Minimising Bank Failures in Ghana Through Effective Regulatory Compliance Monitoring

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DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed: Patricia Barnett-Quaicoo (candidate)

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This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used the extent and nature of the correction is clearly marked in a footnote(s). Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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DEDICATION

This thesis is wholeheartedly dedicated to my husband and my children**.**

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ABSTRACT

This research was conducted based on the main research question, “How can an effective regulatory compliance monitoring framework minimise bank failures in Ghana?” The main aim of the research was to meet the objectives of examining the existing Regulatory Framework for banks in Ghana, identifying the monitoring framework of the Central Bank (Bank of Ghana), identifying the soundness of banks before the failure, examining the causes of the recent bank failures in Ghana and making recommendations for an effective regulatory compliance monitoring framework which could minimise such bank failures in Ghana.

The researcher adopted a mixed method of data collection and analysis. A total of ninety-seven respondents were involved in the study. Questionnaires and semi-structured interviews were employed for the collection of primary data. The secondary sources of data included academic journals, official documents from international organisations such as the World Bank and the International Monetary Fund, documents from the Central Bank (Bank of Ghana), and annual reports of some selected banks in Ghana.

From the data collection and analysis, the researcher identified that Bank of Ghana (the Central Bank of Ghana) is the regulator of the Ghana Banking Sector as mandated by the Bank of Ghana Act 930, 2016 to maintain a sound banking system. The findings and analyses showed that the causes of the recent bank failures in Ghana were capital inadequacy, illiquidity, high rate of non-performing loans, bad corporate governance practices and ineffective monitoring by the regulator. It was also identified that except for Regulatory Monitoring lapses, all the other causes of the bank failures cited by the respondents were indicators monitored by the regulator. It could, therefore, be concluded that the responsibility of Regulatory Compliance Monitoring, if effectively executed by the regulator, could minimise bank failures in Ghana.

The methods of analyses were Content Analysis, Survey Analysis, The Delphi Technique, CAMELS Analysis and Regression Analysis.The researcher then recommended a more robust regulatory compliance monitoring framework to help improve the effectiveness of monitoring regulatory compliance in the banking sector in Ghana.

Abbreviations	
ACCA	Association of Chartered Certified Accountants
AI	Artificial intelligence
AUM	Assets Under Management
BBWA	Bank of British West Africa
BIS	Bank for International Settlement
BoE	Bank of England
BoG	Bank of Ghana
CAMELS	Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Sensitivity
CEO	Chief Executive Officer
ECB	European Central Bank
ERP	Economic Recovery Programme
EU	European Union
FCA	Financial Conduct Authority
FDIC	Federal Deposit Insurance Corporation
FSA	Financial Services Authority
HQLA	High-Quality Liquid Assets
IAS	International Accounting Standards
ICA	International Compliance Association
IFRS	International Financial Reporting Standards
ILC	Industrial Loan Companies

IMF	International Monetary Fund
ITLOS	International Tribunal for the Law of the Sea
NIM	Net Interest Margin
NIPE	Net Income per Employee
NOP	Net Open Position
NPBT	Net Profit Before Tax
NPRA	National Pensions Regulatory Authority
OR	Operational Research
PNDC	Provisional National Defence Council
PRA	Prudential Regulatory Authority
ROA	Return on Assets
ROE	Return on Equity

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CHAPTER ONE

CHAPTER 1: Introduction

1.1 Background to the Research

The Prudential Regulatory Authority (PRA) of the Bank of England defines a bank as a firm with permission from the Financial Conduct Authority (FCA) or the Prudential Regulatory Authority (PRA) to carry out the regulated activity of accepting deposits (Bank of England Prudential Regulatory Authority, 2014). In other countries, the appropriate regulatory body will have the mandate of authorizing institutions to operate as banks within their jurisdictions. There are various types of banks such as commercial banks, investment banks, merchant banks and Islamic banks, providing services such as forex, international and local payments, loans and deposits, financial market activities and fiduciary services (Spiegel, 2014). Banks play critical roles in the economic development of the countries in which they operate through the facilitation of trade between importers and exporters, provision of credit to borrowers and an avenue for savings for customers with surplus funds. Banks also provide employment to scores of people and contribute to the nation's tax budget (Bollard, 2011). In most countries, banks are highly regulated because they play extremely critical roles in the financial stability of the countries in which they operate through investments, lending, provision of employment and contribution to government tax revenues. Despite the many advantages of banks, they are also highly sensitive institutions that can easily be run down. This sensitivity of banks can adversely affect economies by increasing the rate of unemployment, decreasing government tax revenue and decreasing investor confidence in a country.

As indicated, banks play various critical roles such as acting as financial intermediaries (Cavenaile & Sougne, 2012) leading to economic growth due to increases in accumulation of capital (Pagano, 1993) and productivity; transmission of the monetary policy of central banks into the real economy by adjusting interest rates and the supply of loans in response to changes in monetary policies of a country (Juurikkala, et al., 2011); strengthening corporate governance systems for the improvement of returns on investment through the provision of appropriate mechanisms and also helping capital markets to integrate into economies such as in the case of the Euroland (Buch, 2000).

1.2 Bank Failures

A bank is said to have failed when its regulator revokes its operational license (Cavalcanti & Monteiro, 2016).

These failures can be caused by a myriad of reasons, both financial and non-financial. According to (Basu, 2003), bank failures are generally common in countries with liberalised and deregulated financial markets. Non-performing loans and speculative attacks, causing panic amongst depositors can cause a run-on banks (Wigmore, 1987) as well as shocks resulting from illiquidity (Huang, 2003). (Belongia & Alton, 1990) posit that collapsed banks have some common characteristics which include high loan-to-asset ratios, unusually rapid growth, and bad corporate governance.

Bank failures and financial crises are not novel because many countries have experienced these at one point or the other (Sayek & Taskin, 2014) in their history. Globally, bank failures are common and come at a high cost to many economies because of the instabilities in financial systems and reductions in economic growth that such failures cause. Countries such as Brazil and Russia; and recently the United States of America and the continent of Europe have all experienced banking failures. The failure of small banks in the United Kingdom in the early 1990s (Balluck, et al., 2016) ; the crises of the European Monetary System between 1992 and 1993 which disrupted what seemed like a smooth progress towards economic and monetary union (Cobham, 1996) ; and the two financial crises in Sweden in the 1920s and the 1930s (Lonnborga, et al., 2011) all go to prove the global nature of bank failures and financial crises.
However, this problem is more prevalent in developing countries due to macroeconomic volatilities and changes in political regimes in these countries (Caprio & Honohan, 1999).

In the 1980s, the United States of America went through its worst banking crises since the 1930s. G. Kaufman asserts that since both of the banking crises of the 1930s and the 1980s after the government had created institutions (the Federal Reserve in 1913 and the Federal Deposit Insurance Corporation in 1934) intended to correct shortfalls in the system, it can be concluded that mismanagement of the banking system by the government played a major role in the crises. However, since G. Kaufman also mentioned that the most severe regional recessions began in Texas and neighbouring producers of energy, following the collapse of world oil prices, it could be inferred that such failures were caused by adverse economic conditions rather than government mismanagement (Kaufman, 1995).

A study by the Office of the Comptroller of the Currency, Washington D.C. for the identification and assessment of the causative factors of the collapse of national banks also revealed that although bad economic conditions was a contributory factor to the banking crises of the 1980s in the USA, poor management policies and other internal problems such as non-adherence to compliance, bad loan policies, insider abuse and fraud were the major reasons why national banks failed (Office of the Comptroller of the Currency, 1988).

The critical roles played by banks imply that the failure of any bank has adverse effects on economies of nations. The contagion effect (Gay, et al., 1991) of bank failures can result in the collapse of a series of smaller banks when one large bank collapses, which can cause massive job losses and loss of tax income to the state. The contagion effect occurs especially when a large bank fails or if the failure is unexpected (Gay & Timme, 1991). For instance, until the collapse of Lehman Brothers in the year 2008, it was a major investment bank in the United States of America and played the important role of acting as a primary dealer of United States' Treasury. However, when it collapsed, this bank which had been established in 1850 and survived many banking crises, made it difficult for many affiliated banks to rollover short-term debts (Johnson & Mamun, 2012).

1.3 Minimising Bank Failures

Over the years, many actions have been taken by banks, regulators, and governments to prevent banks from collapsing. These actions have included skill enhancement training programmes for bankers and regulators; strengthening of legal framework; ensuring adequate capitalisation; accurate reporting from banks to the regulator; market and regulatory discipline; and Deposit Insurance and Government Guarantees for banks' liabilities. (Economic Development Institute of the World Bank, 1998) . However, after the credit crunch of 2007 - 2009, it became evident that lapses in regulatory compliance was a major contributory factor to the crises. An effective and comprehensive regulatory regime, therefore, is required for the sustenance of the global banking system (Petitjean, 2013).

1.4 Regulatory Mechanisms

In July 1995, F.R. Edwards and F.S. Mishkin pointed out that the nature of banking was changing from the traditional way of providing long-term loans with funds from short-term deposits to more sophisticated and non-traditional products, such as derivatives, which promise greater returns but come at a higher risk. They, therefore, suggested as a mitigation to this problem, the maintenance of a sound banking system, and the

restructuring of the banking industry for the achievement of long-term financial stability. To achieve this, they identified the need for a robust regulatory policy capable of shaping the transition from the traditional way of banking into new frontiers while guarding against excessive risk-taking by adopting a system of structured capital requirements for banks as well as early regulatory corrective actions (Edwards & Mishkin, 1995). A timely warning, which if heeded, could have averted the 2008 financial crisis.

