

# Ownership Structure and Performance of Listed Banks in Ghana

Maclean Amoako-Tuffour, Asare-Baffour Frempong, Dennis Manu

Internal Audit Directorate, Kumasi Technical University, Kumasi, Ghana

Email: maclean.atuffour@kstu.edu.gh, asare-baffour.frempong@kstu.edu.gh, dennis.manu@kstu.edu.gh

**How to cite this paper:** Amoako-Tuffour, M., Frempong, A.-B., & Manu, D. (2022). Ownership Structure and Performance of Listed Banks in Ghana. *Open Journal of Business and Management*, 10, 882-913. <https://doi.org/10.4236/ojbm.2022.102049>

**Received:** November 18, 2021

**Accepted:** March 28, 2022

**Published:** March 31, 2022

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## Abstract

The main purpose of this study involves investigating whether or not any empirical relationship prevails amongst ownership forms and banks' financial outcomes. Utilizing archival data from 8 listed banks from 2014 to 2018, this study implemented a panel regression method of random effect with the aid of Hausman test to facilitate answering the research questions. The study finds that managerial ownership engenders significant parallel association with performance measured with profit before interest and taxation and return on shareholders' funds. Second, the study learns that banks owned partially by the government and foreign investors suffer substantially from achieving performance with respect to profit before interest and taxation, and return on assets. Lastly, the study makes it known that banks owned by institutions can perform creditably well but the findings lack strong statistical backing. The study recommends that owners of banking institutions should practice a managerial system of ownership, linking compensation to performance, through offering incentive contracts in the form of profit sharing, stock options and performance bonuses. Banks owned by government, institutions and foreign investors are advised to strengthen and implement robust auditing and corporate governance systems so that managerial actions can be supervised and monitored effectively.

## Keywords

Ownership Structure, Bank Performance, Performance Indicators

## 1. Introduction

### 1.1. Background

The literature on how ownership structure and firm performance relate to each other has drawn considerable attention. The subsisting quota of studies centra-

lizes on the link between ownership structure and the performance of firms (Peljhan et al., 2019). Admati et al., 1994; Dhillon and Rossetto, 2014; Faccio et al 2011; John et al 2008; Rossetto and Stagliano, 2018; Yasser and Al Mamun, 2017 have all delved into the link between firm performance and ownership structure.

In the specific instance of bank performance and ownership structure, the debate has raged on since 1932 (Rahman & Reja, 2015). (Rahman & Reja, 2015) find that dissimilar types of ownership structure show dissimilar impacts on the performance of Malaysian banks. This view corroborates the views of Ungureanu (2008); and Berger et al. (2005). Ungureanu (2008), on the one hand, submits that concentrated ownership is associated with high bank performance. Berger et al. (2005), on the contrary, find that concentrated ownership impacts negatively on performance. Ownership concentration refers to the percentage of shares held by an owner relative to the total shareholding of the firm while ownership identity refers to the actual names of major shareholders (Ongore, 2011). In simple terms, ownership concentration is the ownership proportion of the substantial owners in a firm (Thomsen & Pedersen, 2000).

Notwithstanding, the influence of concentrated ownership structure of ownership depends on the identity of the owners or stockholders (Shleifer and Vishny, 1997). The differences in priorities, objectives, and preferences of the different types of stockholders are what drive the impact of concentrated ownership on the performance of firms (Claessens et al., 2000).

There is no rule of thumb for selecting specific standards for the evaluation of ownership structure-performance relationship. In each specific case, the choice of these standards is determined by information availability and their suitability for specific research questions (Ongore, 2011). For purposes of this study, modeling the study after Ongore (2011), ownership structure is analyzed in two dimensions, namely: ownership concentration and ownership identity.

Irrespective of the abundance of literature on firm performance, and, more specifically, bank performance and ownership structure, literature is quite scanty on the ownership structure and performance of Ghana's listed banks. For instance, there has been an attempt to document the impact of structure of ownership and corporate governance on bank efficiency in Ghana's banking industry (Bokpin, 2013). This study, therefore, attempts to shed some light on the relationship between ownership structure and the performance of Ghana's listed banks.

This paper is divided into five (5) chapters. Chapter one introduces the study, states the problem, identifies the objective, demarcates the scope, and summarizes the methodology of the study. Chapter two (2) reviews the conceptual, theoretical, and empirical literature relative to the topic. Chapter three (3) emphasizes the econometric procedures, tools, and strategies through which the study is carried out. Chapter four (4) discusses the results of the study. Chapter five (5) summarizes the findings, draws conclusions, makes recommendations, and pro-

vides directions for future studies.

## **1.2. Statement of Problem**

The level of dependency on banks for funding, technology and innovation, salaries and emoluments and concentrated ownership structure in developed countries obviously differ from what pertains in developing economies. Therefore, the concern that arises is whether the outcomes of studies conducted in those economies could be generally applicable in developing economies (Rahman & Reja, 2015). Several examinations have been conducted on the interaction between corporate governance mechanisms, firm performance, and ownership structure. A better part of those studies has been done in the United States, the United Kingdom and Japan (Fauzi & Locke, 2012). This brings to the fore the need to conduct such a study on ownership structure and performance of banks in Ghana. The focus of this study is to probe into the different forms of ownership structure on the performance of Ghana's listed banks. Listed banks are used in this study due to the similar requirements that must be met by these banks in order to qualify for listing. Although unlisted banks may have similar in-house requirements and other regulatory requirements, the listed banks, in addition to the requirements similar to the unlisted banks, have another tier of requirements to meet. The other tier which is provided by the Ghana Stock Exchange forms a proper basis for evaluating these banks.

## **1.3. Objectives of the Study**

This study investigates to establish, if any, the relationship between ownership structure and performance of listed banks in Ghana.

### **Specific Objectives**

Specifically, the study seeks to establish if any relationship exists between bank performance and the following forms of ownership:

- 1) Managerial ownership
- 2) Governmental ownership
- 3) Institutional ownership
- 4) Foreign ownership

## **1.4. Research Hypothesis**

The study proceeds on the following hypotheses:

H1: There is no relationship between managerial ownership and performance of listed banks in Ghana.

H2: There is no relationship between governmental ownership and performance of listed banks in Ghana.

H3: There is no relationship between institutional ownership and performance of listed banks in Ghana.

H4: There is no relationship between foreign ownership and performance of listed banks in Ghana.

### 1.5. Significance of the Study

This study attempts to shed some light on the relationship between ownership structure and the performance of Ghana's listed banks. This will set the pace for further studies to be conducted on the specific forms of ownership structure and their relationships with specific bank performance indicators, going forward.

### 1.6. Summary of Methodology

Settling on a viable method for effective evaluation of performance is not an easy task. There is a weighty body of literature that considers different forms of research methods used in performance evaluation. Some of the performance evaluation methods may have already been obvious to the public. Other methods were simply drafted from the realm of industrial study into commerce. Some are still in the fetal stage. Each of the methods can be independently used to evaluate performance. However, none of them is infallible. Researchers can only settle on a method to evaluate performance that has minimum drawbacks for that study's particular standpoint. Therefore, a workable method for effectively evaluating performance is aimed at resolving issues with multiple variables and targets (Ho, 2006).

Relying on and adopting the methodology, design and approach of (Rahman & Reja, 2015), as well as using secondary data, this study empirically examines Ghana's listed banks during the period of 2014 to 2018. Multiple regression with a random effects model is performed to test the research model. Testing on four categories of ownership structure such as governmental, managerial, institutional, and foreign ownership is done.

