KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

ASSESSING THE IMPACT OF THE RECAPITALIZATION ON THE PROFITABILITY OF LISTED UNIVERSAL BANKS IN GHANA

BY

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DECLARATION

I, Isaac Adu-Gyamfi, 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 duly acknowledged.

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God richly bless you all.

DEDICATION

This work is fully dedicated to Hon. Dr. Yaw Osei Adutwum, MP for Bosomtwe Constituency and the current Minister for Education; whose life has been a great motivation and blessing to myself and many young people in Ghana. God bless you, Sir.

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LIST OF ABBREVIATIONS/ACRONYMS

BOG	-	Bank of Ghana
GDP	-	Gross domestic product
GSE	-	Ghana Stock Exchange
NIM	-	Net Interest Margin
NBFIs	-	Non-Bank Financial Institutions
NPL	-	Non-Performing Loans
PwC	-	PricewaterhouseCoopers
ROE	-	Return on equity
ROA	-	Return on assets
St. dev	-	Standard deviation

ABSTRACT

The recapitalisation policy by Bank of Ghana has significant influence various stakeholders of the banking industry. Among the important questions asked is on how the minimum requirement has so far led to the profitability among banks. The key objective of this study is to examine the impact of recapitalisation on the profitability of listed banks in Ghana. The study limited itself to two profitability indicators which are ROE and NIM of eight (8) listed banks on the GSE. Using the published financial statements of the banks from the year 2013 to 2020 as relevant data, statistical analysis was done using STATA 13 Software. The findings from the test of equality of means and regression analysis for the profitability indicators shows that the means there is a major difference between the means of NIM for the pre and post recapitalisation era and reverse for the ROE. The shareholder's equity to total assets which represents the capitalisation of banks has a negative and statistically insignificant relationship with ROE. There is a positive statistically significant relationship between recapitalisation and NIM for banks. As recommendations, Bank of Ghana could devise policies to help the banks to increase profitability and enhance their supervisory role. The government could provide the needed enabling economic environment to attract more investors may want to come in and borrow bigger loans from the banks. Banks who may not be able to meet the minimum requirements should look at merging. Also, banks could look at ways of increasing their profitability by diversifying their activities and providing more services that will attract more customers.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Banks play a very vital role in the economy of every country (Lebe, 2016). This is mainly because of the intermediary role they play in channeling funds from deficit spending units to surplus units. This intermediary role can effectively be done through adequate capital funding. According to Kenn-Ndubuisi and Akani (2015), the provision of capital by Banks have led to the enhancement of the productivity of most economies which have led to the promotion of economic growth. The banking system in Ghana involves a network of licensed and statutory financial institutions. The Bank of Ghana (BOG) serves as the central bank that provides the regulatory body within which the financial institutions operate. As at the end of March 2020 the Ghanaian banking sector encompassed twenty-four (24) banks as two banks being First National Bank and GHL bank are in the process of merging. Eight (8) of these banks are listed on the Ghana Stock exchange. Nine (9) of these universal banks are locally owned while the remaining have foreign majority ownership.

The banking industry in Ghana has undergone vital changes within the past two (2) decades. These reforms in the sector include the liberalization and deregulation in the form of privatization of publicly owned banks. According to Venette (2012), the increase in competition in this sector which has been partly as a result of the foreign and private-domestic banks that have entered the market have all led to an increase in the minimum capital requirements of banks. Vennet (2012) further asserts that there has been one chief regulatory factor which have changed the scene of the banking industry and this has been introducing the Universal Banking Business Licence (UBBL) which took place in the year 2003. In universal banking, banks along with their banking operations which have been traditional, have been allowed to offer financial service for example the sale of insurance. Other operations include the underwriting securities and the engagement in bond trading and management of portfolio, investments in equity, and financial advice.

Universal banking in the Ghanaian context has been stated as the business of accepting deposits and other repayable funds (currently utility bills, passport forms, banker's drafts for students among others) from the public. It also includes lending, investing of financial securities and services in the transmission of money, issuing and administering means of payment such as the bank drafts, cards for credit, traveler's Cheques. It also involves issuing guarantees for a person's own account or to the account of customers. Additional services include the foreign exchange or transferable securities, acquisitions and mergers, providing advice on capital structure, management of portfolio and other services that may be determined by the Bank of Ghana (Banks and Specialized deposit-taking Act, 2016(Act 930)).

The Ghana banking survey report from PricewaterhouseCoopers, PwC (2019) stated that the sector has continued to enjoy stability in its operations which has made it one of the drivers of growth in the economy. Nonetheless, in the year 2015, one of its chief challenges for the sector was the decline in profitability. The report asserted that this was as a result of the operational costs which were high predominantly because of the energy crisis at that time and rising Non-Performing Loans (NPLs). Banks at that time were cautious in lending as a result of the challenging economic conditions and the implications in recovering loans (PwC, 2019). In 2018, several banks in the country have been obligated in relying on customer's deposits as a result of the mixed performance of the economy (PwC, 2019). Also, challenges in the energy sector and the rates which were declining on government securities also compounded to them relying on deposits (PwC, 2019).

According to Mustapha (2017) the need for increment in capital of banks is necessitated by the need for the banks to transact in huge business and not be overcome by economic shocks and manage a very stable financials. Capital is an essential element in the banking sector which enhances the confidence and permits banks to embark on their banking activities. Capital in the banking sector therefore helps in absorbing losses, serves as a buffer between operating losses and insolvency (Eyenubo, 2015). Recapitalization of banks in the financial reform has been implemented by several countries which are developed and those who are still developing (Obadeyi, 2014). Presently, the emerging markets are also implementing policies on recapitalization with the intention of downsizing inefficiency and ineffectiveness in the banking sector (Obadeyi, 2014).

In 2003, BoG started with an issuance of a directive to commercial banks to increase their capital to GHS 7 million. This was part of measures in strengthening the capital base of the banking industry in the country. This was done before the redenomination of the cedi. Five years later, to be precise in 2008, BoG further made an announcement of an upward revision to GHS 60 million as the minimum capital of banks. This was more than 85% increase. There were other non-mandatory adjustments to Ghc 120 million over the period until 11th September, 2017 when the BoG announce a new minimum capital requirement of Ghc400 million effectively by December, 2018. The BoG did this in a bid to make the banks at that time more resilient against expected or unforeseen losses.

The analysts in the banking industry in the country have asserted that the purpose of this increment, among others, is to further develop, strengthen and modernize the financial sector to support the Government of Ghana's economic vision and transformation agenda. They would then have the capacity to invest into relevant economic sectors. Therefore, as the banks have good underwriting practices, they would become better placed to underwrite credits which were bigger to other sectors of the economy (PwC, 2019).

1.2 Statement of problem

Recapitalization affects all banks across the world. In neighboring Nigeria, Bakare (2011) asserted that as a result of the recapitalization policy, the banks that could not meet the required amount had to merge with the bigger or stronger ones. After implementation of that policy, followed by an unprecedented process of recapitalization, the banking sector in the shrunk to about 25% of its original size. There was a reduction of the deposit money banks from eighty-one (81) to twenty-one (21). In Ghana, the recapitalization has led to the drastic reduction of universal banks from thirty-three (33) in January ,2017 to twenty-four (24) as at December, 2019. In spite of the stable funding, Mustapha, (2017) asserts that the banks in Ghana face high asset risks, solid capital buffers, and a recovery in economy.

The rational for recapitalization in Ghana had been to inject more capital into the banks, thereby making these banks resilient and stronger to take part in big ticket deals on both the local and international scenes and markets. In Ghana, there have been some studies on banks performance (Krakah and Ameyaw, 2010; Mills and Amowine 2013; Nkegbe and Ustarz, 2015). Krakah and Ameyaw (2010) examined the drivers of profitability of two banks in the country. They found non-interest expense, non-interest income, total assets, capital strength, annual rate of inflation and growth of money supply were the drivers which significantly impacted the profitability of those banks. Nkegbe and Ustarz (2015) on the other hand found contrary evidence that since 2007, the indicators of profitability of banks thus, the ROE, ROEA and ROA had seen a continuous fall. The issue of profitability of banks is of much interest to all stakeholders. The profitability indicators for banks from 2016 to 2019 from the BoG annual report (2019) as shown in table 1.1 reveals some interesting trends. These indicators, for instance the returns on equity, assets, earning assets, net interest margin and spread after tax showed an upward trend after 2018 minimum capital adjustment. As a country, this is the first time the country has engaged in a recapitalization policy of GH¢400 million Ghana cedis which applies to all banks. While re-capitalization of banks in Ghana may address concerns of low capitalization and its associated risks, the effect of this implementation on the performance of banks in terms of profitability remains an empirical one.

There have been concerns by some of the banks that these amounts that have been used in the recapitalization could have been given out as loans and the banks make profits instead of using it in the recapitalization process. Questions have arisen with regards to the lending behavior of banks as a result of the recapitalization. Will the new regulatory capital of banks make these banks lend more or less since these huge sums of money may be kept with the regulator. There is therefore the need to conduct a study to ascertain the impact of recapitalization on profitability banks in the country because of the uncertainty and fears and the impact of recapitalization on the lending behavior of banks.

