

**UNIVERSITY OF GHANA**

**EFFECT OF THE MINIMUM CAPITAL REQUIREMENTS ON PERFORMANCE OF  
BANKS IN GHANA**

**BY**

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**DECLARATION**

I do hereby declare that this work is as a result of my own research and has not been presented by anyone for an academic award in this or any other university. All references used in my work have been fully acknowledged.

I bear sole responsibility for any shortcomings.

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## **CERTIFICATION**

I hereby certify that this thesis was supervised in accordance with the procedures laid down by the University of Ghana.

.....

**DR AGYAPOMAA GYEKE - DAKO**

(SUPERVISOR)

.....

**DATE**

## **DEDICATION**

This work is dedicated to the LORD GOD Almighty for His abundant grace all through the period. It is also dedicated to my family for their love and support. I could not have done this without you all, and God richly bless you.

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## ABSTRACT

The Ghanaian banking sector in recent years has seen some developments after the recapitalization exercise embarked on in 2012. This study generally assesses the impact of the 2012 recapitalization on the performance of banks within the Ghanaian banking sector. The study specifically aimed at examining the effect of the regulatory increase in capital of banks in Ghana on their performance as well as the impact of the regulatory increase on the lending behaviour of these banks. Employing a quantitative research approach, and with the use of the paired t-test statistical tool on data gathered from some 32 banks in the country as at 2016, the study made the following findings:

ROA and ROE after recapitalization were in decline in the sense that the average ROA value of 4.27 before recapitalization decreased to 4.12 showing a decline of 0.15. Likewise, ROE with an average value of 15.45 moved to 13.69, showing a decline of 1.76. It was with NIM that the recapitalization somewhat led to an increase which was not much; from 6.09 before recapitalization to 6.23 after recapitalization at just a 0.14 increase. These findings show that the recapitalization exercise rather brought a decline in the return on assets as well as on equity as proven by the pre and post recapitalization means of the variables.

With these findings made, it can be said that investing in more capital does not necessarily lead to an increase in the performance as some practices of management are likely to cause the investment not to yield the needed outcome. From this assertion, the study's second objective which is to examine the regulatory increase on lending behaviour somewhat showed that the banks performed poorly with regards to their lending behaviour seeing that there was rather a decline on the returns made to equity as well as assets.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Banks are known to be key players in the Financial Sector of every economy because of their role as financial intermediaries. Despite the significant role played by banks, the heightened financial crises recorded in economies have questioned the operation of banks worldwide (Hoshi & Kashyap, 2010). To counter this effect, public capital injections were introduced into the banking system, aimed at reducing the financial risks of capital-injected banks, thereby stimulating their lending and profitability. For instance, the financial crisis after the Lehman shock in 2008 and the global downturn that followed compelled technologically advanced countries, including Germany, Ireland, England, France, the US and Switzerland, to implement bank recapitalisation programmes (Nakashima, 2015).

Efforts have been made by developed economies to stabilise their financial system, and emerging economies are no exception as the sector has been clearly under managed. According to Yalley,Djibom, Boachie-Yiadom and Kunawotor (2018), in order to be at par with global trends, Ghanaian banks are compelled to restructure their processes. For instance, the Bank of Ghana (BOG) has put measures in place to periodically revise the minimum capital requirement in order for Banks in Ghana to have the necessary capital needed to curtail such incidence of impaired capital due to bad loan, poor returns on other assets or both (Odonkor, Osei, Abor & Adjasi, 2011).

The Bank of Ghana has over the period increased capital requirements in a bid to make the sector robust and ensure public confidence in the sector. This started in 2004 when the universal banking licence was introduced by the Banking act 2004, where banks were expected to have minimum required capital of 7 million Ghana cedis. Banks had up to the end of 2006 to comply with the directive (Bawumia, 2006). This was further increased to 60 million cedis in 2009, in support of the universal banking act 2004, where banks were expected to operate on a level playing field. During this period, all merchant and development banks obtained Universal Banking licences and operated as such. The minimum capital requirement was further increased to GHS120 million, and in September 2017, another directive was given to increase same for all 34 banks to GH¢400 million (Bank of Ghana, 2018). This requirement, according to the central bank, would indicate the readiness of the banks to operate as universal banks since BOG envisaged that the current capital levels were too low for large volume transactions.

The setting of a minimum capital requirement is not without criticisms, as scholars have emphasised that this approach will expose banks to undue liquidity crisis through increased funding costs and low profits (see Ibrahim, Mohammed, & Gani, 2012; Okpara, 2011). The debate about the impact of recapitalisation on bank performance requires the BOG to find out the real effect of such a decision on banks in Ghana.

## **1.2 Problem Statement**

In the financial region of every economy, banks are seen to play significant roles by channelling funds from deficit spending units to surplus spending units (Akinlo & Egbetunde, 2010; Lebe, 2016). However, the past decade is not without major restructuring of the banking industry worldwide, partly as a result of the recent financial crisis. To curb this crisis, a number of

emergency measures, ranging from state guarantee schemes, to public recapitalisations, forced takeovers and acquisitions, and nationalisations, were introduced (Beccalli & Frantz, 2016).

In the emerging economies, especially Ghana, the Bank of Ghana similarly presented the idea of recapitalising banks in order to reposition, strengthen and address the perceived or impending crises faced by banks as a result of their poor operating performance, persistent illiquidity, unprofitable performance, poor asset quality and lack of extension of credit facilities to the real sectors of the economy, and lack of due diligence on the part of the central bank (Tahir et al., 2017). These issues are evidenced to contribute to the collapse of five banks in the country which includes First Capital Bank, Uni Bank, UT Bank, Beige Bank and Construction Bank. In addition, reports showed that as a result of loan impairment, the capital adequacy ratio (CAR) of the banking industry declined by 2.1% (Bank of Ghana, 2017). This led to the recent wave of mergers and acquisitions (Ablordeppey, 2015) and the take-over of two previously vibrant domestic banks, UT Bank and Capital Bank, by the GCB Bank (Bank of Ghana, 2017). These crises destabilised the financial sector and the economy.

The central bank's raising minimum capital for banks should not be criticised for exercising the responsibility (Ibrahim, Mohammed, & Gani, 2012). This is because many banks see the minimum capital set by the central bank as a way to collapse banks, whereas others appear to have preference of minimum capital requirements that should be set by the regulator. On the contrary, minimum capital is set by the central bank with a goal to create confidence and make the financial sector very robust to stand economic shocks. The Chief of Deutsche Bank in the same vein expresses that increased capital requirements would restrict the capability of banks to give advances to whatever is left of the economy, and this action is detrimental to the advancement of the economy (Admati

& Hellwig, 2013, p.5). This assertion, however, may be subjected to statistical proof in respect of the recapitalisation in the Ghanaian banking sector.

Moreover, research studies conducted on bank capitalisation and performance in Ghana focus on the relationship between capital and performance (Agyei, 2010; Awunyo-Vitor& Badu, 2012; Kumi, Amoamah, &Winful, 2013) and competition (Akomea&Adusei, 2013). Furthermore, literature in this area is dearth in investigating the impact of recapitalisation on bank performance (Yalley et al., 2018). It is against this background that this study intends to find out if indeed recapitalisation has an influence on the activities and performance of the financial sector, precisely banks in Ghana.

