THE STRUCTURE, CONDUCT AND PERFORMANCE OF COMMERCIAL BANKS IN GHANA

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ABSTRACT: *This paper analyses the structure, conduct, and performance of commercial banks in Ghana. The empirical investigation uses two different measures of concentration to represent market structure and a market share variable to capture the effect of Market conduct on bank performance, and two accounting measures: return data on Return on Assets (ROA), return on equity (ROE) to represent banks' performance. Annual time series data ROA, ROE and other ratios were collected from nineteen commercial banks over the period 2007 -2012. The results indicated that market concentration and market share significantly determines profitability in Ghana, signifying the strong acceptance of the SCP hypothesis. Consequently, the research suggests the need for improvement in bank capitalization, bank size, service product innovation and effective liquidity management for the Ghanaian banking industry.*

KEYWORDS: Structure, Conduct, Performance, Market Share, Concentration, Assets, Deposits**.**

INTRODUCTION

The banking industry worldwide is being transformed continually and global forces including technological innovation; deregulation of financial services at the national level and opening-up to international competition; corporate behaviour, such as growing disintermediation and increased emphasis on shareholder value are changing incessantly. In addition, recent 2007 - 2008 global banking crises have accentuated these pressure especially the Asian and Latin America financial crises. The intermediation and payment functions usually explain why banks exist, but the structure and conduct of banking varies widely from bank to bank and country to country. Often a country's banking structure is a consequence of the regulatory regime to which it is subject.

During the late 19th century in Ghana, banks were established in the British West Africa. The management teams were all governed by the British people from 1894 until 1957. In 1957, Ghana gained her independence from the British colony. From there a new economic system was established and this led to the development of a new national currency and a more progressive economic system.

Finance and investment have been part of the lives of people from various corners of the globe. In Ghana for instance, banking is a prominent and influential industry contributing about 50% to the services' sector contribution of the Gross Domestic Product (GDP), ISSER (2011)**.** This is established by the various loans, credit, and investment types available for both locals and foreigner investors.

The economy of Ghana witnessed a decline in the late 1970s and the early part of 1980s. Import and export issues, strict exchange control, and trade insufficiencies were just a few of the major elements that brought about the financial difficulties in the Ghanaian banking industry. The depressing performance of the economy significantly affected the banking sector as most banks were financially weak, became less competitive, unprofitable, illiquid, and technologically bankrupt. The Government of Ghana launched the Economic Recovery Programme (ERP) in April 1983; with the aim of liberalizing the economy from controls in order to enhance productivity. The economy witnessed some stabilization from 1984 - 1986. It was however, felt that for the Programme to achieve the desired results there should be a dynamic financial sector to facilitate the payment system and enhance the allocation of resources. Financial Sector Adjustment Programme (FINSAP) was embarked upon in 1988 to address the weaknesses in the banking industry, low competition, weak financials, and low profitability as a result of high nonperforming loan assets, less liquidity, low capital base, and low level of technology. Anim (2000).

Currently, the financial status of Ghana have been in its strongest form since the inception of the stock exchange in 1989 and through policies such as Financial Sector Adjustment Program (FINSAP), Economic Recovery Program (ERP), and Structural Adjustment Program (SAP) etc., which were aimed at stabilizing the increasing financial instability trend in the market. Indeed, this nation has proven that it has come a long way when it comes to economic progress. As a result of the restructuring in the 1990's, profitability of banks in Ghana had increased with return on equity (ROE) between 16% and 24%, averaging 20% over the last 20 years. Capital adequacy ratios had seen improvement outpacing the statutory requirement of 10%. Yet, a question time and again asked is "why a bank exhibits the organizational structure and the conduct of business as it does"? Profit- maximizing banks have the same objectives as any other firm. So this question is best answered by drawing on traditional models. (Coase 1937), in his classic analysis argued that the firm acted as an alternative to market transaction as a way of organizing economic activity because some procedures are more efficiently organized by "command" rather than depending on market price. In such a situation, it is more profitable to use a firm structure than relying on market forces. The existence structures of the "traditional" banks, which intermediates between borrowers and lenders, and offerings payment services to its customers, fits in well with the Coase theory.

