Short Term Financial Leverage and Shareholders’ Wealth Maximisation of Ghanaian Banks: New Theoretical Evidence

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Abstract
This paper investigated the effect of short term financial leverage on shareholders’ wealth maximisation of Ghanaian banks. The objective of this paper was to determine that the traditional capital structure theories are limited to explaining the causal role of short term leverage. The study first estimated assumed minimum and maximum proxies for measuring short term financial leverage and investigate the effect of these proxies on shareholders’ wealth. The paper argued that to the extent that capital structure definition encompasses short term debt, some theoretical assumptions of the traditional theories should be relaxed and policy directions uniquely formulated for each component of capital structure. The study uses secondary data from 2004-2014 and estimated the relationship using panel ordinary least square estimation technique after the relevant econometric considerations are tested. The paper revealed that both minimum mean proxy and maximum mean proxy of short term financial leverage positively affect shareholders’ wealth, however, the minimum mean proxy was insignificant. It was concluded that the higher the level of short term financial leverage, the more the wealth of shareholders of Ghanaian banks are maximised. It was also concluded that Ghanaian banks are not limited by the optimisation threshold even though the tax benefits may be minimal due to high interest rate spread on short term financial leverage. It is recommended that theoretical estimation of optimality should not be based on only the marginal benefits of tax and marginal cost of debt but also marginal earning power of the debt and industrial characteristics. Ghanaian banks should increase their coverage to deepen their customer bases to boost short term debt for the purpose of maximising shareholders’ wealth.

Keywords: Short term financial leverage, shareholders’ wealth, minimum mean proxy, maximum mean proxy and return on equity

1. Introduction
Corporate finance is one of the most important concepts in finance. Firms require strong financial health to guarantee their survivorship and to pursue their corporate goal. This makes capital structure decision a critical one. According to Saad (2010), capital structure involves managerial decision about financing a firm’s assets across the blend of debt, equity or hybrid securities. Effective capital structure management is very crucial to the success of companies playing a significant role in the increase of shareholders’ wealth and the achievement of benefits from other forms of capital investments. In fact, poor management of the capital structure is one of the most common reasons for corporate failure. It is therefore essential that company managers have an understanding of this key area of corporate capital structure. Firms’ value and performance are sensitive to this strategic financing decision making it a vital part of financial management (Taani, 2013). Taani (2013) advised that proper care and attention need to be given in making capital structure decision.

Efforts by experts and researchers to provide strong foundations to guide capital structure decision have generated series of theoretical postulations. The popular MM theory proposed by Modigliani and Miller (1958 and 1963) is considered by many as core traditional theory that forms the basis for modern capital structure thinking. Modigliani and Miller (1958 and 1963) demonstrate that in their breakthrough paper that in a frictionless world, capital structure decisions are inconsequential to firm value, but in a world with tax- firm value and capital structure are positively related. Following the MM theory and criticisms, other theoretical arguments emerged. For instance, the trade-off theory (TOT) also seeks to provide the basis to determine optimal capital structure to enhance firm value. The TOT suggests that a target leverage of a firm is determined by balancing the available taxes benefits and costs of debts. It is explained that under the TOT, the interest payments in respect of financing tend to be tax deductible and this makes debt financing less expensive than the use of equity financing (Brounen & Eichholtz, 2001) to the extent that the benefits of tax is substantial to minimise the cost of debt. Thus, the optimal capital structure is one that balances the marginal benefits of tax and marginal cost of debt. Further theoretical basis is the bankruptcy and financial distress cost theory which also argues that the use of debt in financing decision by firms generates financial distress which could lead to bankruptcy. The theory states that the larger the fixed interest charges associated by debt financing, the greater the probability of decline in earnings since it is allowable expenses and ultimately increase the likelihood of incurrence of costs of financial distress and bankruptcy (Harris & Raviv, 1991; Riahi-Belkaoui, 1999).

A critical evaluation of these theoretical thinking other than the bankruptcy theory reveals that a high the debts could contribute positively to the earnings and wealth of shareholders when the tax benefits exceed the cost of debts. This is debatable. In this paper, it is argued that the assumptions of these theories limit the capital
structure concept as a long term phenomenon. However, capital structure could be classified into four main components or facets: namely, short term leverage, long term leverage, total leverage and equity risk exposure. The theoretical characteristics of these components differ and could have different effect on firm value.