### **1.3 Purpose of the Study**

The general purpose of this study is to assess the impact of recapitalisation on the performance of the banking sector in Ghana.

### **1.4 Objective of the Study**

Specifically, this research seeks to:

- i. Examine the effect of the regulatory increase in capital of banks in Ghana on performance
- ii. Examine the impact of recapitalisation on banks' profitability in Ghana

### **1.5 Research Questions**

The following are the research questions the study seeks to proffer answers to:

- i. What is the effect of the regulatory increase in capital of banks in Ghana on performance?
- ii. What is the impact of recapitalisation on banks' profitability in Ghana?

## **1.6 Significance of the Study**

The finding of this research work is useful in three respects: policy, practice and academic. In terms of policy, the findings of this research serve as a document that provides advice to regulatory bodies in their decision making process in relation to the minimum capital requirements for banks in Ghana. This additionally aids government officials and policy makers to ascertain techniques to induce banks to improve their performance and enhance economic growth. Furthermore, the outcome of this study provides insight to experts in the financial sector with comprehensive and up-to-date financial information in carrying out their services to their clients, prospective investors and other interested parties. For players in the academic arena, consisting of students and researchers, this study contributes to literature by providing a comprehensive view and understanding on the topic of Bank Recapitalisation. It also adds to existing literature which serves as a reference document for further research.

## **1.7 Organisation of the Study**

Chapter one, which is the first chapter, presents the background of the study, the problem statement, the purpose of the research, study objectives, significance of the study and organisation of the study. Chapter two reviews relevant and existing literature in relation to the study. Chapter three, the methodology, outlines the research design and approach, sampling techniques, research instruments used and data analysis methods and techniques employed for the study. Chapter four focuses on the presentation of data from secondary sources, analysis and discussion of empirical results. Chapter five presents the summary, conclusions and recommendations for the study.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter discusses and evaluates theoretical and empirical literature depicting the effect of the recapitalisation of banks on performance. The chapter focuses on the concepts of bank recapitalisation, historical development of banking, the role of the banking sector in Ghana's economy, status of the banking sector, the impact of recapitalisation on bank performance, banks performance indicators, empirical reviews and conclusion.

#### 2.2 The Concept of Bank Recapitalisation

The concept of recapitalisation is practiced all over the world as a means of strengthening the banking sector. Recapitalisation in Ghana was to salvage the collapse of the banking sector through the introduction of different restructuring programmes. According to Tomec and Jagrič (2017), capital is described as the amount of own funds available in a bank's business. Beccalli and Frantz (2016) explain recapitalisation as the sale of new equity in a bank to interested investors in the market or to a government organisation without the loss of independence. Jimmy (2008) is of the view that recapitalisation is a way of restructuring banks' debt and equity mixture, most regularly with the objective of making banks' capital structure more stable accordingly. In addition, recapitalisation happens when banks change their capital unit; it is used to enhance banks debt/equity ratio, and it can also be explained to be the main change in the way a bank is being financed (Raji et al., 2018). Recapitalisation is seen as one of the tactics used by banks to fortify their banking system from the likelihood of bank failures. As a result, banks cannot refute that

capital is one of the most significant elements to run their business (Ernovianti, Ahmad and Mazlan, 2016). Over the years, bank recapitalisation has been the major issue, which has led to the central bank of Ghana' directive that all banks, both domestic and foreign banks, should recapitalised up to 400 million Ghana cedis. The BOG argued that “this will further develop, strengthen and modernise the financial sector to support the Government’s economic vision and transformational agenda” (PWC, 2018). This situation is as a result of the non-existence of deposit insurance scheme like in the case of the United States of America (USA), where they have deposit insurance scheme called U.S. Federal Deposit Insurance Commission (FDIC) (Tomec and Jagrič, 2017). Therefore, bank recapitalisation is essential to restore confidence in depositors about the bank solvency and warrant the security of deposits (Tomec and Jagrič, 2017). Ifechi and Akani (2015) is of the view that the banks want recapitalisation because it maximises the liquidity, capital adequacy, quality management structure, quality of assets and earnings quality. Recapitalisation is one of the most important features in the banking sector, as it improves the development of banks (Ailemen et al, 2014).

Recapitalisation of banks has been accepted as the right step of helping domestic banks compete globally. Recapitalisation by banks can be in the form of injecting new capital, capitalisation of reserves, merging of businesses to become strong entity and government-sponsored recapitalisation programmes geared at offering emergency capital to struggling banks (Poczter, 2016). However, a banking catastrophe can be activated by a weakness in banking sector as a consequence of persistent undercapitalisation, insolvency, illiquidity, high level of non-performing loans and feeble corporate governance structure and many others (Oluitan et al., 2015).

### **2.2.1 The Effects of Bank Recapitalisation in the Financial Sector**

Bank recapitalisation assists banks to take out harmful assets quickly and more proficiently, maintain security, and funding new lending as well as several activities. Then, if capital injection is done in an appropriate amount and quickly, it has an impact on bank performance. Moreover, the achievement rate of recapitalisation rests on the ability and the preparedness of stakeholders to inject new capital (Tomec and Jagrič, 2017).

As a result, central and federal banks ensure that banks adhere to the regulations set in order to safeguard stability for the future. Ghana is a classic example of this situation, where after the oil discovery in the country, the Bank of Ghana directed all banks to recapitalise with a minimum capital of 25 million Ghana cedis for local banks and 60 million Ghana cedis for foreign banks (Ntow–Gyamfi and Laryea, 2012). This raises a question of why the Bank of Ghana (BOG) failed to apply selective policies in the past for domestic and foreign but rather directed all banks to meet a minimum capital of 400 million cedis, resulting in the collapse of locally-owned Ghanaian banks.

According to a report by Basel Committee on Banking Supervision (2009 and 2010) as mentioned in (Beccalli, Frantz and Lenoci, 2018), recapitalisation makes banks strong and financially sound in times of financial crisis. A study done in Indonesia established that recapitalisation maximised lending by 3.6 million Indonesian rupiah (IDR), 1.5 standard deviation beyond the pre-crisis control group mean, and even more so for bigger banks. Furthermore, the study indicated that capitalisation leads to a 40% net growth in bank risk, with recapitalised maximising risk and non-

recapitalised minimising risk. Moreover, both of these are key outcomes persistent in eight years post-intervention.

Recapitalisation has triggered some banks to announce plans and efforts to increase capital locally. Nevertheless, Ghana's capital market is undergoing harsh circumstances and normally these seem that banks would find it difficult to raise the capital needed to meet the central bank requirements. In view of the situation, local banks are the hardest hit than the foreign banks (PWC, 2018). In line with the regulator's directive, some banks have decided to merge with others, and one example is a request by BSIC and Omni Bank to amalgamate their businesses. On the other hand, seven other domestic banks have had their licenses withdrawn by the BOG and their businesses combined into one entity, now called Consolidated Bank Ghana (CBG) Limited (PWC, 2018).