It will compare how some listed banks in the country are performing after their recapitalization. In order to compare the impact across banks, both foreign banks and local banks in the industry will be part of this study.

1.3 Research objectives

The main objective of this study is to examine the impact of recapitalization on the profitability of listed banks in Ghana. This main objective has been further broken down into specific objectives stated below as:

a. To examine the effect of recapitalization on the performance of locally-owned listed universal banks in Ghana.

b. To ascertain the effect of recapitalization on the performance of foreign-owned listed universal banks in Ghana.

c. To assess the effect of the new minimum capital on the performance of all listed universal banks in Ghana.

1.4 Research questions

a. How has the recapitalization affected the performance of locally-owned listed universal banks in Ghana?

b. How has the recapitalization affected the performance of foreign-owned listed universal banks in Ghana?

c. How has the recapitalization impacted the performance of listed universal banks in Ghana?

1.5 Justification of the study

The universal banks in Ghana now require a minimum capital GHC400 million as before they can successfully operate in the country. The increment is significant and similar to what happened in Nigeria which forced a lot of banks in the country to merge. Although the government helped the local banks to recapitalize through the specialized Ghana Amalgamated trust. This study is important as it would show the impact of the recapitalization on the performance of the banks. This study is of interest to both local and international banks as recapitalization affects them equally.

Also, the lending behavior is important since the interest on loans is one source of profitability for the banks. It is therefore essential to see the impact of recapitalization on the lending behavior of the banks as this announcement may have the capacity to influence loans. The findings will be relevant to C.E.O of banks, managers of the various unit right down to every single employee in the bank as they would be interested in the impacts. In addition to this, the BoG will be interested in this report. Additionally, other policy makers, researchers in the academia and other stakeholders in the banking sector will be interested in the findings of this study. Also investors and other shareholders of banks would benefit from this study as they would see whether they should contribute the remaining amount needed for the recapitalization or not to do so.

1.6 Scope of the Study

The scope of this study comprises banks in Ghana which will be made up of banks whose origin are both local and foreign. These banks should also be listed under the Stock Exchange in the country. Although there are over twenty –four (24) banks in the country, not all of them have been listed under the Ghana Stock Exchange.

The research is limited to only the listed locally-owned and foreign-owned banks. Therefore, the results from this work cannot be generalized for all the banks in Ghana. The research is also limited to the model that will selected for the study as well as the indicators that will be used to measure profitability. The main focus was on the return on equity (ROE) and the net interest margin (NIM) as the measure of performance and profitability.

1.7 Summary of Methodology

This study adopts the work and methodology of Adegbaju and co, (2008) for a similar study they performed with Banks in Nigeria. The study uses quantitative research design and employ the use of secondary data source. The population aimed for this study is all listed banks with operating in Ghana. The sample size is restricted to eight listed universal banks including five (5) foreign owned and three (3) others with local ownership. The data and variables used were all sought from the annual financial statements of these sampled banks. A panel regression model technique which takes into account both the fixed effect model and random effect model which uses the generalized least squares depending on the outcome of the Hausman's test.

1.8 Limitations of the study

The major shortcoming of this study is that the research is limited to only the listed locally-owned and foreign-owned banks. Therefore, the results from this work cannot be generalized for all the banks in Ghana. The research is also limited to the econometric model that is selected for the study as well as the indicators that will be used to measure profitability. The main focus was on the return on equity (ROE) and the net interest margin (NIM) as the measure of performance and profitability. Other variables such as the return on assets (ROA), yield on earning assets and others that could have been considered as profitability indicators were not used and these are the shortcomings of this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Saunders et al. (2009) spoke about two different approaches that have been used in literature review which are namely the deductive approach and the inductive approach. According to them, the deductive approach is when in some research projects, one would use the literature to help him/her identify theories and ideas that would be tested using data. One is then able to develop a theoretical or conceptual framework, which would be subsequently tested using data. With regards to this approach, it is imperative to know the theories that surround the concepts in the first place. Saunders et al. (2009) added that for other research projects, one would plan to explore the data and develop theories from them that would consequently relate to the literature.

This second approach is the inductive approach. They added that although the research may research question(s) and objectives which have been clearly defined along with a purpose, one did not start with any theories which have been predetermined or even made use of conceptual frameworks. Normally, this is used when one could not find relevant theories which are related to the topic.

This research used the deductive approach and developed a theoretical framework which were related to recapitalization and profitability. This is because of the availability of theories which are related to recapitalization and profitability.

The review begins with the definitions of the working terms and concepts and theories. But it limited itself to very few literatures from the 2011 to 2019. The review also looked at literature that is related to recapitalization of banks especially by looking at published works in journals. It included articles which have been done from the year 2010 to date especially for the empirical framework section. It excludes studies which are old. They were excluded because there may be new lights that may have come up after the research have been carries out in later years which may not have been used during that study. Secondly, the issue of recapitalization in Ghana came up in recent years. Therefore, using literature which is old may not tackle the issue of recapitalization. The review also made used literature from relevant websites and relevant industry reports.

2.1 Conceptual literature

2.1.1 Concept of Recapitalization

Recapitalization is said to be the increase the amount of long term finances that has been used to finance an organization. Recapitalization also refers to increasing the debt stock of the company or the issuing of additional shares through shareholders that already exist. It could also take the form of issuing new shares to new shareholders or a combination of the two (Alalade, et al., 2016). Recapitalization could take the form of mergers and acquisitions.

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 fresh capital, capitalization of bank's reserves, merging of businesses to become strong entity and government-sponsored recapitalisation programs 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 undercapitalization, insolvency, illiquidity, high level of non-performing loans and feeble corporate governance structure and many others (Oluitan et al., 2015).

2.1.2 The Concept of Profitability and Financial Performance

For profitability, it is a subset of performance of an organization. Performance of an organization has been conceptualizing as the condition where an organization has the deliberate association of assets which are productive (including the physical, human, and capital resources) to achieve a mutual purpose (Barney, 2015).

For financial performance, it involves the measuring of profitability of the organization. Carton (2014) added that profitability has been the primary organizational performance dimension or indicator used in most studies. Profitability has been defined as the profit that banks make by earning more than the taxes they pay. Even in Ghana, most of the studies in relation to performance have focused on the financial performance (Krakah and Ameyaw, 2010; Kukurah et. al, 2014, Nkegbe and Ustarz 2015). This could be due to the ease of getting data when measuring financial performance.

With regards to the measures on profitability, the most frequently utilized indicator is return on assets. Other authors have used the Return on equity, net profit margin, earnings per yield among others. This is because most of the data on these indicators are published in the financial statements of the companies and businesses. In Ghana, if the company has been listed under the GSE, it was mandatory for it to publish annually their statements.

According to Philippon and Schnabl (2013), there is a way that an efficient recapitalization program should be designed. They asserted that it should be in a way that it would reduce the debt overhang problem and at the same time limit the rents it creates for the bank.

2.2 Framework of theories (Theoretical Literature)

This section is subdivided into two where the first section deals with theories on recapitalization and performance and the second section discusses theories on recapitalization and lending behavior.

2.2.1 Theories on recapitalization and performance

The theories on performance of banks and recapitalization consist of the signaling theory, risk-return hypothesis and expected bankruptcy cost hypothesis. The very first one to be looked at is the signaling hypothesis. As Saona (2011) suggested, when there was a higher capital, it gave a signal that is positive to the market value of a bank. For this theory, the signals given by management of the bank was that the prospects for the future of the bank would be good when the capital was increased (Trujillo-Ponce, 2012). A lower leverage gave an indication that banks were performing better than their competitors in the same industry who could not raise their equity devoid of a further deterioration in the profitability (Saona, 2011). This theory relates to the problem statement where the challenge is the direct impact of recapitalization of banks which is yet to be revealed in this study. However, from this theory, it seems as if the impact will be positive.

The second theory is the hypothesis on bankruptcy. The argument is that in case where bankruptcy costs would be very too beyond expectation, a bank would hold more equity so that it could avoid periods of distress (Trujillo-Ponce, 2012).

These two theories support a relationship between capital and profitability which is positive. Therefore, it is expected that the impact of recapitalization of banks and the profitability which is a measure of the performance of banks would be positive. These theories are very important since the findings that would come of this current study will either support these theories or opposed to them.

The third theory is the risk-return hypothesis. It suggests that when there is an increase in the risks as a result of an increase in the leverage of the firm or organization, it was able to lead to expected returns which were higher (Ametei, 2014). If the expectation of the bank was to have an increase in returns (profitability) but took up more risks when there was an increase in its leverage, there would be a reduction in the equity to asset ratio (represented by capital). Therefore, the profitability which the banks or firms sought would not be realized. As a result, this hypothesis predicted that there was a relationship between capital and profitability but that relationship was negative (Saona, 2011). From this theory, the impact of recapitalization on firms would be negative.

