

The Relationship between Capital Structure Measures and Financial Performance: Evidence from Ghana

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Received: September 11, 2013

Accepted: September 27, 2014

Online Published: May 22, 2014

doi:10.5539/ijbm.v9n6p151

URL: <http://dx.doi.org/10.5539/ijbm.v9n6p151>

Abstract

One of the areas that has been a focus of intense debate when it comes to capital structure research is whether to use the book value or market value of capital structure as the accurate measure of financial leverage (Salehi & Biglar, 2009). Various arguments have been raised in favour of which of the measures researcher should use in capital structure studies. However, much has not been done to determine which of the measures has a more significant relationship with financial performance. Therefore the thrust of this paper was to establish the relationship between capital structure measures and financial performance so to determine which of the capital structure measures has a stronger association with financial performance. Two definitions of capital structure measures (book value & market value) and six financial performance measures were used. For this study, fifteen companies on the Ghana Stock Exchange (GSE) were selected over a 6-year time period (2002–2007). The outcome of the study established that the capital structure of firms influences their performance. Many measures of firm performance were negatively correlated with financial leverage. Meaning, companies with less debt in Ghana have high profit margins and good financial performance. The study established that the market value of capital structure has a stronger relation with financial performance as compared to the book value. Researchers should therefore consider first, the use of market value in any studies on capital structure.

Keywords: capital structure, book value, market value, financial performance

1. Introduction

1.1 Background of the Study

According to Rajan and Zingales (2003), recently, a number of research works have probe into business financing decisions in the past to gain more understanding of present-day corporate governance and corporate financing (see). In addition to the above, financial economists have also worked over the past decades to move corporate financing into a more scientific task, with a body of recognized theories that can be tested and explained by empirical studies. However, the challenge has always been the issue of coming out with a universally accepted classic theory of debt equity mix. Moreover, developing an empirical test is authoritative to provide an acceptable yardstick for making a choice among the various debt policy theories have been daunting.

Capital structure which refers to an organization's financing structure is a subject that continues to engage the attention of researchers in the field of accounting and finance. It is seen as one of the most perplexing issues in corporate finance literature (Brounen & Eichholtz, 2001). Its significance derives from the fact that capital structure is strongly linked to the capability of organizations to fulfill the expectations of their stakeholders. Capital structure studies have persistently increase over time and still continue to engage the attention of researchers with the main purpose of determining whether optimal equity and debt combination exist. The combination of equity and debt capital that will minimize the cost of capital of a firm whilst maximizing firm value is known as optimal capital structure. Ironically, how organizations select the amount of equity and debt in their capital structure mix still remain a mystery.

Another area that has been a focus of intense debate when it comes to capital structure research is whether to use the book value or market value of capital structure as the accurate measure of financial leverage. Proponents of the use of the book value measure have presented two reasons for their stance. Firstly, they argue that the key

cost of debt is the estimated cost associated with financial distress in the incident of insolvency. Financial distress has an effect on the weighted average cost of capital (WACC) and ultimately on the optimal leverage. As a matter of fact, the cost of the distressed to the organization is very close to its book value. And also, the interest tax shield cash savings is not affected by the market value of the debt. Moreover, in the event of insolvency, book value of debt is seen as the correct measure of debt liability. The second argument they put up is that earlier studies have revealed that managers of firms perceived issues from the viewpoint of book value or historical cost rather than market values. Also, book value figures are readily available, presumed to be correctly recorded and not expose to changes in the market. However, those who argue in favour of the use of the market value believe that the market value eventually determines the actual net worth of an organization. They explained that it is likely for an organization to have a negative book value of owner's equity whilst experiencing a positive market value. This is so because a negative book value is a sign of past losses whilst a positive market value depicts the anticipated potential cash flows of the organization (Gupta, Srivastava and Sharma, n.d). According to Salehi and Biglar (2009) both capital structure measures are used.