The Basel Committee on Banking Supervision (BCBS) was established in 1974 for the enhancement of global financial stability through the improvement of the quality of global banking supervision. To fulfil its mandate, the committee formulated the Basel I and Basel II accords in 1988 and 2004 respectively, for the monitoring of a global Capital Framework with Basel II being an improvement of Basel I. However, following the failure of the Lehman Brothers in September 2008, the committee updated the second Basel accord to manage liquidity risk, set standards, monitor, and set up an international regulatory mechanism aimed at greater resilience in banks and financial systems (Bank for International Settlements, n.d.). Though the BCBS is no prescribed universal authority, and the prudential guidelines it proposes are not legally binding (Bank for International Settlements, n.d.), M. Magnus and A. Korpas describe it as a critical standard-setter in the banking sector, with the mandate of strengthening the regulation, supervision and practices of banks globally, with specific emphasis on large, globally active banks (Korpas & Magnus, 2017). Adherence to the statutes of the BCBS by member banks will greatly improve the stability of the global financial system.

It must be noted, however, that some banks have collapsed despite the existence of a regulatory framework. Northern Rock, for example, was a British Bank which collapsed in the year 2007 (Marshall, et al., 2012) though the United Kingdom had an existing banking regulation framework.

1.5 Regulatory Compliance

Compliance generally refers to conformity to rules, policies, standards, or laws (Zheng, et al., 2020). Regulatory compliance requires organisations to adhere to the guidelines, specifications, laws and regulations which are relevant to the sector of the business. Violation of these regulatory compliance requirements are punishable in various ways including sanctions and fines. Various industry sectors have their own governing bodies which can be either local to the region or international. However, the idea of compliance in

banks has evolved over the years from a set of rules set by the regulator which must be ticked off to ascertaining the risks a bank faces and adopting the appropriate mitigating measures (Haynes, 2005). The regulation of banks reduces the probabilities of failure, increases the confidence of investors and depositors in the banking system and reduces the cost of insurance for insured deposits (Cyree, 2016) .

In response to the financial crises of 2007-2009, the Basel Committee on Banking Supervision developed a set of globally accepted mechanisms with the aim of consolidating the supervision, regulation and risk management of banks. This framework was known as BASEL III and was aimed at strengthening the faith of stakeholders in banks, which was lost during the credit crunch (Bank for International Settlements, 2017).

1.5.1 How Ineffective Regulation Can Lead to Bank Failures

Regulatory failures can refer to a regulatory framework that is poorly designed, too interfering, too lenient, or inadequately implemented (Saal, et al., 1996).

The gravity of the global financial crisis of 2008-2009 has called for a great regulatory revamp because observers such as the Asian Development Bank Institute have attributed the global banking crisis to a regulatory failure (Acharya, et al., 2011).

Between 1997 and 1999, Asia experienced widespread financial crises which affected countries such as Thailand, Malaysia, Indonesia, Korea and the Philippines (Lindgren, et al., 1999). Although the crises could be generally attributed to weaknesses in the financial and corporate sector, (Lindgren, et al., 1999) state that it was caused by “weaknesses in bank and corporate governance and lack of market discipline which allowed excessive risk taking because prudential regulations were weak and poorly enforced”. According to the IMF, the restructuring of the banking sector which cost the countries involved between 15 to 45 percent of Gross Domestic Product (GDP), could have been avoided with better regulatory and supervisory framework as well as more transparent micro and macroeconomic policies.

Africa has had a fair share of banking failures with countries like Benin, Cameroun, Cote D’Ivoire, Ghana, Guinea, Kenya, Nigeria, Senegal, Tanzania and Uganda experiencing banking failures at different times in their history. An International Monetary Fund Working Paper WP/04/55 indicates that among other factors such as government interference, one of the major causes of these banking failures in Africa was the deficiency in banking regulation and supervision (Daumont, et al., 2004).

These examples show examples of how ineffective regulation led to bank failures, globally, in Asia and in Africa.

1.6 Background to the Study

Until 14th August 2017, the banking system in Ghana comprised of the Central Bank (Bank of Ghana), thirty-five (35) licensed banks and representative offices of three (3) offshore banks (Bank of Ghana, 2017). However, as of 1st January 2019 the number of banks had reduced to twenty-three (23). The reduction in the number of banks had been caused wide-spread failure of banks in Ghana between 2017 and 2018.

The Central Bank of Ghana has the responsibility for the total supervision and regulatory authority in all matters dealing with banking business with the aim of achieving a robust and efficient banking system which works on behalf of depositors and other clients of these financial institutions in particular, and the economy of Ghanaians in general (Bank of Ghana, 2011). The regulatory framework of Ghana's banking system has adopted the Basel Accord and is backed by the Banking Act of 2004 (Act 673) for strengthening the safety, stability and soundness of the banking system (Bank of Ghana, 2011). The Bank of Ghana is mandated with the responsibility of ensuring the stability of the banking system for the facilitation of economic growth, wealth creation and development within the country of Ghana. This is achieved through the regulatory and legal framework within which banks operate in Ghana, which govern the licensing and withdrawal of licenses, monitoring of banks and the duties and protection of the regulator.

Bank of Ghana Acts 612 and 673 define the responsibilities and functions of the Bank of Ghana in its capacity as regulator as follows:

1. Regulation, supervision and direction of the credit and banking systems for the seamless operation of a secured banking system.
2. Appointment of an officer designated by the Board to head the Department of Banking Supervision.
3. Consideration and proposal of reform of the laws relating to banking business when necessary. (Bank of Ghana, 2011)

To determine the financial health of banks in Ghana, banks are expected to periodically submit to the Banking Supervision Department of the Central Bank, reports as requested. These reports are inclusive of the following:

- Consolidated Balance Sheets
- Capital Adequacy Returns

- Liquidity Reserve Returns
- Net Open Positions
- Large Exposures in Advances and Deposits
- Maturity Analysis of Assets and Liabilities

  Banks are expected to operate within stipulated limits, failure of which attracts penalties from the regulator.

The Ghana Association of Bankers which is the main mouthpiece of Ghanaian Banks, brings all banks under one umbrella with the mission to support the banking sector in the development of best practices and standards; and advocate financial, regulatory and economic policies in the best interest of its members to foster a robust banking industry for economic growth (Ghana association of Bankers, 2018).

1.7 Problem Definition

Despite the Regulatory Framework instituted by Bank of Ghana, the banking system in Ghana has had some failures, which include the collapse of the Bank for Housing and Construction and the Co-Operative Bank in the year 2000 due to insolvency caused by liabilities exceeding the assets of the two banks (Adjei, 2017). It was, therefore, to be expected that the appropriate measures would have been employed by the regulator to minimise any more of such occurrences. However, between August 2017 and December 2018, Ghana saw the reduction of banks from thirty-five to twenty-three because the regulator revoked the licenses of seven banks citing reasons of undercapitalisation, insolvency and illiquidity. This exercise saw the revoking of the licenses of seven banks over a sixteen-month period (Bank of Ghana , 2019).

This study, therefore, aims at examining the reasons for the collapse of the banks in Ghana from August 2017 to the end of the year 2018, examine how effective regulatory compliance monitoring could have minimised the failures and be employed to minimise any such occurrences in the future.

1.8 Research Question

How can an effective regulatory compliance monitoring framework minimise bank failures in Ghana?

1.9 Purpose of Study

The purpose of this study is to identify the causes of the recent bank failures in Ghana and explore how an effective regulatory compliance monitoring framework can minimise such failures. The study will also develop a monitoring framework for regulatory bodies to effectively monitor the activities of banks in Ghana.

1.9.1 Importance of Stopping Bank Failures

According to (Gobat, n.d.), in an article written on the IMF website, banks are important primarily for collecting deposits from those with excess funds and lending to those in need of funds. People therefore depend on banks to look after their excess funds and provide funds to those in need. This intermediary role, according to (Bank of England, 2020), is what keeps the economies of nations running. Therefore, when a bank collapses, national economies are greatly affected.

Although it may be practically impossible to prevent every bank from collapsing, it is imperative to reduce the chances of this happening to keep economies running.

1.10 Objectives of Study

The primary objective of the study is to identify the causes of the recent bank failures in Ghana and examine how an effective regulatory compliance monitoring framework can help minimise such failures.

The objectives of the research, therefore, are:

i. To examine the existing regulatory framework for banks in Ghana.
ii. To identify the loopholes in the monitoring framework of the Bank of Ghana.
iii. To identify the soundness of the failed banks before the failure.
iv. To examine the causes of the recent bank failures in Ghana.
v. To recommend and develop an effective regulatory framework that can help minimise such failures.

The first, second and third objectives will be met through the literature review in Chapter 2 and the content analysis, the questionnaires and interviews; then based on the responses received, an effective regulatory framework aimed at bridging the gap identified will be developed by the researcher, and then recommendations will be made.