Since capital structure decision of a firm influences its shareholders return and risk (Pandey & Chotigear, 2004). Consequently, the shareholders value may be affected by the capital structure decision. Thus, investigating separately the effect of each of the components of capital structure would not only contribute to theoretical framework of capital structure but also inform separate policies to meet shareholders expectations. Doing so would help firms to achieve their primary objective of maximizing shareholders wealth through capital structure decisions. Following these backgrounds, the present paper seeks to contribute to theory on capital structure and policy by investigating the relationship between short term financial leverage and shareholders’ wealth maximisation from the perspective of Ghanaian Banks. The study seeks to unearth limitations to over concentration of capital structure optimality and reveal possible cautions in designing and implementing uniform capital structure policy across all facets of capital structure.

2. Theoretical Review and Hypothesis Development
This section provides theoretical and empirical bases for the study. Theoretical except the MM proposition I-irrelevant theory, the remaining propositions of MM theory demonstrate a strong relationship between capital structure and firm value. The MM proposition 2 included corporate taxes. The theory proposes that the firm’s value is equal to the value of the firm’s cashflow with no debt tax shield plus the present value of tax shield in the case of perpetual cash flows (Olokeoyo, 2012). The interest in capital structure and tax has led to extensive theoretical analysis to establish relation between capital structure and taxes and this has produced testable hypotheses (Givoly, Hayn, Ofer & Sarig, 1992). These theoretical based hypotheses specify particular relations that exist among the optimal capital structure, and firm value. Firm values are directly related to shareholders’ wealth under ordinary course of business. This suggests that capital structure has causal relation with shareholders’ wealth. Operationalising capital structure as short term financial leverage, it could be hypothesised that:

\( H_1 \): Short term financial leverage has strong positive effect on shareholders wealth.

Contrary to the MM theory which suggests obvious positive relationship between capital structure and shareholders’ wealth, the bankruptcy cost and financial distress theory posits that the effect could be negative or positive depending on the level of debt which produces distress or bankruptcy cost. According to this theory, the use of debt in financing decision by firms generates financial distress which could lead to bankruptcy. Myers (1984) established that the concept of financial distress cost include the legal and administrative costs of bankruptcy, monitoring and contracting costs, subter agency and moral hazard which could erode firm value even if formal default is avoided. It is believed that financial distress and bankruptcy costs expand beyond certain level of debt financing, thereby making the substitution of debt for equity benefit eroding rather than cost eroding. Therefore for firms to get tax savings from debt financing, they should operate on an appropriate capital structure (Zeitun & Tian, 2007). Drawing from the assumptions of bankruptcy cost and financial distress theory, short term financial leverage could have either positive or negative significant effect, however, a higher level of debt would erode earning ability of firm. Thus, from this theory, the theoretical hypothesis could be reformulated as:

\( H_2 \): Minimum mean proxy of short term financial leverage has strong positive effect on shareholders wealth.

\( H_3 \): Maximum mean proxy of short term financial leverage has strong negative effect on shareholders wealth.

Another theoretical argument is the trade-off theory (TOT). Trade-off theory, developed by Myers (1984), suggests that firm should have optimal capital structure based on balancing between the benefits of debt and costs of debt. The theory also suggests that a target leverage of a firm is determined by available taxes and costs of financial distress. It is further explained under the TOT that, interest payments in respect of debt financing tend to be tax deductible and this makes debt financing less expensive than the use of equity financing. It is assumed that the relationship between corporate tax and value of a firm is a positive one to the extent that optimal level of capital structure is not exceeded. Following these assumptions, the theoretical hypotheses are similar to the bankruptcy and financial distress cost theory.