1.2 Statement of Problem

Organizations need resources to survive, grow and develop. However, there are constraints in financing these resources. Therefore, resources should be apply judiciously so as to create a fitting shareholders value for providers of funds and users of the resources. This makes capital structure decision strategic and very sensitive. The lack of consensus in the various theories that inform such decisions also makes it delicate. Consequently, several studies have been conducted to determine the effect of capital structure on firm's profitability, the determinant of capital structure etc (see Abor, 2005). Although there has been considerable research on many areas of capital structure, those research papers were silent on the capital structure measure used. Capital structure measures comprise book value, adjusted value and market value. As highlighted in the background, various arguments have been raised in favour and against which of the measures that should be used in capital structure works. However, much has not been done to determine which of the measures has a more significant association with financial performance. Furthermore, it is also clear that there is no generally accepted theory for the debt equity mix with regards to whether to make use of the book value or market value of capital structure. This study was therefore done to assess which of the capital structure measures has a more significant correlation with performance so as to provide a basis for capital structure decision for managers, investors and other stakeholders.

1.3 Literature Review

1.3.1 Meaning and Overview of Capital Structure

Abor (2008) defines capital structure as the specific mix of debt and equity a firm uses to finance its operations. Capital structure represents the major claim to a corporation's assets. It includes publicly issued securities, private placements trade debt, bank debt, leasing contracts, pension liabilities, tax liabilities, unpaid compensation to employees and management, performance guarantees, contingent liabilities and other product warrantees. There has been a large amount of academic discussion on the subject whether or not an optimal capital structure exists for companies. Modigliani and Miller (1958) first hypothesize the subject by posing their irrelevance proposition ("M & M debt-equity mix"). They stated that capital structure does not influence firm value under certain conditions. They assumed a world with no taxes, no transaction costs, perfect capital markets and homogenous expectations. The realities and interactions of the business environment were totally ignored by the author in this framework. Modigliani and Miller (1963) relaxed one of their crucial initial assumptions, the absence of corporate taxation. They said corporate taxation could influence the capital structure choice of firms. Based on the fact that interest is tax-deductible and its gains can translate into higher after tax profit necessary to enhance the value of the firm. The implication of "M&M" (1963) proposition is that firms must use more debt to increase value relative to equity. These two publications by Miller and Modigliani had triggered streams of studies that contributed to the clarification of the "capital structure puzzle".

1.3.2 Capital Structure Theories

Prior to the MM theory existing prepositions propounded that financial leverage could be used by companies to enhance their net worth. The theories have also recognized the benefits of financial leverage in firm financing while avoiding the costs of financial distress. These recognitions have led to two dominant theoretical models within which other theories are embedded. These are the Static Trade-Off model and the Pecking Order model.

1.3.2.1 Static Trade-off Theory

As explained by Jensen and Meckling (1976), optimal capital structure of organizations involves the trade off

among the bankruptcy costs and agency costs, the effects of corporate and personal taxes, etc. This theory assumed that capital structure moves towards an optimum leverage which is determined by balancing the corporate tax savings merit of debt and the costs of financial distress. This idea has been developed in many papers, including, DeAngelo and Masulis (1980) and Bradley et al. (1984). However, it has been questioned by many others, including Miller (1977), who argues that the Static Tradeoff model implies that firms should be highly geared than they really are, as the tax savings of debt seem large while the costs of financial distress seem minor. Other theories that are rooted in the Static Trade-off model are bankruptcy costs, agency problems, and the benefits of tax savings.

1.3.2.2 Pecking Order Theory

According to Watson and Head (2007), the pecking order theory goes in opposition to the idea of firms having a distinctive mixture of debt and equity finance which minimizes their cost of capital. The theory suggests that when a company is looking at financing its long-term investment, it has well defined order of preference with respect to the sources of finance available to it. Fama and French (2002) and Meyers (1984) describes an organization's debt condition as the accumulated outcomes of earlier investment and capital budgeting decisions. This theory argues that organizations will fund their new investments first using internal source of funds. If internal funds are inadequate or unavailable they will move on to the use of debts that are safe, then debts that are risky and lastly equity.