The Structure-Conduct-Performance (SCP) defined as the relationship between market structure, firm conduct and firm performance postulates that, "the existence of entry barriers is the major determinant of firm profits, thus the greater cost of entry makes it easier for existing firms to maintain monopoly profits". Therefore, market concentration decreases the cost of collusion between firms and results in abnormal profits for existing firms in the market. Sinkey (1986). According to the logic of the SCP, market concentration reduces cost of collusion between firms and produces hyper normal profits. The less there are firms on the market (concentrated structure); the less competitive is the firm's behaviour (price levels are elevated and/or weak output). Simply put, the fundamental idea of the SCP approach is that, the structure of the industry determines behaviour and influences performance of the industry. This paradigm describes how the observable characteristics of a market or of an industry could affect behaviour and performance of this market's participants. The theoretical predictions of the SCP approach appear to be difficult to reconcile with the reality of the evolution of markets structures and the performance of banking industry. Against this scenery, this paper is to examine the effect of structure and conduct on the performance of the

commercial banks in Ghana. This paper would contribute to the large and growing body of empirical research by focusing on the structure and conduct of Ghanaian commercial banks and its effect on their performances. Indeed, the continuous changes in the Ghana Banking Industry deserve special attention since good performance in the industry has particular implication for the economy. The study is also significant for practitioners in the banking industry for informed decision making.

REVIEW OF RELATED LITERATURE

Theoretical Literature

The Structure-Conduct-Performance model (SCP) defined as the relationship between market structure, firm conduct and firm performance postulates that the existence of entry barriers is the major determinant of firm profits, thus the greater cost of entry makes it easier for existing firms to maintain monopoly profits. Considered differently, new entrants will diminish the level of those profits. Therefore, market concentration decreases the cost of collusion between firms and results in abnormal profits for existing firms in the market. The SCP has been one of the most tested hypotheses in the industrial organizations (Sinkey,1986). According to Sinkey (1986) the microeconomic theory, the structure of the market influences the conduct and behaviour of individual firms. The term *structure*, in the framework of SCP model, refers to the number of banks serving in the entire industry. Market structure responds to the internal variables, such as competition and regulation, as well as to external variables, such as technological changes, economic and population situations. The term *conduct* refers to the behaviour of the banks in the market. This includes pricing, marketing and innovative behaviors of the business of banking. The term *performance* refers to the quantity and quality of products and services provided by the banks in the industry.

SCP model assumes that market structures identified by many firms providing the same products and services, though relatively equal in firm size, are competitive markets generating greater performance. Then, the degree of concentration of banks' output in a market affects the extent of competition among these banks. This is so because of the assumption that a more highly concentrated market structure is more likely to produce more effective collusion. In other words, SCP model suggests that market concentration lowers the cost of collusion between banks and ends in suboptimal profits for all market participants. This assumption is examined by estimating measures of bank performance as functions of the concentration of deposits or assets among banks in a given market.

For public policy making, it is well-known that bank regulation is necessary with regard to depositors' protection, bank contagion and the protection of the financial system from noncompetitive behavior in the banking sector. It is useful to mention that, there exist two imperative types of bank regulations that have significant influence on the performance on banks worldwide. First, structural regulation, which is concerned with banking market and performance, such as type of activities, entry and exit barriers, price or commission fees charged and interest rates ceilings. The second form of regulation is supervisory and prudential directives in various countries, which are concerned with liquidity and solvency issues in banks Molyneux & Thorton (1992). Consequently, whereas there are high profits and collusive behavior in banking market, the regulatory authorities forced to enhance banking competition through using the structural regulation. Thus, knowledge of the form of

this relationship is essential for public policy to determine the social benefits and costs of the bank market structure, as well as the impact of structural changes on bank performance. Moreover, competition has become a significant determinant in banking regulation since 1960s. Hence, regulatory authorities have become more concerned in the banking market structures. Besides, the SCP model has been conducted to supply information for public policy making, which has potential influence on bank competitiveness, mergers and acquisitions in various economies.