A similar situation happened in Nigeria, where the Central Bank of Nigeria in 2005 undertook a recapitalisation programme in which minimum capital requirement was raised to N25 billion (US\$192.2 million) from N1 billion (US\$7.7 million) for existing banks and N2 billion (US\$15.4 million) for new players. This circumstance led to reduction of banks from 89 to 25, which arguably merged some banks into one, creating stronger banks that had the ability to participate at a regional level, beyond Nigeria. This led to entry of Nigerian banks into Ghana including Zenith Bank, GT Bank, UBA, Intercontinental (now FBN Bank) and Access Bank (PWC, 2018).

On the contrary, recapitalisation had a negative effect on employment; there are many instances where employees of banks have lost their jobs as result of recapitalisation. In the USA, statistics show that 12.5million Americans were jobless, and many were anticipated to join the list of the

unemployed. Laid off workers were unable to contribute entirely in economic decisions, requiring varied expenditures due to the recapitalisation introduced in 2009 as result of global financial crisis. A similar situation happened in Nigeria, where many bank workers were rendered jobless and those who depended on them also lost their businesses. This situation contributed to the high incidence of crime in the country (Kanu and Hamilton, 2015). Ghana is not an exception from the effect of recapitalisation, as many workers of UT bank, Capital bank, Construction bank and others lost their jobs.

### **2.3 Historical Development of Banking**

Majority of banks in Africa have witnessed major transformation in their effective environment of which Ghana is not an exception. In many of the countries, financial sector reforms have been executed (Nkegbe and Ustarz, 2015). After attainment of independence, specialised banks in Ghana such as National Investment Bank, Agricultural Development Bank (ADB) and others were setup to support several developmental projects in the country. From that period, through government industrialisation and import substitution policy, many state owned-businesses were created. An example is Ghana Industrial Holding Corporation (GIHOC) which was part of the SOEs established by the government (Akomea and Adusei, 2013). Throughout the period, most banks use traditional means to operate, and innovations were the least because of lack of due diligence in loan approvals, corruption, huge bad debts, with their statement of financial position showing high levels of non-performing assets, weak bank regulations and uncontrolled political interference (Aboagye-Debrah, 2007). In the late 19th century, Ghana's banking sector saw bigger structural changes through a Financial Sector Adjustment Programme (FINSAP) introduced in 1988 (Owusu-Antwi, 2009). This programme informed researchers like Antwi-Asare and Addison

(2000) to group the structural period into Pre-Financial Sector Period and Post-Financial Sector Period. This financial policy was part of the Economic Recovery Programme (ERP) which primary objective was to streamlined challenges in the financial sector and reorganise troubled banks to improve financial liberalisation (Owusu-Antwi, 2009).

In the early 2000s, the number of banks in Ghana stood at 17 and the banking industry was somewhat comfortable for the bigger banks whilst smaller banks progressively captured the market share although insignificantly. The Bank of Ghana introduced Universal Banking License in 2003 which made the banking industry very competitive. Under the new license policy, banks were required to have a minimum capital of 7 million (Akomea and Adusei, 2013). In the year 2005, two foreign banks from Nigeria, Standard Trust Bank (United Bank of Africa) and Zenith Bank, joined the banking industry and were permitted to operate as universal licenced banks. Additionally, in 2006, Guaranty Trust Bank, Intercontinental Bank (now FBN Bank) and Fidelity Bank, two banks from Nigeria and one from Ghana were granted Universal Banking License. Also, new technology such as Automated Teller Machine (ATM) services emerged in the banking sector which made banking convenient (Akomea and Adusei, 2013).

Furthermore, major reforms transformed the banking sector, resulting in high competition reforms including extension of banking hours, reduction of loan approval waiting time less than 48 hours from normal waiting time (Akomea and Adusei, 2013). The use of bullion vans to transfer huge sums of money to banks became the order of the period in 2006. Between 2006 and 2009, four new licensed banks joined the financial sector, including Sahel-Sahara Bank, Bank of Baroda, Energy bank and Access Bank (Akomea and Adusei, 2013).

### **2.3.1 The Role of Banking in an Economy**

Banks act as representative for financial intermediation that permits mobilisation of surplus funds to the discrepancy sector of the economy attributes great status to the activities within the economy (Oluitan et. al.2015). The banking sector is segmented into parts which include corporate banking, investment banking, retail banking, wealth and asset management (Manu, Gnanendra and Ayushi, 2018). The role of a bank is important in any economic development pattern of the strength of the financial sector. Hence, the banking industry is the most critical sector of an economy and signifies one of the most significant aspect of a nation's capital. As a feature of their essential obligation, business banks go about as budgetary middle people among savers and financial specialists. What's more, they fill in as a methods which the controller (Central bank) executes its money related strategy, and they work as the key mode of instalment for organizations (Opoku-Agyemang, 2015).

Again, banks are fundamental of the financial sector particularly developing countries where the capital market is week. In most cases where the capital market has not developed enough, as a result banks serve as vital sources of funds for businesses. Therefore, the survival and dependably good performance of banks is a subject of concern to all (Ntow – Gyamfi and Laryea, 2012).

Capitalization permits banks to better endure financial and real shocks. Recapitalization increases the capability to raise non-insured debt and so banks' ability to limit the influence of a drop-in deposits on lending (Ashcraft, 2001). A comprehensive research conducted by Gambacorta and Mistrulli (2004), using data for Italian banks in 1992, established that well-capitalized banks improved on the absorption of temporary financial complications on the part of their borrowers and still kept long-term lending relationships.

Banks that are well capitalised can likewise improve loaning security from money related stuns as they have simpler contact to non-guaranteed subsidizing. Positively, credit development of incredibly utilized banks is more responsive to money related approach than the advance development of well-promoted banks (Kishan and Opiela, 2000). Thus, the negative impact of higher momentary loan fees using a loan accessibility is more grounded for saves money with lower capital. An information from Spanish credit register recommended that one percent expansion in the financing cost diminishes advances allowed by less-promoted banks by 3.9 percent more than advances conceded by well-promoted banks Jimenez et al. (2012).

Thus, the essential job of banks exudes as another type of financing explicitly roundabout financing. This is the road whereby monies are guided from savers to borrowers through budgetary mediators. As result, banks work as the key association that play out the money related intermediation job (Opoku-Agyemang, 2015).

In the capital market banks play major roles such as brokerage function where banks act as an intermediary between savers and lenders which help to minimize transaction and information costs for the lenders and savers; they function as asset transformation into two forms including asset diversification and asset evaluation function. In relation to asset diversification, the important role as intermediaries is changing huge-denomination financial assets into lesser units (Opoku-Agyemang, 2015).

On the contrary, PWC (2014) study indicated that legislation will be an important force of modification in the Ghanaian banking sector. The report suggested that most of the bankers surveyed pointed out that legislation and regulation would be in midst of top three aspect that

would push the future of the industry. Some bankers were in the opposite that direct participation through market involvements made by the central bank, would have an outcome on the operations of banks. It was also detected that the initiation of a Valued Added Tax (V.A.T.) rate of 17.5% would lead to more pressure as it were in the industry because banks were previously facing shrinking profits mainly linked to some governing measures put in place by the Bank of Ghana. It was established that banks were united in the view that should V.A.T. be enforced on banks, the cost would eventually be handed on to the customer given that banks had to protect the interest of their shareholders (PWC,2014).