3. Working Hypothesis
Given the characteristics of the short term financial leverage, the finance cost (interest expense) is often low and therefore the tax benefits of applying short term debt is also low. However, the bankruptcy cost could be high given panic withdrawal from the customers. Cost of panic withdrawal and the interest could suggest that the relationship would follow the bankruptcy cost and financial distress theory and trade-off theory. The study however, hypothesised contrary that both minimum and maximum mean proxies would have significant positive effect on shareholders wealth. This is based on the interest rate spread principle. The Ghanaian banking sector earns high interest income from loanable funds whiles incurring low interest expense. Thus, optimality
assumption and distress may not be applied to short term debt so long as the interest rate spread is high even with low tax benefits from debt. Therefore, the operational hypotheses for this paper are formulated as:

\[ H_{w1} \]: Minimum mean proxy of short term financial leverage has strong positive effect on shareholders wealth.

\[ H_{w2} \]: Maximum mean proxy of short term financial leverage has strong positive effect on shareholders wealth.

4. Methodology

This section presents the detailed methods, techniques and procedures employ in this paper. It encompasses the analytical procedure and design, source of data and measurement of variables, hypothesis testing framework and estimation technique. It is discussed as follows:

4.1 Analytical Procedure & Design

This study employs quantitative approach and analytical procedure in investigating the causal relationship between short term financial leverage and shareholders’ wealth maximisation of Ghanaian banks. This analytical procedure is fitting as the study develops hypotheses from existing theories to establish empirical relationship (Creswell, 2003). According to Bayeh (2011), quantitative approach assumes that there is the existence of cause and effect relationship between and among known study variables of interest. This paper follows this approach by operationalizing the study objective into hypotheses, collect numerical data to measure the study variables and apply econometric estimation technique to test these hypotheses. This analytical procedure is applied within the framework of causal design. Causal research design research is used to measure the cause and effect relationships. Thus, it used when a researcher intends to establish the effect a specific change will have on existing norms and assumptions (Gall, 2007). The causal research design is applied in this paper through manipulation of the presumed causes – short term financial leverage variables whiles observing the outcomes in the shareholders’ wealth maximisation of Ghanaian banks.

4.2 Source of Data & Measurement of Variables

The secondary data are mainly used in this study. The data are taken from Bank of Ghana. The paper uses data derived from the audited financial statements of the various banks obtained from Bank of Ghana for the empirical analysis. These data are collected over ten years’ period from 2004 to 2014. The annual book based values of the financial date are used. The variables for the study are short term financial leverage and shareholders’ wealth maximisation. The shareholders’ wealth maximisation is the dependent variable and it is measured by return on equity. The choice of this proxy follows the existing prior research efforts as return on equity has been frequently used in the empirical literature (Abor, 2005; Ebaid 2009; Frank & Goyal, 2003; Goyal, 2013; Kyereboah & Coleman, 2007; Muhammad et al, 2012; San & Heng, 2011). The short term financial leverage is used as the independent variable. The study proposes two proxies for the measurement of short term financial leverage. These are minimum mean proxy and maximum mean proxy. The minimum mean proxy is measured by the ratio of short term debt to total assets (SDA) whiles the maximum mean proxy is measured by short term debt to equity (SDE). The use of these two proxies concurrently is to propose mean scale for estimating optimality of short term leverage. In empirical evaluation of optimality using this mean scale, importance is not attached to the proxies (SDA & SDE) but the mean values they present on the scale. Thus, the SDA and SDE are mere parameters to propose minimum and maximum means for an entity to define the level of short term financial leverage. Once, these parameters are determined, the true optimality (minimum and maximum means) is determined using a common denominator, however, these optimality value would lie on the mean scale.

4.3 Hypothesis Testing Framework

The theoretical literature provides theoretical relationship between capital structure and firm performance. Following the theories reviewed under the literature review section, the trade-off-theory, bankruptcy and financial distress cost theory and agency cost theory predict that capital structure could negatively affect the value of firm with much emphasis place on marginal cost of debt and benefit of tax. However, the present paper argues that when industrial characteristics and incidence of interest rate spread assumptions are considered, short term financial hypothesis could be developed as:

\[ H_1 \]: Minimum mean proxy of short term financial leverage has significant positive effect on shareholders’ wealth maximisation of Ghanaian banks

\[ H_2 \]: Maximum mean proxy of short term financial leverage has significant positive effect on shareholders’ wealth maximisation of Ghanaian banks

To test these hypotheses, the paper formulates panel model without control variables. The use of control variable could amplify the predictive value of short term financial leverage which may obscure the true relationship between the short term financial leverage and shareholders’ wealth. The generalised panel model is expressed as
Where:
'i' represents the cross-sectional dimension (banks in Ghana) and the ‘t’ also denotes the time-series dimension (year) of the model.