2.2.2 Theories on bank capital and lending behavior

In this section two theories were considered. The first is the bank pro concentration theory and the bank capital channel.

The argument by pro concentration theory proponents of banking sector is that economies of scale is able to drive bank recapitalization as well as mergers and acquisitions. Therefore, an increase in concentration could be used to achieve improvements and efficiency (Boachie-Yiadom and Kunawotor 2018). A concentrated banking system is able to enhance economic activities and profits and also to diminish the bank financial weakness (Okpala, 2013).

The relation of this theory to the problem statement is that from the concentrated banking system which would be derived when there is recapitalization, it would enhance economic activities. And this is a positive relationship.

The second theory is the Bank Capital Channel. It is a direct mechanism that is based on adverse selection problems particularity in the area of fund raising of banks. This is based on the support of three premises with the first being that there is an imperfect market for bank equity (Boachie-Yiadom and Kunawotor 2018). The second premise is that when there is a maturity mismatching between assets and liabilities, it is able to expose the banks to interest rate risk. The third premise is to have a direct influence of regulatory capital requirements on the supply of credit. The bank capital channel concentrates on a market for the equity of banks which is imperfect.

Okpala (2013) described how the bank capital channel works. After there has been an increase of market interest rates, there could be a renegotiation on the lower fraction of loans with respect to deposits (loans are mainly long term, while deposits are typically short term). Hence, this leads to the banks which suffer a cost as a result of the maturity transformation. This could reduce the profits and then capital. Okpala (2013) added that the bank capitalization may also influence the way lending supply reacts to output shocks. This is how this theory relates to the problem statement which is the impact of recapitalization on lending behavior.

2.3 Reasons for conducting recapitalization in banks

One reason was that there was stunted growth in the real sector and the sector is very important since the banking sector is able to provide financial service to the real sector. Ametei (2014) noted that in Ghana, the reasons have been an amalgamation of macroeconomic pressures, global markets, IT developments, and the wind of financial crises from other parts of the world have forced the regulators to deregulate the markets. This has also opened up the playing field for competitors who are foreign ones as well as other local ones. The new entrants of banks have provided a form of competition which has been healthy for other banks which are publicly owned.

Kukurah et al. (2014) added that another reason for recapitalization was that the collective resources of the new entity. It could also be the collective liabilities which were reorganized with the purpose of placing new banks in the best financial situation possible. Also the recapitalization of banks could take place as a way of resisting an attempted takeover. It could also be a way to avoid a potential failure or even to have a severe cutback in operations.

Another reason was that lending rate which was high and shunning of real sector which would be solved during recapitalization (Alalade et al., 2016). Alalade et al. (2016) added that there has also been the over-dependence on deposits from the public sector. This has therefore raised issues which were of great concern to the monetary authorities. Most banks in Nigeria were depending on the deposits from three-tier government and this had led to the neglect of savers from the medium and small class. When recapitalization happened, there was a reduction in the dependence on government deposits for survival.

Another reason was that there have been unprofessional and unethical conducts where ethics and decency have been thrown over-board as executives of banks have made up revenue targets which were tough for all levels of workforce (Alalade, et al 2016). This has made workers to either achieve these targets or to quit the work. All of these challenges were solved when recapitalization took place.

Another reason according to Alalade et al. (2016) was that it had the capacity to lead to curtail of excessive risks that banks took. This was because some banks have resorted to excessive risk taking and proliferating the breaking of regulatory rules which could be solved when banks recapitalize.

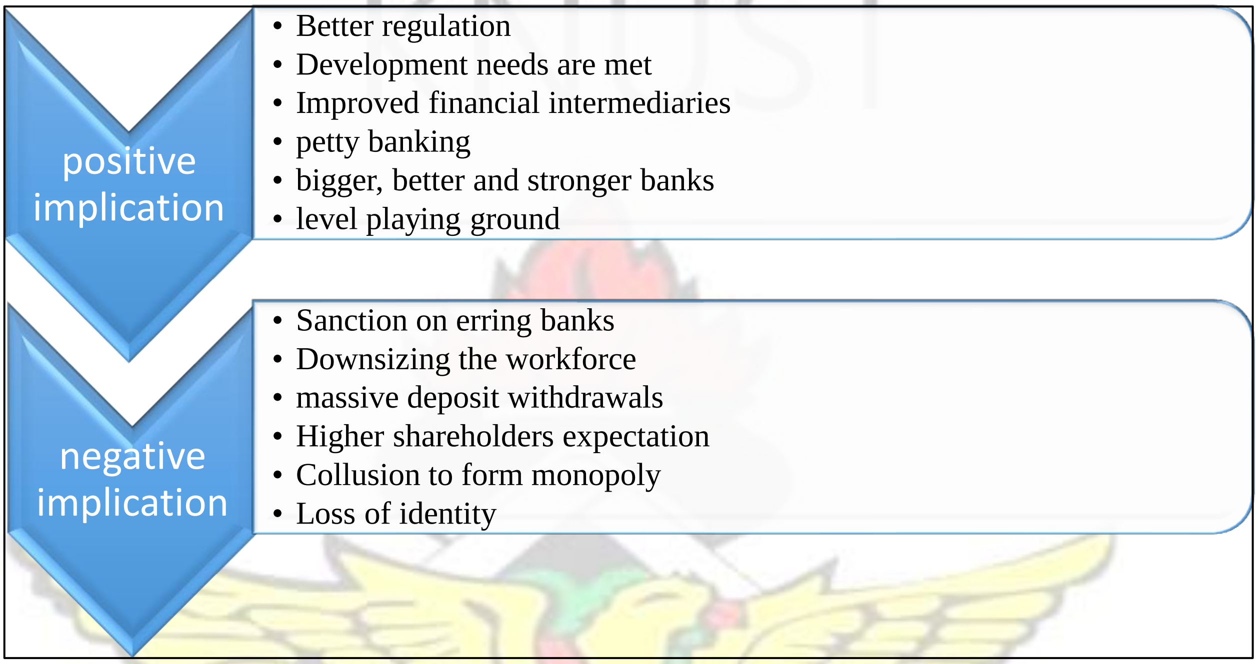
Kukurah et al. (2014) added that recapitalization was able to provide an opportunity to eliminate weak banks from the system in a manner which was orderly. In addition to this, banks which were well capitalized had better prospects for profitability and efficiency in operations. It was able to also provide an avenue to broaden the shareholder base of banks. This was especially through public listing and this was able to improve prospects for corporate governance in a good way. Another reason for recapitalization has been that challenges in illiquidity and insolvency would be handled or solved. These challenges have been evidenced by capital adequacy ratios being negative, liquidity ratios which have been poor and funds of shareholder that have been completely eroded by operating losses (Alalade et. al, 2016).

Kukurah et al. (2014) opined that when the banks were well capitalized, they were better placed to finance the development needs in the long term of the Ghanaian economy and companies in the country. The banks were able to invest in training more and develop relevant manpower.

In summary, various reasons have been given to the need to perform recapitalization in banks. These reasons that have been given seems sound. With regards to how this relates to the problem statement of this study, the assertions could be possible impacts of recapitalization on profitability of banks, the lending behavior of these recapitalized banks and the economy on the whole.

2. 4 Recapitalization on banks

The recapitalization of banks has both positive and negative connotations for the banks which are affected and this has been shown in figure 2.1 below.



(Source: Alalade et al., 2016)

Figure 2.1: Positive and negative implication of recapitalization

Based on the implications that favors the interested party, researchers can skew the arguments towards the positive implication or the negative implications. For instance, looking at the views of the Bank of Ghana and the Minister of Finance with regards to the decision to recapitalize, one can see that it is only the positive side of recapitalization that has been elaborated and stressed on.

From the literature above, there are various reasons for recapitalization. In the case of Ghana, a lot of the positive aspect has been stressed. According to BoG and the Minister of Finance, there would be a better regulation and bigger, better and stronger banks which is supposed to be impact of recapitalization of the banks.

As Boachie-Yiadom and Kunawotor (2018) asserted that recapitalization is able to provide a cushion that would absorb possible losses. This was done so that the depositors would be fully protected at all times. This did not look at the impact of recapitalization from the perspective of the banks, whether it will be profitable for them or not. Kukurah et al. (2014) added that the benefits are that banks would be able to invest more in training and development of manpower. This impact may not be in the short term but it in the long term, it could be an impact.

The challenge is that the direct impact of recapitalization on the performance of the banks has not been tested. Therefore, the positive and negative connotations to its impact on performance of banks remain are just suggestions. This is because it has not been backed with solid proof of empirical works. And this is the problem statement of this current study. The statements by the Bank of Ghana and the Minister of Finance (Mr. Ken Ofori-Atta) may be true, however it should be backed with solid empirical works which would serve as the proof.

Another challenge here is that, it is as if there are no negative implication of recapitalizing banks which may manifest itself in mergers and acquisitions, subsequent loss of jobs and the loss of identity for bank that has been acquired. These impacts may not be statistically tested however they are also real. What is presented in most of the statistical analysis of the recapitalization of banks do not take into account these negative effects of recapitalization. One of the ways to look at the effect is to find the fair balance between the positive implications and the negative ones.