### **2.3.2 Status of the Banking Industry in Ghana**

Ghana's banking industry entails national system of licensed and statutory financial organisations involved in the business of banking regulated under the banking laws of Ghana. The banking sector is regulated by the Central Bank of Ghana. In 2012, Deposit taking financial and Non-Bank Financial Institutions were 26 and 52 respectively. By the end of 2005, net interest margin reduced from 9.6% to 6.5%. Again in 2009, return on assets (ROA), return on earning assets (ROEA) and return on equity used to measure profitability ratios of DMBs had seen progressive decline since 2007 (BoG, 2012).

Minimum capital requirement (MCR) was first introduced by the central bank in 2003. Licensed universal banks were mandated to have a minimum capital of 70 billion cedis (now 7 million Ghana cedis). From that period onwards, banks were directed to hold 9% of the cedi and forex deposit base with the central bank on day-to-day basis as primary reserves and 35% (later adjusted by 15%) of deposits primarily cedi denominated assets as secondary reserves (Akomea and Adusei, 2013). After the redenomination of the Ghana cedi in 2007, banks were obligated to

increase their minimum capital from GHS 7 million to GHS 60 million, however foreign banks were required to hold a minimum capital of GHS 60 million and GHS 25 million for domestic banks (Monetary Capital Markets and African Departments, 2011).

The banking sector is governed by laws of Ghana, and it is regulated by the Bank of Ghana. In 2002, the Bank of Ghana Law 1992 (PNDCL 291) was substituted with Bank of Ghana Act (2002) (Opoku-Agyemang, 2015). The Banking Act 2004 (Act 673) was passed in 2005 to replace the banking law 1989 with the aim to fortify its risk based on sensible supervision policies (Monetary and Capital Markets and African Departments, 2011). The introduction of Banking Act 2004 (Act 673) aided in setting up international financial services in Ghana; for instance, a local subsidiary of Barclays Bank was granted license to start business as an off-shore bank (Monetary and Capital Markets and African Departments, 2011).

Universal Banking Business license (UBBL) was introduced in 2003 which gave banks the opportunity to involve in all acceptable businesses without restriction and compartmentalisation. Again, the licence policy is to eliminate three banking pillar model such as commercial banking, merchant banking and development banking (Bank of Ghana, 2011). The banking sector witnessed a major change in 2006 where the Central Bank of Ghana removed secondary reserve requirement of 15% as a way of creating more cash, accessible for private sector lending. It still held the basic reserve requirement of 9% (BOG, 2006). Moreover, The Foreign Exchange Act 2006 (Act 723) and Whistle Blowers Act 2006 (Act 720) were also passed in the same year. In 2007, the banking sector was shaken with the passage of Banking Amendment Act 2007 (Act 738) and Credit

Reporting Act 2007(Act 726). This Act by parliament sought to provide total legislative transformation targeted at developing a robust banking industry in Ghana (BOG Report, 2007).

According to Opoku-Agyemang (2015), banks which started in the country were Bank of British West Africa established in 1896 and Barclays Bank DCO in 1917. A study conducted by Opoku-Agyemang (2015) demonstrates that foreign banks such as Ecobank, UBA, Zenith Bank hold 60% of operating assets and deposits. Reports on the banking sector indicate that in 2013, 50% of the industry's assets and deposits were owned by six banks; where 5 out of the six were foreign banks and one was a Ghanaian owned bank. These six banks were Ecobank, Stand Chart Bank, Zenith Bank, UBA, Barclays Bank and GCB Bank.

## **2.4 Banks Performance Determinant Indicators**

### **2.4.1 Liquidity Indicators**

The financial sector stays on sufficient liquid to attain its short-term commitments. There are some primary liquidity indicators that showed a number of enhancements in the financial sector as at the end of December 2018 compared to December 2017. The sector's primary liquid assets to overall deposits percentage increased to 43.3 percent in December 2018 from 41.8 percent in December 2017 due to an increase of 21.7 percent in banks' liquid assets (cash and near cash items). In the same way, core liquid assets to total assets increased to 27.6 percent from 26.0 percent during the review period. The sector's huge liquid assets (cash, due from banks and investments) attained a maturity of 28.4 percent year-on-year to some extent, due to the issuance of the ESLA bond and the current Government of Ghana bond to balance the liabilities of the 5 non-operational banks

that merged into the Consolidated Bank Ghana (CBG). Huge liquidity indicators enhanced, with broad liquid assets to total deposits increasing to 98.6 percent from 90.1 percent and broad liquid assets to total assets increasing to 62.7 percent from 56.0 percent in 2018 to 2017 (BOG Report, 2018).

#### **2.4.2 Capital Adequacy Ratio (CAR)**

The financial sector stayed solvent, with Capital adequacy ratio at 17.9 percent in December 2017, and remained at 17.8 percent in December 2018, which is considerably above the 10.0 percent prudential limits. The industry's Risk-Weighted Assets (RWA) to total assets (excluding UT and Capital banks) was 61.3 percent in December 2017 compared to 63.7 percent in December 2018, suggesting some moderation in the industry's risk-weighted assets (BOG Report,2018).

#### **2.4.3 Profitability**

The financial sector distributed a strong salary proclamation execution in December 2017 contrasted and the presentation in December 2016. This reflected in an improvement in the year-on-year development of the areas' networking salary from 4.3 percent in December 2016 to 11.1 percent in December 2017 on report of lull in the part's working costs, prevalently staff costs. The area's net intrigue salary still kept up a slower year-on-year development from 17.3 percent to 12.6 percent during the period under survey. The enhanced net operating income performance converts into a better income before tax performance with a 13.3 percent increase in December 2017 from 3.4 percent a year earlier. In the same way, the sector's net profit after tax posted a 10.0 percent growth in December 2017 after contracting by 1.0 percent a year ago. (a) Return on Assets and Return on Equity the industry's key profitability indicators, namely, after tax return on equity

(ROE) and before tax return on assets (ROA) moderated in December 2017 compared with the same period last year. Percent Composition of Income (%) Investments Loans Commissions & Fees Other Income (b) Interest Margin and Spread, the ratio of gross income to total assets (asset utilisation) rose from 17.1 percent in December 2016 to 17.8 percent in December 2017, pointing to a development in the income created from assets. Banks' interest spread still declined from 15.0 percent to 12.3 percent during the same review era, reflecting the lower earnings on money market instruments. Banks' interest margin to total assets still unchanged at 8.1 percent, on the other hand interest margin to gross income declined from 47.4 percent in December 2016 to 45.6 percent in December 2017, reflecting a decline in the proportion of bank's income from interest margin subsequent to the decline in money market rates. Arrangement of Banks' Income from loans formed 46.4 percent of the industry's total income in December 2017, from 50.7 percent a year ago, indicating falling lending rates and slowdown in credit extension in the face of rising NPLs.

In contrast, the share of income from investments (both short and long term) raised from 33.5 percent in December 2016 to 38.0 percent in the present period, pointing to shifts in banks' portfolio preferences despite declining money market rates. The share of fees and commissions in total income fell marginally from 10.6 percent in December 2016 to 10.2 percent in December 2017, while 'other' income, recorded a marginal share increase from 5.2 percent to 5.5 percent during the period under review (BOG Report, 2018).