'Y', also denotes the dependent, shareholders wealth

'X', is the independent variable which is the short term financial leverage.

Φ is the intercept of the model

‘β’ denotes the coefficients of the independent variable
‘e’ represents the error term

The paper substitutes the study variables into the model (1) to derive the empirical model (2):

\[ Y_{it} = \phi_0 + \beta_1 X_{it} + \epsilon_{it} \]  

\[ ROE_{it} = \phi_0 + \beta_1 SDA_{it} + \beta_2 SDE_{it} + \epsilon_{it} \]

Where:

ROE is return on equity and proxy for shareholders’ wealth

SDA is short term debt to asset, minimum mean proxy

SDE is the short term debt to equity, maximum mean proxy

The rest of the variables are the same as described earlier

4.4 Econometric Estimation Technique

The panel ordinary least square estimator is used to estimate the model (2). OLS is one of the commonly used estimators in the literature. According to Petra (2007), OLS estimator outperforms other regression estimator especially the statistical assumptions are met. OLS also has limited assumptions making it more suitable. The common assumptions of OLS estimator are linear function, non-autocorrelation and no multicollinearity (Park, 2011). However, OLS could not be estimated at levels when the data are non-stationary or have unit root. Therefore, prior to OLS estimation, the paper conducts diagnostic tests to check the econometric considerations or the assumptions.

In addition, panel models require that a researcher chooses between fixed effect specifications and random effect specifications. This paper does not arbitrarily choose the specifications. It conducts Hausman test to determine whether the fixed or random effect is more appropriate. The results of these econometric considerations are discussed in the next section. All the estimations are conducted using ‘EVIWES’ statistical package.

5. Data Analysis and Discussion

The statistical results from the estimations conducted in this paper are discussed in this section of the paper. The results are presented in Tables. The interpretation and discussion of these statistics or estimates are as follows:

5.1 Descriptive Analysis

The descriptive statistics show the properties of the data used. The results from the descriptive statistics are presented in Table 1. From the Table 1, it can be seen that all the variables with the exception of return on equity (ROE) have positive means. This is not strange considering that ROE takes its numerator value from net earnings which could assume negative values. To be specific the mean values return on equity (ROE), short term debt to equity (SDE) and short term debt to asset (SDA) are 0-0.0881, 6.8130 and 0.8072 respectively. The associated standard deviation of the mean values of ROE, SDE and SDA are 4.4026, 4.6757 and 0.6730 respectively. The maximum values are in the parentheses.

Table 1: Descriptive Statistics of the Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>ROE</th>
<th>SDE</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>-0.0881</td>
<td>6.8130</td>
<td>0.8072</td>
</tr>
<tr>
<td>Median</td>
<td>0.1747</td>
<td>6.1096</td>
<td>0.8101</td>
</tr>
<tr>
<td>Maximum</td>
<td>4.5481</td>
<td>34.9546</td>
<td>8.3512</td>
</tr>
<tr>
<td>Minimum</td>
<td>-64.7884</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>4.4026</td>
<td>4.6757</td>
<td>0.6730</td>
</tr>
<tr>
<td>Observations</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
</tbody>
</table>

Source: Generated from Eviews 7.0 Package

5.2 Multicollinearity Test

One assumption underlying OLS estimation is the absence of multicollinearity problem. The paper tests this assumption using correlation matrix. The paper relies on the coefficient of the correlation between the independent variables to determine whether or not there is a multicollinearity problem. Although there is no
strict rule on the appropriateness of the level of correlation coefficient, the rule of the thumb suggested by the literature suggests that coefficient of approximate 0.8 and above indicates multicollinearity problem (Singh, Kaur, & Malhotra, 2009) while Pallant (2007) also suggested coefficient of above 0.9. The results from Table 2 show that none of the coefficient of the correlations was 0.8. Therefore, based on the various correlation coefficients revealed in Table 2, the paper concludes that there is no problem of multicollinearity problem. 