From the two broad theories explained above, several theories have emerged in the corporate finance literature, all in an attempt to define the theory of corporate financial policy. Some of the theories are contracting costs, bankruptcy cost, Agency cost, Information asymmetry costs etc.

1.3.3 Empirical Evidence Relating Capital Structure Measures and Firm Performance

According to Salehi and Biglar (2009) AJMV (Adjusted Market Value), MV (Market Value) and BV(Book Value) of capital structure respectively have the most association with financial performance that is $r_{Pr,AJMV} > r_{Pr,MV} > r_{Pr,BV}$ Salehi and Biglar (2009) revealed that there is a significant association between financial performance and capital structure measures apart from the association between return on stock (ROS) and book value of capital structure. Salehi and Biglar (2009) find out that apart from the association between ROS in which the relationship between ROS and market value of capital structure is significantly stronger, the adjusted value has the strongest correlation with financial performance measures. Comparing the three capital structure measures, Market value and adjusted value have stronger association with financial performance.

1.3.4 Empirical Evidence of Negative Association between Leverage and Performance

Cassar and Holmes (2003) find a negative relationship between profitability and both long-term debt and short-term debt ratios. Rajan and Zingales (1995) and Wald (1999) also confirm a significantly negative correlation between profitability and leverage in their works. Amidu (2007) investigate the determinants of capital structure of banks in Ghana and found a significantly negative association between total debt and profitability. Basically, the implication of the above empirical results is that, profitable firms use less debt relative to equity in funding their operations. Salehi and Biglar, 2009 find that several measures of financial performance have negative relationship with financial leverage.

1.3.5 Empirical Evidence of Positive Association between Leverage and Performance

Some authors observed a positive relationship between profitability and debt levels in their studies. Petersen and Rajan (1994) found a significantly positive association between profitability and debt ratios in a study designed to investigate the relationship. According to Champion (1999) companies can use more debt to enhance their financial performance because of debts' capability to cause managers to improve productivity to avoid bankruptcy. On the average, Abor (2005) found a significantly positive relationship between total debt and profitability thus supporting the above previous works.

To conclude this section, it must be noted that there are some other firm level characteristics that are correlated with leverage besides profitability. These include but not limited to firm age, size; growth opportunities, tax; risk, managerial ownership; and asset tangibility.

1.4 Research Hypotheses

Based on the purpose of the research, the following hypotheses were extracted and tested:

- 1) Capital structure has a significant relationship with return on investment (ROI);
- 2) Capital structure has a significant relationship with return on equity (ROE);

- 3) Capital structure has a significant relationship with net profit before tax to sale ratio (EBT/S);
- 4) Capital structure has a significant relationship with operational profit to sale ratio (OPR/S).
- 5) Capital structure has a significant relationship with sales to total assets (STA).
- 6) Capital structure has a significant relationship with net profit margin (NPM).

2. Research Methodology

2.1 Scope, Population and Sample Size

The study evaluates the link between capital structure and the financial performance of listed companies on the Ghana Stock Exchange (GSE) using data from 2002 to 2007. The proposed study period was 6 years. The population of the study consisted of all the 34 companies on the Ghana Stock Exchange.

Fifteen (15) non financial firms on the Ghana Stock Exchange constituted the sample size. We collected the data from the Ghana Stock Exchange and other publicly available sources. Companies, for which performance data between 2002 and 2007 was incomplete, were however excluded from this sample. Firms in the financial sector were also excluded owing to their uniqueness in terms of the composition of their assets, liabilities and operations that would potentially hinder analysis and inter-company comparisons (Salehi and Biglar, 2009). Also, the capital structure of financial institutions is highly regulated. Companies covered in the study are presented in Table 1 below:

Table 1. Companies covered in the study

Companies	Abbreviated Name	Number of Years Financial Data was obtained
Accra Brewery Ltd	ABL	6 years–(2002–2007)
Aluworks Ltd	ALUL	6 years–(2002–2007)
Benso oil Palm Plantation	BOPP	6 years–(2002–2007)
Camelot Ghana Limited	CGL	6 years–(2002–2007)
CFAO (Ghana) Ltd	CFAO	6 years–(2002–2007)
Cocoa Processing Co	CPC	6 years–(2002–2007)
Fan Milk Ltd	FML	6 years–(200–2007)
Guinness Ghana Breweries Limited	GGBL	6 years–(2002–2007)
Mechanical Lloyd Company Ltd	MLCL	6 years–(2002–2007)
Pioneer Kitchenware Ltd	PKL	6 years–(2002–2007)
Produce Buying Company Ltd	PBCL	6 years–(2002–2007)
PZ Cussons Ghana Ltd	PZ	6 years–(2002–2007)
Super Paper Products Co. Ltd	SPPCL	6 years–(2002–2007)
Total Petroleum Ghana Ltd	TPGL	6 years–(2002–2007)
Unilever Ghana Ltd	UGL	6 years–(2002–2007)

2.2 Data Sources

The research was based on secondary data collection. The secondary data was supplemented with the use of desk study. The desk study was a review of relevant literature of previous studies about the subject matter such capital structure of companies, financial performance appraisal of companies, capital structure measures and performance measures. It also consisted of reviewing financial directorates, financial journals, articles and financial statements of companies on the GSE. The value of the explained variable and that of the explanatory variables were estimated from the secondary data.

2.3 Data Analysis

Descriptive statistics containing mean, standard deviation and inferential statistics containing Pearson Correlation, ANOVA test using Statistical Package for Social Sciences (SPSS) were used in data processing. The dependent and independent variables were calculated with the aid of Microsoft Excel software. The variables were then exported into SPSS software where Pearson correlation coefficient was used to measure the relationship between explained and explanatory variables.

Correlation matrix was used to test the hypotheses between capital structure and financial performance. Also significance level was used to depict significance of the correlation between the variables instead of student's T test. H_0 (null hypothesis) is rejected when the significance level is less than 5%.

2.4 Capital Structure Variables

For computing the market value of capital, the study used market value and the number of issued stock at the end of each term. Shareholders fund was used to represent book value of capital. The key measure used for leverage was total liabilities ratio (TL). Total liabilities ratio is regarded as the most appropriate measure for capital structure because of the following reasons outlined by Salehi and Biglar (2009): firstly, when a firm wants to acquire more debt, creditors/lenders will not only look at the long-term debt of the business but also the firm's current debt situation as well as its total liabilities. Moreover, they argued that short-term debts to a certain extent are fairly part of total assets.

3. Results and Discussion

Descriptive and inferential statistics have been employed in discussing the results of this research. The analyses and findings are based on the methodology discussed above. Results of the study are presented and discussed below.

3.1 Descriptive Statistics

The descriptive statistics gives a summary of the information in the data set by revealing the average indicators of the variables used in this study and presents the information in a convenient way (McClave et al 2000). As mentioned earlier, Fifteen (15) companies were selected for the study. The list of the companies is presented in Appendix. Table 2 below shows the descriptive statistics of the variables used in the study.

Table 2. Descriptive statistics of the variables

Variable	Minimum	Maximum	Mean	Std. Deviation
ROE	-.58	.53	.1274	.20920
ROI	-.17	.27	.0625	.08633
EBTS	-.20	.29	.0587	.08461
OPRS	-.21	.21	.0424	.08085
STA	.37	13.20	2.0477	2.47338
NPM	-.20	.24	.0421	.07207
MV	.04	.89	.4009	.19981
BV	.06	.91	.5410	.18547
STD	.06	.82	.4714	.17313
LTD	.00	.57	.0696	.11236

Where:

- ROE (Return on Equity) = Profit after tax/Net worth
- ROI (Return on Investment) = Profit after tax/ Total asset
- EBTS (Earnings before Tax to Sales Ratio) = Profit before tax / Sales
- OPRS (Operational Profit to Sales Ratio) = Operational Profit/Sales
- STA (Sales to Total Assets) = Sales/Total Asset
- NPM (Net Profit Margin) = Net Profit/Sale
- MV (Market Value of Capital Structure) = Total Debt/Total Market Capital
- BV (Book Value of Capital Structure) = Total Debt/Total Capital
- STD (Short Term Debt to Total Capital) = Short Term Debt/Total Capital
- LTD (Long Term Debt to Total Capital) = Long Term Debt/Total Capital