#### **2.4.4 Operational Efficiency**

The banking sector's effectiveness indicators are generally enhanced, with banks earning a smaller amount for every piece of income created or asset employed. The sector's cost to overall assets percentage reduced to 12.1 percent in December 2018 from 14.4 percent in December 2017,

whereas the cost to revenue percentage reduced to 84.3 percent from 86.3 percent during the same time, pointing to some enhancement in the sector's total efficiency. Banks' operational cost to total assets ratio also reduced to 7.8 percent in December 2018 from 8.4 percent in December 2017. On the other hand, operational cost to gross income ratio improved to 54.1 percent from 50.1 percent during the period under review, due to a slowdown in the development of the sector's gross income.

## **2.5 Theoretical Reviews**

### **2.5.1 Bank Capital and lending Cycle**

Okpala (2013) argued that bank capitalisation is connected to risk taking character and bank portfolio choices. This suggests that lending of banks responds to the degree of capitalisation (Okpala, 2013). Hellman, Murdock and Stiglitz's (2000) model contended that well-capitalised banks are not as much of risk. The key conclusion of the model is that, if the effort aversion result is larger than the asset substitution impact, advanced capital standards influence banks to take on averagely more risk. The conjecture that well-capitalised banks are more risk-averse can also be buttressed, interpreting excess capital as a pillow against contingencies (Leonardo & Paolo, 2003).

### **2.5.2 Theory of Financial Intermediation**

Diamond (1984) propounded the theory of financial intermediation, grounded on determining incentive issues between borrowers and lenders. Further, the theory examines the role of financial intuitions in the flow of fund from fund provider, depositors and investor to borrowers or customers. In this case, the bank acts as a third party by taking money from account holders or an investor and investing the money or offering loans to customers.

This growth has delivered a different long-term rise in market capitalisation comparative to GDP. Even though larger banks' capital decreases the likelihood of financial distress, it also decreases liquidity creation. According to Diamond and Rajan (2000), bank capital structure cancels off effects on liquidity formation, costs of bank distress and the ability to force borrowers' repayment.

#### **2.5.4 Capital Regulation**

In the 1998 initial Basel consensus, capital regulation was the major factor of banking regulations. The main view was that more capital ought to make banking industry enhanced enough to be able to hold losses with their resources, without becoming insolvent or demanding bailouts with public funds. In such manner, administrative accord considers cash-flow to be a weapon for forestalling hazard taken created by constrained obligation and fortified by store protection and bailout desires. Capital guideline and its usage was lacking in controlling the emergency in the monetary frameworks and thus required government intercession around the globe to avoid the destruction of banking foundations. Besides, a gigantic piece of the safeguarded foundations appeared to be in concurrence with least capital prerequisites right away previously and all through the money related emergency (Demirguc-Kunt, Detragiache, and Merrouche, 2013). Capital necessities would give two situations in alternate point of view that may impact fundamental hazard. On the opposite side, capital could conceivable limit the individual hazard taking conduct of banking establishments and thusly backing to diminish orderly hazard, for the reason that individual hazard is a significant piece of foundational chance. Additionally, banking foundations answer to capital prerequisites may empower association inside the financial framework, and as an impact, increment fundamental hazard.

In this way, diminishing individual hazard may not in every case at the same time decrease by and large foundational chance (Zhou, 2013).

From the perspectives appeared above, Demirguc-Kunt et al. (2013) inspected the handiness of current administrative capital guidelines and confirmed hypotheses that help the utilization of capital guideline breaking point bank hazard taking motivating forces and grasping misfortunes. It inferred that, more grounded capital levels are basic components during foundational emergencies. Henceforth, connoting that the present spotlight on reinforcing capital necessities is fitting. Besides, they set up more noteworthy conspicuousness on 'higher quality capital' as substantial resources. Fanti (2014) led an examination on the impacts of capital accords recommended by BIS (Basel I, Basel II, and Basel III). The investigation reasoned that presentation of accurately high capital necessities is compelling for goal of protecting or reestablishing banking area security with heterogeneous and homogeneous banks' desires.

## **2.6 Expected Bankruptcy Cost Hypothesis**

This theory obtains from the Modigliani and Miller Proposition II or MM II (Modigliani & Miller, 1963). The MM II states that banks can maximise their worth by borrowing and benefiting from high taxes. However, influences ahead of a certain point corrode the tax gains and expose banks to financial crisis and bankruptcy. For that reason, banks seek to obtain stability connecting the suitable stages of influence which decreases this threat.

Therefore, in the period of high possibility of bankruptcy, banks hold more impartiality to safeguard them alongside likely financial crisis and insolvency (Berger, 1995). This allows banks

to fund their assets at lower interest rates and therefore boost profits while using the surplus capital as insurance in opposition to future unfavourable developments (Athanasoglou, Brissimis, & Delis, 2008). Hence, an increase in bank capital could be an attempt to pre-empt a possible catastrophe linked with high leverage. Hence, an improvement in banks' minimum capital requirement is likely to lead to an enhancement in performance.

## **2.7 Empirical Review**

Manu, Gnanendra and Ayushi (2018) assess the outcome of recapitalization on the presentation of Indian open segment banks. The investigation reasoned that, there is basic contrast in Earnings per Share (EPS) and Net non-performing resources of picked open segment banks during pre and post declaration of recapitalization. In any case, it was uncovered that no critical difference in Nifty PSU stock file during pre and post recapitalization declaration.

Nakashima (2016) looks at an econometric assessment of bank recapitalization programs with bank-and credit level information with essential spotlight on Japan's two huge scale capital infusions in 1998 and 1999. Information was assembled from three sources which contains bank level board information, bank equalization and pay information from Nomura Research Institute. The information assembled are semi-yearly established on budget report related by Japanese banks for the main half and the entire year beginning from September 1997 through March 2002. The outcomes from the examination inferred that the two open capital infusions (First and Second capital infusions) basically limited the monetary dangers of the capital-infused banks which supported to balanced out Japanese financial framework.

Tomec and Jagrič (2017) researched the outcomes of bank recapitalization on productivity during the ebb and flow worldwide money related emergency. The examination inspected 91 sorted out banks from European Union and United States of America. It was presumed that tremendous sum recapitalization supported to build benefit of banks in the time of one year. In spite of the fact that it performed contrarily in the initial two years however it ended up positive when it was tried toward the finish of the period.

Montgomery and Shimizutani (2009) investigate the effectiveness of bank recapitalization policies in Japan. A data was gathered from 109 banks in Japan from their statement of financial position and income between the periods of 1990-1992. The results indicated that capital injections had great impact on bigger international banks than small local banks in Japan. The study also establishes that in 1997, capital injection assisted big international banks to clear the 8% capital adequacy ratio while the second-round capital injection in 1998 helped to support the capital adequacy ratios for bigger international banks and local banks aiding to banks to write off bad loans and increase local lending for small and medium enterprises.

Montgomery and Takahashi (2014) conducted a research on the economic consequences of the Troubled Asset Relief Program (TARP): The adequacy of bank recapitalization arrangements in the U.S. Information was incorporated from yearly accounting reports and pay proclamations recovered from Report of condition and salary (Call Report) information and data was additionally taken from area and lawful structure of banks kept up and made open by the Federal Reserve. The examination discovered that Troubled Assets Relieve Program (TARP) present did not achieve the predefined program target of invigorating bank loaning. Interestingly, we find confirmation that

recipient banks developed resources extensively slower, overwhelmingly vigorously chance weighted resources, for example, advances.