1.11 Significance of the Research

This study which was prompted by the collapse of some banks in Ghana between 2017 and 2018, will add to the existing literature on regulatory compliance monitoring and also benefit the banking sector in Ghana, the Ghanaian government, academia and other stakeholders. This research will add to the body of knowledge on Regulatory Compliance Monitoring, especially in developing countries, which according to (Yee, et al., 2016) is currently mainly concentrated on Western countries. It will also assist academia as a study material for banking and compliance students and open research ideas for future doctoral thesis.

The regulator of the banking sector in Ghana will benefit from a more effective regulatory framework with early triggers and work together with the management of affected banks for an early resolution of identified problem areas to avoid crystallisation into major issues. The pitfalls to be avoided will be highlighted to banks and other financial institutions. The regulator of the banking system in Ghana, the Bank of Ghana, will benefit from the suggestions made by the researcher for effective Regulatory Compliance Monitoring which will help to minimise such bank failures.

The results of this study will suggest a monitoring framework which will give the government of Ghana an insight into the banking sector and step in through the ministry of finance. A strengthened and well-regulated banking industry is a plus for any government since investors are confident of the safety of their investments. This will also improve the financial rating of the country of Ghana and attract more foreign investors into the country. Finally, the government of Ghana will be relieved from the pressures of unemployment and loss of taxes due to bank failures.

Also, other stakeholders such as employees of banks in Ghana, will be confident about their job securities, giving them the peace of mind to contribute their best towards the growth of their organisations.

1.12 Limitations of Research

This research faced some challenges due to the sensitive nature of the area being researched. At the time of starting this research journey, the researcher expected to face some difficulty accessing information, especially from the regulator since the Right to Information Bill had not yet been passed in Ghana. However, this did not turn out to be a

difficulty after all as the Bank of Ghana official who was interviewed by the researcher indicated that the information required was public knowledge and directed the researcher to sections of the Bank of Ghana ACTS 673 and 970 from where information pertaining to this research could be obtained.

Additionally, the researcher anticipated that out of the fear of victimisation, employees in the banking sector may not be willing to provide data for the purpose of the research. Though there were a few respondents who were a little apprehensive, the researcher assured all respondents of anonymity. Further, the researcher made extensive use of published data from the Central Bank of Ghana and published annual reports of banks to avoid putting respondents in positions where they would be faced with controversial questions.

One major challenge the researcher faced was the refusal of all interviewees to have interview proceedings recorded. Though the researcher assured respondents that the recordings were just going to be a back-up to the written responses, they were still not prepared to have them recorded, citing examples of situations where some private proceedings had been leaked to the public, thereby creating problems for people. The researcher, therefore, had to be extra attentive during the interview to be able to record every response in writing.

An unanticipated challenge which the researcher was faced with was the unavailability of financial data for any of the collapsed banks with the exception of the UT Bank. However, even with the UT Bank, which was listed on the Ghana Exchange and therefore expected to publish annual reports, publications ceased after 2013. The researcher was, therefore, faced with the limitation of a skewed regression analysis which was overcome by creating two different regression scenarios and performing a CAMELS analysis to determine the soundness of the UT Bank as compared to the other banks in the years leading up to the failures.

Finally, though Ghana has experienced a number of bank failures since the introduction of banking into the country, this research was limited to the banks which failed between August 2017 and December 2018 due to time and financial constraints.

1.13 Justification for Research

After the recent bank failures in Ghana and the effects that these failures had on the economy and the employment situation in the country, the researcher found it expedient to identify the reasons for the factors which led to the collapse of the banks which failed between 2017 and 2018, and find out if effective regulatory compliance monitoring could have minimised such failures. This, the researcher believed, would lead to the recommendation of a more robust regulatory compliance monitoring framework with an early warning system to identify breaches to report issues of non-compliance.

The researcher noticed after a thorough search through published academic materials that though there have been earlier research studies on the banking industry in Ghana such as (Owusu-Frimpong, 1999) and (Aryeetey, et al., 1997), the area of Regulatory Compliance Monitoring had not been adequately researched. Additionally, with the issue of the recent bank failures being a recent occurrence, there were not many academic journal articles, although there were a number of publications in the print and online media platforms. The justification for carrying out this research, therefore,was to collate all the findings and present the results in an improved and systematic monitoring framework for the regulator of the banking industry in Ghana, academia and the banking and financial industry at large.

1.14 Scope of Research

The scope of the research was limited to the banks which existed in Ghana in the period between August 2010 and year-end 2018. Participants were selected from both existing and failed banks, the Bank of Ghana, experienced banking professionals and some legal luminaries to provide information for the research.

1.15 Research Assumptions

The researcher made the following assumptions with respect to this study:

i. The information required will be available.
ii. The respondents will be co-operative.
iii. There will be no major obstacles.

1.16 Organisation of Research

This research is segmented into six chapters as indicated in the table below:

Table 1.1: Chapter Organisation of Research

Chapter	Title
Chapter One	Introduction
Chapter Two	Literature Review
Chapter Three	Methodology and Design
Chapter Four	Findings and Analyses
Chapter Five	Discussion on Findings
Chapter Six	Conclusions, Contributions and Recommendations

Chapter 1

Chapter one is an introduction to the study and discusses the basis and justification for the study. It also provides the main background to the study and the research objectives.

Chapter 2

In chapter two, existing literature on financial and banking systems; indicators of the financial health of a bank; causes of bank failures; mechanisms for minimising bank failures; and regulatory compliance are critically reviewed.

Chapter 3

The methodology for the research is discussed in chapter three, bringing into focus the research philosophy, design and strategy. The data sampling, collection and analysis procedures are also discussed in this chapter.

Chapter 4

In chapter four, research findings based on the data collection and analysis are presented.

Chapter 5

Chapter five is a discussion of the results of the findings of the data collection and analysis. Evidence from primary and secondary data and new information obtained as a result of this research are presented in chapter five and explained in detail.

Chapter 6

Conclusions, contributions and recommendations from the work carried out by the researcher can be found in chapter six, which is the final chapter. This chapter contains the summary of the research findings; how the research objectives were met; contribution from the research to the practice of banking, academia and knowledge on Regulatory Compliance Monitoring. The researcher also made recommendations for further research in chapter 6.

1.17 Definition of Key Terms

To avoid any confusion or ambiguity, the key terms and concepts used in the research are defined in this section as seen in Table 1.2 below.

Table 1.2: Definition of Key Terms

Key Term	**Definition**
Bank	A bank is defined by the Bank of England as a financial institution which provides financial intermediary services by receiving deposits from customers and providing credit to others. (Bank of England Prudential Regulatory Authority, 2014)
Central Bank	The European Central Bank defines a Central Bank as a public institution which manages a country's currency and controls the supply of money with the main aim of ensuring price stability (European Central Bank, 2015). The theory of Central Banking with respect to its purpose has undergone many changes, especially after the recent global banking crises (Dow, 2017). In the 1990s, the activities of Central Banks mainly represented inflation targeting (Crowe & Meade, 2007). However, the new approach is now focused on monetary stability (Arestis & Sawyer, 2008).
Financial Health	According to the (World Health Organization, 2006), " Health" is defined as " *a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity*". Financial health can, therefore, be defined as the relationship between the use of an entity's financial resources and its impact on their mental,

	social and physical well-being. In other words, it is the measurement of an individual or organisation's income as compared to their expenditure.
Balance Sheet / Consolidated Balance Sheet	The balance sheet of a business entity portrays its financial position on the reporting date (Yang, et al., 2014). Whilst all companies prepare balance sheets, parent companies prepare consolidated balance sheets to capture their subsidiaries.
Capital Adequacy	The European Investment Bank defines Capital Adequacy as the amount of capital (shareholders funds) that a bank must hold in relation to it's risk-weighted assets. Regulators use it as a measure of preventing banks from taking excessive leverage which may result in insolvency. Capital Adequacy of a bank is measured by the Capital Adequacy Ratio, which is the ratio of capital to risk-weighted assets. According to the Basel III Accord, a bank's capital adequacy ratio must be at least 8% (Basel Committee : Bank for International Settlement, 2019).
Compliance	The International Compliance Association describes compliance as "*the ability to act according to an order, a set of rules or request*" (International Compliance Association, n.d.) . In banking, compliance encompasses rules, standards and laws concerning market conduct, the management of conflicts of interest and fair treatment of customers. These include laws on terrorist financing and money laundering (Basel Committee on banking Supervision: Bank for International Settlement, 2005)

CHAPTER TWO

CHAPTER TWO: Literature Review

2.0 Chapter Overview

According to (Tellis, 2017), contrary to the assumption that research is impactful when there is the discovery of truth, rather, the impact of research is enhanced when it refutes long-held beliefs. Additionally, as different people have different and divergent views and opinions in research, it is important to review literature from different writers on an idea and analyse the various opinions to draw conclusions.

It is in this light that the researcher performed a systematic critical review of the literature on the major issues concerning the banking industry in this chapter. Themes reviewed have included financial systems; banks and banking systems; soundness of banks; causes and effects of banking failures; and regulatory compliance monitoring in the banking sector. Also reviewed is the literature on Ghana as a West African country, how the banking and financial sectors in Ghana have evolved over the years as well as the causes and effects of the recent banking failures in Ghana.