### 1.7. Scope of the Study

The study focuses on the five-year period prior to the implementation of the new minimum capital requirement. The study, therefore, analyses the relationship between ownership structure and the performance of all of Ghana's listed banks from 2014 to 2018. Three (3) key accounting performance indicators are used in the analysis. Namely:

- 1) Profit before Income Taxation (PBIT)
- 2) Return on Assets (ROA)
- 3) Return on Equity (ROE)

## 2. Literature Review

### 2.1. Introduction

This chapter is dedicated to the review of literature relevant to the study. The Chapter lays out the theoretical and conceptual frameworks underlying the study. It also considers the concepts which shape the substrata of the study. The chapter chiefly presents a review of the subsisting literature with the eyeshot of

providing guidance on the theories within which the study is situated and casting light on what might already be known on ownership structure and performance of listed banks in Ghana, Africa and the rest of the world. The final section sets forth the synopsis of the presentation made in the chapter.

## 2.2. Theoretical Review

The Researchers, in this section, discusses the theory on which the study is grounded. The Agency Theory is discussed for the purpose of this study.

### Agency Theory

Agency theory is one of the foremost theoretical viewpoints applied in business and management research. Agency theory contends—using underlying assumptions that agents are: 1) self-serving, 2) boundedly cogent, and 3) dissimilar to principals in their objectives and approaches—that a drawback occurs when a principal hires an agent to decide and act instead of the former. More importantly, the principal-agent relationship is under-optimized in value due to the information asymmetry between the two contracted parties (Payne & Petrenko, 2019). Jensen & Meckling (1976) find a positive relationship between information availability and owners' wealth.

Ang, et al. (2000) contend that Agency costs result when the managers' interests diverge from owners', and take the form of inclination for on-the-job perks, side-stepping, and taking egocentric and fixed decisions that minimize shareholder wealth. The immensity of these costs is restricted by how well outside managers monitor the “inside managers”.

## 2.3. Conceptual Review

The researcher lays out the concepts germane to the study in this section. The concepts discussed in this section are the concepts of ownership structure and firm performance measurement. The sub-sections take turns to look at the headings in detail.

### 2.3.1. The Concept of Ownership Structure and Its Measurement

Ownership structure refers to the percentage of equity capital held by different parties (Manna et al., 2016). The power of stockholders to affect managerial actions and decisions is measured by ownership concentration (Thomsen & Pedersen, 2000). For the purpose of this study, ownership structure is represented by foreign ownership, managerial ownership and foreign ownership.

The antecedent body of banking literature reinforces the position that ownership type and bank performance are somewhat related (Drakos, 2003; Bonin et al., 2005; Lin & Zhang, 2009). In a cross-country study over the period of 1996-1998, the International Monetary Fund (2000) report a dichotomy between foreign-owned banks and local banks operating in Hungary, Poland, and the Czech Republic in terms of their Return on Equity (ROE); with the foreign-owned banks having a lion's share. Similarly, in India, Bhattacharya et al. (1997) also establish that for-

foreign banks are more efficient than domestic banks. Other studies such as [Bonin and Wachtel \(2005\)](#) have rendered some support with respect to the superiority of the performance of foreign banks compared to their domestic counterparts. These studies argue that foreign ownership brings state-of-the-art technology and human capital to the banks and that this may explain their superior performance over domestic banks. In contrast, the study of [Yildirim and Philippatos \(2007\)](#) did not find foreign banks to be more profitable and efficient compared to both the private domestic banks and state-owned banks in the transitional economies.

### 1) Managerial ownership

Managers and directors with substantial personal wealth contingent on the firm's value are more incentivized to act in the utmost interest of external shareholders ([Belkhir, 2009](#)). According to [Jensen & Meckling \(1976\)](#), the owner's wealth is directly related to the ease with which outside shareholders assess the degree of agency costs imposed by the owner-manager. Therefore, the less costly it is to assess those costs, the lower the owner's wealth.

### 2) Foreign ownership

Foreign ownership and its effect on firm performance is one contentious issue that engages the interest of academics and policy makers ([Ongore, 2011](#)). These thoughts corroborate those of ([Gorg & Greenaway, 2004](#)) who posit that the after-effect of foreign ownership is the main issue of contention.

If a predominant part of outstanding shares of a firm is held by foreign shareholders, it may give an indication that foreign stockholders have faith in those firms. This may have a positive effect on firm value ([Ghazali, 2010](#)). [Bai et al. \(2004\)](#) find that issuance of shares to foreign investors positively affects market valuation of firms. Previous studies also provide evidence that firms with a higher quota of foreign stockholders make material disclosures in their annual reports ([Haniffa & Cooke, 2002](#)). [Aydin et al., \(2007\)](#) conclude that multinational enterprises post better performances than their domestic counterparts.

Other reasons associating foreign ownership to firm performance are espoused by [Ongore \(2011\)](#). He finds that expatriate owners have the capacity to keep track of managers, and provide them with performance-based inducements, leading to managers avoiding conducts and actions that undermine the wealth maximisation interests of owners. He also finds globally accepted management practices and new technological transfer to the firms, which help in the enhancement of efficiency through the reduction of costs and improvement of savings for firms.

### 3) Governmental ownership

Government-owned firms have been defined as "political" enterprises with the general public as a shared owner ([De Alessi, 1980](#)). A particular trait of state-owned firms is that the citizenry lays no direct claim to the residual income of these state-owned firms and are unable to cede their ownership rights ([Ongore, 2011](#)). [Vickers and Yarrow \(1988\)](#) appraise the dearth of incentives as the weighty opi-

nion at odds state ownership. Other opinions put forth include the price policy (Shapiro & Willig, 1990), political meddling and human resource challenges (Shleifer & Vishny, 1994).

#### 4) Institutional ownership

Institutional Investors are firms which pool resources and invest those resources in firms. This group may include banks, non-banking financial institutions, mutual funds, provident funds, insurance companies, etc (Manna et al., 2016).

#### 5) Blockholder ownership

The existence of stockholders holding a great quota of the firm's paid-up capital is another way of ameliorating the ramifications of the detachment of ownership and control on the value of a firm. Managers of firms with diffused shareholding can engage in value shrinking activities (Berle & Means, 1932). This stance is corroborated by (Hoang et al., 2017) who assert that a high concentration ownership structure is anticipated to minimize both the agency and free-rider problems as it orients the interests of both managers and outside shareholders (convergence-of-interest hypothesis), and also surges the efficiency of monitoring processes of the external stockholders atop the managers (monitoring hypothesis).

### 2.3.2. Bank Performance and Its Measurement

For the purpose of this study, a bank is an institution licensed under Section 5 of the Banks and Specialised Deposit-taking Institutions Act 930 Act, 2016 to engage in deposit-taking business specified in Section 4 of the same Act.

The metric used to appraise the efficiency [or otherwise] and effectiveness [or otherwise] of any action or decision is termed as a performance measure (Neely et al., 1995). Efficiency measures the output produced from a number of inputs used (Al-Darrab, 2000). Efficiency measures output as a ratio of input.

A metric, in the view of Melnyk, et al. (2014), differs from performance measure. They propose three components of metric. Namely:

- 1) A measure that assesses what is currently ongoing.
- 2) A standard, or target, guiding the direction of the organisation.
- 3) Consequences for missing or attaining the target.

Performance measurement forms part of the core management functions. Performance evaluation, change reviews in the encircling environment and adaptations are usual and needed parts of management (Chaneta, 2007).

Performance measures should include a mixture of both outcome and input measurements. These need to relate to financial indicators. Additionally, a system should be put in place by managers to continuously monitor how a change in one indicator affects other indicators (Martinsons et al., 1999). It should be noted, however, that not all performance indicators are financial.

The perception of performance measurement has become an important focus of research. Since the early parts of the 1990s, firms have been investing surging sums of funds to measure their performances (Aracıoğlu et al., 2013).