2.5 Capital adequacy in Ghana and current Recapitalization policy by the BoG

The Banks and Specialized deposit-taking Act, 2016 (Act 930) replaced the BoG Act 2004 (Act 673) with the aim of amending and consolidating the laws relating to deposit-taking; to regulate institutions which carry on deposit-taking business, and to provide for related matters. The Act was enacted with the expectation to bring more competition that is healthy inside the industry.

A total of 23 banks remained in the industry after the 31 December 2018 deadline for the recapitalization exercise. This comprised of 14 foreign-controlled banks and nine domestically-controlled banks. The increases in paid-up capital, coupled with deposits growth caused a 14.7% growth in banks total assets in 2018. (PwC, 2019). There were some implications of the recapitalization where the liquidity of the industry improved with the first phase of the capital injection which was mandatory. UT bank and Capital Bank were initially acquired by GCB bank in August 2017. Unibank, Royal Bank, Construction bank, Sovereign bank and Beige bank were consolidated into the formation of Consolidated bank before the regulatory deadline in 2018. Energy bank was acquired by First Atlantic bank while Omni bank merged with BSIC Sahel bank. Bank of Baroda winded up as a result of the new regulation. (PwC, 2019).

2.6 The relationship between recapitalization and lending behavior of banks

In Nigeria, the recapitalization of banks had an impact on the lending behavior of banks. Obadeyi (2014) asserted that the recapitalization also forced the lending rate of the banks to rise sharply to average of 25%. Therefore, this led to market impactions and externalities in financial market particularly in markets which were emerging. This may often lead to inducing financial intervention in the long run.

With regards to the lending behavior, the loan to deposit ratio (LTD) is a proxy adopted that is been used for lending behavior of banks. The LTD relates to the amount of deposits that has been received by a bank and it is used to measure the efficiency of banks with regards to the degree at which they used the deposits mobilized to give out loans. Therefore, having a higher ratio simply means that the process of financial intermediation is more efficient and vice versa. It should be stated that this ratio as presented in some literatures to denote the credit and operational risk management of financial institutions. The assertion is that having a credit risk which is higher should be able to improve the earnings of banks. This was because loans in itself have been classified as the riskiest assets. Therefore, it has become the highest yielding assets based on the hypothesis of risk to returns as explained above.

There exists a relationship between recapitalization and lending behavior of firms. However, in the case of Ghana, the lending behavior portion have been left out in many studies which has become a gap in literature. And this is one of the objective of this current study. Also, as has been stated, the lending behavior of banks and recapitalization seems to support the risk-return hypothesis.

2.7 Empirical review

2.7.1 Recapitalization and profitability of banks: The Locally owned banks' perspective

According to a study conducted by Boahene, et al (2012) on profitability of banks in the country. Boahene et al. (2012) use a five-year panel data from 2005 to the year 2009. They worked on six (6) selected commercial banks, which was analyzed using the fixed–effect panel model. Four (4) among these six (6) were locally owned banks. They discovered support from previous empirical works that capital was able to influence the profitability of these local banks positively. Also, this influence was very significant. These were the key findings of their work. This work is very important as it shows the influence of capital on profitability. Therefore, one could deduce that if the capital of banks were raised through recapitalization (one of the major variables of this work), then profitability would be positive and also significant on the local banks.

Nkegbe and Ustarz (2015) also conducted a study to find out the trends and determinants on the performance of banks in Ghana. They considered the period 2000-2010 for ten banks including five (5) local banks and used trend graphs, panel data estimation techniques and equations. They affirmed that there was a decreasing trend which was general in bank performance indicators namely return on equity, net interest margin and return on assets. It should be noted that these indicators are also indicators for profitability. One of the findings of this study was that profitability was decreasing in the banking sector. And this finding is very important on the locally owned banks. Already there is a decrease in profitability in recent times, therefore introducing a new policy which is recapitalization is something that should be clearly looked at. Although the study did not take into consideration the impact of recapitalization, the findings are still relevant for this study since some of the indicators for performance are profitability indicators. The findings can be compared against the years 2012-2016 which were not part of the study.

The next study done in Ghana was by Kukurah et al. (2014) who conducted a study to ascertain the effects of financial sector recapitalization policy on the performance of banks. They chose two banks in Ghana and used them as case studies. One was a locally owned bank, (GCB bank) and the other was a foreign owned bank (Ecobank). They found out that for the Net Interest Margin (NIM), there was a sharp increase in that variable for post recapitalization result for GCB bank. With the case of Ecobank Ghana Limited, in 2009 the Net interest margin (NIM) rose from 5.9 to 7.2 in 2010. Kukurah et al. (2014) asserted that the results which were obtained gave an indication that the management of the two banks have been efficient immediately after recapitalization. For the variable which was the Yield on Earning Assets (YEA), it rose gradually after the first phase of the recapitalization in 2009 in both cases. However, GCB recorded quite a sharp rise than Ecobank which implied that recapitalization was able to result in more yield on earning assets. For both banks in 2009, the EPS rose sharply after the first phase of the recapitalization. On the average, the post-recapitalization EPS was able to exceed the pre-recapitalization EPS almost twice the number in both cases. Contrasting Ecobank with GCB, the GCB was a local bank which had to meet a lower capital requirement during the first phase. Kukurah et al. (2014) saw that ROE was encouraging for GCB however it was very poor for Ecobank.

The main findings of the work were that bank recapitalization exercise had a relationship which was significant on the pre and post recapitalization profitability indices of the two banks. And this finding is very significant for this study. This is because, this current study also wants to find out the impact of recapitalization. The challenge here is that the data set that was used did not take into consideration recent years. Nonetheless, because they compared the pre and post recapitalization periods, the findings are very relevant for this current study.

Amertei (2014) sampled twenty–two banks in Ghana to find out the impact of bank recapitalization on the profitability of banks in Ghana. He used multiple regression model and depended on secondary data from the GSE. He used three proxies for profitability and compared the pre recapitalization era to the post recapitalization era. He performed equality tests of means of the profitability indicatoes and found out that the recapitalisation had resulted in the increase of the profit after tax significantly. However, in the case of ROE and ROA, there were not much significant changes seen. The findings of his study revealed that the recapitalisation had a negative, significant effect on the performance of banks. This was for both foreign and local banks.

2.7.2. Recapitalization and profitability of banks; The foreign owned banks' perspective

Yalley et al (2017) sampled thirty-four (34) banks, seventeen (17) foreign and the other seventeen (17) locally owned banks to assess the impact of the 2012 recapitalisation on the industry, foreign and local banks. Their findings by comparing the pre recapitalization to the post recapitalization were consistent with that of Al-Kayed et al (2014) and Trokilo-Ponce (2013) that the ROAs and ROEs of locally owned banks increased significantly after the recapitalization. With evidence of other nations, the foreign owned banks, it was confirmed that bank capital increase had a positive relationship with the performance, especially in Islamic nations. (Al-Kayed et al, 2014). Contrary to the above, Adegbaju and Olokoyo (2008) reported that ROA of banks in Nigeria deteriorated post-recapitalization suggesting that recapitalization is harmful to banks. The findings of Yalley et al. (2017) reported also confirmed that of Sufian and Chong (2008), Berger (1995), and Al-Kayed et al. (2014) whom all found a positive association between bank capitalization and ROE. Sufian and Chong (2008) reported their findings from a study of Philippines foreign owned banks. They established that foreign owned banks that are well-capitalized rewarded equity holders better than those that are less-capitalized.

Okpala (2013) sought to find out the profitability of banks in Ghana. He sampled 22 banks, majority of which were foreign owned, that had emerged after the recapitalization exercise in the country. One of the vital findings of the work was that bank recapitalization was able to influence the manner banks reacted to profitability of foreign owned banks. This finding is very significant because one of the variables that would be looked at is the lending behavior of these foreign banks and how that affected their profitability following recapitalization. Okpala (2013) finalized that recapitalization had enhanced lending to the sectors which were productive. Therefore, recapitalization had a positive impact towards profitability of foreign owned banks.

Amertei (2014) sough to find out the impact of recapitalization on the profitability of twenty-two (22) banks. He found out that with regards to foreign banks, the NIM had a higher positive significant impact on recapitalization of foreign banks. However, he also noticed that although recapitalization was able to raise the capital structure of the banks, it was not always that the banks were able to transform the capital into good financial intermediation.

2.8 Hypothesis Formulation

Base on the above conceptual and empirical reviews, the following propositions have been made relative to independent and explanatory variables according to the required influence evidenced by previous studies discussed above:

Hypothesis 1: There exist statistically significant association between recapitalization and ROE of all listed banks in the industry.

Hypothesis 2: There exist statistically significant association between recapitalization and ROE of foreign owned listed banks in the industry.