Though there are different types of literature reviews such as argumentative, integrative, historical, methodological, systematic and theoretical, the researcher opted for the systematic literature review. The choice to do a systematic literature review was based on the fact that systematic reviews form an overview of existing research work pertinent to the current research, which were then identified and critically appraised based on relevant themes (Pinto & Mendes, 2017).

The importance of this chapter to this research is that it served to provide ideas to explore through examples of well-conducted research work (Sample, et al., 2020). The literature review also helped the researcher to avoid a repetition of research work already carried out by others, and instead build on and add to the existing knowledge.
Through the literature review, the researcher identified gaps in the literature that this research contributed to by closing. By positioning this research in the context of other research work, a conceptual model was generated and gaps in literature were identified (Krishnan & Ulrich, 2001).

The researcher briefly looks at financial institutions since banks are financial institutions and then moves on to banks by critically reviewing literature on the activities, risk management and the role of central banks in the regulation of banks.

Literature on the ways in which banks are assessed, bank failures, mechanisms for minimising bank failures, and regulatory compliance. The issues of regulatory compliance related to banking needs are set in an African context prior to the situation in Ghana, which is the focus of the research. Finally, literature on data analysis methods such as CAMELS and Regression Analyses are also reviewed.

The chapter ends with a discussion of the conceptual framework for the research.

2.1 Financial Institutions

Financial institutions are one of the components of financial systems. They can be state-owned or private-owned; domestic-owned or foreign-owned (MichaSJurec, 2014). There are different types of financial institutions. Notable among them are banks, venture capital institutions, insurance companies, brokerage firms, credit unions and building societies. They primarily act as intermediaries in financial systems by proving funding and facilitating the flow of funds in an economy by pooling resources from those with surpluses and making them available to those who need credit. In effect, they fuel economies through the provision of credit for economic activities.

Financial institutions also contribute to the allocation of sustainable development through the allocation of capital (European Commission, 1997). According to (Sunley, et al., 2005), financial institutions are an important part of the ecology of the structure of regional industries. To buttress this point, the researchers cited the example of the United Kingdom and Germany where Venture Capital Institutions have been used to bridge the gap for funding small and medium-sized enterprises. (Grohn, 2011) agrees that venture capital institutions facilitate the flow of capital (and technical or managerial expertise) from institutional investors to entrepreneurial ventures to create employment, growth and innovation.

Another area in which financial institutions play an important role is that of international trade (Alfieri, 2018). (Veer, 2015) buttresses this point by stating that financial institutions facilitate international trade through the provision of export credit and insurance on exports. The (Bank for International Settlements - Committee on the Global Financial System , 2014) confirms the importance of financial institutions in the facilitation of international trade by stating that the provision of working capital and support for international trade transactions reduce payment risks. For instance, by issuing Letters of

Credits (LCs), banks provide a framework in which exporters are guaranteed payment for goods delivered.

2.2 Banks and Banking Systems

Banks are financial institutions and are very critical to the effective running of any financial system. However, (Allen, et al., 2008) submit that the importance of these roles varies across countries and economies. From the amelioration of problems with information between lenders and borrowers to risk management and the proper use of depositors' funds, banks provide the systems for the attainment of the functions of a financial system. (Ehrmann, et al., 2001) also emphasise the importance of banks in the eurozone where in the role of financing firms, banks adjust lending in response to monetary policy, thereby constituting a critical channel for monetary policy to function effectively.

A "Bank" can refer to many financial institutions ranging from savings and loans or credit unions, to large commercial and regional banks (Heffernan, 2005) and countries have their own legal definitions of a bank (Gup & Kolari, 2005). The Bank of England defines a bank as an institution authorised to accept deposits and give out credit (Bank of England, 2014) and (Heffernan, 1996) submits that the distinguishing feature of banks from other financial institutions is the provision of loans and deposit products. Therefore, in line with the acceptance of deposits and provision of loans, banking can be further defined as the process of accepting deposits of money from the public that is repayable on demand, purposely for lending or investment. Additionally, Professor Moorad Choudhry identifies the role of banks as providing transmission mechanisms to process payments and asserts that the global development of societies and economies relies on banks for the efficient provision of banking services (Choudhry, 2018). This was confirmed by an observation made by (Fiske, 1919) as far back as 1919 when he stated that the bank was the most important factor in the modern system of trade and industry, without which the system could have never developed or been identified.

Banking has been with mankind through the ages and is believed to have begun around 2000 BC (Hale, et al., 2018). However, many historians place the development of banking systems in medieval renaissance Italy (Kelman, 2016), with (Kashyap, et al., 2002) also submitting that economic historians (Roover, 1948), (Lane & Muller, 1985) and (Usher, 1943) agree that in Continental Europe, deposit banking evolved from money changing

activities. According to (Connors, 2017), from an institution for the safekeeping of currencies, banking has evolved over the years to involve regulation and redistribution of financial reserves of countries, trade and participation in business deals. Today, banking covers an extensive variety of activities of varying degrees of complexity (Choudhry, 2018).

There are different types of banks which can be classified based on the functions they perform. Some of these banks include Commercial Banks, Investment Banks, Co-operative and Agricultural Banks, Industrial Banks, Universal Banks and Central Banks.

2.2.1 Banks

Banks perform a wide range of activities depending on what types of banks they are. The types of banks include commercial banks, investment banks, co-operative banks, industrial banks, universal banks and central banks.

Commercial banks mainly receive deposits, give loans, finance trade, provide short-term credit and payment systems (Moulin, 2016). By mobilising deposits, commercial banks help the growth of commerce and trade (Moulin, 2016). Investment banking involves a set of diverse activities which include underwriting, asset management, trading and brokerage (Iannotta, 2010). Co-operative banks, on the other hand, have been most beneficial in social, agricultural and industrial advancement (Wolf, 1907). For instance, in India, co-operative banks have played important roles in providing credit to the agricultural sector which is the mainstay of the economy of India (Singh & Kaur, 2015). Industrial Banks, also known as Morris Banks or Industrial Loan Companies (ILC), are financial institutions which accept deposits from customers and sell investment share certificates as described by (Dauer, 1947). The World Bank defines a Universal Bank as one where extensive networks of branches are operated by large banks to provide various services, holding numerous claims on firms (including equity and debt), and participating directly in the corporate governance of firms which depend on the banks for funding or as insurance underwriters (Calomiris, 1995). Central Banks are normally referred to as the bankers' bank. They normally contribute to the development of national and global standards by playing different roles in the formulation and implementation of micro and macro prudential policies across countries. In addition to the major aims of ensuring the stability of monetary and financial systems, central banks also provide the core components of payment systems and the management of foreign exchange reserves and gold for countries (Bank for International Settlement, 2009).

The researcher therefore concluded that based on the functions of the various types of banks, they are critical to the economic growth of countries through facilitation of different economic activities.

2.2.2 Management of Banks

Management of banks generally refers to the practice of managing the activities of the bank to ensure compliance with statutory regulations whilst maximising profitability. Managing banks involves statutory, financial and risk management.

According to the (Bank of England , 2020) banks are regulated to ensure that they have a good management and do not engage in excessively risky investments that can lead to failure. In line with this, banks have regulations which guide their operations. To avoid penalties for non-compliance, it is necessary for the leadership of the bank to manage the statutory requirements of the bank to ensure compliance. The Bank for International Settlement supports the view of the Bank of England on bank regulation and has strived to facilitate the international regulation of banks through the Basel Accords (Bank for International Settlement, 2020). However, (Saubert, 2003) believes that in this post crises era, banks are over-regulated and thus profitability is stifled. Though (Freixas, 2010) supports the view that the post-crisis statutory management of banks is challenging, the researcher of this thesis believes that a robust statutory management system is more beneficial to banks and banking systems.

(MPRA, 2018) defines the management of risks in banking as "*the logical development and execution of a plan to deal potential losses*". These risk management activities are usually focussed on managing the bank's exposure and protecting its assets. The process of managing risks involves the identification of any activities capable of damaging the business of the bank and setting up a framework to eliminate or minimise the impact of the risk. (Chakroun & Abid, 2015) view risk management as a panacea against bank failures citing the global banking crises of 2008 -2009 as a situation in which risk management failed in the banking industry. (Vyas & Singh, 2010) view effective risk management of banks as a key contributory factor in the stability of the financial sector by noting that unsound risk management practices in lending played a major role in the global financial crises of 2008-2009.

The literature reviewed have underscored the importance of the management of banks and for the purpose of this research, it must be emphasised the key role played by risk management in the stability of banks. The researcher therefore proceeded to review literature on the relationship between risk management and bank failures.

2.2.3 Relationship between Risk Management and Failure of Banks

The global financial crisis of 2007 – 2008 exhibited deep rooted risk management failings in the banking and financial sector. Prior to the crisis, banks funded their investment activities by borrowing from the wholesale market because interest and inflation rates were low in America. However, when interest rates started increasing in the year 2006, things changed rapidly, resulting in the global financial crisis. This, according to (Sabato, 2009) is a typical example of a risk management failure that resulted in the collapse of banks such as Lehman Brothers and Northern Trust. To further prove this point, the researcher reviewed an article by (Islam, et al., 2019) to check the impact of credit risk management on bank performance with evidence from Bangladesh. After performing many tests, it was concluded that banks need to strive to keep an effective risk management system to ensure stability and prevent failure.

