentage growth is equivalent to

7,277million. The growth of total assets was funded by deposits, borrowings, and shareholders fund which increased by 30.3 percent, 22.7 percent and 9.3 percent respectively. While NBFIs share in total assets of the financial system is relatively small, the measurements do not take into account the volume of deposits. Their (NBFIs) outreach, measured by the population doing business with NBFIs, can be quite large. As most of the clients belong to low income group of the population, the wind up of the NBFIs would have adverse consequences. Although their contribution to total assets is relatively small, it is essential to study the effect of capital structure on NBFIs profitability due to the exceptional receptiveness of the segment and its contribution to financial systems development. How their assets and operations are funded and the adequacy of capital in leveraging additional resources to fund operations requires a look at the concept of capital structure and its effect on profitability.

Literature on capital structure and profitability of financial sector institutions have focused on banks (Gatsi and Akoto, 2012; Awunyo-Vitor and Badu, 2012; Niresh, 2012; Checeht and Olayowola, 2014; Yegon et al., 2014) while others have focused on listed firms (Anarfo, 2015; Hossain and Hossain, 2015; Appiadjei, 2014; Hossain and Ali, 2012; Sayeed, 2011, Siddiqui, 2012; Amidu, 2007; Abor, 2005). Research has shown that banks and other financial institutions are the most leveraged as compared to non-financial firms and are also subject to capital regulation (Agoraki, Delis and Pasiouras, 2011; Banor and Odonkor, 2013; Lepetit, Saghi-Zedek and Tarazi, 2015). This notwithstanding, Lepetit et al. (2015) posits that despite the capital requirement regulations, financial institutions always have a target capital structure. The need to examine the effect of capital structure on the performance of NBFIs in Ghana is long overdue especially as Bank of Ghana has also started regulating their minimum equity capital requirements. The study in the light of the above discrepancies in literature examined the impact of capital structure (Debt ratio) of the profitability of NBFIs in Ghana.

The study contributes to the almost non-existent literature on capital structure and profitability of NBFIs and enriching the debate on the effect of capital structure of the performance of firms in different industries. The study being the first of its kind in Ghana will contribute significantly to the debate on how to regulate the capital requirement of NBFIs in Ghana.

## 2. Literature review

Capital structure studies have been inspired by the pioneer work of Modigliani and Miller (1958) and subsequently by a litany of theories such as Agency theory, Pecking-order theory, Static Trade-off theory, Free Cash Flow theory, Signaling theory etc. In order to investigate the impact of capital structure on NBFIs profitability, the study follows the lead of Saeed and Mahmoodi (2011), Siddiqui and Shoaib (2011), Shubita and Alsawalhah (2012), and Saeed et al. (2013) and draw on the seminal work by Modigliani and Miller (1958). The original work of Modigliani and Miller is the work on which the theoretical frameworks of most studies evolved. Modigliani and Miller (1958) provide the basis for the development of various theories of capital structure and firm performance. The capital structure irrelevance is one of the major theories that postulated that financial leverage has no effect on a company's value. Beyond this and many other theories like the static trade-off theory, agency cost theory, and the pecking order theory, various empirical studies have been conducted by different researchers in different sectors and using different financial and macro-level data.

Abor (2005) investigated the effect of capital structure on profitability of listed firms on the Ghana stock exchange (GSE). Data taken for this study was a sample of twenty five listed firms between the years of 1998 and 2002. The study employed regression analysis in the estimation of functions relating the return on equity (ROE) with measures of capital structure. The measures of capital structure were the short-term debt to total capital ratio (SDA), long-term debt to total capital ratio (LDA) and total debt to total capital ratio (DA). Firm size and sales growth were included as control variables. The results from the regression revealed a significantly positive relationship between SDA and profitability, and DA and profitability. However a significantly negative relationship was found between LDA and ROE. Hence profitable firms rely on debt as a main source of financing their operations. In the Ghanaian case, a high percentage of debt (85%) employed is short-term.