The relationship between profitability and market structure has generated competing hypotheses. On one the hand, the traditional market structure–conduct–performance (SCP) or collusion hypothesis (following (Bain, 1951) claims that, market structure influences conduct (behaviour) of firms through pricing and investment policies, and this in turn translates into performance.

On the other hand, the contestable market theory challenges SCP model. It proposes that the characteristic of the market, which determines the performance, is entry barriers. It assumes that conditions external to a market control conditions internally. In addition, it suggests that free entry and exit of competitors to the industry, without losing their capital, own the same cost functions as banks that already serve the industry's market.

Additionally, portfolio theory approaches played a major role in the descriptive structure (behaviour) of banks. Portfolio in banking perspective is the collection of banking investments on assets and liabilities. In the portfolio choice model, banks seeks to maximize profit defined by a viable set of assets and liabilities with interest rates set by the bank and per unit costs incurred by the bank of producing each components of assets and liabilities. The interest rate applied forms the basis of the rental price of funds.

The SCP model has incorporated in various aspects of competitiveness and economies of scale useful for the analysis of this study as explored above. Although the challenges exist, SCP provides two main benefits to studies in the investigation of structure and conduct of the banking industry. These benefits include:

- The SCP shows the way banks are operating. Thus, it explains the different force which shows the way to restrict or expand the scope of firms' or banks' operations in the banking industry. For instance, the SCP helps to interpret different sources of productivity.
- Also SCP still provides a rational basis for analyzing the market behaviour of banks in the absence of any meaningful theory.

Empirical Literature
Significant work on banking structure, conduct and performance exist in literature. However, just a few of these studies relating to the structure and performance of banks have been carried out in developing countries and for that matter Ghanaian banking industry. Corporate performance has been the primary concern of management, investors and policy makers. Until recently, the theory behind this model commonly known as the collusion hypothesis rested on the pioneering works of Mason (1939), Bain (1951) as methods of analyzing markets and firms in the manufacturing sector. It was later introduced into the banking industry following Schweiger and Mcgee (1961) and has since served as a fertile ground of market concentration for empirical test on the impact of market concentration on bank profitability. Most studies test the competing hypothesis of market concentration i.e. the SCP

and the efficient structure (ES) by including these variable in the profit function of banks. Sathye (2005),
Several others have attempted to identify the characteristic of high performance banks. Ford and Oslon, (1978) asserted that the elements beyond the control of management contribute modestly in the banks rate of return. They reported that the financial determinants of high performance banks depends on the efficient and effective management of: interest on deposit, gross loans to total deposit, gross charge-off to loans, municipal bonds, securities income to securities, payroll expense to employees, overhead to earning assets, operating expense to earning assets, loan loss provision to earning assets, loan income to gross loans, interest on deposit to time and saving deposits.

In a similar study, Bourke, (1989) attempted to appreciate the factors that are likely to influence the performance of the commercial banks in Europe, North America and Australia. The results showed that, liquidity ratio (cash and bank deposit plus investment securities as percentage of total assets), concentration ratio (largest three banks of either total deposits or assets) and growth of money supply in each country are significant in determining commercial banks profitability.

Molyneux & Thorton (1992) subsequently applied the model used by Bourke to carry out a study of banks in eighteen European countries. They used standardized accounting data published by the International Bank Credit Analysis Ltd (IBCL) to account for differences in accounting policies. Their result showed a strong positive relationship between concentration and each of six measures of performance used.

Consequently, several interpretations have come up that do not support the SCP hypothesis following the fact that existing studies do not provide unique empirical conclusion or results. There is the efficient market or efficient structures hypothesis that challenges the SCP hypothesis. Proponents of Efficient Structures (ES) hypothesis, Demsetz (1973) argue that a positive relation between profit rates and concentration reflects relative efficiency of the largest and smaller firms in various markets.

Peltzeman, (1977) and Smirlock, (1985) hold that, market concentration is not a random event rather the result of firms with superior efficiency obtaining a large market share. They have attempted to demonstrate that no relationship exist between concentration and profitability, but rather between bank market share and bank profitability, performance for that matter.