Table 2: Multicollinearity diagnostic

<table>
<thead>
<tr>
<th>Correlation</th>
<th>SDE</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDE</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>SDA</td>
<td>0.2658</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Source: computed using Eviews 7.0 Package

5.4 Panel Unit Root Test

Unit root test is used to check the stationarity status of the data used. It is one of the core assumptions underlying the appropriateness of a choosing econometric estimator. Since the study seeks to use panel ordinary least square estimator (POLS), it is crucial to determine the order of integration for reliable results. POLS estimator can only be employed at levels when the variables are stationary. The paper uses Augmented Dickey Fuller (ADF) and Philip –Peron (PP) tests to check the stationarity. The use of the two is to be certain of the stationarity status of the variables to avoid misspecifications and estimations. The details of the results have been reported in Table 3. It is evident from the Table that all the variables are stationary at levels. This means that these variables have order of integration zero (I(0)) since they are stationary at levels.

Table 3: Panel Unit Root Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF</th>
<th>PP</th>
<th>ORDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDE</td>
<td>64.8875</td>
<td>0.0077</td>
<td>104.320</td>
</tr>
<tr>
<td>SDA</td>
<td>121.347</td>
<td>0.0000</td>
<td>145.817</td>
</tr>
<tr>
<td>ROE</td>
<td>74.1593</td>
<td>0.0008</td>
<td>85.7342</td>
</tr>
</tbody>
</table>

Source: computed using Eviews 7.0 Package

5.5 Panel Ordinary Least Square Estimation

The results from the correlation analysis, collinearity and other diagnostics run above approve that there is no existence of multicollinearity and other challenges which may result in misspecifications. Following these, the study proceeds to conduct the multiple regression analysing using panel ordinary least square estimator. Since all the variables have shown integration order of 0, the POLS could be employed. However, the paper conducts the Hausman test to identify the appropriate panel specifications for the OLS estimation. The results are reported in Table 4. The Table shows that the cross –section random, and period random are insignificant. The results mean that the data have either cross-section random or period random effect. The test of the cross-section and period random simultaneous also indicates insignificant chi-square statistic suggesting that there is a two way random effect. Therefore, the study chose the panel random effect as more appropriate for estimating the coefficients or statistics of the POLS.

Table 4: Hausman Chi-square Test

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>0.247083</td>
<td>2</td>
<td>0.8838</td>
</tr>
<tr>
<td>Period random</td>
<td>0.378810</td>
<td>2</td>
<td>0.8275</td>
</tr>
<tr>
<td>Cross-section and period random</td>
<td>0.574296</td>
<td>2</td>
<td>0.7504</td>
</tr>
</tbody>
</table>

Source: computed using Eviews 7.0 Package

Having determined that the panel two way random effect is more appropriate, the paper conducts the Panel OLS estimation using random effect specifications. The results are reported in Table 5. The model has R2 and adjusted R2 of 0.2225 and 0.2074 respectively. Given the absence of any control variables, the R2 and adjusted R2 statistics show the true value relevance of short term financial leverage. The R2 of 0.2225 implies that 22.25% of changes in the level of return on equity are explained by changes in the short term financial leverage. The f-statistic of the model estimates the joint significance of the coefficients of all the variables in the model. The f-statistic is significance level of 10%. This connotes that collectively the coefficients of all the variables are relevant in explaining the variation in the dependent variable as evident in significant statistic. The Durbin –Watson statistic is also used to test the presence of autocorrelation problem. It exhibits autocorrelation when the statistic is farther away from 2. However, when it is closer to 2, then there is no autocorrelation problem. The Table shows that there is no autocorrelation problem as it is closer to 2 (2.1923).
positive effect on return on equity (ROE), such effect is insignificant. The level of SDE also has shown a bases to reject or fail to reject the null hypotheses. The short term debt to asset (SDA) in Table 5 has coefficient
on these statistical findings and concludes that the effect of short term financial leverage on the level of return on variations in ROE. Overall, both SDA and SDE have exhibited positive relationship with ROE. The study draws the level of ROE. The study therefore rejects the null. This suggests that SDE is significant in predicting equity at 1%, 5% and 10% confidence level. This indicates that although the level of SDA has some level of positive effect on return on equity (ROE), such effect is insignificant. The level of SDE also has shown a coefficient of 0.1093 with p-value of 0.0986. Following the p-value of 0.0986, the study concludes that the coefficient is significant at 10% significant level. Thus, unlike the SDA SDE has positive significant effect on the level of ROE. The study therefore rejects the null. This suggests that SDE is significant in predicting variations in ROE. Overall, both SDA and SDE have exhibited positive relationship with ROE. The study draws on these statistical findings and concludes that the effect of short term financial leverage on the level of return on equity depends on whether the banks employ more short term debt or not. The results imply that operating above the maximum mean proxy would generate better returns to maximise shareholders’ wealth.