Gatsi and Akoto (2010) examined capital structure and profitability of banks in Ghana. The study adopted panel regression and a sample of 14 banks over a 10 ten year period from 1997 to 2006. The study showed that about 87% of the total capital of banks in Ghana was debt out of which 65% constituted short term debts while the remaining 22% represented long term debt. The results of the study showed a positive relationship between short term debt and profitability measured by net interest margin but not significant with profitability measured by return on assets. However, long term debt was negatively related with profitability also measured by net interest margin but statistically insignificant. Overall, total debt was negatively related with net interest margin. This conclusion shows that the results support the pecking order theory. The major limitation of the study like in most of the studies conducted in developing countries is the smaller sample size of 14 banks.

Niresh (2012) examined the impact of capital structure on the profitability of 10 Sri Lankan banks over eight year period. Consistent with most of the studies reviewed, the study found a positive relationship between total debt and banks profitability. The study measured profitability using different variables such as profit margin,

return on assets, and return on equity as well as net interest margin. The major limitation of the study just like most of the studies done in the context of developing economies is the small sample size.

Siddiqui (2012) carried out a study on capital structure determinants of non-bank financial institutions in Bangladesh. The sample size consisted of 24 firms for the period of 2006 to 2008 regardless of listing status. Profitability was measured as the ratio of net income after taxes divided by total shareholders' equity. Capital structure was expressed in terms of short-term debt ratio, long-term debt ratio and total debt ratio. Siddiqui's results did not give any significant evidence to accept the hypothesis that long-term debt ratio, short-term debt ratio and the total debt ratio are negatively related to the profitability ratio. Hence the study concluded that profitable NBFIs in Bangladesh have better access to debt finance and they utilize it.

Awunyo-Vitor and Badu (2012) examined capital structure and performance of listed banks in Ghana. The study used a very small sample of 7 which in reality in the available banks on the Ghana Stock Exchange. The results showed an inverse relationship between capital structure and banks performance. The implication is that banks cannot rely on debt as a measure of reducing agency cost thereby enhancing shareholders returns.

Checeht and Olayowola (2014) study examined the effect of capital structure on profitability of listed firms in Nigeria from the perspective of agency theory. The study found evidence against agency theory as the results showed a negative relationship between capital structure and profitability of the banks in question.

Yegon et al. (2014) examined the effect of capital structure on firms' profitability using sampled banks from Kenya. Their study found a positive relationship between short term debt and profitability, but found a negative relationship between long term debt and profitability. Finally, the study found no relationship between total debt and profitability. The authors argue that the implication of these findings is that the association of short term debt and the financial performance in contrast attests the static trade-off theory.

In an attempt to overcome the challenge of smaller sample sizes that characterizes most capital structure studies in developing countries and particularly Africa, Anarfo (2015) undertook a cross country study of capital structure and bank performance in Sub-Saharan Africa. The results based on a sample of 37 banks across the sub-region showed capital structure does not determine banks performance but on the contrary, bank performance determines capital structure. The study period was just five years and as such the sample size did not improve but was an improvement over previous studies in the sub-region.

The literature review had shown that there exist several scholarly works and theories on the subject matter but in different industries and sectors. The approach of scholars on the subject however, has led to a few contradictory findings and outcomes on establishing the relationship between capital structure and profitability. Some of the contradictions could be attributed to the smaller sample sizes of these studies or their definition of capital structure and even performance. The review has also shown that little study has been done on capital structure and performance among NBFIs apart from the few that have focused on the few listed banks (Awunyo-Vitor and Badu, 2012). Therefore, there is enough room for future research works to be done in order to properly establish the link between the two phenomena in the Ghanaian settings.

### 3. Methodology

The study sampled 42 non-bank financial institutions over a 7 year period from 2008-2014 based on the list presented by Bank of Ghana. Quantitative secondary data used in the analysis was obtained from the financial statements of NBFIs. This data was drawn from the Bank of Ghana dataset. Data collected was put in a panel. Panel data involves the pooling of observations on a cross-section of units over several time periods and provides results that are simply not detectable in pure cross-section or pure time series studies (Abor, 2005).