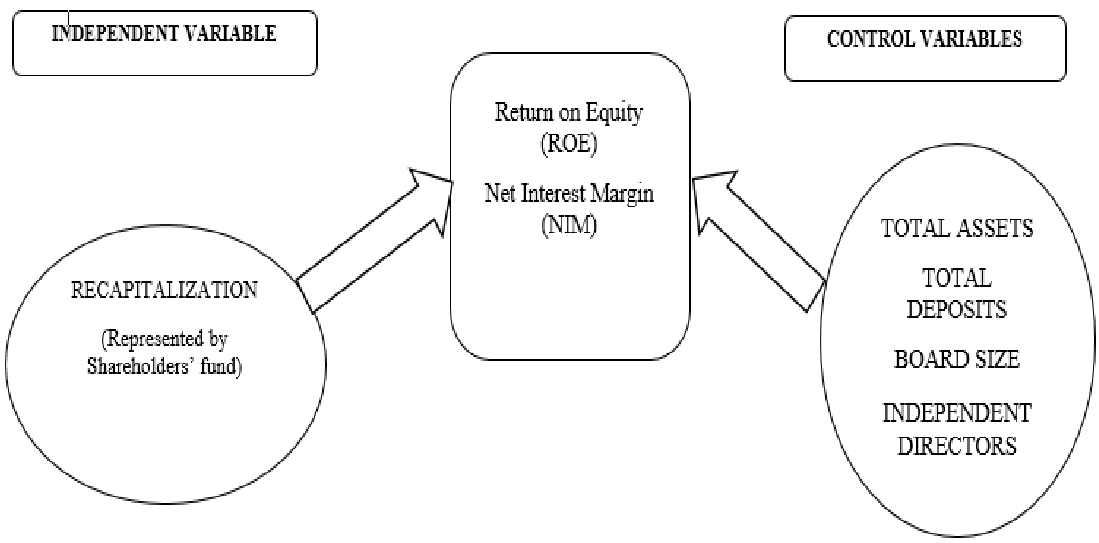
Hypothesis 3: There exist statistically significant association between recapitalization and ROE of locally owned listed banks in the industry.

Hypothesis 4: There exist statistically significant association between recapitalization and NIM of all listed banks in the industry.

Hypothesis 5: There exist statistically significant association between recapitalization and NIM of foreign owned listed banks in the industry.

Hypothesis 6: There exist statistically significant association between recapitalization and NIM of locally owned listed banks in the industry.

The above performance indicators (ROE and NIM) are suggested in the study to analyze their overall performance on banks before and after the recapitalization. The proposed conceptual framework below has been developed to show how these variables are linked to recapitalization as discussed in the documented literature.



Source: Researcher field construct, 2020

Figure 2.1: Conceptual framework

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter clearly states the way by which the researcher was able to gather the data that was used for the study. Therefore, the discussion is centered on the methodology employed for this study as well as the reasons for choosing such a methodology. In addition to this, the research design that was adopted for this study has been stated, the advantages of using it along with the type of research.

3.2 Research design

The designing of the research is a way of planning the procedure which ought to be adopted to gather the essential techniques and data needed to be used for the analysis. This is done in keeping in note the objectives that has been set for the research because this has a great relationship with the reliability of the aftermath of the research.

According to Boateng (2016), some of the designs which are available are exploratory design, explanatory design, and correlational design among others. The design of this study is an explanatory research. This is because it is a study that would establish causal relationships between variables. The argument for choosing an explanatory study was because the explanatory research looks at if there is a relationship between two or more variables. As Saunders et al. (2009) opined that the emphasis of an explanatory study is to study a situation or a problem with the intention of explaining the relationships between variables in question.

As has been stated in the research questions, which is to examine the effect of the recapitalization on the performance of listed banks with the focus on both local and foreign owned banks. The key is to find the relationship between the recapitalization and the other two (2) variables.

There are different research strategies employed by researchers such as survey, experiment, case study among others. The choice of research strategy is based on the type of research questions that have been set up and the scope of the research. Therefore, the strategy employed in this study is a survey since this strategy helps one to answer questions relating to what, who, where and how. It allows one to quantitatively collect data that can be analyzed using statistics. The survey looks at the local universal banks which has been listed on the Ghana Stocks Exchange.

3.3 Population

There were thirty-two (32) commercial banks in Ghana as at 2016 which has now reduced to twenty-four (24) as at March 2020 as a result of the recapitalization. The population studied does not cover all these twenty-four (24) banks but rather the only eight (8) locally listed ones from the year 2013 to 2020. This presents eight (8) financial years and hence gives the opportunity to assess the banks performances four (4) years before the 2017 recapitalization and the four (4) years after recapitalization where the third quarter financial reports for 2020 were used as proxy for the full year financials for 2020 financial year.

3.4 Sample size and sampling technique

The population for this study is the banking industry in the country which is made up of both local banks and foreign banks. As per law, all these banks are supposed to submit their financial statements. Therefore, every bank should have been part of the study. Nevertheless, it is imperative to have a sample which is supposed to be a representative of the entire population. This study employed a purposive sampling technique to obtain the sample needed. The criteria for selecting a bank to be part of the study is that it should be listed on the GSE.

Table 3.1 gives the names of listed local banks on the GSE.

Table 3.1 Shown The Listed Banks Located in Ghana on the GSE.

Banks listed	Ownership	Authorised Shares
Access Bank Ghana	Foreign	(no information)
Agricultural Development Bank	Local	(no information)
CAL Bank Limited	Local	1,000,000,000
Ecobank Ghana Ltd	Foreign	500 Million
Republic bank limited	Foreign	1,000,000,000
Ghana Commercial Bank Limited	Local	1,500,000,000
Societe Generale Ghana Limited	Foreign	500 million
Standard Chartered Bank Ghana Ltd.	Foreign	250 million-Ordinary

Source: Ghana Stock Exchange, June, 2020.

Another criterion to select the banks on purpose is that the financial statements of the banks. It should have financial statements from the year 2013 to 2020. Figure 3.1 shows how the sampling was done.

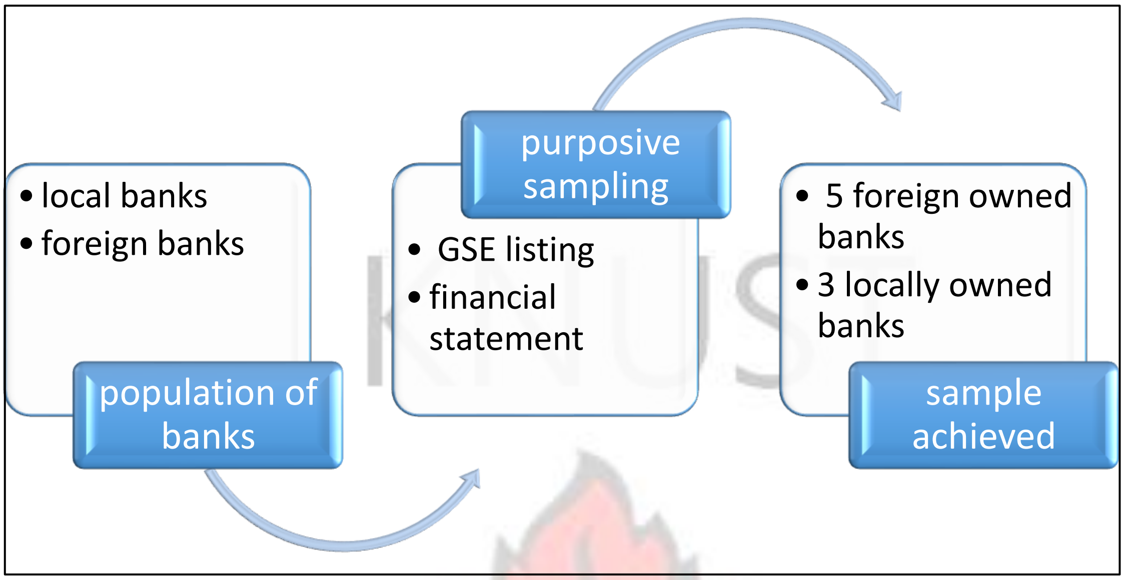


Figure 3.1: Sampling technique employed by researcher.

The pre-recapitalization era was from 2013 to 2016 which is four (4) years, meanwhile the post recapitalization includes the year 2017 to 2020 (Using quarter 3 financials of 2020 as proxy for full year) which is also four (4) years. The eight (8) year (2013 – 2020) data was then analyzed using the econometric technique of fixed effect model of the panel data after the run of the random effect proved insignificant after the Hausman test was run. Moreover, the time frame was chosen due to the fact that it is able to offer time and cross sectional observations of the previous recapitalization exercise for the current banks. Also, it also shows a time of great changes which happened within the banking industry. Furthermore, the pre and post is able to provide an overview of some banks which were not listed at that time but were listed in the post recapitalization era.

3.5 Method of data Collection

The financial statement is supposed to give a snapshot of the company which is a true and fair view of the consolidated and separate its position in terms of finances. It also gives a true reflection of its consolidated and separate financial performance and separate cash flows for the year that has ended (Way, 2007). It is also required by the Companies Act, 1963 (Act 179). The financial statements are published in media outlets namely the newspapers such as the Daily Graphic. It is also published on the website of companies as well as the banking halls of the respective banks. There are reasons for publishing financial statements and one is that management is able to communicate with outside parties (investors) who may be interested in the company about its accomplishments in terms of being able to run the company. The financial conditions which is a major concern to investors and creditors is given out (Way, 2007).