Tahir, Adegbite and Guney (2017) directed a worldwide assessment on the financial adequacy of banking recapitalization. The investigation utilizes macroeconomic factors, for example, stock lists, loaning rate, modern generation swapping scale and swelling rate which were achieved from Thomson Reuters Data stream in quarterly arrangement. It was inferred that, macroeconomic markers in these economies have reacted to banking recapitalization in a related way. In any case, the likenesses speak to different divisions, with a remaining of comparative conduct for macroeconomic factors of develop countries from one perspective, and furthermore, a comparative conduct for the factors of creating countries then again. In this occasion, it was built up that the majority of the creating economies in the example reacted to recapitalization with an ascent in mechanical generation. In any case, on account of the created economies, there was a fall in modern generation.

Beccalli and Frantz (2016) conducted a study on factors that determine if a bank will be taken over or recapitalized before and during financial crisis using multinomial logistic model. Their results showed that low interest margins determine if a bank will be taken over while banks with lower equity and positive growth are recapitalized. Banks with larger equity that are operating in bigger banking systems are publicly recapitalized while banks with less equity are privately recapitalized.

Poczter (2016) evaluates the impact of Indonesia's bank recapitalization program on lending and bank risk following the Asian financial crisis of 1997. A collection of data was used for the study which comprises financial statements gathered from the various commercial banks in Indonesia

from 1993-2000. The study established that, recapitalization helped to increase lending for bigger banks, however its enhanced bank risk in the long term.

Echekoba (2014) assessed the level to which Banking industry capitalization has improved the Nigerian economy, whether the capitalization of banking sector heightened the banks' lending ability for the period of eight years. It was established from the study that, the banking capitalization has no important effect on the growth and development in the Nigerian economy as in an effort to endure in the highly competitive banking industry.

Yalley (2018) conducted a study on the impact of bank recapitalization in Ghana between local and foreign banks performance. The researchers collected data from 2009-2015 with the exception of 2012 because, 2012 was the year the recapitalization was directed by the Bank of Ghana (BOG) on three indicators such as Return on Equity (ROE), Return on Assets (ROA) and Profit before Tax (PBT) from 22 commercial banks. It was established from their findings that recapitalization program introduced by the BOG in 2012 has enhanced bank performance on ROA, ROE and PBT.

Akomea and Adusei (2013) directed an investigation on the fixation levels of the financial business in Ghana and gauges the future focus levels of the business should combinations created by the new bank recapitalization strategy happen in the business. It was uncovered that Herfindahl-Hirschman (HHI) lists offers proof for the contentions that for as long as eight years the financial area has been amazingly aggressive without any indications of focus.

## **2.7 Conclusion**

Recapitalisation is a regulatory tool that central banks can use to reform and create sanity in the financial sector. It is also seen as a disruptive weapon to banks, especially small banks. For this reason, it is important for stakeholders in the financial sector to come together to find a common ground when the regulators want to introduce it in order to prevent arm length relation between the regulators and banks.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the methodology and importance models adopted for the study. It covers how the research was conducted and this includes research design, sample size and technique, sources of data collection, study population and conclusion.

#### **3.2 Research Design**

Polit et al. (2001) are of the view that research design is an overall arrangement for conducting the study to support answers for the research question. Saunders et al. (2007) also define research design as the general idea of how the research questions would be answered. The research design reveals the steps that should be followed in conducting the research. The study employed quantitative approach. Quantitative research is objective, measurable and usually stresses on quantification in collection and analysis of data (Bryman & Bell, 2007). In addition, descriptive research was used in this study, because it gives a correct profile of the selected event or organisation. Yauch and Stendel (2003) posited that employing a quantitative approach normally gives outcomes that are greatly independent of the one carrying out the study, since it entails thorough processes and procedures that places a limit on the researcher's influence on the results of the research, hence making it possible to come out with a better, true picture and fair state of affairs as far as the subject matter being studied is concerned.

### **3.3 Population**

Population can be explained as the entire group of individuals, events or things of interest that the researcher desires to study. Babbie (2007) explains that population connotes a group that the researcher has interest in for the purpose of generalisation. There were thirty-two (32) commercial banks in Ghana as at 2016. The population studied covers these thirty-two banks but excludes the year 2012. This is because the study wants to assess the impact of the 2012 recapitalisation, and it is perceived that in the same year the recapitalisation took place, its impact would not be seen or reflected on bank performance, hence the exclusion of the year 2012 from the study.

### **3.4 Sample Size and Sampling Techniques**

A sample is a segment of the population that has characteristics as the entire population (Bryman and Bell, 2003). The sample size for this study is expected to be lower than thirty-two banks that were in operation during 2016. This is because the study would want to make comparison between pre-recapitalisation and post recapitalisation of the 2012 minimum capital requirement. This then means that banks that were in existent in 2008 through till 2016 were sampled for the study. The sample was grouped into pre and post recapitalisation period. After the groupings of the pre and post recapitalisation period, the study compared the performance measures for the two groups which are in line with that of Adegbaaju and Olokoyo's (2008) research conducted in Nigeria.

### **3.5 Data Collection and Source**

Data collection can be described as employing the selected approach of investigation and using the right procedure in systematic and professional manner. There is no best method a researcher is obliged to use, therefore appropriate method should be driven by the research questions (Robson,

2002). Saunders et al. (2009) opined that data collected is determined by research objectives, research questions and what is being studied. The data was obtained from secondary source, i.e. from annual reports of the banks involved in the study. Data collected was properly arranged in excel and some computations were done, especially with those variables that could not be traced straight away from the financials of the banks. The bank performance measures that considered include Return on Assets (ROA), Return on Equity (ROE), and Profit before Tax (PBT) margin. The average bank performance prior to recapitalisation was compared to performance after recapitalisation, using the paired sample t-test to ascertain whether there is a statistical difference in performance of banks after the recapitalisation policy took full effect.

**Table 3.1 Measures of Bank Performance and Definitions**

<b>Classification</b>	<b>Description</b>	<b>Computations</b>
<b>Dependent variable</b>		
Return on Equity (ROE)	This refers to return on investment for shareholders or owners of the bank.	Calculated as the ratio of net income after tax to total equity provided by shareholders
Return on Assets (ROA)	This ratio gives an indication of managerial efficiency. It shows how capable the management of the bank has been converting the bank's assets into net earnings.	Computed as the ratio of net income after Tax to total assets
Net profit Margin (NIM)	Net interest margin measured as net interest income to average earning assets..	Net interest margin measured as net interest income to average earning assets.