The descriptive statistics from table 2 above shows that performance ratios measured by Return on Equity (ROE), Return on Investment (ROI), Earnings before Tax to Sales Ratio (EBTS), Operational Profit to Sales Ratio (OPRS), Sales to Total Assets(STA) and Net Profit Margin (NPM) averaged 12.74%, 6.25%, 5.87%, 4.24%, 2.0477 times and 4.21% respectively. With the exception of ROE, the variations within and among the companies is quite moderate as can be seen from the minimum and maximum values shown above. Averagely, OPRS of 4.24%, EBTS of 5.87% and NPM of 4.21% are on the low side looking at the average sales to total assets of 2.0477 times. This suggests that companies in Ghana are able to utilize their assets effectively by turning them into sales. However, the sales they make are not translated into high profits due to operational lapses resulting in high operational cost.

During the period understudy, the ratio of total debt to total market value of capital structure averaged 40.09% signifying lowly geared companies. However, the ratio of total debt to total book value of capital structure averaged 54.10% indicating highly geared companies. Looking at the figures closely, it can be deduced that either the market performance of the share prices has been good leading to increase in value of the equity of the sampled companies or some of the companies have experience losses leading to a reduction in the book value of equity capital.

3.2 Capital Structure Trend among Ghanaian Companies

The capital structure trend among Ghanaian companies was seen as a mixed one. At one extreme some companies experienced a considerable rise in the use of debt financing while others experienced a reduction in debt financing. Most of the companies were found to be highly geared over the period under study. From table 2, the ratio of total debt to total capital averaged 54.10%. The ratio of long-term debt to total capital stood at 6.96% while that of short-term debt to total capital stood at 47.14%. This is an indication that approximately 54.10% of total asset among the sampled companies are represented by debt making the companies highly geared. Interestingly, over 47% of these are short-term debts, attesting to the fact that companies in Ghana rely on short-term advances/debt in financing their activities relative to long-term debts.

To further enhance the analysis of the capital structure trend in Ghana, a critical examination of the short-term and long-term gearing of these companies was conducted. Table 3 and 4 provide a platform for analyzing the capital structure trend in Ghana in relation to the use of short-term and long-term debts.

Table 3. Short-Term debts to total capital

COMPANIES	2002	2003	2004	2005	2006	2007
ABL	47.50	54.83	38.04	44.67	50.51	54.44
ALUL	35.41	51.39	35.95	53.33	43.53	58.19
BOPP	36.33	14.09	10.55	7.32	9.22	6.13
CGL	54.43	65.48	71.61	38.01	33.13	41.51
CFAO	78.24	67.00	75.01	69.44	62.87	72.49
CPC	49.43	65.98	46.78	40.68	52.66	28.69
FML	58.56	48.54	50.49	42.24	34.97	31.76
GGBL	41.27	57.02	51.28	46.25	53.87	35.59
MLCL	55.62	53.36	38.22	42.62	38.53	36.88
PKL	42.67	36.86	18.51	36.44	57.26	69.42
PBCL	29.41	46.90	73.06	82.22	77.49	79.12
PZ	33.14	34.84	33.66	29.20	33.50	33.93
SPPCL	20.16	52.13	52.60	29.72	37.88	46.15
TPGL	64.79	69.91	81.88	80.08	56.13	59.40
UGL	38.91	50.64	49.50	46.19	45.50	31.62

Comparing table 3 to 4 above, it can be deduced that the short-term gearing of the companies for almost all the period under review exceeded that of the long-term gearing. The exceptions were CGL (2005, 2006 & 2007),