Neely, et al. (2000) and Richard, et al. (2009) both present criteria measuring

performance indicators which encapsulate the general consensus in the body of performance literature. Firstly, the body of literature strongly accedes that performance indicators are firm-specific and should flow from a firm's objectives, strategic direction, mission and vision. Secondly, general agreement also exists among academics as regards the need to use both financial and non-financial performance indicators. The foregoing notwithstanding, heads remain split over whether qualitative and quantitative indicators need to be combined, with objective quantitative indicators being preferred by most practitioners. Although subjective indicators may be adjudged biased, they come with some advantages (Hubbard, 2009; Richard et al. 2009). Moreover, other studies indicate a correlation between objective and quasi-objective indicators. However, the correlation depends on the level of detail of the subjective question (Richard et al., 2009). From the foregoing position espoused by Richard, et al. (2009), one cannot safely dismiss the use of subjective indicators in measuring performance. However, the context within which those indicators are used is very important.

Performance indicators are broadly categorized under: Financial Performance Indicators (FPSIs) and Non-Financial Performance Indicators (NFPIs). Chytas (2006) suggests that FPIs indicate the contribution of the implementation and execution of an organisation's strategy to improving the bottom-line.

#### 2.4. Empirical Review

Literature is replete with studies examining the relationship between ownership structure and firm performance. This section presents a review of earlier research on the relationship between ownership structure and firm performance. The study's thematic concepts are used as the guide for constructing the empirical review.

##### **Managerial ownership and firm performance**

Chen (2006), in examining Managerial ownership and firm performance, employed a switching simultaneous-equations model to analyse the linkage between managerial ownership and organisational performance. The model included a multinomial logit for the organisation's choice among three regimes of huge-block ownership, which can be contended as the choice among different degrees of controlling-minority make-ups, and three simultaneous-equations set-ups of managerial ownership and accomplishment for each ownership practice. The paper contended that the choice of ownership practices is the organisation's internal decision as a mirror of the organisation-specific organizational and contractual attributes, and hence the effect of managerial ownership on output differs across firms owned by dissimilar regimes. Empirical results depict family involvement in management and notable related party deals as key elements in the determination of ownership regimes. There is enough proof that the designs of the linkage between managerial ownership and organisational performance are noticeably dissimilar among ownership regimes. The researcher provides interpretations congruous with the managerial ownership endogeneity.



While analysing the relationship between ownership structure and firm performance: an empirical analysis of listed companies in Kenya, [Ongore \(2011\)](#) investigated the impacts of ownership structure on performance of Kenya's listed firms with agency theory as an analytical framework. Ownership structure was utilised as regards concentration of ownership and ownership identity. Performance indicators were return on assets (ROA), return on equity (ROE) and dividend yield (DY). The performance of forty-two (out of fifty-four) listed firms were analysed with the deployment of both primary and secondary data. Cronbach's Alpha was used in testing the reliability of data, while multicollinearity was tested using tolerance and variance-inflation factor. Employing Pearson's product moment correlation and logistic regression, the researcher found significant negative relationships between ownership concentration and government ownership with firm performance. On the other hand, significant positive relationships were found between firm performance and foreign ownership; diffuse ownership; corporation ownership; and managerial ownership.

[Fauzi & Locke \(2012\)](#)—in Board Structure, Ownership Structure and Firm Performance: A Study of New Zealand Listed-Firms—investigate the function of board structure and how ownership structures impact on the performance of New Zealand's listed firms. A good number of studies, the weightier portion from the U.S., U.K., and Japan, have scrutinized the linkage allying corporate governance mechanisms, ownership structure and organisational performance. Those studies produced different results, impacted by the nature of the carrying governance system for each country. Examining New Zealand's listed firms, the researchers opined, could magnify the diversity of the ever-expanding body of literature that studies into this relationship. Though the good majority of literature only tested a linear linkage between variables, some studies have observed a non-linear linkage allying board structures, ownership structures and organisational performance, and corroborated the non-linear relationship. Using an even panel of 79 New Zealand listed organisations, the study employed a Generalised Linear Model for robustness. The result disclosed that board of directors, board committees, and managerial ownership significantly impact positively on organisational performance.

[Yiğit \(2014\)](#) investigated how corporate governance and company performance relate to each other. The researcher considered two corporate governance measures for the period 2005-2011. Financial ratio, Return on Sales (ROS) was utilised in measuring firm performance. The researcher found a notable positive relationship between firm performance and ownership structure and between management structure and organizational performance. The researcher used data from firms listed in Borsa Istanbul to appreciate the connection allying corporate governance and firm performance.

The findings of [\(Hoang et al., 2017\)](#) run parallel to theory and expectations. The results of their OLS estimates show an inverse relationship between insider and blockholder ownership and performance in banking companies. The results

are consistent with less insider and blockholder ownership leading to better performance. But these results are also consistent with causality running the other way around. Insiders and blockholders may be led by below-par firm performance to reduce their equity stake in the bank.

In *Ownership Structure and Firm Performance: Evidence from Vietnamese Listed Firms*, Phung & Mishra (2016) examined how ownership structure impacts on organisational performance, for firms listed on Vietnamese bourses, employing 2744 firm-year observations from the year 2007 to 2012. The researchers found a non-linear linkage allying both ownership structure and firm performance. The researchers found a convex relationship between state ownership and organisational performance. The paper found that corporate performance surges beyond 28.67 percent level of governmental ownership. A concave relationship was found between foreign ownership and corporate performance. They found that corporate performance surges with a growth of foreign ownership up to a magnitude of 43 percent and then diminishes. Policy makers were admonished to encourage foreign ownership and widely diffused governmental ownership in firms, which can stimulate improvement of firm performance.

#### **Foreign ownership and performance**

Manna et al. (2016), while analysing the Impact of Ownership Structure and Board Composition on Corporate Performance in Indian Companies reckoned the National Stock Exchange (NSE)-listed Indian companies, which constitute the CNX Nifty Index, for the period from 1 April 2009 to 31 March 2013. The researchers deployed return on capital employed, cash earnings per share, market value added and Tobin's Q as the organisational performance variables for the study; the last two being market-based whereas the other two were accounting-based indicators. Board composition, Board size (BS), ownership structure, CEO duality, multiplicity of directorship, executive remuneration and CEO were used as firm governance proxies from non-identical angles along with other traditional independent variables to ascertain their impact on firm performance using a panel-data-based regression. BS and foreign ownership were found to be positively related to more than one firm performance variable.

#### **Institutional ownership and performance**

Duggal & Millar (1999). Institutional ownership and firm performance: the case of bidder returns employed firm takeover decisions to look into how institutional ownership impacts on firm performance. The Ordinary Least Squares regressions of bidder gains on entity ownership indicated that institutional ownership and firm performance positively relates to each other. However, the researchers found that institutional ownership is notably influenced by insider ownership, organisation's occupancy on the Standards and Poor's 500 index and firm size. When the researchers regressed bidder gains on the forecasted values of entity ownership in two-stage regressions, the repetitive estimates do not corroborate the linkage depicted by the OLS regressions. Furthermore, the researchers did not find any proof that active entity investors as a group boost

market efficiency for firm control. Those findings raise uncertainties about the loftier capacities of institutional investors to select and monitor.

#### **Ownership structure and firm performance**

The selection of generic specific means of investigating ownership structure-performance relationship is a contentious matter among various authors. The selection, in each case, hinges on information availability and their suitability for specific research hypotheses. For instance, studies pivoted on the influence of ownership concentration are inclined to deploy the Herfindahl index (Demsetz & Lehn, 1985). That pertains to countries where data availability is high. However, (Kapelyushnikov, 2000) finds that other researchers in developing economies where data availability is low would favour the use of the equity stake of the largest stockholders. In line with the view of (Kapelyushnikov, 2000), the ownership structure of the listed banks in Ghana is determined by the equity stake of the largest stockholders. Therefore, a bank that has the majority of its stocks held by another resident institution is termed as an institution-owned bank. Government-owned bank, similarly, refers to a bank in which the government-directly or indirectly-owns a majority of the outstanding shares. Foreign ownership applies to banks with the majority of stocks held by persons whose residence or registered addresses are not in Ghana.