Data for the study is analyzed using multiple regression models. Multiple regressions extend the concept of simple linear regression to cases where a researcher wishes to apply several explanatory variables in predicting the value of the dependent variable. Below are the estimated regression models;

$$ROA_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 SIZE_{it} + \beta_3 ACOMP_{it} + \beta_4 CRISK_{it} + \beta_5 AGE_{it} + \varepsilon_{it}$$

$$ROE_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 SIZE_{it} + \beta_3 ACOMP_{it} + \beta_4 CRISK_{it} + \beta_5 AGE_{it} + \varepsilon_{it}$$

Where;

$ROA_{it}$  represents net income divided by average total assets for firm  $i$  in time  $t$

$ROE_{it}$  represent net income divided by total equity for firm  $i$  in time  $t$

$\beta_0$  is the coefficient of intercept

$\beta_1$ -  $\beta_5$  are the coefficient of the independent variables

$DR_{it}$  represents total debt divided by the total capital for firm  $i$  in time  $t$

$SIZE_{it}$  represents the natural logarithm of total assets for firm  $i$  in time  $t$

$ACOMP_{it}$  represents total loans divided by total assets for firm  $i$  in time  $t$

$CRISK_{it}$  represents loan loss provisions over total loans for firm  $i$  in time  $t$

$AGE_{it}$  represents the age of firm  $i$  in time  $t$  since incorporation

$\varepsilon_{it}$  is the error term

### 3.1 Dependent variables

Return on Assets (ROA) and return on equity (ROE) are among the most highly used performance measurement in literature and to some extent firm value. Previous studies on capital structure in different sectors have relied on this measurement of performance (Niresh, 2012; Hossain and Ali, 2012; Yegon et al., 2014; Hossain and Hossain, 2015). The study is line with previous literature adopts these two performance measurements.

### 3.2 Independent variable

The main dependent variable for the study is capital structure which is measured by total debt to total capital ratio (DR). Previous studies have relied on three different measures of capital structure using short term debt ratio, long term debt ratio and total debt ratio (Awunyo-Vitor and Badu, 2012; Yegon et al., 2014; Anarfo, 2015). Non-bank financial institutions do not separate their liabilities into short term and long term and the researchers did not want to use their judgment which might compromise the accuracy of the measurements. The study there used only total debt ratio as a measure of capital structure for the study.

### 3.3 Control variables

The study used firm size (SIZE), assets composition (ACOMP), credit risk (CRISK) and age of the firm (AGE) as control variables. Control variables are a special type of independent variables that researchers measure because they potentially influence the dependent variable. Firm size is often considered an important determinant of its profitability. As in most studies in banking and even other studies that uses non-banks (; Abor, 2008; Checeht and Olayowola (2014; Yegon et al, 2014; Anarfo, 2015), firm size usually have a positive relationship with profitability.

Literature on banks and other similar financial institutions agree that Assets composition influence the profitability of firms (Amidu, 2007; Trojillo-Ponce, 2013; Gyamerah and Amoah, 2015). These studies argue that banks profitability is enhance when the portfolio of loan increase relative to other secured assets. Credit risk is the likelihood that the borrower will not pay and has been used in literature as one of the key determinants of bank's profit (Pasiouras and Kosmidou, 2007; Goyal, 2013; Jabbar, 2014). Empirical evidence shows that the age of a firm positively or negatively affects its profitability.

### 3.4 Research hypothesis

The result of previous studies on capital structure and profitability using total debt as proxy for capital structure provides mixed results. For instance Gatsi and Akoto (2012) found a positive relationship between total debt and net interest margin even though the relationship with return on assets and return on equity were not statistically significant. Yegon et al. (2014) found no significant relationship between total debt ratio and profitability. However, some studies have shown a negative relationship between total debt ratio and profitability (Anarfo, 2015; Hossain and Hossain, 2015; Awunyo-Vitor and Badu, 2012; Niresh, 2012; Hossain and Ali, 2012). Based on the results of the empirical findings discussed above, we hypothesize that;

H1: Total debt ratio has negative relationship with NBFIs profitability measured by Return on Assets and Return on Equity in Ghana.