Berger and Hannan (1989) and Maudos, (1998) argue that market share which is included in the profit regression to test the ES hypothesis is a proxy of the efficiency of firms. Contrarily, Chirwa (2001) produced negative and statistically insignificant estimates which reject the efficient market hypothesis. Adherents of the SCP hypothesis have raised several reasons why some studies do not find a positive and significant relationship between concentration and bank profitability. It is worth noting however that although SCP serves as a measure of performance, it fails to take into account entry regulation or barriers to entry. This can affect the monopolistic behaviours' of incumbent banks.

At the center of the traditional SCP hypothesis is the argument that market concentration is a determinant of profitability. Concentration, defined as the extent to which most of the market's output is produced by a few firms in the industry forms the basis for the explicit link

between market structure and performance through firms' conduct Bain (1951); Scherer and Ross (1990). The definition of concentration in terms of output stances empirical problems in the banking industry because of its multi-product nature, although the main products are loan-making and deposit-taking services Morris (1985). However, since deposit data are readily available, bank output is usually measured by total deposits. Competition theorists argue that firms in highly concentrated industries refrain from competing among themselves and might also refrain from raising deposit rates or lowering lending rates. This would result in higher than average profitability. The traditional expectation is that higher concentration leads to higher and monopolistic performance.

There are several measures of market concentration, but the most common measure in both industrial and banking studies have been the concentration ratio (CR) and the Herfindahl-Hirschman Index (HHI) Agu (1992). Results from empirical studies on the performance of concentration in banking are mixed. Civelek and Al-Alami (1991) find a statistically significant relationship between concentration and performance in most years with perverse signs in some years in the Jordanian banking system, while Molyneux and Thorton (1994) find overwhelming evidence of a significant positive relationship between concentration and profitability. The SCP hypothesis is supported by the significance of the coefficient of concentration of market shares. Alzaidanin (2003) and Chirwa (2001) have considered most of these variables in the studies reviewed above.

Several studies on SCP in the banking industry have used ROA and ROE. Smirlock (1985) asserts that, the use of ROA has provided strongest evidence on the concentration-profitability relationship in banking. Keeton and Matsunaga (June, 1985) also affirmed that ROA is especially useful in measuring changes in bank performance over time since banks' income and expense components are more closely related to assets.

Bank size is measured as banks total deposits (assets) or as an average measure based on total assets takes into account differences brought about by size such as economies of scale Molyneux and Forbes (1995). Conversely, Evanoff and Fortier (1988) established that any positive influence on profits from economies of scale may be partially offset by greater ability to diversify assets resulting in a lower risk and a lower required return. Therefore, the impact of bank size, a priority, is indeterminate. The empirical results on the performance of bank size variable are mixed. We expect that larger banks compared with smaller banks can reap economies of scale and have greater diversification opportunities.

Since profit measures are usually not adjusted, the capital-asset ratio (CapAss) is included to account for differences in levels of risk between firms. Lower CapAss is associated with high risk. We postulate a negative effect on capital-asset ratio and performance. However, as a measure of risk, the capital-asset ratio also produces perverse sign although it is statistically significant Molyneux and Forbes (1995). Evanoff and Fortier (1988) found a significant negative relationship between return on assets and capital-asset ratio (CapAss).

The market SCP hypothesis has been a basis for analyzing firm behaviour or performance given the structure of the market. According to SCP hypothesis, the degree of competition among banks is influenced by the degree of concentration. Hence,

- It is assumed that a more highly concentrated market structure is conducive to effective collusion or segmentation.

- A measure of performance depends on a bank profit rate, interest rate on loans and interest rate on deposit.

In summary, although the SCP has been criticized or challenged on the grounds that efficient market hypothesis is also gaining empirical support. It is still the most popularly and widely used in the analysis of banks market and there exist evidence Bain (1951), in support of the structure - performance hypothesis. The specification of the SCP model following from the traditional form has been enriched by the inclusion of control variables.

In this study, bank performance is measured by the level of bank profitability. The profitability measures include ROE and ROA. Based on the literature review and the objectives of the study, the following hypothesis has been formulated to be tested:

H_0: There is no effect of structure and conduct on the profitability of Ghanaian banks.