#### **Ownership concentration and firm performance**

Since Berle & Means (1932), ownership concentration and its effects on organizational profitability have been the subject of many studies. Supplemental studies contrasting the performance of manager- and owner-run firms, often classified by the proportion of the largest owner, generally find a higher rate of yield in firms with concentrated ownership (Cubbin & Leech, 1983).

#### **Return on assets**

Return on Assets (ROA) is a popular and helpful financial ratio. It has been utilised in industry since circa 1919 when the DuPont Company deployed it as the apex of its ratio triangle system. The ratio was referred to as return on investment and was computed as Profit/Total Assets. The bed of the DuPont triangle was the larger ROA formula: Profit Margin (Profit/Sales) and Capital Turnover Ratio (Sales/Total Assets) (Horrigan, 1968).

The significance that academics and practitioners attach to ROA can be perceived in three ways. First, a good majority of business textbooks present at least, one ROA formula. In a study of major business textbooks, ROA ranked as the third most chronically presented ratio appearing in 70 of the 77 textbooks (Mankin & Jewell, 2010).

Second, failure prediction studies are hardly successful without any version of ROA. ROA is one of the factors propounded by the primordial Altman (1968)—Score In developing the factors deployed in predicting business failures (Jewell & Mankin, 2011). The ROA version Net Income/Total Assets (NI/TA) was ranked as the single most popular ratio in all the failure prediction studies (Hossari & Rahman, 2005).

Third, ROA is a popular ratio for analysing and investigating firm performance,

financial position, and future outlook (Jewell & Mankin, 2011).

#### **Return on equity**

According to Gitman, (2000) financial management pointed to one generally accepted goal: “maximizing the wealth of the firm’s owners” and attention switched from ROA to ROE. This informed the first major refinement of the initial Du-Pont model. The use of leverage—the way by which an organisation financed its core activities—became a third area of attention for financial managers besides profitability and efficiency (Mubeen et al., 2014).

While the ROA estimates the return on all assets invested in a firm, the return on equity (ROE) focuses on just the component contributed by equity holders. ROE relates the net income to the equity contributed by stockholders (Damodaran, 2007).

#### **Profit before interest and taxation**

In interpreting and analyzing financial statements, several kinds of profits can be deployed for purposes of comparing and analysing trends. One such kind is profit before interest and taxation (PBIT). PBIT is useful in computing financial leverage and operating profit margin. In many computations PBIT is used instead of operating profit (Joshi, 2015). PBIT is the difference between total revenue (TR) and total expenditure (TE). Interests relating to how the business is financed are not taken into account (Whiting, 1986).

### **3. Research Methodology**

#### **3.1. Introduction**

Attention is focused on how the study is conducted in this chapter. Thus, emphasis in this chapter is placed on the econometric procedures, tools and strategies through which the study was made successful. The chapter contains sections that dwell on the study’s design, population and sampling procedures and areas from which data collection was made possible. Further, the chapter sets separate sections aside for the construction of empirical models, and the description of variables, as well as data estimation systems and analysis activities followed.

#### **3.2. Research Design**

This study adopts explanatory research design as the fundamental structure for integrating all activities and aspects of the work into one coherent whole in order to provide answers to the research questions. According to Yin (2003; 2009) and Saunders, Lewis and Thornhill (2012), empirical studies can adopt either explanatory, exploratory or descriptive designs. Explanatory study is applied when a researcher intends to elicit replies to queries seeking explanation for suspected causal linkages between phenomena (Yin, 2003; 2009). Baxter and Jack (2008) assert that the choice of a particular study design is directed by the general aim of the study. The purpose of this study implicitly presumes a causal inter-linkage between ownership forms and financial performance of banking corporations, and so based on Baxter and Jack’s (2008) view, it is justifiable that explanatory

design is adopted. By gathering and examining already existing data through econometric procedures, the expected causal relationships for ownership forms and financial outcomes of the sampled banks can be explained.

### 3.3. Study Population and Sampling Procedure

The population for this study comprises commercial banks listed on the Ghana Stock Exchange. The list of banks listed on the GSE contains 8 enterprises, and these form the universe for the study. Given that the number of banks listed on the GSE is quite small, the study did not apply any specific sampling procedure, but studied the entire population of the banks using a census approach. Again, studying the entire population of listed banks is not problematic since data required from the yearly financial reports of the banks is available and easily accessible.

### 3.4. Sources of Data

By the nature of this study, in terms of the variables enshrined in the objectives, secondary data is preferred to primary data. Thus, the study extracts already existing secondary data from the annual financial reports of the banks under study. The data which covers the period from 2014 to 2018 is in the form of accounting and financial ratios including return on assets, return on equity and profit before interest and taxation. Data for ownership structures like management, government, institutional and foreign forms of ownership are also computed from the annual accountability documents of the banks. Information on banks' age is equally taken from the websites of the banks.

### 3.5. Study Model Development

Panel regression models are applied to test the prevalence of, if any, the relationship between ownership systems and financial performance of banks being studied. The structure of a universal panel regression modeling is stated in Equation (1).

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \epsilon_{it} \quad (1)$$

where  $Y_{it}$  signifies the regress and which is financial performance in this study. Small  $t$  represents the time length covered by the study, and  $i$  stands for the cross-sectional units being studied. It is a constant of the regression model; embodies weights attached to the regressors of  $Fit$ ;  $Fit$  denotes a representative for all the regressors and it is the error variable.

Banks' financial performance is determined by ownership forms, and following prior studies, four ownership forms are identified. Therefore, the functional model enveloping the dependent variable and the ownership forms is constructed in Equation (2)

$$\text{Financial Performance} = f(\text{Managerial, Governmental, Institutional, and Foreign forms of ownership}) \quad (2)$$

The study takes three proxies for financial performance. These are PBIT, ROA and ROE. Now, taking it that the relationship among the regressand and the causal variables is linear, and fusing the variable symbols into Equation (2), and applying the natural logarithms, the empirical models for this study are developed as follows.

Objective one models:

$$\text{LnPBITit} = 0 + 1\text{LnMOit} + 2\text{LnAGEit} + \text{it} \quad (3a)$$

$$\text{LnROAit} = 0 + 1\text{LnMOit} + 2\text{LnAGEit} + \text{it} \quad (3b)$$

$$\text{LnROEit} = 0 + 1\text{LnMOit} + 2\text{LnAGEit} + \text{it} \quad (3c)$$

Objective two models:

$$\text{LnPBITit} = 0 + 1\text{LnGOit} + 2\text{LnAGEit} + \text{it} \quad (4a)$$

$$\text{LnROAit} = 0 + 1\text{LnGOit} + 2\text{LnAGEit} + \text{it} \quad (4b)$$

$$\text{LnROEit} = 0 + 1\text{LnGOit} + 2\text{LnAGEit} + \text{it} \quad (4c)$$

Objective three models:

$$\text{LnPBITit} = \emptyset 0 + \emptyset 1\text{LnIOit} + \emptyset 2\text{LnAGEit} + \text{it} \quad (5a)$$

$$\text{LnROAit} = \emptyset 0 + \emptyset 1\text{LnIOit} + \emptyset 2\text{LnAGEit} + \text{it} \quad (5b)$$

$$\text{LnROEit} = \emptyset 0 + \emptyset 1\text{LnIOit} + \emptyset 2\text{LnAGEit} + \text{it} \quad (5c)$$

Objective four models:

$$\text{LnPBITit} = 0 + 1\text{LnFOit} + 2\text{LnAGEit} + \text{it} \quad (6a)$$

$$\text{LnROAit} = 0 + 1\text{LnFOit} + 2\text{LnAGEit} + \text{it} \quad (6b)$$

$$\text{LnROEit} = 0 + 1\text{LnFOit} + 2\text{LnAGEit} + \text{it} \quad (6c)$$

From the above models, the constant terms are captured by 0, 0,  $\emptyset 0$  and 0. MO, GO, IO and FO respectively represent managerial, governmental, institutional, and foreign forms of ownership whose attached weights are to be estimated electronically. Age of bank is introduced as a control variable.