## 4 Results and discussion

### 4.1 Descriptive Statistics

**Table 4.1 Descriptive Statistics**

Variable	Mean	Std. Dev.	Min.	Max.
<b>ROA</b>	0.0289	0.0882	-0.3491	0.5304
<b>ROE</b>	0.05227	0.66579	-0.0848	0.1943
<b>Size (Control)</b>	20061480	0.5552	571,082	210,000,000
<b>ACOMP (Control)</b>	0.6440	0.2267	0.1176	1.0455
<b>CRISK (Control)</b>	0.1570	0.2135	0.0038	1.8542
<b>Age (Control)</b>	10.3856	5.7956	1	27
<b>DR</b>	0.702	0.1964	0.0408	1.0564

Table 4.1 presents the descriptive summary statistics of the variables used in our study. This shows the average indicators of variables computed from the financial statements. This helps to identify some irregularities or abnormalities in our dataset before the regression is carried out. On the average a greater percentage of the capital structure of NBFIs in Ghana is made up of debt accounting for about 70.2% of NBFIs capital. The above position reveals that NBFIs are financially leveraged with a higher proportion of debt in the capital structure. This is possibly so because most of the NBFIs in Ghana are deposit taking which constitute a major component of their liabilities and therefore increasing their leverage. On the other hand, the ones that do not take deposits

rely heavily on debt in their operations since they cannot raise the equity for the operations since they are into lending money to clients.

This finding is corroborated by studies done by Abor (2005) and Amidu (2007) on related sectors in the Ghanaian economy like the banking sector. For instance, Amidu (2007) reveals more than 87% of the banks in Ghana are financed by debt and that average long-term debt represents only 8.2% while Abor (2005) reveals that about 45% of the total assets of Ghanaian listed firms are financed by short term debt. The result is also similar and consistent with the findings of Awunyo-Vitor and Badu (2012) on listed banks of the Ghana stock exchange where it was revealed that 87% of their capital was debt.

The results show that the average total assets on NBFIs in Ghana is around 2 million with a maximum of two hundred and ten million Ghana cedis and a minimum total assets of half a million. The results show that the sizes of NBFIs are very small as compared to the main commercial banks that have average size of above a billion cedis (Awunyo-Vitor and Badu, 2012).

The average credit risk is 15.7%. The results means that almost total loan loss provision averaged 16 of total assets. There are no internationally accepted benchmarks for loan loss ratio but a loan loss above 10% is certainly a course for concern. The ratio suggests that most NBFIs are at a high credit risk with high potential loan default amounting 16% of total assets. It is very important to keep this ratio low as it measures the level of the bank's exposure in terms of default risk.

Also the average return on assets (ROA) is 2.89% while that of return on equity is 5%. This shows that on average an NBFIs manages its assets to produce a 2.89% increase in income and a return to shareholders of 5%. It suggests that investors are not worse off investing in these institutions although they are not attractive. This is in comparison with previous studies on commercial banks in Ghana where the mean return on assets was 4% (Awunyo-Vitor and Badu, 2012). This suggests that NBFIs are less profitable as compared to the main commercial banks in Ghana.

Again, the average age of NBFIs in Ghana is 10.39 years. This result is inconsistent with previous studies on commercial banks in Ghana where the average age was 37 but confirms the fact that the development of NBFIs in Ghana is a recent phenomenon (Awunyo-Vitor and Badu, 2012). This shows that the Ghanaian Non-Bank Financial Institutions industry is relatively younger as compared to the commercial banks and that could probably explain the performance exhibited by NBFIs over the years.