The researcher of this thesis therefore agrees with (Gabbi & Levich, 2019) who suggest that the ability to control risks helps to ensure financial stability and keeps prices more stable.

2.2.4 Regulation of Banks

Just like any other business, banks can fail when bad investment decisions are made or when there is a run on the bank as happened in the case of Northern Rock in 2007 (Lastra, 2008). The Bank of England advocates that to prevent such occurrences and ensure the smooth running of the banking sector in a country, banks need be regulated. If left alone, even though bank managers are aware of the risks involved in running a bank, profitability will take prominence over prudent management. In agreement with the Bank of England, (Thornton, 1992) argues that the regulation of banks is in the interest of the public and an unregulated banking system is unstable and prone to bank failures with its associated adverse effects on the economy. Other researchers like (Lundtofte & Nielsen, 2019), (Gueyié, et al., 2019) and (Izan, 1980) support the regulation of banks.

However, deviating from the view of the Bank of England and (Thornton, 1992), (Benston & Kaufman, 1996) point to the fact that advocating for the regulation of banks is a controversial issue since banks are inherently fragile. (Parker & Gupta, 2015) point to the worrying trend of talented investment bankers moving from the highly regulated banking sector to less regulated finance houses.

By taking a middle ground between the advocates for regulation and non-regulation of banks, (Aizenman, 2004) argue both under-regulation and over-regulation of banks have their associated disadvantages. The researcher therefore agrees with (Benston & Kaufman,

1996) who advocate for the appropriate level of regulation of banks to ensure stability of the sector.

2.2.5 Role of Central Banks in Bank Regulation

(Bank of England , 2020) also states that regulation of banks helps to minimise problems of financial difficulty for banks and prevent possible bank failures and according to (Goodhart, 2010), the three main functional roles of central banks have been:

"i) To maintain price stability, subject to the monetary regime in current operation, for example the gold standard, a pegged exchange rate or an inflation target;

ii) To maintain financial stability, and to foster financial development more broadly;

iii) To support the State's financing needs at times of crisis, but in normal times to constrain misuse of the State's financial powers"

In the absence of crisis such as wars, the focus of central banks shifts to the first two responsibilities of maintaining a stable monetary regime. The European Central Bank also believes that prudential supervision is the direct responsibility of central banks (European Central Bank, n.d.). (IMF, 2019) notes that although there have been changes in the policy framework that central banks operate in, the key role of conducting the monetary policy to ensure price stability is done together with the regulation of banks since it involves the regulation of the supply of money.

It can therefore be concluded that in many countries, central banks are directly in charge of or are closely linked with regulating banks (European Central Bank, n.d.).

2.3 Assessing the Performance of Banks

The critical role played by banks has resulted in an interest in their performance by stakeholders such as customers, regulators, investors and depositors (Fethi & Pasiouras, 2010) Additionally, the global financial crisis of 2007-2008 saw the deteriorating performances of banks globally which were caused by a series of bank failures with their attendant adverse effects on the global economy. This unfortunate phenomenon has increased the interest of all stakeholders of the banking industry with regards to the performance of banks (Ghosh, 2016). It is, therefore, not surprising that there are many studies and articles on the performances of banks. Such studies have ranged from country-specific research studies such as (Dietrich & Wanzenried, 2011) on Switzerland, to multi-country ones as in the case of (Migliardo & Forgione, 2018) or regional as written by (Molyneux & Thornton, 1992).

Banks can be assessed on various performance indices. (Bikker & Bos, 2008) analysed the performance of banks in the areas of profitability, competition and efficiency by covering empirical results from the OECD (Organisation of Economic Co-Operation and Development), the European Union (EU), Central and Eastern Europe as well as some emerging economies. The study revealed that, banks need to maximise profits to satisfy their shareholders in the form of increases in share prices or dividend payments by increasing revenue and reducing cost. However, this seemingly simple process can be affected by competition, efficiency and risk-return policy. (Fiordelisi, et al., 2010) then underscored efficiency by pointing out that lower efficiency exposes banks to higher risks which can adversely affect performance. (Guevara, et al., 2005) buttressed this point on the importance of efficiency in banking in their study on market power and efficiency in European banking by showing the impact of the single market programme on the efficiency of banks and concluded that efficiency was an important force which drove bank performance. To measure competition, (Guevara, et al., 2005) adopted the balanced scorecard approach using parameters such as Return on Assets (ROA), Net Interest Margin (NIM) and cost efficiency to assess various countries. Touching on the regulatory framework in the various regions, (Guevara, et al., 2005) revealed that competitiveness of banks was dependent on market conditions.

Replicating the methodology used by (Bourke, 1989) which was also an extended work on (Short, 1979) and supported the view that concentration and profitability were positively and moderately related, (Molyneux & Thornton, 1992) examined the determinants of the performance of banks in eighteen countries across Europe from 1986 to 1989. Arriving at a conclusion which conflicted with Short's view, that a greater market power leads to higher bank profit rates, Molyneux & Thornton agreed with Bourke's view which supported the Edwards-Heggestad-Mingo hypothesis of the avoidance of risk by banks with greater market power.

Building on the work of (Molyneux & Thornton, 1992) and (Demirguc-Kunt & Huizinga, 1999), (Dietrich & Wanzenried, 2011) analysed the profitability of 453 Switzerland commercial banks between 1999 and 2008 for a comparison of the profitability of the banks under study before and during the financial crisis of 2007-2008. Adopting a linear model, the researchers used peculiar determinants specific to banks and markets such as "the relative growth of a bank's loans to the growth of a market" and "the share of interest

income relative to total income" and differing responses to the determinants were observed.

Moving away from the method of assessing banks through financial ratios, Meryen Duygen Fethi and Fotios Pasioras presented a review of 179 studies which employed Operational Research (OR) and Artificial Intelligence (AI) methods of assessment (Fethi & Pasiouras, 2010) by discussing the relationship between the determinants, ownership, stock returns on one hand and efficiency on the other.

2.3.1 Key Performance Indicators (KPIs) for Measuring the Performance of Banks

"What gets measured gets done" is a quote attributed to William Thomson (Thomson, 1889). It is in this light that (Marv, 2012) described Key Performance Indicators as important compasses employed by managers to determine the path of their companies by highlighting good performance as well as areas needing attention. The difficulty in the measurement of the performance of banks has led to strongly differing types and qualities of indicators used (Bikker, 2010).

In their report on *"Guide to Key Performance Indicators: Communicating the Measures that Matter*," Price Waterhouse Coopers (PWC) mentioned that Key Performance Indicators could either be financial or non-financial (PricewaterhouseCoopers, 2007) and are informed by the industry in which a company operates. For the banking industry, PWC suggested the following as good indicators of a successful bank: Customer retention, customer penetration, asset quality, capital adequacy, assets under management and loan loss.

2.3.1.1 Financial KPIs

Financial KPIs measure the financial health of a bank, which is largely determined by the cash flow, profitability and the quality of balance sheet (Briggeman, et al., 2009). (Gruca & Rego, 2005) believe that there is a direct correlation between cash flow and customer satisfaction, and they assert that satisfied customers translate into increased loyalty and cross-selling. Historically, bank profitability has been measured by the balance sheet size and market share. However, this has shifted particularly in the European countries, to a focus on the rate of return on a bank's equity (Return on Equity) (Llewellyn & David, 2005). To investigate the impact of specific characteristics of banks, the structure of financial markets and macroeconomic conditions on the profitability of United Kingdom-owned banks, (Kosmidou, et al., 2005) relied on two profit-performance measures, which

are Return on Assets (ROA) and Net Interest Margin (NIM). However, the International Monetary Fund (IMF)'s financial soundness indicators for deposit taking institutions is a good way of assessing a bank's financial well-being. These indicators are capital adequacy; asset quality; earnings and profitability; liquidity; and sensitivity to market risk (International Monetary Fund, 2002).

2.3.1.1.1 Asset Quality

One of the most important areas which determines the condition of a bank is the quality of its assets. Asset quality is in turn affected by the quality of a bank's loan portfolio which makes up a greater portion of the assets of a bank. Asset quality is evaluated by the potential credit risk inherent in the loan portfolio (Federal Deposit Insurance Corporation, 2012). In a research aimed at offering a comprehensive analysis and treatment of non-performing loans, (Bholat, et al., 2018) identified that one of the key pointers to sound banking is the quality of a bank's assets. (Balakrishnan & Aytekin, 2018) also found out that banks with better quality of assets tend to report more frequently, giving stakeholders more insight.

(Louzis & Metaxas, 2012) list some of the determinants of non-performing loans as bad management, low capitalisation, loan quality, diversification, and excessive risk. It is no wonder, therefore, that the Federal Deposit Insurance Corporation (FDIC) submits that one of the most important ways of determining the well-being of a bank is through the assessment of the quality of its assets (Federal Deposit Insurance Corporation, 2012). To do this, the FDIC suggests, among others that management must ensure that loans are of good quality and well diversified to reduce loan losses. The total amount or value of assets belonging to other people which is managed by a bank is known as the Assets Under Management (AUM). Although there is very little literature on how AUM can be used to assess banks, a greater AUM portfolio suggests more confidence from the investor public.

The mandate of collecting deposits from customers and issuing loans to others exposes banks to credit risks in the event of the inability of borrowers to repay loans. Banks are, therefore, required to reserve an amount of money for absorbing loan losses which is referred to as Loan Loss Provisions or Provision for Bad Debt (Ozili & Outa, 2017).