### 3.6. Definition and Measurement of Variables

The definitions and measurement procedures for the variables of the study are explained in this section under the following sub-headings.

#### 3.6.1. Dependent Variables

This study makes use of three proxies including PBIT, ROA and ROE for the dependent variable. PBIT is used as the first dependent variable. ROA is measured as profit after tax as a fraction of total assets, and it measures the return banks make from utilization of assets in the pursuit of banking business. ROE signifies the amount of returns that accrue to owners of capital for the investment risks undertaken. This study determines ROE as the ratio of profit after tax to total shareholders' equity. Using these performance proxies is consistent with [Ongore \(2011\)](#).

#### 3.6.2. Independent Variables

The study centers on ownership forms as principal independent variables. These forms are managerial, governmental, institutional, and foreign. Generally, own-

ership was taken as a percentage of shareholding in a particular bank, which was arrived at by taking the number of shares held as a ratio of the total number of shares outstanding. For example, managerial ownership was determined as the percentage of shares in the hands of managers and directors as a ratio of total outstanding shares in a particular year. Following the same procedure, government ownership was defined as the percentage of shares held by the government or its agencies as proportion of total outstanding shares. These measurement procedures are consistent with a number of prior studies (Ongore, 2011; Fauzi & Lock, 2012; Phung & Mishra, 2016; Manna et al., 2016).

### 3.7. Data Estimation Strategies

Models 3a to 6c are estimated following first order panel regression systems of fixed effect (FE) and random effect (RE) strategies. In the views of Plasmans (2006) panel system of regression analysis is very efficient in handling random samples whereas Hsiao (2005) contend that panel regression estimates are able to control for the influence of absentee variables, and unobservable elements associated with the data (Wei & Liu, 2001), and at the same time able to offer significant information pertaining to inter-temporal dynamics of the dataset. In particular, the study applies the panel least squares dummy variable (PLSDV) strategy which is able to take care of dealing with heterogeneity through providing varied constant parameters for cross-sections (Brooks, 2008; Gujarati, 2009). Afterwards, the same models are estimated for the parameter weights attached to the regressors using the random effect model procedure which assumes that cross-sectional effects do not associate linearly with the regressors (Wooldridge, 2013). As part of the estimation activities, the Hausman test is undertaken as a procedure meant to help determine the effectiveness of either the FE or RE models. Test for multicollinearity is administered through vector inflation factors and Spearman rank order correlations.

### 3.8. Data Analysis Procedures

A series of data handling activities are followed in the pursuit of analyzing data in this study. Data analytical processes and activities conducted involve the following.

#### 3.8.1. Descriptive Statistics

The first part of data analysis activities conducted involves the determination of the descriptive statistical features of the variables of the study. For this reason, measures defining the central tendencies, or the averages of the variables are computed and scrutinized. A closer look at the mean, median, lowest and highest number of variable ranges is done. The dispersion associated with the variables measured by standard deviations is also generated and analyzed.

#### 3.8.2. Multicollinearity and Hausman Tests

In the second phase of data analysis, the presence of multicollinearity in the da-

taset is determined with the use of Spearman Rank order correlation coefficient estimates which show the degree of linear association pertaining in the variables. The study set the correlation coefficient at 0.8 as a reference point for determining the prevalence of multicollinearity in the variables. High degrees of linear relations can give rise to spurious regression, and so there is the need to check and restrain this problem from disturbing the regression results. The accompanying statistical significance of the correlation numbers is explored using probability estimates. Variance inflation factors associated with the variables are also checked as complementary to the Spearman rank order correlations. The VIFs are set at 10, against which the estimates are compared. Apart from the conduct of correlation analysis, the study performed Hausman test to ascertain the efficacy of either the FE or RE models.

### 3.8.3. Panel Regression Analysis

For the purpose of achieving objectives of this study, first order panel regression systems are used as the grand framework for analyzing the data gathered. In this regard, both FE and RE versions of panel regression estimates are implemented. And as required, the study relies on the outcomes of the Hausman test to determine the appropriateness of either the FE or RE models for analysis purposes. In analyzing the regression output, the computed variable weights are examined for statistical significance and relative power of individual independent variables in explaining variations in the regress and Numerical probability numbers associated with the variable weights, the test-statistics and standard errors are all examined to make meaning out of the raw estimates.

## 4. Results and Discussion

### 4.1. Introduction

This chapter dwells on displaying the results from the data estimation exercise. The following sections define the content of this chapter. Section 4.2 spells out the descriptive statistical analysis of the variables of this study. Section 4.3 talks about the nature of the linear correlation coefficients for the variables, whereas the Hausman specification test output for endogeneity is captured in Section 4.4. In Section 4.5 and its associated subsections, the panel regression outcomes for the thematic objectives of the study are dealt with. The summary of the chapter's presentation is found in Section 4.6.

### 4.2. Descriptive Statistics

For this study, attention is focused on four ownership variable constructs and three financial outcome metrics. These are foreign ownership (FO), managerial ownership (MO), governmental ownership (GO) and institutional ownership (IO). Firm age is added as a control variable. The performance proxies are ROA, ROE and PBIT. The summary statistical measures generated for each of these variables are assembled in **Table 1**.



**Table 1.** Descriptive statistics.

Measures	ROA	ROE	PBIT	FO	MO	GO	IO	AGE
Mean	7.732	24.374	1.770	34.263	0.401	19.745	38.007	47.361
Median	5.230	21.250	98549	19.970	0.000	0.000	24.630	39.500
Max.	45.000	95.680	5.011	93.400	2.910	100.000	95.570	122.000
Min.	-3.680	-23.340	-1.061	0.000	0.000	0.000	0.000	7.000
Std. Dev.	8.842	27.458	1.781	36.214	0.936	30.227	32.314	33.146
VIF	-	-	-	1.020	2.189	2.339	1.098	2.189
Obs.	40	40	40	40	40	40	40	40

Source: Author's estimation based on E-views 9.

The statistics show that in terms of financial performance, the banks under study did quite well over the period under investigation. For instance, the averagely managed bank in the sample achieved ROA of 7.732% from the usage of corporate resources while the efficiently managed ones were able to take home maximum return of 45% from asset utilization. The standard deviation, indicating the extent of variability from the mean stood at 8.842%, which is ahead of the mean number. This shows some amount of risk, uncertainty or instability associated with the banks' ROA over the period. Similar applications can be alluded to the ROE and PBIT statistical measures. The ROE numbers begin from the lowest of negative 23.34% to the highest of 95.68%, suggesting that poorly managed banks recorded negative returns for their shareholders while the best performing ones made a huge 95.68% return for their owners. In between these extremes are the average performing banks which garnered 24.374% for their owners. The volatility for ROE is quite huge at 27.458% above its mean.

Furthermore, it can be seen that the percentage of managerial ownership in the sampled banks is quite small, having a mean of 0.401 relative to the mean of 38%, 34.26% and 19.7% for institutional, foreign, and governmental forms of ownership. Looking at the maximum values, government ownership has 100% as compared to 95.57% and 93.4% for institutional and foreign ownership systems respectively. The suggestion is that at least one bank in the sample is owned or has been owned 100% by the government at some point in time over the study period, whilst a good number of the banks are either institutionally owned or owned by expatriates. The standard deviations for the ownership variables exceed their mean figures. This can be interpreted to indicate that no one bank is wholly owned by only one form of ownership. In other words, ownership systems of the banks are mixed and not uniform. The least aged bank is aged 7 years whilst the most aged one has been in operation for more than a century (122 years). However, the average age of the banks is pegged at 47 years.