#### 4.2 Pearson correlation Results

**Table 4.2.1 Correlation matrix showing the relationship between ROA and dependent variables**

	<i>ROA</i>	<i>DR</i>	<i>SIZE</i>	<i>AGE</i>	<i>ACOMP</i>	<i>CRISK</i>
<b>ROA</b>	1.0000					
<b>DR</b>	0.1840***	1.0000				
<b>SIZE</b>	0.0702	0.4124	1.0000			
<b>AGE</b>	-0.0375	-0.0116	0.3199	1.0000		
<b>ACOMP</b>	-0.0602	-0.0478	-0.0564	0.0143	1.0000	
<b>CRISK</b>	-0.1429**	-0.0173	-0.0395	-0.0433	-0.0403	1.0000

\*\*\* Significant at 1%, \*\*Significant at 5%, \* significant at 10%

**Table 4.2.2 Correlation matrix showing the relationship between ROE and dependent variables**

	<i>ROE</i>	<i>DR</i>	<i>SIZE</i>	<i>AGE</i>	<i>ACOMP</i>	<i>CRISK</i>
<b>ROE</b>	1.0000					
<b>DR</b>	0.1030*	1.0000				
<b>SIZE</b>	0.1903***	0.4124	1.0000			
<b>AGE</b>	-0.0132	-0.0116	0.3199	1.0000		
<b>ACOMP</b>	0.00757	-0.0478	-0.0564	0.0143	1.0000	
<b>CRISK</b>	0.0708	-0.0173	-0.0395	-0.0433	-0.0403	1.0000

\*\*\* Significant at 1%, \*\*Significant at 5%, \* significant at 10%

The results from the regression indicate a positive relationship between capital structure and return on assets as well as return on equity of NBFIs. Size is positively related to return on assets and return on equity but only statistically significantly with ROE while age, asset composition, and credit risk are negatively related to ROA of NBFIs. The results show that a higher debt ratio will result in an improvement in the return on assets and

return on equity and vice versa. Also, the negative relationship between credit risk and return on assets suggest that the higher the ratio of loan loss provision, the lower the profitability of the NBFIs which is in line with finance theory.

#### 4.3 Regression Results

In estimation of equations, the assumption of cross-sectional independence of the error terms in the panel regression was achieved. This is confirmed by the p-value for the Hausman test which is statistically insignificant indicating that the random effects model is appropriate. To correct any other methodological issues affecting the data, the robust random effect model in stata was used for both equations.

**Table 4.3.1: Regression result showing the relationship between ROA and DR**

VARIABLES	COEFFICIENT	STANDARD ERROR
DR	0.0619394**	0.02822872
SIZE	0.1010148***	0.02963
ACOMP	0.1834189***	0.064372
CRISK	-0.0543419	0.056156
AGE	0.0014545	0.014102
CONST.	-0.8038013	0.2219343
R-Sq. ( Overall)	0.2603	
Wald Chi2(5)	19.97**	

\*\*\* Significant at 1%, \*\*Significant at 5%, \* significant at 10%

**Table 4.3.2: Regression result showing the relationship between ROE and DR**

VARIABLES	COEFFICIENT	STANDARD ERROR
DR	0.1975021	0.1537932
SIZE	0.5570578	0.1501978
ACOMP	0.8188862***	0.3157319
CRISK	0.5804042**	0.2749224
AGE	-0.078804	0.0102559
CONST.	-4.293048	1.105192
R-Sq. ( Overall)	0.1216	
Wald Chi2(5)	28.51***	

\*\*\* Significant at 1%, \*\*Significant at 5%, \* significant at 10%

The main variable of interest is capital structure measured as total debt to total capital and its impact on profitability measured by return on assets and return on equity. The results of the panel regression shows that capital structure measured as total liabilities over total capital is positively associated with profitability of NBFIs measured as return on assets and return on equity. However, the relationship is only statistically significant with return on assets at a 5% significance level. The results show that the increase in debt capital financing relative to total capital will improve profitability of NBFIs.