2.3.1.1.2 Capital Adequacy

Capital, which is the difference between a bank's assets and liabilities, is the cushion for absorbing unexpected losses to remain solvent, and hence, ideally, assets must always exceed liabilities (Board of Governors of the Federal Reserve System, 2014).

Capital Adequacy is the minimum capital reserve that a financial institution is required by law to have available (Supervision, 2011)**.** The recurring phenomena of banking crises happening after periods of major credit growth, have necessitated macroprudential dimensions in the regulation of the financial sector, which includes the regulation of capital regulation of banks (Jimenez, et al., 2017). The issue concerning the capital adequacy of internationally active banks became the prime goal of the Basel Committee on Banking Supervision after the fundamentals of supervision had been set. Approved by the G10 (*The Group of Ten comprising eleven industrialised countries namely, Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States of America)* (Bank for International Settlements, n.d.) Governors and circulated to banks in 1988, Basel I was a measurement system for capital which was referred to as the Basel Capital Accord. In June 2004, a revised capital framework known as Basel II was released which stood on the three pillars of minimum capital requirement, supervisory review of capital adequacy and effective disclosure. Then in November 2010, as a response to the financial crises of 2007 to 2009, Basel III was released with even stricter demands for quantity and quality of regulatory capital (Bank for International Settlement, 2018).

2.3.1.1.3 Earnings and Profitability

Profitability is the ability to earn above investments and expenditure. For banks, profitability is measured through ratios such as Return on Equity (ROE), Return on Assets (ROA) and the Net Profit Before Tax (NPBT). However, ROE appears to be most frequently used as a measure of bank profitability (Molyneux, 1992). Although the Return on Equity (ROE) might be the most common measure of profitability and invariably the success of a bank, in an appendix to their report on EU banking structures, (European Central Bank, 2010) argued that ROE does not show the total picture about the performance of a bank. This, the report stressed was evident during the financial crises about a decade ago when ROEs may have provided misleading information on distinguishing between good and bad banks. This view is shared by (Jones, 2014) who thinks that investors cannot trust ROE because it can be a bad indicator, and instead

suggests that Price to Sales, Price to Earnings, growth rates and cash flows are better metrics for assessing financial performance of banks.

2.3.1.1.4 Liquidity

Liquidity measures the ease and ability to convert assets into cash. Assets which can be easily converted into cash to meet financial obligations are referred to as liquid assets. Banks must maintain enough liquid assets such as government debts, central bank reserves and cash to remain viable (Board of Governors of the Federal Reserve System, 2014). (Onaran, 2016) likened bank liquidity to the need for fluid replacement in a human body. In the case of a bank, however, the fluid which needs constant replacement is money or cash.

Basel III introduced a new liquidity framework where banks are expected to ensure the availability of High-Quality Liquid Assets (HQLA) to cover at least thirty days in the case of a stress on the bank (Basel Committee on Banking Supervision, 2013). Liquidity is connected to both sides of the balance sheet (assets and liabilities). The assets held by a bank and the liabilities which must be repaid when they fall due, must be well-balanced to avoid liquidity risks which can result from the unavailability of sufficient funds to make payments when they fall due or the inability to dispose of an asset quickly on the market at a reasonable price. To mitigate against liquidity risks, banks can either attract stable funds or maintain a buffer of cash and high-quality liquid assets which can be easily converted into cash (Farag, 2013).

2.3.1.2 Non-Financial KPIs

Though non-financial, KPIs such as customer retention rates and market penetration, give a good indication of the performance of banks.

2.3.1.2.1 Customer Retention

The acquisition and retention of customers are pivotal to the management of customer relationships (Wook, et al., 2016). The importance of customer retention is underscored by (Drucker, 1963) as he submits that marketing is concerned with the process of acquiring as well as the retention of customers. (Berry & Parasuraman, 1991) also add that quality is a key ingredient to customer retention. Customer retention can be achieved through the "relational price discount" where initial discounts are aimed at building long-term relationships after the expiration of the initial discount.

Another customer retention strategy is the “loss leader strategy” where incentives for price reduction to attract customers vary across retailers, as demand for a product changes (Li, et al., 2013). A product may be marketed by network effects in different ways. An individual may be influenced by the consumption pattern of different networks. The behaviour of influential consumers such as celebrities may affect that of susceptible consumers. In the “network discount strategy”, networks are used to influence product sales (Fainmesser & Galeotti, 2016).

Other customer attraction and retention strategies include “customised product service design” (Jing & Xie, 2011) and “one-to-one promotion” (Shaffer & Zhang, 2002). However, contrary to commonly held views, (Ascarza, 2018) points out that some retention efforts turn out in futility because of wrong targeting rules such as pursuing high risk customers.

2.3.1.2.2 Market Penetration

Market penetration can be defined as the successful selling of a service or product in a specific market to increase the quantity of goods sold or the number of customers. During the introduction of products, market penetration strategies are very common (Glass, 1997). However, (Han, et al., 2013) discovered that emerging market penetration may not necessarily lead to better financial performance and, therefore, suggested that companies needed to tackle challenges inherent in the supply chain to fully benefit from market penetration.

2.3.1.3 Summary – Measuring the Performance of Banks

Bank assessments are necessary to give stakeholders information about their investments. Since it is important to know both the financial and non-financial standings, banks are assessed using both financial and non-financial indicators. Table 2.3 below summarises the key performance indicators for assessing banks.

Table 2.1: Summary of Measuring the Performance of Banks

	Key Performance Indicators	**Defining Characteristics**	**Authors/References**
Financial Indicators	Asset Quality	Asset quality is evaluated by the potential credit risk inherent in the loan portfolio.	(Federal Deposit Insurance Corporation, 2012)
	Capital Adequacy	Capital Adequacy is the minimum capital reserve that a financial institution is required by law to have available.	(Supervision, 2011)**.**
	Earnings and Profitability	For banks, profitability is measured through rations such as Return on Equity (ROE), Return on Assets (ROA), Net Profit Before Tax (NPBT). However, ROE appears to be most frequently used as a measure of bank profitability.	(Molyneux, 1992).
	Liquidity	Liquidity measures the ease and ability to convert assets into cash. Assets which can be easily converted into cash to meet financial obligations are referred to as liquid assets. Banks must maintain enough liquid assets such as government debts, central bank reserves and cash to remain viable.	(Board of Governors of the Federal Reserve System, 2014)
Non-Financial Indicators	Customer Retention	The acquisition and retention of customers are pivotal to the management of customer relationships.	(Wook, et al., 2016)

		Customer retention can be achieved through strategies such as "relational price discount", "loss leader strategy", "network discount strategy", "one-to-one promotion".	
	Market Penetration	Market penetration can be defined as the successful selling of a service or product in a specific market to increase the quantity of goods sold or the number of customers. During the introduction of products, market penetration strategies are very common.	(Glass, 1997).

Source*: The researcher compiled the summary from the articles reviewed under "Measuring the performance of Banks".*

2.4 Soundness of Banks

It has already been indicated that the financial system of every country, which includes banks, play a vital role in the development of the economy of the country. As such, any unmanaged risks can cause adverse effects to the wellbeing of the country's economy. The soundness of a bank is, therefore, a measure of the ability of a bank to withstand adverse conditions.

(Restoy, 2017), in his address on Financial Soundness Indicators at the International Monetary Fund Users' Workshop in Washington DC on 26 April 2017, suggested the CAMELS rating as a basis for the assessment of the financial soundness of banks. These indicators, according to (Restoy, 2017), are important for the monitoring activities of regulators in the establishment of benchmarks for the risk evaluation of banks because the CAMELS analysis tests the Capital Adequacy, Asset Quality, Management Quality, Earnings, Liquidity and Sensitivity of banks and financial institutions. However, according to (Hagendorff & Nieto, 2015), the soundness of banks is predominantly dependent on capitalisation, performance and liquidity. The researchers further argued that banks with greater capital had a better solvency buffer to mitigate negative exposures to assets and were able to access liquidity from the market more easily.

The CAMELS rating system is, undoubtedly, a great tool for determining the soundness of banks (Barnett-Quaicoo, 2020).

2.4.1 CAMELS Analysis

CAMELS is an effective tool for studying the performance of banks and projecting relative risks (Mohammed & Sha, 2019). As such, many studies such as (Rostami, 2015), (Balasundra, 2008) and (Chowdhury, 2011) have all used CAMELS to assess financial performance. CAMELS is an acronym for Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Sensitivity and was created in 1979 by bank regulatory agencies in the United States of America with five components and in 1997, a sixth component which is sensitivity was added.

Capital Adequacy, which is the minimum statutory reserve that a bank is expected to keep, indicates the financial stability. This affords depositors the confidence that the bank is able to respond to additional capital requirements with no disruptions to its operations. it can be measured by indicative ratios such as the debt-to-equity ratio and the capital-to-risk-weighted assets ratio. Banks are expected to comply with the statutory capital requirements of their regulators to meet capital adequacy requirements. For banks which are internationally active, the Basel Committee for Bank Supervision of the Bank for International Settlement fixes the minimum requirements. The Asset Quality indicator measures the quality of the assets on the balance sheet of banks to prevent the negative effect of non-performing loans on the profitability of the banks. This is measured by the percentage of non-performing assets to the total assets of the bank or the percentage of secured assets to total assets (Sahajwala & Bergh, 2000).