### 3.6 Estimation Technique

The paired t-test is a statistical tool which is used to test the effectiveness of a treatment by making comparison of performance before and performance after a treatment. The treatment for this study is the imposition of the 2012 minimum capital requirement by the bank of Ghana on banks that were in operation at that time. Assuming the performance of a particular bank before the directive was  $x$  and its performance after the directive was  $y$ , then the effect of the directive on the performance of the bank  $i$  would be  $d_i = y_i - x_i$ . The researcher then goes ahead and find the effect of the recapitalisation directive on the performance of each bank in our sample, assuming there are  $n$  banks as the sample size. Next, the study finds the average effect or mean difference of the recapitalisation directive on the performance of all banks in our sample as:

$$\bar{d} = \frac{\sum_{i=1}^n (y_i - x_i)}{n-1} = \frac{\sum_{i=1}^n d_i}{n-1} \quad (\text{Eq. 1})$$

Standard deviation is calculated on the effect of the recapitalisation directive on bank performance as below:

$$sd_d = \sqrt{\frac{\sum_{i=1}^n (d_i - \bar{d})^2}{n-1}} \quad (\text{Eq. 2})$$

This standard deviation aids in the computation of the standard error ( $SE_{\bar{d}}$ ) of the effect of the directive on bank performance as:

$$SE_{\bar{d}} = \frac{sd_d}{\sqrt{n}} \quad (\text{Eq. 3})$$

With the mean difference and standard errors of the mean difference computed, the next stage is to calculate the t-statistic as follows:

$$t - statistic = \frac{\bar{d}}{SE_{\bar{d}}} \text{(Eq. 4)}$$

The t-statistic follows a t-distribution with  $n - 1$  degrees of freedom. Therefore, the value of the t-statistic is compared with the  $t_{n-1}$  distribution, which gives the p-value of the paired sample t-test. The null hypothesis of the paired sample t-test is that the true mean difference is zero, against an alternative hypothesis that the true mean difference is not equal to zero. The null hypothesis is rejected when the t-statistic is greater than the  $t_{n-1}$  distribution or when the p-value is less than 0.05.

This procedure is employed in assessing the impact of bank recapitalisation directive on the performance of banks in Ghana. The approach provides a simple and straightforward way of assessing the impact of recapitalisation directive on bank performance.

### **3.7 Conclusion**

The chapter discussed into detailed the methodologies as well as the data source and estimation strategy that was employed in achieving the objectives of the study. The chapter also captured the explanations to the various variables that were used in the study and justifies their use.

## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION

#### 4.1 Introduction

This chapter of the study covers a presentation of the findings made, its analysis, as well as a discussion of it with regards to the study's objectives. The chapter highlights the descriptive statistics of the variables used, a test for equality of the means, and a discussion of the entire findings. The findings as computed are presented in tables.

#### 4.2 Descriptive Statistics

The table below is a presentation of the summary of the descriptive statistics of the variables captured in the study's model. The statistics were generated to provide the general depiction of the data made use of in the model so as to allow the researcher look through it for any doubtful figure. Among the key descriptive measures are the observations, the mean, standard deviation, the maximum, as well as the minimum values of the variables highlighted, over the period within which the study is being conducted.

**Table 4.1: Descriptive statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	246	0.042	0.202	-0.171	3.151
ROE	246	0.190	0.482	-0.361	4.434
NIM	246	0.061	0.257	-0.375	3.969

*Source: Researcher's computation (2019)*

As evident in table 4.1 above, ROE had the largest standard deviation of 0.482 (48.2%) which is an indication that return on equity for shareholders and owners of the bank had a more significant variance as the other variables over the period. The data presented also shows that on the average, banks are getting more 19% return on their equity. The maximum value for ROE as presented in the table is 4.434, indicating a 443.4% post-tax profit to total equity over the period. It also recorded a minimum value of -0.361, meaning there was 36.1% decline of the total equity.

ROA on the other hand had a maximum value of 3.151 and a minimum of -0.171 showing a 315.1% of net income after tax to total assets and a 17.1% decline. ROA had the least average as well as standard deviation as compared to all 3 variables. On the average, the data computed showed that banks are getting 4.2% return on their assets for the entire period and a standard deviation of 20.2%.

The highest NIM observed from the table is approximately 397%, and the least being -37.5%. Its mean for the periods of study as computed is 6.1% with a standard deviation of 25.7%.

### **4.3 Test for Equality of Two Means**

The researcher again computed for the test of equality of two means and this is presented in *table 4.2* below. The table highlights the findings that were made before and after the recapitalization of the three performance indicators; the Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM) of the selected banks in the country based on the approach used in Adegbaaju and Olokoyo (2008).

**Table 4.2: Pre and post recapitalization means of performance variables**

Period	<u>Variable</u>			Obs.
	ROA	ROE	NIM	
pre-recap (%)	4.27	15.45	6.09	141
post-recap (%)	4.12	13.69	6.23	83
diff (%)	-0.15	-1.76	0.14	
t-statistic	0.05	-1.20	-0.04	
	<u>p-values</u>			
Ha: diff < 0	0.521	0.1161	0.4854	
Ha: diff != 0	0.958	0.2321	0.9707	
Ha: diff > 0	0.479	0.8839	0.5146	

*Source: Researcher's computation (2019)*

From the table above, there is a clear indication that the mean performance measures after the recapitalization was done were lesser with the ROA and ROE. It was with the NIM that the computation done provided a higher average after recapitalization. Before recapitalization, the banks had a mean value of 4.27 for their return on assets. However, this value dropped after recapitalization to 4.12 showing a difference of -0.15 at a t-statistics of 0.05. Return on equity as presented above had a mean value of 15.45 before recapitalization which also dropped to 13.69 showing a difference of -1.76. The Net Interest Margins of the banks before recapitalization was 6.09. This increased after the recapitalization exercise by 0.14 showing a post-recapitalization mean value of 6.23.

The difference between the pre and post-recapitalization values of the banks in terms of ROA, ROE, and NIM were used in ascertaining the extent to which the hypothesis was achieved or not. As presented in the *table 4.2* above, the hypothesis being used are  $H_a: diff < 0$ ,  $H_a: diff = 0$ , and  $H_a: diff > 0$ . For the ROA, the difference value generated is -0.05 and with a *p-value* of 0.521, showing a difference of less than 0, we accept the null hypothesis and conclude that the recapitalization has a no significant effect on the performance of ROA. Same can be told for ROE as well.

#### **4.4 Discussion of Findings**

The study's main objective was to assess the effect of the 2012 recapitalization on the performance of banks within the Ghanaian banking sector. By so doing, the study specifically aimed at examining the effect of the regulatory increase in capital of banks in Ghana on their performance as well as the impact of the regulatory increase on the lending behaviour of these banks. The results generated from the data analysed showed how the recapitalization impacted bank performance using ROA, ROE and NIM as the performance indicators.

From the analysis done, it was realised that ROA and ROE rather declined after the recapitalization in the sense that the average ROA value of 4.27 before recapitalization decreased to 4.12 showing a decline of 0.15. Likewise, ROE with an average value of 15.45 moved to 13.69, showing a decline of 1.76. It was with NIM that the recapitalization somewhat led to an increase which was not much; from 6.09 before recapitalization to 6.23 after recapitalization at just a 0.14 increase.