Variance inflation factors (VIFs) for each independent variable is reported. Using the universally accepted threshold of less than 10, the results inform us of

the non-prevalence of multicollinearity amongst the independent variables. This is evident in the VIF values of 1.020 and 2.189 for FO and MO respectively. The rest are 2.339, 1.098 and 2.189 for GO, IO, and age respectively. Further confirmation of these results is provided by correlation analysis using the Spearman rank order system reported in the next sub-section.

### 4.3. Spearman Rank Order Correlation Estimates

Undertaking the Spearman rank order correlation analysis is meant to help determine the manifestation or otherwise of multicollinearity in the panel data. The results are recorded in **Table 2**. Generally, the impression being created by the correlation coefficient estimates is that the issue of multicollinearity does not manifest in the dataset. This is because none of the estimates for the independent variable constructs is up to 0.8 if the study sets the limit for determining multicollinearity at 80%. These outcomes give credibility to results retrieved from the VIF estimates in the previous section.

By carefully observing the correlation estimates for the independent variables, one can see that the range of numbers begins from low to moderate. As an example, the correlation estimates for the foreign ownership variable and each of

**Table 2.** Spearman rank order correlation.

	Correlation							
Probability	ROA	ROE	PBIT	FO	MO	GO	IO	AGE
ROA	1.000							
	-							
ROE	0.468	1.000						
	(0.004)	-						
PBIT	0.681	0.423	1.000					
	(0.000)	(0.010)	-					
FO	0.088	0.433	-0.137	1.000				
	(0.610)	(0.008)	(0.423)	-				
MO	-0.052	0.113	0.184	-0.423	1.000			
	(0.761)	(0.511)	(0.282)	(0.010)	-			
GO	-0.195	-0.768	-0.342	-0.415	-0.323	1.000		
	(0.255)	(0.000)	(0.041)	(0.012)	(0.054)	-		
IO	0.249	0.133	0.541	-0.625	0.618	-0.300	1.000	
	(0.141)	(0.437)	(0.001)	(0.000)	(0.000)	(0.075)	-	
AGE	0.444	0.116	0.272	-0.019	-0.509	0.267	-0.077	1.000
	(0.007)	(0.499)	(0.108)	(0.912)	(0.001)	(0.114)	0.655	-

Source: Author's estimation based on E-views 9.

the other independent variables falls below the set target of 0.8. Foreign ownership has negative linear association with each other independent variable, having statistically significant (at 1%) estimate of  $-0.423$  with managerial ownership, and  $-0.415$  with the government ownership variable at 5% significance level. The most outstanding estimate falls at  $-0.625$  for the foreign ownership variable and institutional ownership.

Similar observations can be made for the managerial ownership variable, which exhibits averagely low to medium linearity with other independent variables such as government ownership (having  $-0.323$  linkage at 10% significance level) and age with an estimate of  $-0.509$  at 1% level. The highest estimate prevails between managerial ownership and institutional ownership constructs with 1% positive significant limit of 0.618. The age variable equally has a low linear relationship with each of the ownership variables, with the majority of them having opposite directions.

#### 4.4. Ascertaining the Appropriateness of Fixed Effect and Random Effect Models

This study undertook a Hausman test for aiding the use of either fixed effect or random effect model. The results obtained from the test indicate that the random effect strategy is appropriate for this study. This is because the probabilities for the chi-square statistics for each of the models exceeds 5%, making the rejection of the leading hypothesis impossible. **Table 3** shows details of the test results.

**Table 3.** Hausman test results.

Ownership forms	Models/Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Managerial	PBIT	5.588661	2	0.0612
	ROA	4.572160	2	0.1017
	ROE	5.329931	2	0.0696
Government	PBIT	4.374813	2	0.1122
	ROA	12.533840	2	1.0000
	ROE	2.479764	2	0.2894
Institutional	PBIT	10.332796	2	0.0757
	ROA	2.684903	2	0.2612
	ROE	0.506814	2	0.7762
Foreign	PBIT	23.977508	2	1.0000
	ROA	17.741058	2	1.0000
	ROE	3.194927	2	0.2024

Source: Author's estimation based on E-views 9.

#### 4.5. Relationship between Ownership Structure and Banks' Performance

The central focus of this study involves the investigation of whether or not any empirical relationship prevails amongst the four forms of ownership systems and banks' financial outcomes. By applying panel regression strategies, this study determines to find out if managerial, governmental, institutional, and foreign forms of ownership play significant roles in explaining financial performance measures of Ghanaian listed commercial banks. Drawing on evidence from prior studies, this study delineates financial performance with reference to firms' PBIT, ROA and ROE. The following subheadings contain tables that provide answers to the research questions under investigation.

##### 4.5.1. Managerial Ownership and Banks' Performance

The first thematic objective of this study deals with ascertaining if any relationship exists for managerial ownership and financial outcomes of banks under study. Raw data estimation results based on the random effect system are shown in **Table 4**. Insights from the results help us to conclude that banks massively owned by managers can perform quite well. This is because out of the three-performance metrics, the managerial ownership (MO) variable imposes statistically significant influential power on two, which are profit before interest and taxation and return on shareholders' funds.

**Table 4.** Results for managerial ownership. Dependent variables are PBIT, ROA and ROE.

Model	PBIT				ROA				ROE			
Variable	Coef f.	Std. Error	t-Stat	Prob.	Coef f.	Std. Error	t-Stat	Prob.	Coef f.	Std. Error	t-Stat	Prob.
C	12.5 9351	5.76 7869	2.18 3391	0.0 453	-6.27 9689	6.57 7945	-0.95 4658	0.3 531	-16.1 4923	5.15 5587	-3.13 2374	0.0 061
LNMO	0.14 6948	0.06 9971	2.10 0111	0.0 530	0.03 6903	0.07 8777	0.46 8448	0.6 454	0.18 1332	0.06 3684	2.84 7361	0.0 111
LNAGE	1.90 5353	1.73 4657	1.09 8403	0.2 893	2.32 7802	1.98 4016	1.17 3278	0.2 569	5.77 0006	1.55 7563	3.70 4509	0.0 018
R-squared		0.22 0334				0.08 0789				0.41 4547		
Adjusted R-squared		0.11 6379				-0.02 7354				0.34 5670		
F-statistic		2.11 9510				0.74 7057				6.01 8673		
Prob (F-statistic)		0.15 4637				0.48 8687				0.01 0560		
Durb in-Watson stat		2.38 8325				2.37 7662				2.13 9125		

Source: Author's estimation based on E-views 9.

It can specifically be seen from **Table 4** that being owned by management has the advantage of improving the profit before interest and tax situation of banks. This is confirmed by the 10% significant weight of 0.146948 for the MO variable at a probability of 0.0530. This statistical result suggests that all other things being equal, being owned by management, enhances the operating profit or profit before interest and taxation of banks, which can ultimately contribute to improving the annual profit position.

In the second model having ROA as the dependent variable, MO has a positive relationship, albeit non-significant. The numerical weight for MO is 0.036903 for a probability of 0.6454. This indicates the possibility of managers to influence returns from asset deployment. Given that the coefficient lacks statistical backing, the result seems to indicate the weak possibility for managers to optimize returns from utilization of corporate assets. In the third model, MO possesses substantial association with ROE after sustaining a positive weight of 0.181332 and generating a –5% significant probability of 0.0111. Thus, for a given level of managerial control, banks' ROE position improves by 0.181332, all else remaining unchanged.