In addition to capital adequacy and high-quality assets, banks also need good Management, which is the third indicator of the CAMELS analysis. This indicator measures the efficiency of the management of a bank, which guarantees growth and profitability as the management of the bank executes the growth strategy. The management indicator can be measured with the profit per employee ratio. For banks, it is necessary to know the quality of its earnings, which is a reflection of its current performance and an indication of its future performance. The return-on-assets (ROA) ratio and the net-interest-margin are a good way of measuring the earnings of a bank (Jimenez, et al., 2017).

The extent to which a bank shows its ability to satisfy its short-term financial commitments is known as liquidity and this is the fifth indicator of the CAMELS Analysis. Banks must ensure the provision of adequate liquidity as it promotes profitability, which is a good balance. The loan-deposit-ratio or the liquid-assets-to-total assets can be used to assess the

liquidity of a bank. Banks can be affected by changes in the financial market conditions such as interest and foreign exchange rates. The response of the bank to these changes is what is referred to as Sensitivity in the CAMELS analysis. It is expedient to measure this as it has the capacity of affecting the bank's earnings and capital. The total securities to total assets ratio is a good measure of the sensitivity of the bank where a high ratio is indicative of high sensitivity to market changes (Rostami, 2015).

Table 2.2: Formulae for CAMELS Parameters

CAMELS Parameter	**Ratio**	**Formula**
Capital Adequacy	Capital Adequacy Ratio	Capital Adequacy Ratio (CAR) $= \frac{Total\ Capital\ fund}{Total\ Risk\ weighted\ Assets}\ x\ 100$
Asset Quality	Loan Loss Rate	Loan Loss Rate $= \frac{Impairment\ Charge}{Loans}\ x\ 100$
Management	Net Income per Employee	NIPE $= \frac{Net\ Income}{No.of\ Employees}$
Earnings	Return on Equity Ratio	Return on Equity Ratio $= \frac{Net\ Income}{Shareholder's\ Equity}$
Liquidity	Liquidity Ratio	Liquidity Ratio $= \frac{\boldsymbol{Liquid\ Assets}}{\boldsymbol{Total\ Assets}}$
Sensitivity	Net Interest Margin	Net Interest Margin $= \frac{\boldsymbol{Net\ Interest\ Income}}{\boldsymbol{Total\ Assets}}$

2.4.1.1 Application of the CAMELS Analysis

To apply the CAMELS rating, a scale of 1 to 5 is applied to each of the indicators with 1 as the best and 5 as the worst. "*A rating of 1 indicates a strong performance whilst 2 is satisfactory. When performance and risk management practices are flawed to some degree, a rating of 3 is awarded and this generates supervisory concern. A rating of 4 is indicative of poor performance whilst 5 represents a critically deficient and unsatisfactory performance, requiring immediate remedial actions."* (Barnett-Quaicoo, 2020)

Table 2.3: CAMELS Rating

Rating	Rating Range	Rating Analysis	Indication
1	1.0 – 1.4	Strong	Strong performance and risk management practices that consistently provide for safe and sound operations.
2	1.5 – 2.4	Satisfactory	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
3	2.5 – 3.4	Fair	Flawed to some degree and is of supervisory concern.
4	3.5 – 4.4	Marginal	Poor performance and of serious supervisory concern.
5	4.5 - 5	Unsatisfactory	Unsatisfactory performance that is critically deficient and in need of immediate remedial action.

Source: Adapted from (Dzeawuni & Tanko, 2008)

2.4.2 Regression Analysis

Regression analysis is a multivariate method used or predicting the relationship between a dependent variable and a number of independent variables and can be linear or multiple. The dependent variable is usually denoted by Y and the independent variables by X with a subscript such as X_1, X_2, X_3,…,Xn (Bartholomew, 2010). Regression analysis can be used to determine the relationship between the number of study hours and the performance of students in an examination.

2.4.2.1 Regression Models

Regression models are used in predicting the value of the dependent variable Y when the value of the independent variables is known (Cu, et al., 2019). There are many regression models, common among which are the Linear Regression Model, Polynomial Regression Model and Bayesian Regression Model.

2.4.2.2 Linear Regression Model

Linear regression models the relationship between two variables with a linear equation from observed data, using the equation $Y = \boldsymbol{a} + \boldsymbol{bX}$, where $\boldsymbol{X}$ is the independent or exploratory variable, **Y** is the dependent variable, b is the slope of the line and $\boldsymbol{a}$ is the intercept or the value of **Y** when **X**= 0 (Liu, et al., 2013). There are different techniques for preparing the linear regression equation from data and these include the ordinary least squares and the sum of squares.Ordinary least squares (linear least squares) model approximates the parameters of a regression model by reducing the sum of the square of the residuals. To do this, a line is drawn through the data points that reduces the total of the squared differences between the observed values and the matching fitted values (Anderson & Schumacker, 2003).

In regression analysis, sum of squares refers to how well the modelled data is represented by a regression model. A higher sum of squares is indicative of the model not fitting the data properly (Anon., 2012). In Linear Regression, model checking performs an essential function of validating the efficiency of the regression analysis. This can be performed with either the Omnibus Test or the Test of Model Effects.

2.4.2.3 Polynomial Regression Model

A Polynomial Regression is a unique type of Linear Regression where the relationship between the dependent and independent variables assume a curvilinear relationship in the

polynomial equation (Yang, 2018). In this form of regression analysis, the relationship between the independent variables and dependent variables are demonstrated in the nth degree polynomial. One important distinguishing characteristic between Linear and Polynomial Regression is that Polynomial Regression does not need a linear relationship between the dependent and independent variables.

2.4.2.4 Probit Model

The probit model, which is also known as the probit regression, is used to perform regression for situations for binary outcome variables, where binary According to outcome variables refer to dependent variables with two possibilities such as a positive or negative, yes or no. According to (DePamphilis, 2011), probit regression provides a conditional probability of an observation that belongs to a specific category. A probit models does not involve assumptions which as restricting as discriminant analysis.

2.5 Bank Failures

According to the Federal Deposit Insurance Corporation (FDIC), a bank is said to have failed when it is closed by a regulatory body due to its inability to meet customer obligations (FDIC, 2014). If left unchecked, bank failures can result in a systemic banking crisis where financial and corporate sectors of a country experience a chain of payment defaults (Laeven & Valencia, 2008).

There have been many banking crises in history; from the financial crises in England in the 18th century (Hoppit, 1986) to the most recent global credit crunch in the years 2007-2009. One of the landmark cases of bank failures is the case of the Bankhaus Herstatt in Germany in June 1974, which had domestic and international consequences and resulted in the creation of international regulatory frameworks such as the Basel Accords (Mourlon-Druol, 2015) (Basel Committee on Banking Supervision , 2004).

2.5.1 Causes and Effects of Bank Failures

In this section, the researcher analyses research work on the causes and effects of bank failures.

2.5.1.1 Causes of Bank Failures

It is indicated by the (Basel Committee on Banking Supervision , 2004) that a good appreciation of the reasons for the failure of a bank is important for the development of a regulatory system for the reduction of the risk of more failures. The Basel Committee

attributes the failure of banks to different reasons depending on the conditions of the bank. In their study of bank failures in Germany, Japan, Norway, Spain, Sweden, Switzerland, the United Kingdom and the United States of America, the Basel Committee deduced that bank failures could be due to fraud as was in the Barings Bank and BCCI cases in the United Kingdom, or market conditions as was in the case of Herstatt in Germany. The study further indicated that credit risk in mortgage lending was largely responsible for the bank failures in Spain, the United Kingdom, Switzerland, Sweden, Norway and Japan whilst market risk was identified as the causative factor of collapse in some of the banks in the USA.

By studying bankruptcy of banks in the USA since 2009, (Serrano-Cinca, et al., 2014) identified that wrong strategies could also cause the failure of banks. Additionally, the researchers (Serrano-Cinca, et al., 2014) identified that the signs of an impending bank failure could be identified through an analysis of balances as well as profit and loss accounts. Some of the symptoms identified by the researchers as causal effects preceding bank failures included low returns caused by low profitability, inadequate management of banks, non-performing loans and unusually rapid growth.
In his testimony to the Subcommittee on Financial Institutions and Consumer Credit of the House Committee on Financial Services of the United States of America, Lawrence L. Evans (Director of Financial Markets and Community Investment), also identified non-performing loans in the real estate sector as one of the causes of bank failures in the United States of America from January 2008 to December 2011 (Evans, 2013). By doing a comparison of the attributes of banks which failed during the Chicago panic in June 1932 to bank failures during other months in the same year, (Calomiris & Mason, 1997) concluded that indicators of banks susceptible to failure can be identified in prior months by examining ratios, stock prices, composition of debt, interest rates and the reports of bank examiners.