3.6 Description of Ratios used in this study

3.6.1 Return on Equity (ROE)

This ratio is also measured as net income after taxes divided by total equity capital. ROE indicates how profitable a company as it makes comparison between the net income of the company to its average shareholders' equity (Kukurah et al., 2014). The ROE is able to measure how much the shareholders have earned for their investment in the company. According to Adegbaju and co (2008), this ratio is very important for investors since they would like to find out if they are actually earning that much and so that in the case of recapitalisation, they would decide if they would want to increase their funds or not. The assertion is that when the ratio is higher, the more efficient the management of the company is in the utilization of its equity base. Also, this implies that there is a better return for the investors.

$$\text{ROE} = \frac{PROFIT\ AFTER\ TAX}{\text{TOTAL SHAREHOLDERS}'FUND}$$

3.6.2 Net Interest 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.

$$\text{NIM} = \frac{INTERESTINCOME - INTERESTEXPENSE}{\text{AVERAGE EARNING ASSETS}}$$

Table 3.2 Classification of variables used

Classification	Description	Computations
Dependent Variables		
Return on Equity (ROE)	ROE is considered a measure of how effectively management is using a company's assets to create profits. A good or bad ROE will depend on what's normal for the industry or company peers. Relatively high or low ROE ratios will vary significantly from one industry group or sector to another.	Calculated as the ratio of net income after tax to total equity provided by shareholders
Net interest Margin (NIM)	NIM is the ratio of net interest income to invested assets. A positive net interest margin means the investment strategy pays more interest than it costs. Conversely, if net interest margin is negative, it means the investment strategy costs more than it makes.	Net interest margin measured as net interest income to average earning assets
Independent Variable		
Recapitalization (RECAP)	*This refers to the shareholders fund and other reserves*	*summation stated capital, income reserves, statutory reserves, and capital reserves.*
Control Variables		
Bank Total Assets (TA)	cash and cash equivalents, Treasury bills and bonds, interbank placements and loans and advances	Summation of total operating and non-operational assets.
Bank Total Deposits (TD)	This refers to the funds and other liabilities from the customers.	Summation of all deposits and liabilities.
Board Size (Bsize)	This refers to the total number directors that steer the affairs of the bank	Total count of board members
Independent Directors (IND)	This refers to the ratio of non-executive directors to the total directors	Ratio of non-executive directors to total directors

3.7 Econometric Model

This study employs a similar model as used by Adegbaju and co, 2008 whose research was also build on panel data for banks in Nigeria. They assessed based on the profitability indicators of return to assets (ROA), returns to equity (ROE) and yield to earning assets (YEA). This study examines in addition the return on equity (ROE) and the net interest margin (NIM).

In literature, one aspect of this quantitative study is the use of models. The model specification which is a priori expectation was used to analyze the relevant data.

The mathematical relationship to be adopted by Green (2002) is:

$Y_{i,t} \; = \; R'_{i,t}\beta + V_i{}'\sigma + \mu_{i,t}$= $R'_{i,t}\beta + \gamma_i + \mu_{i,t}$ …………..………………….. Equation (1)

Taking equation (1) into consideration, the vector $R'_{i,t}$ comprises of M regressors which did not consider a constant value. The individual heterogeneity nature is denoted by $V_i{}'\sigma$ where the vector V_i incorporates a constant term and a particular individual or a set of associative specific characteristics which have been followed or not, all have been captured into the constant term over a certain time (t).

3.7.1 Fixed Effect Model

Concerning the fixed effect model, from equation (1), if V_i(the individual differences)is not followed which maybe correlated with x_{it}then using the least squares to estimate β (vector) will generate a highly skewed and inconsistent outcome as a result of variable that has been taken out. In effect of such a situation, the model from equation (1) above will be modified to be;

$$Y_{i,t} \; = \; R'_{i,t}\beta + \sigma + \mu_{i,t} \qquad (2)$$

Where σ_i= $V_i'\sigma$ which represents all discernible effects and defines a computable conditional mean. In the regression model, $\sigma_i$is considered to be fixed which assumes that all individual heterogeneity or group-specific are duly represented.

3.7.2 Random Effect Model

Concerning the random effect, the individual differences which have not been detected can presume to have correlated with the individual factors. Hence the random effect model in equation (1) is transformed as;

$$Y_{i,t} \;=\; R_{i,t}'\beta + E[V_i'\sigma] + \{V_i'\sigma - E[V_i'\sigma]\} + \varepsilon_{it} = R_{i,t}'\beta + \sigma \;+\; v_i + \varepsilon_{it} \qquad (3)$$

The linearity assumption is now achieved in equation (3) comprising a combined stochastic term that may exhibit uniformity, but when estimated by least squares may produce inefficient and inconsistent result. The random effect technique defines that v_i exhibit particular group random variable which is the same as ε_{it} with the exception of each particular group having an individual cast into the regression undistinguishable in each time space. The generalized least squares (GLS) are employed to estimate variables in the random effect model when the variance structure is recognized, whereas, in the case of unknown variance. (Way, 2007)

3.7.3 The Hausman's Test

The Hausman specification test is used to detect correlation between the error elements and the regressors in a random effects model. Moreover, it helps to make comparison between the fixed and random effects and decides which approach is appropriate. The assumed hypothesis of the Hausman's test is that both the random effects and fixed effects estimators are consistent and no correlation exists between them (Hausman, 1978). However, if there is existence of correlation between them, the random effects estimator is inconsistent and bias. Thus, it violates the Gauss-Markov assumptions, and the fixed effects model becomes the best estimator. This means we reject the null hypothesis that there is no correlation in the random effect and accept the fixed effects estimation.

3.8 Model Specification

Based on the panel model above, the models used for this study was adopted from Jiménez and Saurina (2005). The regression model is a linear function that relates both profitability indicators to recapitalization and other control variables. Base on the general equation, the regression equation is expressed as written in the econometric forms as

$$ROE_{i,t} = \beta_0 + \beta_1 RECAP_{i,t} + \beta_2 TA_{i,t} + \beta_3 \mathrm{TD}_{i,t} + \beta_4 \mathrm{Bsize}_{i,t} + \beta_5 IND_{i,t} + \mu_{i,t}$$

$$NIM_{i,t} = \beta_0 + \beta_1 RECAP_{i,t} + \beta_2 TA_{i,t} + \beta_3 \mathrm{TD}_{i,t} + \beta_4 \mathrm{Bsize}_{i,t} + \beta_5 IND_{i,t} + v_{i,t}$$

Where;

RECAP = Recapitalization proxied with Shareholders' fund

ROE = Return on equity

NIM = Net interest margin

TA = Total size

TD = Total deposits

Bsize = Board Size

IND = Percentage of Independence directors.

μ, v =Error term

β_0 $\beta_1\beta_2$ $\beta_3\beta_4\beta_5$ = regression coefficients.

3.9 Data analysis

The profitability indices (ROE, and NIM), After calculations, cross checks were made to make sure that there weren't any suspicious figures or typographical errors that could affect the entire work. The calculated figures were coded into STATA 13 software and analysed using the model above to find out the objectives of the study. The hypotheses were tested using the p values.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

The chapter presents the results that were obtained from the analyses. The preliminary analysis begins with the descriptive statistics of the selected variables as well as the tests on the equality of the two (2) means of pre and post recapitalization. It also presents the regression analysis of the variables for each of the categories of specification within the objectives above. With regards to the discussion, the results have been compared with available literature to see how similar the results are to these literatures.

4.1 Descriptive statistics

The very first table (table 4.1) gives an overview of the variables for the model according to their minimum values, mean, standard deviation and the maximum values obtained. The vital key points of the table have been discussed below.

Table 4.1 Descriptive Statistics for Variables

	ROE	NIM	RECAP	TA	TD	BS	IND
Mean	0.167700	0.090767	6.46E+08	5.62E+08	4.67E+08	9.033333	0.515020
Median	0.196500	0.091000	5.56E+08	3523619.	2943286.	8.000000	0.555600
Maximum	0.395000	0.119000	1.77E+09	4.44E+09	3.64E+09	12.00000	0.750000
Minimum	-0.274000	0.044000	1.41E+08	336242.0	611694.0	6.000000	0.166700
Std. Dev.	0.167109	0.016372	3.80E+08	1.21E+09	9.98E+08	1.711691	0.144478
Skewness	-1.229508	-0.628313	0.905088	1.970041	1.921089	0.325208	-0.391865
Kurtosis	4.327358	3.615813	3.727932	5.624042	5.399960	1.771215	2.631311
Jarque-Bera	9.760795	2.447916	4.758277	28.01231	25.65268	2.416191	0.937707
Probability	0.007594	0.294064	0.092630	0.000001	0.000003	0.298766	0.625719
Sum	5.031000	2.723000	1.94E+10	1.69E+10	1.40E+10	271.0000	15.45060
Sum Sq. Dev.	0.809840	0.007773	4.18E+18	4.26E+19	2.89E+19	84.96667	0.605344
Observations	64	64	64	64	64	64	64

Source: *Researcher's Computations (STATA, 2020)*

According to table 4.1, the maximum ROE observed is approximately 39.50 which indicates a 395 % profit to total equity. The minimum ROE is 0.274 which is 274%. From the mean in the table, banks are getting more 1677% return on equity. Following Vătavu (2015), on an average banks have been able to make profit over the past eight years which is from 2013-2020 by effectively using investors' funds. However, it should be stated that there is a very high standard deviation of (0.167109) 16.71%. This portrays that from 2014-2020, there is a gap between the well performing banks and the worse performing ones.