By implication, this outcome confirms the earlier assertion that managers' interest in the financial health of the banking institutions they handle, may influence their desire to find strategies to improve financial outcomes for owners of the companies. These results imply that being owner-managers, managers have interest in the financial well-being of the banks they oversee; and in practical terms, managers may have control over income streams on the income statement. For example, it can be argued that managers can put in place measures to increase the stream of incomes from interest and commission, while containing expenses associated with interest, personnel, and other operating expenditures. By so doing, profit before interest and tax can soar, which can translate into rising profit after tax. In the end, the above numerical outcomes suggest that issues of agency emanating from management and ownership can reduce when managers are incentivized to own shares in the company. The central hypothesis behind the first objective is therefore supported. The findings recorded in this section are consistent with [Ongore \(2011\)](#) who found a significantly proportional connection between management ownership and corporate performance in Kenya. Similarly, this study's findings agree with [Fauzi and Locke \(2012\)](#) who disclosed that corporate operational results for listed firms in New Zealand are substantially associated with management having ownership control. The findings of this study, however, contradict [Hoang et al. \(2017\)](#) whose paper reported an indirect link for insider ownership and banks' output.

#### **4.5.2. Governmental Ownership and Banks' Performance**

This section takes a look at the quantitative outcomes relative to the question of whether or not any relationship exists between government ownership (GO) and banks' financial situation. The random effect model results providing answers to this question are shown in **Table 5**. The results obtained from the three models

**Table 5.** Results for government ownership. Dependent variables are PBIT, ROA and ROE.

Model	PBIT				ROA				ROE			
Variable	Coef f.	Std. Error	t-Stat	Prob.	Coef f.	Std. Error	t-Stat	Prob.	Coef f.	Std. Error	t-Stat	Prob.
C	12.4	2.21	5.63	0.0	0.07	4.34	0.01	0.9	8.25	4.27	1.93	0.0
	5755	0667	5197	005	4319	1189	7119	867	6156	7772	0013	824
LNGO	1.68	0.62	2.71	0.0	3.94	1.48	2.65	0.0	0.58	1.46	0.39	0.6
	5942	0402	7500	264	5348	7131	2992	242	4180	5407	8647	985
LNAGE	3.28	0.77	4.22	0.0	4.17	1.73	2.40	0.0	1.42	1.71	0.83	0.4
	3069	6410	8526	029	6997	9163	1728	372	4513	3757	1222	253
R-squared		0.66				0.26				0.23		
		4790				4968				1737		
Adjusted R-squared		0.58				0.11				0.07		
		0987				7961				8084		
F-statistic		7.93				1.80				1.50		
		2814				2424				8187		
Prob (F-statistic)		0.01				0.21				0.26		
		2626				4552				7639		
Durb in-Watson stat		0.42				0.67				1.55		
		2697				6512				1091		

Source: Author's estimation based on E-views 9.

can be summarized by saying that government ownership causes financial outcomes of banks under study to decline. Thus, the relationship existing between government ownership and firm performance is indirect.

From **Table 5**, evidence has it that the GO construct produces a coefficient of  $-1.685942$  for PBIT at a  $-5\%$  significant probability of  $0.0264$ . Thus, a negative relationship between government ownership and banks' PBIT is found. In the case of the second model, GO has a significantly dangerous connection with ROA with a weight of  $-3.945348$  at  $5\%$  probability. For the third model, GO still maintains its indirect relationship with ROE, although it is less relevant in statistical terms. These figures mean that if the impact of other variables such as banks' age are controlled for, or assumed constant, banks which have majority of their ownership in the hands of the government could underperform. Therefore, the second hypothesis for this study lacks empirical backing in that a negative linkage is observed for government ownership and banks' performance measures.

The transmission mechanism through which government ownership may contribute to explaining variation in business outcomes of listed banks can be seen in terms of the attitude of management officials discharging the affairs of the banks on behalf of owners. Argument can be advanced that depositors' attitude and perception towards the banking system may go favorably for pub-

lic-owned banks, believing that such banks cannot collapse, and so doing business with them is not problematic. Also, in times of financial crisis, publicly owned banks can be arguably seen as more resilient compared with private banks. Government liquidity support through capital injection is always assured during periods of financial distress, helping to maintain stability and responsiveness. And, in times of upsurge in regulatory capital, government banks can do relatively better in raising additional funds than their peers in the market, all things equal.

In spite of all these, if the attitudes of the management team, and other staff are such that owners' interest are sacrificed for management and employees', owner-manager conflicts emerge. In such circumstances, managers and workers do not offer their best efforts, they do not work hard; and this adversely affects the firms' profits which eventually harm performance. Similar study outcome was documented by Ongore (2011) when it was observed that government-owned banks underperform due to destructive relationship between government ownership and business outcomes for Kenyan commercial banks. Phung and Mishra (2016) on the other hand, found a non-linear relationship for government ownership and firm performance for Vietnamese listed companies. Their study's results suggest that the relationship between ownership forms and performance can equally be treated as non-linear.

#### 4.5.3. Institutional Ownership and Banks' Performance

The question of whether or not any connection exists between institutional ownership and banks' performance is addressed as the third objective for this study. This question is answered through testing the key hypothesis that no relationship exists between institutional ownership and banks' performance. Numerical results obtained for this objective are displayed in Table 6.

Unlike managerial and governmental forms of bank ownership, the fundamental outcomes for the supposed relationship between institutional ownership and business results of listed banks appear quite weak, although direct relationship is found. The institutional ownership variable injects positive coefficient estimates in all the three models, but only the PBIT model has a statistically significant numerical estimate. The coefficient of IO (1.043461) in the PBIT model is 5% significant, whereas that of the ROA and ROE models are 0.138195 and 0.2117 respectively. The corresponding probability numbers are 0.6043 and 0.6259, which are far from the acceptable statistically significant levels. This means that financial outcomes of listed banks are not accounted for by being owned by institutions.

The implications of the above numerical identities are that when institutions own majority shares in listed banks, there is the likelihood that performance can improve, at least, according to this study. However, the performance effect of institutions is limited to PBIT, as opposed to the ROA and ROE metrics. The study argues that PBIT is a weak measure of performance, and it is less measurable in percentage terms. Thus, PBIT fails to tell us how much percentage returns banks

**Table 6.** Results for institutional ownership. Dependent variables are PBIT, ROA and ROE.

Model	PBIT				ROA				ROE			
Variable	Coef f.	Std. Error	t-Stat	Prob.	Coef f	Std. Error	t-Stat	Prob	Coef f	Std. Error	t-Stat	Prob.
C	-2.19 6718	4.14 0982	-0.53 0482	0.6 001	-1.53 9828	1.40 3969	-1.09 6768	0.2 818	1.66 1158	2.84 3627	0.58 4169	0.5 636
LNIO	1.04 3461	0.44 2240	2.35 9494	0.0 258	0.13 8195	0.26 3746	0.52 3970	0.6 043	0.21 1726	0.42 9642	0.49 2796	0.6 259
LNAGE	4.31 9093	1.07 2685	4.02 6430	0.0 004	0.74 1305	0.38 1080	1.94 5273	0.0 615	0.03 6410	0.76 1641	0.04 7805	0.9 622
R-squared		0.38 1049				0.13 8251				0.00 9716		
Adjusted R-squared		0.33 5201				0.07 8821				-0.05 8580		
F-statistic		8.31 1108				2.32 6255				0.14 2258		
Prob (F-statistic)		0.00 1539				0.11 5616				0.86 7999		
Durb in-Watson stat		2.21 8835				2.31 2642				2.20 2451		

Source: Author's estimation based on E-views 9.

make out of asset utilization, and how much returns are accrued to owners of capital of banking businesses. PBIT is also subject to taxation and other expenses, making it less reliable in determining the true level of profitability. At times, PBIT increases but does not translate into quantifiable returns to suppliers of capital. Based on these lines of arguments, the study avers that no strong relationship prevails for institutional ownership and financial performance of listed commercial banks in Ghana. This assertion gives credence to the null hypothesis of this study. The findings corroborate Yigit (2014) who equally found direct linkage between institutional ownership and firm financial results for listed entities on Borsa Istanbul.