These findings are at variance with the apriori expectation of this study. It was expected that due to high interest rate spread in Ghana, any additional customers’ deposits would generate interest income and enhance shareholders wealth. Thus, both the minimum mean proxy (SDA) and maximum mean proxy (SDE) were expected to contribute significantly to shareholders’ wealth not only SDE as found in this study. The insignificant relationship found between SDA and ROE in this study does not suggest irrelevance of short term financial distress and bankruptcy cost theory for banks’ short term financial leverage is almost unattainable under the concept of short term financial leverage of banks. The implication is that in applying the financial distress and bankruptcy cost theory to capital structure decision, two factors are primary: the industry of the firm and category of capital structure either short term financial leverage or long term financial leverage. Thus, short term financial leverage is theoretically different from the traditional theories of capital structure.

The results, however, provide new evidence for review regarding the financial distress and bankruptcy cost theory. The theory believes that financial distress and bankruptcy costs expand beyond certain level of debt financing, thereby making the substitution of debt for equity benefit eroding rather than cost eroding (Zeitun & Tian, 2007). The positive effect of short term financial leverage under both the minimum mean proxy and maximum mean proxy suggests that banks can only make significant positive contribution to equity participants after compensation non-equity participants if they operate beyond the current maximum mean proxy. This shows that the signal for financial distress or bankruptcy cost for banks’ short term financial leverage is almost unattainable under the concept of short term financial leverage of banks. The implication is that in applying the financial distress and bankruptcy cost theory to capital structure decision, two factors are primary: the industry of the firm and category of capital structure either short term financial leverage or long term financial leverage. Thus, short term financial leverage is theoretically different from the traditional theories of capital structure.

Similar to the financial distress and bankruptcy cost theory, trade-off theory suggests that firm should have optimal capital structure based on balancing between the benefits of debt and costs of debt. The theory identified that optimality level is determined between available tax benefits and costs of financial distress (Myers, 1984). The proponents define the distress to include cost of debt. Since the cost of short term debt for banks in Ghana unlike other sector is relative negligible due to low interest on customers’ deposit, the need for optimality is inconsequential as additional customers’ deposits increase net interest income. Therefore, the positive but insignificant influence of short term financial leverage (SDA) on return on equity implies that banks can continue to apply more short term debt over the maximum mean proxy determined in this study to significantly influence the returns of equity participants. This is dissimilar to the original trade-off theory.

Empirically, the findings about the relationship between short term financial leverage and return on equity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDA</td>
<td>0.0271</td>
<td>0.0729</td>
<td>0.3712</td>
<td>0.7108</td>
</tr>
<tr>
<td>SDE</td>
<td>0.1093*</td>
<td>0.0659</td>
<td>1.6587</td>
<td>0.0986</td>
</tr>
<tr>
<td>C</td>
<td>-0.8108</td>
<td>0.6947</td>
<td>-1.1671</td>
<td>0.2445</td>
</tr>
</tbody>
</table>

Notes: $R^2 = 0.2225; \text{Adj } R^2 = 0.2074; F\text{-statistics} = 6.0846; \text{and } P\text{-value} (F\text{-statistics} = 0.1002); \text{Durbin-Watson stat} = 2.1923$

*** Significant at 1%, ** Significant at 5%, * Significant at 10%.

Source: computed using Eviews 7.0 Package

The relationship between short term financial leverage elements and return on equity are exhibited by the coefficients and the associated p-values. The indication of the causal relationship is depicted by the short term debt to asset (SDA) and short term debt to equity (SDE). The significance of the magnitude of the coefficients (the absolute value of the coefficients) and the direction of the coefficients (positive or negative) provide the bases to reject or fail to reject the null hypotheses. The short term debt to asset (SDA) in Table 5 has coefficient of 0.0271. The direction of this coefficient is positive indicating a positive influence on the level of return on equity. The p-value of this coefficient is 0.7108. This means that the coefficient is insignificant.