With respect to the recapitalisation of the banks, the minimum value is 0.141 or 14.1% while the maximum is 1.77 or 177%. This implies that the shareholder's equity (total value) to the total assets of the banks for the least bank is 14,1% which is low while the highest is 177%. On the average, banks have 6.46% for the recapitalization.

The highest NIM observed from the table is approximately 119%, and the least being 44%. Its mean for the periods of study as computed is 9.1% with a standard deviation of 1.64%.

4.2 Test for Equality of Two Means

Table 4.2. reveals the results of the pre and post recapitalisation for the two (2) profitability indicators.

Table 4.2 Pre and post recapitalization means of profitability variables

Profitability variable	Mean (Pre-recap)	Mean (Post-recap)
All Banks		
ROE	16.56	16.26
NIM	6.36	7.30
Foreign-owned		
ROE	16.71	16.51
NIM	9.07	10.01
Locally-owned		
ROE	14.81	14.41
NIM	10.14	12.32

Source: *Researcher's Computations (STATA, 2020)*

Overall, there is no significant increase for ROE from their mean values before the recapitalisation. This goes contrary to the works of Amartie (2014) where both the ROA and ROE showed a significant increase. Also for the NIM, the difference is 0.94 significant increase this exactly conforms to the test of Amartei (2014). The next is to test if this is significant at 1% and 5% level per the p-values.

In testing hypotheses one to six under section 2.8, the p-values of the sample test was used with the result shown in table 4.2.2, below.

Table 4.2.2: P-value sample test

Paired variable	Obs.	Mean diff	Std. Err	T–statistic	P – value
Pre ROE– Post ROE	64	-0.70	0.0827	0.02471	0.5038
Pre NIM -post NIM	64	-0.94	0.0916	-0.3301	0.0761*

Source: *Researcher's Computations (STATA, 2020)*
**Significant at 10% level*

None of the results, except of NIM, obtained is significant at 10% level based on the P-Value. From the p-value of 0.5038 with ROE makes the findings statistically insignificant. This finding is agrees with the position of Sani and Alani (2013) and Amertei (2014) who stated that recapitalisation of bank did not have reasonable impact on the ROE.

With regards to NIM, it is the only profitability indicator that has a significant p-value of 0.0761 for the pre- recapitalisation period and the NIM for the post recapitalisation period. For that reason, the null hypothesis for the NIM can be accepted in this regard.

4.3 Discussion of results

4.3.1 The impact of recapitalization on all listed banks

From table 4.3, the result for the fixed effect model with the independent variables has been presented all the listed banks.

Table 4.3 Regression result (All listed banks)

VARIABLES	ROE		NIM	
	Coefficient	p-values	Coefficient	p-values
RECAP	**-0.0169**	**0.9038**	**0.0367**	**0.020***
TA	-0.2443	0.0769**	0.0140	0.0923**
TD	0.0271	0.7095	-0.0175	0.9404
BS	0.04248	0.0892**	0.0521	0.5062
IND	-0.0907	0.0589**	-0.0121	0.0462
Constant	0.1761	0.4759	0.0799	0.3047

**Significant level of 5% ** Significant level of 10%*

R-squared	0.84193
Adjusted R-squared	0.81861
Prob. (F-statistics)	0.37185

Source: *Researcher's Computations (STATA, 2020)*

From the regression result above, we can see there exist a negative relationship between the recapitalization and the ROE. However, the p-value proves an insignificant relationship unlike total assets, board size and independent directors with very significant p-values at 10% levels. These findings are very consistent with the findings of Adegbaju and Olokoyo (2008) where they posit that recapitalization did not have any significant relationship with performance of banks.

A look at the p-values of NIM however proved a positive relationship between recapitalization and performance at a very significant p-level at 5% level. These findings agree with the position of Yalley et al (2017) Okpala (2013) and Amertei (2014) in all three (3) instances the banks performance indicator, NIM, proved a significant relation with the recapitalization of the banks. The total assets of the bank also showed a significant positive relationship under this performance indicator.

4.3.2 The impact of recapitalization on foreign owned listed banks

From table 4.4, the result for the fixed effect model with the independent variables has been presented for foreign owned listed banks.

Table 4.4 Regression result (Foreign-owned listed banks)

VARIABLES	**ROE**		**NIM**	
	Coefficient	p-values	Coefficient	p-values
RECAP	**-0.0158**	**0.8087**	**0.0303**	**0.0035***
TA	-0.293	0.0738***	0.0118	0.0409**
TD	0.0306	0.7086	-0.0152	0.1503
BS	0.0205	0.0861***	0.0521	0.0305**
IND	-0.0309	0.0371**	-0.0027	0.01942**

Constant	0.0338	0.3042	0.1028	0.2010

**Significant level of 1% ** Significant level of 5% ***Significant level of 10%*

R-squared	0.64193
Adjusted R-squared	0.61661
Prob. (F-statistics)	0.27165

Source: *Researcher's Computations (STATA, 2020)*

From the results above, similarly to the general regression table, 4.3.2; there exist a negative relationship between recapitalization and ROE of the banks. However, the p-values did not show a significant relationship between the two (2) variables unlike the case of total assets, board size and independent directors. This assertion confirms the case of Adegbaju and Olokoyo (2008) and Ibrahim et al (2013) where they posit that there exists a significant relationship between the bank capital and performance.

The case of NIM is rather different as it shows a very significant p-value of 1% level confirming the findings of Al-Kayed et al, (2014) that the recapitalization of banks had a very positive relationship with foreign owned banks. Yalley et al (2017) also affirms this position in their article. Kukurah et al. (2014) also in their study of Ecobank Ghana showed how there was a sharp increase in the NIM of the bank from 5.9 to 7.2 after the 2012 recapitalization. These findings accordingly confirm that bank's capital has an influence significantly with their performance.

4.3.3 The impact of recapitalization on locally owned listed banks

From table 4.5, the result for the fixed effect model with the independent variables has been presented for locally-owned banks.

Table 4.5: Regression result (Locally-owned listed banks)

VARIABLES	ROE		NIM	
	Coefficient	p-values	Coefficient	p-values
RECAP	**0.0242**	**0.5707**	**0.0399**	**0.0904****
TA	0.0240	0.0869**	0.0210	0.8018
TD	-0.0636	0.6501	-0.0978	0.9108
BS	-0.0125	0.0842**	0.0165	0.0841**
IND	0.0322	0.0909**	-0.0238	0.0518**
Constant	0.0230	0.6808	0.1065	0.1702

**Significant level of 1% ** Significant level of 5% ***Significant level of 10%*

R-squared	0.43193
Adjusted R-squared	0.41431
Prob. (F-statistics)	0.17165

Source: *Researcher's Computations (STATA, 2020)*

From the above results, there exist a no significant relationship between the bank's capital and the ROE as a performance indicator contrary to the findings of Kukurah et al. (2014) on their study of GCB bank where there was a significant impact of the recapitalization on the returns on assets of the local bank.

The results on the NIM rather confirms the finding of Boahene, Dasah and Agyei (2012) since a look at the p-value showed a significance level of 10% between the bank's capital and performance. The findings equally confirm the position of Kukurah et al. (2014) on their assessment of the NIM of GCB bank impact after the 2012 recapitalization.

4.4 Diagnostics Test

In order to ascertain that the results produced conform to the assumptions of the linear regression model and there is no problem in the residual analysis. The following test such as autocorrelation, normality, heteroscedasticity, have been evaluated and presented in Table 4.6 below.

Table 4.6 Diagnostic Test

Test	Chi-Sq	P-value	Inference
Breusch-Godfrey Serial Correlation	0.416	0.298	No Autocorrelation
Breusch-Pagan Heteroscedasticity	0.325	0.552	Its Homoscedastic
Jarque-Berra	12.349	0.1445	Normally Distributed

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This final chapter presents the brief of the key findings of the study. It also focuses on the recommendations to major stakeholders after the conclusions have been made. The summary gives a general view of the study and the findings according to the objectives set. The recommendations presented are pertinent for the government, central bank, shareholders and managers of the banks to adopt as well as apply. The limitations of the study have been discussed as well as the areas of future study.