H_1: There is effect of structure and conduct on the profitability of Ghanaian banks.

METHODOLOGY

The study combined bank-level data on profitability and bank-level variables with data on organizational and financial structures. The bank-level data were derived from the banks financial statement made available from the Annual Reports Ghana Website, the bank specific information and quarterly bank survey published by "Klynveld Peat Marwick Goerdeler" (*KPMG*-Ghana)

The data covered the period from 2007 through to 2012 compiled from the financial statements of the various banks. The study considered the period 2007 because the economy experienced some level of expansion and growth from 2005 upwards which recorded the attraction of most investors, especially foreign investors. Thus, the period under consideration represent the phase when the economy witnessed an entry of banks in the economy due to the performance and contribution of the banking sector to GDP in the Ghanaian economy. Banks not included in this study was mainly due to inadequate data availability. The study adopted a quantitative approach to assessing the performance of banks by using the SCP paradigm.

Model Specification

The traditional SCP hypothesis can be tested by estimating the profit equation following from: Smirlock *et al.* (1984), Smirlock (1985), Evanoff and Frontier (1988), Lloyd Williams *et al.* (1994), Molyneux and Forbes (1995) specified as:

$\pi_i = f(Cm, Mi, Vi) + \varepsilon i$

Where:

π_i =   a measure of profitability of bank i,

Cm =   is a measure of concentration (also known as a market structure measure) in banking market,

Mi =   is a measure of market share of bank i,

Vi =   a vector of control variables for bank i to account for firm-specific and market-specific characteristics, and

εi =   is an error term for bank i.

This study employed the use of ROA and ROE as dependent variables to bank performance:

ROA $\pi_{it} = \beta_0 + \beta_1 CapAss_{it} + \beta_2 STA_{it} + \beta_3 NIM_{it} + \beta_4 NTIM_{it} + \beta_5 IC\text{-}GLAit + \beta_6 CrD_{it} + \beta_7 LtD_{it} + \varepsilon_{it}$

ROE $\pi_{it} = \beta_0 + \beta_1 CapAss_{it} + \beta_2 STA_{it} + \beta_3 NIM_{it} + \beta_4 NTIM_{it} + \beta_5 IC\text{-}GLAit + \beta_6 CrD_{it} + \beta_7 LtD_{it} + \varepsilon_{it}$

Where;

π_{it} = represents the dependent variable (the observation on profitability (ROA or ROE) for Bank *i* at a time *t).* The index *i* refer to the unit of observation, and *t* refer to the time period.

ε_{it} = is a disturbance term assumed to satisfy the usual regression model conditions (ε_{it} are independently and identically distributed normal random variable.

B = Coefficient

CapAss = Capital to asset ratio of commercial banks. Lower ratios show risky positions, hence a negative relationship ($\beta_1 < 0$).

STA = Share Bank assets. The relationship may be positive, reflecting economies of scale, or negative, reflecting greater ability to diversify assets, which results in lower risk and lower required return ($\beta_2 > 0$ or $\beta_2 < 0$).

NIM = Net Income Margin which is the spread between the income received from advanced loans and the interest paid on deposits ($\beta_3 < 0$).

NTIM = Net Interest Margin which measures turnover level of bank in the industry which in turn lead to higher profitability ($\beta_4 > 0$).

LtD = Loan to Deposit ratio. The relationship may be positive; reflecting high capital structure and reverse is true ($\beta_5 > 0$ or $\beta_5 < 0$).

CrD = Concentration Ratio on deposit. The more concentrated the deposit received the higher the level of profitability ($\beta_7 > 0$). It is computed by the using HHI formula.

IC-GLA = Impairment Charge/G. Loans & Advances. The more impaired of loans granted, the lower the level of profitability ($\beta_7 < 0$)

ROE represents return on equity and it measures the bank's profitability by revealing the amount of net income returned as a percentage of shareholders equity during the financial year.

ROA represents return on assets which measures how much per cedi or dollar of the bank asset have been generated into profit during the financial year.