This suggests that the study could not reject the null hypothesis of no significant effect of SDA on return on equity at 1%, 5% and 10% confidence level. This indicates that although the level of SDA has some level of positive effect on return on equity (ROE), such effect is insignificant. The level of SDE also has shown a coefficient of 0.1093 with p-value of 0.0986. Following the p-value of 0.0986, the study concludes that the coefficient is significant at 10% significant level. Thus, unlike the SDA SDE has positive significant effect on the level of ROE. The study therefore rejects the null. This suggests that SDE is significant in predicting variations in ROE. Overall, both SDA and SDE have exhibited positive relationship with ROE. The study draws on these statistical findings and concludes that the effect of short term financial leverage on the level of return on equity depends on whether the banks employ more short term debt or not. The results imply that operating above the maximum mean proxy would generate better returns to maximise shareholders’ wealth.

These findings are at variance with the apriori expectation of this study. It was expected that due to high interest rate spread in Ghana, any additional customers’ deposits would generate interest income and enhance shareholders wealth. Thus, both the minimum mean proxy (SDA) and maximum mean proxy (SDE) were expected to contribute significantly to shareholders’ wealth not only SDE as found in this study. The insignificant relationship found between SDA and ROE in this study does not suggest irrelevance of short term financial leverage (minimum mean proxy) to shareholders wealth or returns but implies the level of short debt (SDA) is not significant enough to enhance return on equity after compensating non-equity participants. With the high interest rate spread banks ability to accumulate more customers’ deposits and transform into good loans are obvious good investment for shareholders as the cost of short term debt in Ghana is relatively insignificant to generate significant tax savings to boost returns on shareholders.

The results, however, provide new evidence for review regarding the financial distress and bankruptcy cost theory. The theory believes that financial distress and bankruptcy costs expand beyond certain level of debt financing, thereby making the substitution of debt for equity benefit eroding rather than cost eroding (Zeitun & Tian, 2007). The positive effect of short term financial leverage under both the minimum mean proxy and maximum mean proxy suggests that banks can only make significant positive contribution to equity participants after compensation non-equity participants if they operate beyond the current maximum mean proxy. This shows that the signal for financial distress or bankruptcy cost for banks’ short term financial leverage is almost unattainable under the concept of short term financial leverage of banks. The implication is that in applying the financial distress and bankruptcy cost theory to capital structure decision, two factors are primary: the industry of the firm and category of capital structure either short term financial leverage or long term financial leverage. Thus, short term financial leverage is theoretically different from the traditional theories of capital structure.

Similar to the financial distress and bankruptcy cost theory, trade-off theory suggests that firm should have optimal capital structure based on balancing between the benefits of debt and costs of debt. The theory identified that optimality level is determined between available tax benefits and costs of financial distress (Myers, 1984). The proponents define the distress to include cost of debt. Since the cost of short term debt for banks in Ghana unlike other sector is relative negligible due to low interest on customers’ deposit, the need for optimality is inconsequential as additional customers’ deposits increase net interest income. Therefore, the positive but insignificant influence of short term financial leverage (SDA) on return on equity implies that banks can continue to apply more short term debt over the maximum mean proxy determined in this study to significantly influence the returns of equity participants. This is dissimilar to the original trade-off theory.

Empirically, the findings about the relationship between short term financial leverage and return on equity
are similar to the findings in the study by San and Heng (2011) which examined the impacts of capital structure and performance of firms in Malaysia. The study employs ROA, ROE, and EPS as explanatory variables. The results of the study establish short-term debts relate positively with ROE/EPS. Additionally, a study conducted by Goyal (2013) investigated the impact of capital structure on performance of public sector banks listed on India national stock exchange. The study employs among other variables ROE/ROA/EPS. The results of the study show a positive relationship between short-term debts and all the study variables (ROA/ROE/EPS). A more closely related finding to the present study is Ebaid (2009). The study also showed that there is insignificant influence of short term debt on financial Return on equity (ROE).