5.1 Summary of findings

Recapitalization affects all banks across the world. In Ghana, the recapitalization has led to the drastic reduction of universal banks from thirty-three (33) in January ,2017 to twenty-four (24) as at December, 2019. The most important factor of this regulatory step is level of impact of this move on the performance of the banks. This study assessed such impact on the listed banks with the foreign owned and locally owned listed banks in both perspectives. This is partly due to the availability of validly certified financial statements from the GSE archives.

As a measure of performance, this study accordingly looked at the impact of the recapitalization on the return on assets (ROA) and net interest margin (NIM) of the banks before and after recapitalization. The financials of the eight (8) banks including three (3) locally owned ones were collated from 2013 to 2020, with the third quarter financials of 2020 used as a proxy for the full year 2020. The appropriate estimation technique used for regression was the fixed effect after conducting the Hausman test. Analysis were done based on the p-values of the regression results both pre and post recapitalization of each of the three (3) categories per the three objectives as specified in chapter 1.3

Correspondingly, it was discovered that the results of all three (3) objectives revealed that there existed a statistically significant relationship between the net interest margin (NIM) and the recapitalization. The return on equity (ROE), however, did not have a significant relationship statistically with the recapitalization, although there was prove a positive correlation between the two (2) variables. The results show that shareholder's equity to total assets which represents the capitalization of banks has a negative relationship with ROE. The relationship is significant statistically. Therefore, the higher the capitalization of banks, the lesser the return on equity and therefore the less profitable these banks become. This supports the risk-return analysis.

5.2 Conclusions

The new recapitalization policy in 2017 by the regulator in Ghana was met by different opinions and views. This has led to the question on how the minimum capital requirement will affect the profitability of banks in the country. The key objective of this study is to examine the impact of recapitalisation on the profitability of listed banks. Using financial statements from the year 2013 to 2016 to cover the pre-recapitalisation era and from 2017 to third quarter of 2020 to cover the post recapitalisation era, different statistics were done using the model adopted from Jiménez and Saurina (2005). The study limited itself to three profitability indicators which are ROE and NIM of eight (8) listed banks. The results from the test of equality of means and regression analysis for the profitability indicators shows there is no difference between the means of the ROE and but rather showed significant difference in the NIM for the pre-recapitalisation era and the post-recapitalisation era. Furthermore, the ROE supporting the risk-return analysis. With regards to the control variables such as inflation, it has a negative relationship with the ROE. In conclusion although, a negative relationship exists between banks' recapitalisation and ROE, supporting the risk return analysis; the impact is not statistically insignificant. It corroborates the theory Bank Capital Channel. On the other hand, a positive relationship exists between banks' recapitalisation and NIM, the impact is statistically insignificant supporting the position of most recent literature.

5.3 Recommendations

Obviously, from empirical results, the recapitalisation have improved the profitability of the banks. The recommendations have been grouped according to the various stakeholders.

- ***Recommendations to the regulator (Bank of Ghana)***

They can also look at setting new capital requirements for different category of banks per their ownership being foreign or local. The categories could also be according to the tiers they belong. This is so that banks who cannot meet the requirement but are banks which are in good standing with the regulator can still operate and not have to shut down or merge. The Bank of Ghana should devise policies to help the banks to increase profitability. They can also help the banks enhance the supervisory role. One of the issues that affect the profitability of banks is non-performing loans which sometimes arise because of clients who are not credit worthy. There is the need for the regulator to set up a fully functional credit referencing bureau. This will help banks to increase their interest and profit margins. The regulator should ensure that they are doing a good job by regulating and supervising corporate governance on the banks.

- ***Recommendations to the shareholders of banks***

They have a responsibility to choose their directors since they are those who will have to fund the new capital requirement. They should expect more from the banks in terms of how the loans are disbursed and how much profits should be made.

- ***Recommendations to the government and various ministries***

The government's role is to provide the needed enabling economic environment. This is so that the cost of doing business in the country will be significantly reduced. More investors may want to come in and borrow bigger loans from the banks. The banks can also make more profit. In other countries, the interest rates are as low as 3%, therefore more people may want to borrow. Also when mergers and acquisition happen, the government should have a policy where about 50% of the affected staff should be maintained while the other 50% who may be affected could be absorbed through the one module which can be designed under the Nation's Builders Corps (NABCO). Without this, employees who may be laid off from the affected banks as a result of mergers and acquisition will join the unemployed graduate association, increasing the number of unemployed graduates in the long term.

5.4 Areas of future studies

There is the need to have future studies which should look at the impact of recapitalisation on non-listed banks in Ghana. This is because the recapitalisation policy affects all banks.

5.5 Research limitations

The results are also limited to only the eight (8) banks which were used for the study. It also used only two indicators of profitability which sets its limits for the profitability

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APPENDICES

APPENDIX 1: ROE AND NIM FOR LISTED BANKS (PRE RECAPITALISATION ERA)

BANK NAME	YEAR	ROE	NIM	TOTAL ASSETS	TOTAL DEPOSITS
ECOBANK	2013	0.356	0.103	4624405	4067299
ECOBANK	2014	0.395	0.105	5669630	4885759
ECOBANK	2015	0.372	0.109	6587487	5706459
ECOBANK	2016	0.342	0.096	8025510	7073302
STANCHART	2013	0.365	0.101	3207532	2965342
STANCHART	2014	0.394	0.103	3506297	2977370
STANCHART	2015	0.119	0.109	3369448	2814348
STANCHART	2016	0.293	0.119	4373564	3608348
SOCIETE	2013	0.213	0.103	1475986454	1345623577
SOCIETE	2014	0.224	0.108	1675949364	1453966199
SOCIETE	2015	0.169	0.095	1992231175	1728250974
SOCIETE	2016	0.192	0.089	2448836201	2116280777
REPUBLIC	2013	-0.22	0.101	1133233	990765
REPUBLIC	2014	-0.23	0.103	1324350	1088280
REPUBLIC	2015	-0.218	0.095	1566419	1386664
REPUBLIC	2016	-0.274	0.07	1856171	1715022
ACCESS	2013	0.27	0.087	1654647	1389756
ACCESS	2014	0.294	0.091	1718712	1428483
ACCESS	2015	0.224	0.085	2424439	2065488
ACCESS	2016	0.098	0.078	2679608	2251060
ADB	2013	0.125	0.09	2091766	1765444
ADB	2014	0.139	0.11	2156740	1812925
ADB	2015	-0.237	0.084	2134147	2580715
ADB	2016	-0.154	0.071	3035493	1801254
GCB	2013	0.201	0.132	3224145	3211344
GCB	2014	0.243	0.157	4232819	3572923
GCB	2015	0.3	0.165	4641166	3824549
GCB	2016	0.295	0.166	6049604	5034491
CAL	2013	0.321	0.054	2532018	2287655
CAL	2014	0.358	0.085	2707542	2315222
CAL	2015	0.316	0.08	3351039	2845176
CAL	2016	0.014	0.071	3599355	3096587

APPENDIX 2: ROE AND NIM FOR LISTED BANKS (POST RECAPITALISATION ERA)

BANK NAME	YEAR	ROE	NIM	TOTAL ASSETS	TOTAL DEPOSITS
ECOBANK	2017	0.249	0.093	9098692	8071894
ECOBANK	2018	0.257	0.088	10066195	8926291
ECOBANK	2019	0.25	0.087	10829587	9295359
ECOBANK	2020q3	0.26	0.096	10997544	11765488
STANCHART	2017	0.308	0.116	663501	611694
STANCHART	2018	0.201	0.091	688762	638410
STANCHART	2019	0.242	0.088	720398	669737
STANCHART	2020q3	0.254	0.094	837645	786678
SOCIETE	2017	0.174	0.109	2789742286	2270889263
SOCIETE	2018	0.088	0.089	3431356392	2729571492
SOCIETE	2019	0.16	0.093	4443909209	3641947778
SOCIETE	2020q3	0.19	0.098	5456678869	4565537758
REPUBLIC	2017	0.163	0.085	2079096	1852901
REPUBLIC	2018	0.075	0.072	2857988	2360279
REPUBLIC	2019	0.112	0.072	336242	2769632
REPUBLIC	2020q3	0.115	0.065	442243	3322487
ACCESS	2017	0.063	0.076	3199566	2730829
ACCESS	2018	0.079	0.065	3540941	2909201
ACCESS	2019	0.216	0.044	4711698	3907898
ACCESS	2020q3	0.321	0.076	5754733	4876255
ADB	2017	0.055	0.107	3545143	3066130
ADB	2018	0.009	0.074	3597395	2957684
ADB	2019	0.019	0.073	4577659	3784275
ADB	2020q3	0.022	0.087	5332443	4566788
GCB	2017	0.191	0.126	9558151	8445001
GCB	2018	0.244	0.096	10635051	9309634
GCB	2019	0.255	0.101	12416741	10764687
GCB	2020q3	0.298	0.278	14563478	12345547
CAL	2017	0.224	0.091	4212638	3565211
CAL	2018	0.213	0.086	5405856	4641284
CAL	2019	0.181	0.083	7039780	6078913
CAL	2020q3	0.194	0.084	8763458	7542567