CapAss indicates the level of risk in banks. Lower CapAss is associated with high liquidity and bankruptcy risk and hence theory advocates a negative relationship between CapAss and profitability or performance Evanoff and Frontier (1988).

LtD represents Loan-to-Deposit ratio which measures capital structure of banks. This ratio indicates the amount of loans made by a bank (Assets) and the amount of deposits (Liabilities) it holds. The higher the ratio, the more the bank is relying on borrowed funds which are generally costly than other sources of funds. LtD measures the bank's ability to cater for customers withdrawals on demand. A higher leverage should lead to positive profitability and vice-versa Abbadi and Abu-Rub (2012).

CrD is used to measure the liquidity of the banks. It deals with deposits of individual banks in the industry. However, any value higher than the industry's benchmark means, the concentration ratio on deposit is associated with high risk and vice-versa.

STA is used to measure the total size of the banks' total assets in the industry. It represents firm specific market share and used to capture firm efficiency. Market share is an indispensable feature to the banks' operations; hence, it should positively influence banks performance.

NIM measures for the efficiency of banks in terms of the control of its costs or expenses. Thus, the higher the margin the more effective the bank is performing in converting revenue into actual profit.

NTIM measures of the level of bank turnovers in the industry and in a long run should lead to higher profitability. Thus, it shows the income capacity of banks through its primary role of

transforming liabilities into assets. It presents the net interest as a difference between the interests paid on the deposits and received on advances.

IC-GLA measures effective and efficient management of loanable funds. This represents the amount of funds to be set aside to cover loan defaults. IC-GLA has a negative influence on profitability that translates to performance Ford and Oslon, (1978).

The study employs panel data analysis technique for the regression model because it allows the inclusion of data for a number of cross section and time periods. Generally, using panel data has the advantage of providing more efficient estimations of parameters by considering broader sources of variations as well as allowing the study of dynamic behaviours of these parameters.

RESULTS AND FINDINGS

Table 1 and 2 below reports the results for the panel data of nineteen (19) banks from 2007 to 2012 financial years in Ghana. The output equation for the panel regression is as follows:

Table 1: OLA Regression Results of Structure and Conduct on ROA

Variable	Coefficient	Std. Error	t-Statistic
C	0.402138	0.344517	2.060857
CAPASS	-0.011230[*]	0.013087	-0.496689
STA	0.145078[**]	0.055395	2.339547
NIM	0.083848[***]	0.003814	13.94223
NTIM	0.060170[**]	0.023976	2.248688
IC-GLA	-0.089309[**]	0.037144	-3.844908
CRD	-0.062259[*]	0.055178	-0.984716
LTD	0.036079[*]	0.026169	1.381067

R-squared	0.851631	Mean dependent var	1.605188
Adjusted R-squared	0.841833	S.D. dependent var	3.065133
S.E. of regression	1.219009	Durbin-Watson stat	1.562358
Sum squared resid	157.5141		
Log likelihood	-180.1880		
F-statistic	86.19151		

Authors' Computation 2013. NB: *** 1% Significance Level, **5% Significance Level and *10% Significance

Table 2: OLA Regression Results of Structure and Conduct on ROE

Variable	Coefficient	Std. Error	t-Statistic
C	7.089701	3.440171	2.060857
CAPASS	-0.064909[*]	0.130684	-0.496689
STA	1.294120[**]	0.553150	2.339547
NIM	0.531020[***]	0.038087	13.94223
NTIM	0.538355[**]	0.239409	2.248688
IC-GLA	-1.426073[***]	0.370899	-3.844908
CRD	-0.542563[*]	0.550984	-0.984716

LTD	0.360886*	0.261310	1.381067

R-squared	0.724904	Mean dependent var	14.97707
Adjusted R-squared	0.706737	S.D. dependent var	22.47750
S.E. of regression	12.17241	Durbin-Watson stat	1.570321
Sum squared resid	15705.77		
Log likelihood	-442.5173		
F-statistic	39.90278		

Authors' Computation 2013. NB: *** 1% Significance Level, **5% Significance Level and *10% Significance level