#### 4.5.4. Foreign Ownership and Banks' Performance

Under this section, the relationship between foreign ownership and banks' performance is ascertained for the purpose of providing answers to the study's question four. Table 7 sheds light on the regression statistics obtained for the three models constructed for objective four of the study.

Under this section, the relationship between foreign ownership and banks' performance is ascertained for the purpose of providing answers to the study's question four. Table 7 sheds light on the regression statistics obtained for the three models constructed for objective four of the study.



**Table 7.** Results for foreign ownership. Dependent variables are PBIT, ROA and ROE.

Model	PBIT				ROA				ROE			
Variable	Coef f.	Std. Error	t-Stat	Prob.	Coef f	Std. Error	t-Stat	Prob	Coef f	Std. Error	t-Stat	Prob.
C	50.60041	14.91817	3.391865	0.0040	9.919553	4.839697	2.049623	0.0562	10.74417	6.633583	1.619663	0.1237
LNFO	-11.63932	3.275794	-3.553129	0.0029	-1.934348	1.067387	-1.812227	0.0877	-2.118739	1.460802	-1.450395	0.1651
LNAGE	4.003385	0.670624	5.969638	0.0000	0.009011	0.342487	0.026310	0.9793	0.354715	0.541464	0.655104	0.5212
R-squared		0.665296				0.093179				0.129807		
Adjusted R-squared		0.620669				-0.013506				0.027432		
F-statistic		14.90785				0.873405				1.267951		
Prob (F-statistic)		0.000272				0.435445				0.306712		
Durb in-Watson stat		1.374653				1.361086				1.811951		

Source: Author's estimation based on E-views 9.

Similar to the quantitative outcomes generated from the models for government ownership, the foreign ownership variable has harmful association for all the three performance indices. Thus, FO pronounces negative impacts on PBIT, ROA and ROE, with the impact on ROE being insignificant. Information provided in **Table 7** shows that the FO variable has negative weight of 11.63932 with a -1% significant probability of 0.0029. In the same vein, FO assumes considerable negative role in driving ROA variance of banks under study, after having made -1.934348 parametric weight in the model which stays 10% significant level at 0.0877. For the third model, FO has a negative but unimportant coefficient of -2.118739 at a probability value of 0.1651.

The indications from these figures are that banks owned heavily by foreigners suffer from performance challenges in the sense that for a given number of foreign owners, banks' business results measured with PBIT, ROA and ROE proxies dwindle on condition that all other factors are held constant. Furthermore, the numeric output displayed in **Table 7** can be explained as a reflection of agency problems at work. Foreign owners of banks operating in Ghana may lack the capacity to monitor and scrutinize activities of management, and for the fact that managers behave to promote their own interest at the expense of owners, financial performance is likely to suffer. Therefore, the hypothesis that there is a lack of relationship between foreign ownership and performance is refuted. The

findings disagree with Manna et al (2016) who reported that foreign ownership and performance of listed Indian companies are directly associated. Another disagreement can be seen in Ongore (2011) and the findings of this study.

#### **4.6. Chapter Summary**

For the purpose of ascertaining if any relationship can be established for corporate ownership and performance of listed banks in Ghana, this study pursued analysis of quantitative data following panel regression procedures. Revelations generated from the data suggest that different ownership forms command importantly varying impacts on banks' business bottom lines. Thus, the study discovered that managerial ownership engenders significant parallel association with performance, whereas both governmental and foreign forms of ownership introduce substantially detrimental relationships for performance measures. Finally, the study observes no strong relationship prevailing for institutional ownership and financial performance.

### **5. Summary of Findings, Conclusion and Recommendations**

#### **5.1. Introduction**

The outline of the empirical outcomes from the analysis of data is presented in this chapter. The chapter contains the following sections. The summary of findings is done in the next section at 5.2. After those concluding statements are submitted in Section 5.3 while the recommendations are put forth in Section 5.4. The final Section 5.5 details possible areas for future studies.

#### **5.2. Summary of Findings**

Developing this piece of work on the investigation of whether or not a relationship prevails for different forms of ownership and banks' business outcomes, this study applied panel regression strategy of random effect to unearth the findings. The study retrieved yearly data from 8 listed commercial banks' financial reports over the duration from 2014 to 2018. Analysis of data provides insightful learning experiences relative to the objectives of the study. The findings which compare more closely with prior research show that diverse ownership forms introduce significantly varying impacts on banks' business bottom lines. First, the study discovers that managerial ownership engenders significant parallel association with performance measured with profit before interest and taxation and return on shareholders' funds. Second, the study learns that banks owned partially by the government and foreign investors suffer substantially from achieving performance with respect to profit before interest and taxation, and return on assets. Lastly, the study makes it known that banks owned by institutions can perform creditably well but the findings lack strong statistical backing. That is to say that no convincing relationship prevailing between institutional ownership and financial performance is found.

### 5.3. Conclusion

The issue of whether or not an association falls for ownership forms and financial output of Ghanaian banking institutions engaged the attention of this study. Utilizing archival data from 8 listed banks from 2014 to 2018, this study implemented a panel regression method of random effect with the aid of Hausman test to facilitate answering the research questions. Statistical evidence confirms that ownership forms do relate to financial outcomes of banking corporations in Ghana in diverse ways. Important revelations from the study lead to the conclusion that banks whose majority ownership are managers appear to perform efficiently, as managerial ownership is observed to have constructive relationship with shareholders' return and profit before interest and taxation. This outcome implies that agency problems resulting from owner-manager affairs can be dealt with if management is offered incentive contracts including profit sharing arrangements.

Also, the study brings to the fore, evidence that banks owned by the government and foreigners can underperform due to agency issues associated with such forms of ownership. Thus, the outcomes give credibility to the prevalence of agency problems in banking institutions when there is absentee ownership in routine activities. By implication, being owned by the government or its representative institution, and foreign investors, create and perpetuate monitoring challenges which give birth to management behaving to seek self-interests, without putting in the best efforts on owners' behalf. The result further implies that if managers of government-owned and foreign-owned banks consider their reputation and job security, then they can offer the best efforts to save the situation. The study finally brings to bear the evidence that banks owned by institutions can perform creditably well but the findings lack strong statistical support. Overall, it can be proposed that the quality of corporate governance systems and audit excellence can serve useful purposes of reinforcing the impacts that institutional, government and foreign forms of ownership can make on financial performance of banking enterprises.

### 5.4. Recommendations

The study proffers the following recommendations for the attention of banking stakeholders in Ghana.

- 1) The study recommends that owners of banking institutions should practice a managerial system of ownership, linking compensation to performance. This can be achieved through offering incentive contracts in the form of profit sharing, stock options and performance bonuses which convert managers to stockholders.
- 2) Banks owned by government, institutions and foreign investors are advised to strengthen and implement robust audit and corporate governance systems so that managerial actions can be supervised and monitored effectively.
- 3) Also, government, institution-owned and foreign-owned banks should com-

plement fixed salary compensation for managers with the introduction of performance compensation arrangements as a solution to owner-manager agency conflicts. For example, in addition to fixed salary, managers should be given a certain percentage of annual profits to incentivize them to work hard for themselves and owners.

### 5.5. Directions for Further Studies

The study proposes the under listed areas for the consideration of prospective scholars.

1) This study focused exclusively on listed commercial banks. This may impede the generalizability of the findings among all commercial banks in Ghana. Prospective writers can replicate this study by expanding the scope of banks to capture non-listed commercial banks.

2) Ownership forms can be treated as a binary dummy variable. With regards to methods, future studies can apply logistic and probit regression systems to handle ownership structures.

3) Related to the topic of this study are the issues of banking concentration or branchless banking and its consequences for firms' financials which this study did not pay attention to.

4) A study on the mediating roles of audit quality and corporate governance in the relationship between institutional, foreign and government ownership forms and firm performance can make insightful contributions to the literature.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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