On the control variables the results show that firm size (SIZE) is positively related with profitability at 1% significance level and statistically insignificant with ROE. The results show that the bigger the assets size of the firms, the more profitable the firm will be and vice versa. Assets composition (ACOMP) was also positively associated with profitability at 5% and 1% significance level with ROA and ROE respectively. The results show that a higher loan to assets ratio is will enhance the profitability of the firm.

Also credit risk is negatively associated with profitability of NBFIs but statistically insignificant with ROA but positively associated with ROE at 5% significance level. The last control variable which is the age of the firm (AGE) was also negatively associated with profitability of NBFIs which suggest that the older the firm the less profitable they are contrary to expectations.

#### 5. Discussion

The results of the study show that NBFIs reliance on debt financing is yielding positive results as confirmed by the positive association between debt ratio and profitability of NBFIs in Ghana. It is important to note that whether debt would have a significant effect on profitability depends to a large extent on what the debt is used for. Assuming deposits are taken but are not efficiently utilized this will results in little or no returns on assets since a significant proportion of banks' capital come from debt. On the other hand, if deposits are taken and given out as loans but at high default rates, it is again expected that debt will have little or no effect on profitability of banks. The results suggest that NBFIs are using the debts accumulated mainly from customers deposit to create assets through giving out loans and earning income.

This results in inconsistent with the hypothesis meaning that we reject the third hypothesis which states that

there is a negative relationship between capital total debt ratio and profitability of NBFIs in Ghana. The result shows that debt financing increase the profitability of NBFIs in Ghana but maybe with the right combination of debt. The results are consistent with some few studies but inconsistent with many previous studies on the subject in Ghana on commercial banks and other jurisdictions.

For instance the results of these studies have shown a negative relationship between total debt ratio and profitability (Anarfo, 2015; Hossain and Hossain, 2015; Awunyo-Vitor and Badu, 2012; Niresh, 2012; Hossain and Ali, 2012). The results of the study are inconsistent with these studies. The results is however consistent with some studies. For instance Gatsi and Akoto (2012) who found a positive relationship between total debt and net interest margin even though the relationship with return on assets and return on equity were not statistically significant. Yegon et al. (2014) found no significant relationship between total debt ratio and profitability. The results can also be in line with the expectations of the agency theory which argues that debt financing increase monitoring on managers and hence reduces conflicts of interest and enhance profitability.

On the control variables that affect profitability of NBFIs, the study found that they were all statistically significant with profitability. In relation to size, there exists a positive and statistically significant relationship between the size of an NBF and its profitability. This means that large NBFIs are more profitable than their smaller counterparts. The result means that larger NBFIs enjoy economies of scale that reduces their cost of operations thereby enhancing profitability. The economies of scale will also reduce cost of gathering and processing information which will ultimately improve the profitability of the NBFIs. The results can also be interpreted to mean that size is associated with diversification of risk which will impact on the portfolio of product thereby improving profitability.

Assets composition was also found to be positively associated with profitability of NBFIs in Ghana. The results show that loans are the main source of revenue and as such higher loans to assets ratio should translate to higher profit.

## 6. Conclusion

The study revealed that NBFIs capital structure on average consists of 70% debt financing. This means that NBFIs in Ghana are highly leveraged like their commercial banks counterpart's as reported in previous studies. The results of the correlation as well as the regression showed a positive association between debt ratio (capital structure) and NBFIs profitability in Ghana. The study also found a positive relationship between firm size, assets composition and profitability of NBFIs in Ghana.

In conclusion, the finding of the study suggests that capital structure had significant impact on profitability of core business operations of NBFIs. This implies that managers need to consider this impact in their financing or capital structure decision.

This study is limited to only the Ghanaian Non-Bank Financial Institutions Industry. In addition, the study uses only total debts ratio as a measure of capital structure because NBF do not separate long term debt and short term liabilities in their financial reports in Ghana. It is therefore recommended that, future studies consider other forms of measures of capital structure and profitability and as well as extending the study to other African countries.

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