Following the theoretical implications and the empirical consistency of the findings in this study, practical or policy implications can be drawn for practice. One policy or practical implication is that banks in Ghana are under optimising their short term debt capacity. Under optimisation undermines the return expectation of equity investors in respect of returns on their investments in the form of capital gain, higher dividends and accumulated residuals (Sulaiman, 2001). When these expectations are not met, this may increase the probability to compel or cause equity shareholders to dispose off their shareholdings which can lead to a fall in the share price of the company, hesitate to increase investment or approve other major funding options such as debt to support operation as such debt may further undermine their expectations. This explains why the banking sector witnesses mergers and acquisitions anytime there is review of capital requirement. The findings therefore provide empirical reasons to predict shareholders’ behaviour.

Additional policy implication from the findings to support the practice in the banking sector relates to the income generating ability of short term debt. The positive relationship between short term debt and return on equity reflects the high interest rate spread of short term debt which favours the banks. Therefore, an increase in the level of short term debt would increase its contribution to shareholders’ wealth. This implies that shareholders of banks in Ghana through their board of directors and management have empirical foundation for drafting policies targeting increasing the depth of coverage and concentration to boost short term debt.

6. Conclusion and Implications

The paper investigated the relationship between short term financial leverage and shareholders’ wealth maximisation. The study used mean scale to determine minimum mean proxy and maximum mean proxy for measuring the level of short term financial leverage for the purpose of testing the extent of applicability of key traditional capital structure theory. It was found from the study that the level of short term debt to asset (minimum mean proxy) has positive but insignificant influence on the level of shareholders’ wealth whiles the maximum mean proxy demonstrated positive significant effect on shareholders’ wealth. Following the findings, it is concluded that an increase in the level of short term financial leverage of banks would improve the level shareholders wealth and a decrease in the short term financial leverage could reduce the wealth of banks, all other things being equal.

Moreover, the evidence in this study provides special theoretical contribution to the trade-off theory. Unlike the traditional Trade-off theory which suggests that firm should have optimal capital structure based on balancing between the benefits of debt (tax shield) and costs of debt. The optimality falls within upper and lower limit of mixture of capital structure. However, the findings in this study revealed that there is no need for determining optimality as both the minimum value and maximum value of short term financial leverage positively influences the level of profitability. This implies, no matter how high the level of the capital structure in respect of the short term leverage, shareholders wealth would be enhanced. This is special case of trade-off theory for banks. This happens due to high interest rate spread in favour of banks. Therefore, so long as net interest income increases with application of debt, the level of optimality of short term financial leverage of banks become infinite holding other factors constant.

Furthermore, findings also provide new evidence to expand the proposition of the traditional bankruptcy and financial distress theory. According to the traditional bankruptcy and financial distress theory, the use of debt in financing decision by firms generates financial distress which could lead to bankruptcy. Evidence about short term financial leverage and shareholders’ wealth suggests that to the extent that a high debt does not create burden because of low interest charge, its level would positively influence shareholders wealth. Therefore, from this theory because there is low interest charge on customers’ deposits in Ghana, it is expected that there would be no financial distress and bankruptcy probability and hence short term financial leverage expected to positively influence the level of shareholders’ wealth. The present study therefore provides evidence to relax the assumption of debt increase distress and bankruptcy. Thus, the magnitude of debt in the capital structure policy is not a sole determinant or condition for probable financial distress and bankruptcy as it seems to suggest from the traditional view of the financial distress and bankruptcy cost theory but also the cost of debt. Some debts with high spread-higher returns from their application to business investment as against lower cost of debt may be high in value or magnitude but may not necessarily provides signal of distress or bankruptcy as in the case of short term debt found in this study.
Practical implication of positive but insignificant influence of short term leverage on shareholders wealth of Ghanaian banks is that the current investment to increase mobilisation (short term debt) is not optimised. The under optimisation undermines the return expectation of equity investors including higher dividends and accumulated residuals. This could reduce equity investment into the banking sector. It is recommended that shareholders of banks working through their board of directors should cause management to draft and implement policies targeting increasing the depth of coverage and concentration to boost short term debt.

References