From the above presented value changes, it is evident that the regulatory increase did not in any way lead to an increase in the performance of these banks, as the increase made was only with the net interest margin which was just at a smaller rate, lesser than the decreases caused to the return on assets as well as equity. With these findings made, it can be said that investing in more capital does not necessarily lead to an increase in the performance as some practices of management are likely to cause the investment not to yield the needed outcome. From this assertion, the study's second objective which is to examine the regulatory increase on lending behaviour somewhat showed that the banks performed poorly with regards to their lending behaviour seeing that there was rather a decline on the returns made to equity as well as assets.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter of the study presents a summary of the entire study conducted, the conclusions drawn, and the recommendations given based on the findings generated. The implication based on the data analysed is mentioned in the concluding aspect and based on the conclusion drawn, the recommendations were given. The recommendations given are perceived will be of relevance to regulatory bodies regarding the banking sector, practitioners, shareholders as well as stakeholders within the industry. The recommendations are also relevant future research.

#### 5.2 Summary of Key Findings

Considering how relevant the banking sector is to the development of a country, it is necessary that measures be put in place to help mitigate the challenges faced by the sector whenever the need arises. The recapitalization exercise in 2012 was done to improve performance of banks in Ghana and as such, it is expected that some improvement may be recorded with regards to performance of the banks involved in the exercise. It is to identify these improvements in performance that this study was conducted. The results identified are as follows:

ROA and ROE after recapitalization were in decline in the sense that the average ROA value of 4.27 before recapitalization decreased to 4.12 showing a decline of 0.15. Likewise, ROE with an average value of 15.45 moved to 13.69, showing a decline of 1.76. It was with NIM that the

recapitalization somewhat led to an increase which was not much; from 6.09 before recapitalization to 6.23 after recapitalization at just a 0.14 increase.

The findings made indicates that the regulatory increase did not in any way lead to an increase in the capital of these banks, as the increase made was only with the net interest margin which was just at a smaller rate, lesser than the decreases caused to the return on assets as well as equity. With this finding made, it can be said that investing in more capital does not necessarily lead to an increase in the performance as some practices of management are likely to cause the investment not to yield the needed outcome. From this assertion, the study's second objective which is to examine the regulatory increase on lending behaviour somewhat showed that the banks performed poorly with regards to their lending behaviour seeing that there was rather a decline on the returns made to equity as well as assets.

### **5.3 Conclusion**

The findings made from this study clearly show that recapitalization did not in any way improve performance of banks within the Ghanaian banking sector. Based on this finding, it is obvious shareholders could be made worse-off after a recapitalization in the banking sector.

As evident, the recapitalization only helped increase performance slightly on the net interest margin. Return on assets as well as equity rather saw a decline in performance. This is to say that shareholders did not really benefit from the exercise. It is not surprising that even after the recapitalization exercise in 2012, many of the Ghanaian banks failed at performing thereby leading to the collapse of a number of Ghanaian banks and the eventual takeover of the banks by

government. It is worth noting that government did not invest more by given these banks additional capital nor did external investors but rather it took over the banks or forced a merger with other banks. This is to say that recapitalization does not necessarily lead to an improvement in performance and that improving performance greatly is dependent on management and how they go about managing these banks.

The study finally concludes that performance within the banking sector in Ghana in the past few years after the recapitalization exercise has not been very good and as such a regulatory increase in capital although relevant does not guarantee an improvement in performance but rather the management style which will ensure a better lending behaviour.

#### **5.4 Recommendations**

The study has obviously proven that the recapitalization exercise embarked on in 2012 did not have any positive impact on the performance of Ghanaian banks. Based on the findings made and the conclusions drawn, the study recommends that the following be made:

It is certain that recapitalization is good for the banking sector of a country but it could create problems. It is therefore necessary that the banks carefully look into how they go about raising funds for the recapitalization exercise in order not to make shareholders worse off than they were before the recapitalization exercise.

It is not enough investing more capital and without taking a look at management and its activities. It is therefore necessary that managements of these banks embark on an effective intermediation drive to ensure that small savers are brought to the purview of the central bank. In Adegbaaju and

Olokoyo (2008), Nigerian banks were seen to have neglected the informal service sector where a lot of money is in circulation and are advised to extend their attention to that sector so as to get more of the persons within that sector come put their moneys in the banks. Same should be done in Ghana as these money could be a cheap source of funds for the banks which they generate some interest from to increase their profit and improve performance without necessarily asking investors to invest which do come at a cost.

## REFERENCES

- Adegbaju, A. A., & Olokoyo, F. O. (2008). Recapitalization and banks' performance: A case study of Nigerian banks. *African Economic and Business Review*, 6(1).
- Akalaare, A. M. (2018) Bank of Ghana stands by recapitalisation deadline, <https://www.graphic.com.gh/business/business-news/bank-of-ghana-stands-by-recapitalisation-deadline.html>
- Ametei, C. T. (2014). Impact of Bank Recapitalisation on the Profitability of Banks in Ghana (Doctoral dissertation, University of Ghana).
- Bank for International Settlements (2014). Assessment of basel III regulations – european. Secretariat of the basel committee on banking supervision. Basel: Bank for International Settlements
- Berlinda, E. (2018) Your money is safe with these banks as Bank of Ghana rolls out its recapitalisation process in 2019, <https://www.pulse.com.gh/bi/finance/some-banks-in-ghana-who-have-met-bogs-recapitalization-policy-id9139566.html>
- Beccalli, E., & Frantz, P. (2016). Why are some banks recapitalized and others taken over? *Journal of International Financial Markets, Institutions and Money*, 45, 79-95.
- Beccalli, E., Frantz, P., & Lenoci, F. (2018). Hidden effects of bank recapitalizations. *Journal of Banking & Finance*, 94, 297-314.
- Dinger, V., & Vallascas, F. (2016). Do Banks issue equity when they are poorly capitalized? *Journal of Financial and Quantitative Analysis*, 51(5), 1575-1609.
- Martynova, N. (2015). Effect of bank capital requirements on economic growth: a survey.

- Montgomery, H., & Takahashi, Y. (2014). The economic consequences of the TARP: The effectiveness of bank recapitalization policies in the US. *Japan and the World Economy*, 32, 49-64.
- Myjoyonline (2018) Banks to miss recapitalization will be declared by July - BoG Governor, <https://www.myjoyonline.com/business/2018/May-23rd/banks-to-miss-recapitalization-will-be-declared-by-june-bog-governor.php>
- Nakashima, K. (2016). An econometric evaluation of bank recapitalization programs with bank- and loan-level data. *Journal of Banking & Finance*, 63, 1-24.
- Poczter, S. (2016). The long-term effects of bank recapitalization: Evidence from Indonesia. *Journal of Financial Intermediation*, 25, 131-153.
- Saunders, M., Lewis, P. and Thornhill, A. (2007). *Research Methods for Business Students*, Pearson Education Ltd, 4th ed., Harlow, England. *Service Quality in The Banking Industry Importance and Performance of Factors Considered in The Electronic Banking Services*”, *African Journal of Business and Management* Vol. 1, Aibuma Publishing [Http://Www.Aibuma.Org/Journal/Index.Ht](http://Www.Aibuma.Org/Journal/Index.Ht)
- Tahir, S., Adegbite, E., &Guney, Y. (2017). An international examination of the economic effectiveness of banking recapitalization. *International Business Review*, 26(3), 417-434.
- Yalley, S., Djibom, H., Boachie-Yiadom, E., &Kunawotor, M. E. (2018). Bank Recapitalization in Ghana, Who Benefits the More? *Global Journal of Management and B.*