DISCUSSION

The estimated coefficient as reported in Table 1 and 2 above are consistent with theory and they all exhibited the expected signs. Most of the variables are also significant at various levels. Variables attached with (***), (**) and (*) indicates significant at 1%, 5% and 10% respectively. Thus, the estimation output shows that all the variables are significantly different from zero. The results indicate that STA, NIM, NTIM, LtD as well as CapAss are significant factors that affect the performance of the banking industry in Ghana at any particular time during the period. The model has F-statistics which shows the overall significance of the model. The Durbin-Watson statistic explains the serial correlation between the variables in the model. On the other hand, standard deviation is a measure of deviation of data from mean. If Standard deviation of data is higher; then, the range (difference between the highest and lowest values) of values is also higher within the sample. R^2 shows that about 85% of the variation in ROA is explained by the variables used in the model. On the other hand, 72% of the variation in ROE is explained by these variables. The F-statistics for both of them are all statistically significant at 86.92% for ROA and 39.90% for ROE stipulating that, the entire model used is superior. Also, the mean of the dependent variables return on assets and return on equity is 1.605188 and 14.97707 respectively. Beginning with ROA, the results indicates on average that, Ghanaian commercial banks are receives GH¢1.61 on utilizing the assets of GH¢100. On the other hand, the mean of ROE is positive which demonstrates that most bank management utilizes its equity funds effectively. The Durbin-Watson statistic of 1.57 for ROA and 1.56 suggests that, there is likely to be some serial correlation in successive terms of the residuals. For practical purposes however, this level of statistics may be acceptable. Furthermore, the standard deviations of both variables of 3.065133 and 22.47750 for ROA and ROE respectively show that ROE has more variations as compared to ROA.

The study employs two measures of performance, ROA and ROE. From the tables above, the regression outputs presented show results for each specification or measure of performance. Using both ROA and ROE models, net income margin has a positive effect on performance of banks in Ghana at 0.083848*** for ROA and 0.531020*** for ROE and this result is statistically significant at 1% level of significance.

Net interest margin on the other hand also has a positive effect on performance of banks in Ghanaian banking industry at 0.060170** for ROA and 0.538355** for ROE and is statistically at 5% level of significance. This confirms that, indeed banks in the Ghanaian banking industry are efficient and thus take necessary control measures to cut down costs which consequently translate into the overall bank performance.

The Concentration on deposit (CrD) variables as obtained from the regression, gives a negative result though both are significant at 10% significance with ROA at -0.062259[*] and ROE at -.542563[*] implying that not much of the deposits received influence profitability or are translated to bank performance. Thus, investments in other financial securities and other operating income also explain.

In the regression, the capital-to-assets ratio (CapAss) of -0.064909[*] for ROE and -0.011230 for ROA are negative and statistically significant at 10%. This shows fantastic results given that lower capital ratios are associated traditionally with greater risk taking. This result confirms the assertions made by (Mitchell 1984, Evanoff and Frontier 1988) that there exist a negative relationship between ROA, ROE and CapAss. Besides, this study confirms the affirmation made by Civelek M.M., and Al-Alami M.W., (1991) that the CapAss result on ROA is statistically very inferior and justified the relative performance of ROE on the basis that it reflects the efforts of managers interested in maximizing shareholders' wealth.

Loan-to-deposit ratios (LTD) has yielded a significant result of 0.036079[*] at 10% significant level on ROA and 0.360886[*] on ROE at a significant level of 10% indicating a positive impact on both ROA and ROE. Thus a unit change in LTD results in 3.60% increase in ROA and 36% increase in ROE which affirms assertion made by Gladys, (2006) that, LtD has a positive effect on banks profit and positively influences performance. The results recorded on LtD in this study contradict the assertion made by Abbadi, (2012) that, LTD produces negative impact on banks profit in Palestinian Financial Institution.

Share of Total Assets (STA) has a positive influence on ROA at 0.145078[**] and ROE at 1.294120[**] both at a significant level of 5%. This finding may be an indication that diversification is skewed towards the operations of the banks' branches which generates unswerving returns. This has become the case as the banking industry has becoming the center of financial intermediation therefore taking advantage of the market share to generate profit.