CPC (2007), and SPPCL (2002) which for the years indicated against them had their long-term gearing exceeding the short-term gearing. For some of the periods, eight companies did not have long-term debt as part of their sources of funds while short-term source of fund played an integral part of the financing activities of all the companies. Further observation of the balance sheets of the companies revealed that the long-term debts of ALUL, CGL, CFA, FML, MLCL and PBCL were long-term borrowing reflecting in all the years, 3yrs, 2yrs, 5yrs and 2 years respectively. The rest of the long-term debts were in the form of deferred liabilities. Evidently, short-term debt financing is very predominant among Ghanaian companies and this attest to the fact that Ghanaian firms largely depend on short-term debt for financing their operations relative to long-term instruments. This finding is in agreement with earlier works such as Amidu (2007) and Abor (2005) in stressing the significance of short-term advances/debt in financing firms Ghana.

Table 4. Long-Term debts to total capital

	2002	2003	2004	2005	2006	2007
ABL	5.98	9.77	3.86	4.19	2.41	2.11
ALUL	13.18	8.37	7.32	2.76	8.79	25.18
BOPP	0.00	0.00	0.00	0.00	0.00	0.00
CGL	0.00	0.00	0.00	38.38	57.48	49.51
CFAO	0.00	0.00	0.00	0.89	0.88	0.00
CPC	0.00	0.93	22.14	34.86	26.33	42.00
FML	0.00	0.00	0.00	3.17	4.97	2.88
GGBL	6.36	4.60	19.41	10.03	2.95	21.19
MLCL	0.00	14.59	8.39	5.76	8.69	5.67
PKL	8.46	8.16	1.13	1.08	0.95	1.17
PBCL	0.00	3.43	0.00	0.00	0.00	7.68
PZ	4.44	4.10	4.43	4.81	5.72	4.99
SPPCL	25.82	0.00	19.05	6.70	7.48	0.00
TPGL	0.13	1.64	0.41	0.16	0.05	0.00
UGL	2.29	1.91	2.79	3.24	2.92	5.53

This is also the same with companies in the banking sector (Amidu, 2007). This trend of short-term debt being the major source of debt financing is eminent as a result of:

- The high lending rate in the banking sector of Ghana which is deterring many organizations from using loan facilities.
- The immature nature of the Ghanaian capital market, which makes it hard for a good number Ghanaian companies to access long-term debt.
- Unsecured short-term advances are readily availability to firms in Ghana. In Ghana, the banking system make accessibility to unsecured short-term advances easily available to firms who on the whole have excellent credit risk profiles. The major advantage to the bank is that there is low liquidity risk, so it makes it easier for companies to get short term finances as compare to long term finances.
- The ease with which short-term advances and debt gets off the balance sheets more rapidly than long-term debt. This implies that firms with no long term debt and only short term advances and debt can be seen to be managing and control liabilities well.

Short-term debt and advances are usually cheaper than long-term debt so financing long-term activities and growth strategies via short-term advances and debt have appeared as seemingly smart approach in numerous financing activities.

3.3 Correlation between Capital Structure Measures and Performance

In this section, the correlation of the data that were run is discussed. Correlation analysis is used to assess the strength of relationship between pairs of variables. Correlation has been used to assess the relationship between capital structure measures and company performance in Ghana, measured by ROE, ROI, EPTS, OPRS, NPM and STA. The results are presented in Table 5 below. It is clear that capital structure measures have significant relationship with the financial performance measures. Return on equity was the only variable that had insignificant relationship with the two capital structure measures. Also, statistically there was an insignificant relationship between the book value of capital structure and sales to total assets. The study reveals that capital structure measures are inversely related to performance except the relationship between book value and sales to total assets which is positive. The relationship between the later is however insignificant. A lot of the financial performance measures especially that of profitability have negative relationship with leverage deviated from the work of Abor (2005).

Table 5. The results of correlations

VARIABLE	ROE _{it}	ROI _{it}	EBTS _{it}	OPRS _{it}	STA _{it}	NPM _{it}
MV _{it}	-0.169	-0.285**	-0.228*	-0.287**	-0.260*	-0.246*
BV _{it}	-0.104	-0.224*	-0.242*	-0.221*	.199	-0.221*

Note. **. Correlation is significant at the 0.01 level; *. Correlation is significant at the 0.05 level.