With both the ROE and ROA models, Impairment charge off-to-Granted Loans and Advances ratio has a negative effect on performance at -0.089309[*] at 5% and -1.426073[***] at 1% significance level respectively. However, this is not statistically significant. This implies that not all banks have adapted more strategies to ensure efficient and effective management of credit creation or loan facilities to generate profits. Thus, the banks normally off-load funds sometimes to unqualified customers to cause loan defaults. This means that, bank managers' actions accounts for credit quality which in turn translate to bank performance. This affirms assertion made by Ford and Oslon, (1978) that, the elements beyond the control of management contribute modestly in the banks rate of return and translate to bank performance.

IMPLICATIONS TO RESEARCH AND PRACTICE

There is heightened pressure on banks to compete as banks have become more incorporated into the global financial system. In order to survive economic shocks and to maintain financial stability, it is imperative to test the efficiency of structure-conduct-performance within Ghanaian banking industry and the extent of its effects on bank performance.
The study examined the effects of SCP and bank profitability in Ghana. These were categorized into Independents factors which are bank-specific characteristics and Dependent

factors which are performance indicators. In order to accomplish the above objectives, a panel data on nineteen (19) banks in the Ghanaian banking industry was used for the empirical analysis. The data covered the period from 2007-2012.

RECOMMENDATIONS

Based on the findings above, the following recommendations are suggested:
Bank capitalization should be encouraged so that bank performance can be enhanced. Banks should endeavour to maintain earnings to boost up capital rather than paying excessive interest on borrowed funds which reduces bank's profitability. A well-capitalized banking system will ensure financial stability and make the industry more strong against external shocks and risk. This is because, well capitalized banks have lower financial risk and thus are more likely to survive financial crisis. The study of Flamini *et al.* (2009) on the determinants of bank profitability, gives some support to a policy of imposing higher capital requirements in the Sub-Saharan region in order to strengthen financial stability. In line with this, the recapitalization requirement by the Central Bank is apposite and hence, enables banks to operate efficiently and effectively much more on its internal funds than relying on customers' deposits.

Economy of scale derived from bank size play a crucial role in bank profitability. The benefit of size would reflect in the ability to reach wider markets. Banks should therefore be encouraged to look beyond local market and strategically expand their operations to other geographical markets and sectors of the economy. In conjunction with branch expansion, bank should consider diversification of their product portfolio. In this way banks can leverage on their assets to offer other ancillary services and maximize returns, since bank size is positively related to performance from this and other studies.

Banking industry concentration negatively impacts on profitability implying that banks are not being efficient and innovative. Thus, the banking sector should be further liberalized to allow investors to come in. This will not only induce competition but add value to services rendered to customers.

Efficient and effective liquidity management should be adopted by bank managers to ensure that banks do not become insolvent. Since banks are less profitable with less liquid assets, bank managers should be encouraged to embark on extensive deposits mobilization and invest in more financial assets. This will not only improve bank profitability but it will also enable banks meet their short term obligations as they fall due. It is possible that liquid bank assets are more profitable due of some market inefficiency. Further empirical study will be required to establish this fact.

FUTURE RESEARCH

This study only covers the structure, conduct and performance of commercial banks in Ghana; this could be extended to cover many others variables and different economies from different perspective.

CONCLUSION
This study has examined the effect of structure and conduct on the profitability of commercial banks in Ghana from 2007 to 2012, measured by return on assets (ROA) and

return on equity (ROE). Among the two profitability measures, ROA model generated a higher R-square and F Statistic as compared to ROE. This explains that the structure and conduct variables selected for this study has given a much better explanation of return on assets rather than return on equity.

The study found a positive relationship between most of the variables. With the exception of CapAss, and IC-GLA which reflected a negative or inverse relationship to bank performance. Concentration on deposit (CrD) also indicated a negative relationship with both ROA and ROE as performance measures, explaining that, it was not solely the availability of liquidity (deposits) with the banks that transformed the banks' profitability or performance but investments in other securities.

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