3.4 Capital Structure Measures and Performance (Test of Hypotheses)

With the exception of ROE and STA to BV, almost all the financial performance measures have a significant relationship with the two capital structure measures. Table 6 below depicts and confirms most of the hypothesis drawn and their meaningful variables respectively.

Table 6. The results from tests of hypothesis

Hypotheses	Relationship between leverage	Result	α	Meaningful variables (respectively)
1	ROE _{it}	Unconfirmed	%5	-
2	ROI _{it}	Confirmed	%5	$MV_{it,1} - BV_{it,2}$
3	EBTS _{it}	Confirmed	%5	$BV_{it,1} - MV_{it,2}$
4	OPRS _{it}	Confirmed	%5	$MV_{it,1} - BV_{it,2}$
5	STA _{it}	Confirmed	%5	$MV_{it,1}$
6	NPM _{it}	Confirmed	%5	$MV_{it,1} - BV_{it,2}$

The aim of this research was to determine which of the capital structure measure has a more significant relationship with financial performance. It can be deduced from table 5 and 6 that market value of capital structure has a more significant relationship with performance. Looking at the capital structure measures and ROI (Table 5), the significance of the relationship between market and book value of capital structure and ROI is 1% and 5% respectively. This shows that market value of capital structure has a more significant relationship with performance than that of the book value. The significant level of the relationship between capital structure measures and operational profit to sales ratio is the same as the one between capital structure measures and ROI. This depicts a more significant relationship between market value of capital structure and performance than that of book value. The relationships between the capital structure measures and earnings before interest and tax to sales ratio are both significant at 5%. However, looking at the significant figures closely, that of market value is 0.03 and book value is 0.022. The value of the book value is closer to the significant level of 1% than that of the market value. In this regards, book value of capital structure has a more significant relationship with EBTS than that of the market value. The strength of the relationship between capital structure measures and net profit margin is at a significant level of 5%. A closer look at their significant figures shows that market value of capital structure (Sig. test of 0.019 closer to 1%) has a more significant relationship with net profit margin than book value (Sig. test of 0.037 closer to 5%). Finally, the strength of the relationship between market value of capital

structure and sales to total assets is significant at a level of 5% while the relationship between book value is insignificant.

It can be deduced from table 6 and the explanation above that out of the five performance measures with significant relationship capital structure, the market value of capital structure has the highest strength of four while book value has one. According to obtained results, market value of capital structure has a more significant relationship with performance than book value of capital structure.

$$r_{Pr,MV} > r_{Pr,BV}$$

4. Conclusion

This study empirically examined the relationship between capital structure measures and financial performance using Pearson's coefficient of correlation and significant level instead of student's T test. The study covered the period 2002–2007. Specifically, the study looked at which of the capital structure measures has a more significant relationship with performance. The capital structure trends of Ghanaian companies were also investigated. This study is of great importance because of its contribution to the literature as it unfolds the capital structure practices of companies operating in Ghana and serves as a pivot for further research in the area. Findings of this study may help stakeholders to recognize the link between capital structure and financial performance and choosing appropriate measures to evaluate and analyze the companies' financial status. The findings of this study suggest that companies depend more on short-term debt than long-term debt. This is probably due to the absence of a well developed bonds market in Ghana, where companies can raise enough long-term debt. A lot of the financial performance measures especially that of profitability have negative relationship with financial leverage. This means that companies that have high profitability and good performance in Ghana have less debt and depend more on internal sources of financing thus supporting the pecking order theory. This study concludes that market value of capital structure should be taken more into consideration in evaluating capital structure as it has a stronger link to financial performance than the book value. The study recommends the following for future empirical studies: Future researchers should explore other factors that influence financial performance of companies in Ghana besides debt policy; and Further investigation into the capital structure trend and over dependence on short-term debts could be done.

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