In an evaluation of bank failures in the 1980s, the Office of the Comptroller of the Currency (OCC), Washington D.C., identified poor quality of assets which eroded the capital of banks, to be the major problem causing the failure of the banks analysed. The OCC indicated that the causes of those failures were both internal and external. The internal problems identified included Board of Directors and Management members who were inattentive or uninformed, excessively aggressive Board and Management activities, and problematic Chief Executive Officers (CEO). The external economic factors identified

were depressed local economies resulting from the collapse of the mainstay of the economies such as oil & gas, agriculture or commercial real estate. However, the OCC explained that though external causes may influence the failure of a bank, internal factors such as weaknesses driven by management policies played an important role in a majority of the banks evaluated (OCC, 1988).

(Mizen, 2008) outlined two important developments responsible for the failure of banks in the United States of America (USA) in the 1990s and 2007-2008. First was the conducive environment for the expansion of credit which was fuelled by inflows of savings from other countries into the USA, causing extremely calm macroeconomic conditions referred to as the "Great Moderation". The second factor, according to (Mizen, 2008), was the creation of complex financial assets with good credit ratings generated from the securitisation of sub-prime mortgage-backed assets. (Brunnermeier, 2009) buttressed the point made by (Mizen, 2008) about the creation of complex financial instruments by citing the situation where banks could repackage loans to be passed on to financial investors instead of keeping them on the bank's balance sheet as one of the causes of the failure of the banks during that period. (Brunnermeier, 2009) also added that by financing their assets with shorter term instruments, banks created maturity mismatches in their books.

The European Central Bank (ECB) declares a bank as failing if the bank is overstepping the requirements for continuing approval in a way that would justify the removal of its authorisation; or of the bank's liabilities are more than its assets; or the bank is incapable of honouring its obligations when they fall due; or the bank needs out of the ordinary financial support from public funding. Additionally, if a bank has indications of exhibiting any of the listed characteristics, it can also be declared as a failing bank by the ECB.

2.5.1.2 Effects of Bank Failures

The importance of banks in any economy implies that there will be adverse effects on the economy in the case of a bank failure. As a result of globalisation and interconnection of countries and businesses, an unanticipated bank failure can lead to a contagion effect of significant reduction in the share prices of other banks (Gay & Timme, 1991). For instance, the effects of the recent global banking crises which started in the United States of America were felt in the Asian financial markets (Fidrmuc & Korhonen, 2010). One of the most devastating effects of bank failures is the loss of deposits from the banking system, not only as a result of the deposits lost due to the failed bank, but also customers resorting to other means of safe-guarding their money due to loss of confidence in the

banking system (Ramirez, 2011). If the deposits of a failed banked are not fully insured, depositors are likely to suffer losses (Calomiris, 1993) which usually lead to a slowdown in local economies as depositors and creditors lose money. Customers lose the relationship with their bankers when banks collapse, leaving clients with the time-consuming process of establishing a relationship with another bank (Campello & Gao, 2017).

2.5.1.3 Summary – Bank Failures

The failure of banks can be attributed to different reasons depending on the conditions of the bank and a good appreciation of the reasons for the failure of a bank is important for the development of a regulatory system for the reduction of the risk of more failures. Some of the reasons why banks collapse include fraud, credit risk, low profitability, bad management, non-performing loans and unusually rapid growth. The effects of bank failures range from loss of deposits and confidence in the banking system to a contagion effect on other banks. Table 2.4 below summarises the causes and effects of bank failures discussed above.

Table 2.4: Summary of Bank Failures

Causes	Fraud (e.g. Barings Bank and BCCI in the UK), market conditions (e.g. Herstatt in Germany), credit risk, market risk, wrong strategies (Basel Committee on Banking Supervision , 2004).	Low returns caused by low profitability, inadequate management of banks, non-performing loans, unusually rapid growth. (Serrano-Cinca, et al., 2014).	Ratios, stock prices, composition of debt, interest rates and reports of bank examiners (Evans, 2013).	Poor asset quality, inattentive or uninformed Board and management, excessively aggressive Board and management activities, Problematic CEOs (OCC, 1988).
Effects	Contagion effect spreading to other banks (Gay & Timme, 1991).	Loss of deposits from the banking system	Loss of deposits to customers (Calomiris, 1993).	Loss of customer relationship (Campello & Gao, 2017).

		(Ramirez, 2011).		

Source: The researcher compiled the summary from the articles reviewed under "Bank Failures".

2.6 Mechanisms for Minimising Bank Failures

History has it that, the need for regulators to be vigilant with banks cannot be overemphasised. This is because the events which led to bank failures in history, such as the failure of the City of Glasgow Bank in 1878 (Button, et al., 2015) and Japan's banking crises (Nelson & Tanaka, 2014), are not very different from the causes of bank failures today. Indicators such as fast-growing credit, heightened risks in banking systems and rapidly changing business models should serve as early warning signs (Balluck, et al., 2016). However, since failure is an integral part of businesses, regulators cannot attempt to prevent every bank collapse (European Central Bank: Banking Supervision, 2018).

According to the Banking Supervision Division of the European Central Bank (ECB), one of the greatest risks the banking crises of 2008 posed was the probability that a collapsing bank could drag others down with it. To prevent this, therefore, the European Union (EU) set up the ECB as the banking unit of the European Union with the mandate of coordinating a single focused mode of supervision and resolution of the problems faced by EU banks when necessary. In this supervisory role, the ECB is expected to pick up critical risk issues facing banks in the European Union (European Central Bank: Banking Supervision, 2018).

(Atay, 2006) has proposed that, since bank failures produce many undesirable effects, there is the need for policies and laws to be harmonised together with better integration of banking activities across regions. According to the researcher (Atay, 2006), some regional and international interventions include the Financial Stability Forum (FSF)'s deposit insurance task force; the Basel Committee on Banking Supervision (BCBS)'s task force; and the adoption of securities settlement systems by the European Union. The Office of the Comptroller of the Currency in the United States of America (OCC) has also suggested that ailing banks could recover by changing the management and banking philosophy, improving banking practices, additional capitalisation, improvement in local economies and adherence to compliance (OCC, 1988).

Regulatory interventions are sometimes employed to salvage failing banks though arguments against this practice date back to (Bagehot, 1873) who argued that the practice of bailing out troubled banks could serve as an incentive for excessive risk taking. However, from empirical evidence, regulatory interventions tend to be case-specific instead of a wholesale response to all banking crises (Acharya & Yorulmazer, 2007). When bank failures are limited to a few banks, surviving banks may be able to acquire the troubled ones. However, in the case of a widespread and systemic crisis, surviving banks may not have the required liquidity to pay for the failing banks in full, resulting in a phenomenon known as the "cash-in-the-market" pricing of failed banks (where since the users of the assets of failed banks is lower than the banks being liquidated, banks with available liquidity become the owners of the liquidated assets of the banks). To avoid this situation where liquidity-endowed surviving banks acquire troubled banks at low priced assets, regulatory interventions are introduced to salvage failing banks.

In line with the views of (Acharya & Yorulmazer, 2007), (Dow, 2017) believes that the recent banking crisis was partly caused by Central Banking being focussed more on monetary stability (Arestis & Sawyer, 2008) while neglecting financial stability, making central banks not well equipped to handle the crisis. The suggestion was for a reform in central banking to ensure financial stability by supporting deposits of retail banks to ensure that banks maintained a prudent structure of assets.

On a country level, (IADI, 2005) suggested that in addition to ensuring the presence of a clearly mandated and accountable deposit insurer who is shielded from unnecessary industry and political influence, countries must develop mechanisms for preventing bank failures by establishing suitable frameworks with clear roles and responsibilities for handling financial, economic, political, cultural, legal and supervisory issues. According to (IADI, 2005), this framework must include a string of institutional frameworks where policy makers ensure a comprehensive macroeconomic policy, effective corporate governance, robust banking regulation and supervision, sound failure-resolution processes and well-functioning judicial and criminal investigation systems. (Cariboni, et al., 2016) also suggested the creation of a financial safety net which involves the injection of additional capital to salvage failing banks. The fact both (IADI, 2005) and (Cariboni, et al., 2016) agree that strengthening banking regulations and supervisions is paramount, is indicative of the level of importance a strong regulatory and supervision framework for banks.

2.6.1 Summary - Mechanisms for Minimising Bank Failures

(Atay, 2006) has proposed that since bank failures produce many undesirable effects, there is the need for policies and laws to be harmonised together with better integration of banking activities across regions. From the literature reviewed, two effective means of minimising bank failures are the strengthening of regulatory interventions and deposit insurance, as well as other interventions summarised in Table 2.5 below.

Table 2.5: Summary of Mechanisms for Minimising Bank Failures

	Minimising Mechanism	**Author/Reference**
1.	Effective supervision (European Central Bank: Banking Supervision, 2018).	European Central Bank (2018)
2.	Harmonisation of policies and laws (Atay, 2006). E.g. Financial Stability Forum (FSF)'s deposit insurance task force, Basel Committee on Banking Supervision (BCBS)'s task force, the adoption of securities settlement systems by the European Union.	(Atay, 2006)
3.	Changing the management and banking philosophy of ailing banks.	(OCC, 1988)
4.	Regulatory interventions.	(Bagehot, 1873) (Acharya & Yorulmazer, 2007)
5	Deposit insurance for banks.	(IADI, 2005)
6	Creation of a financial safety net.	(Cariboni, et al., 2016)

Source*: The researcher compiled the summary from the articles reviewed under "Mechanisms for Minimising Bank Failures".*

2.7 Regulatory Compliance

The International Compliance Association (ICA), defines compliance as the ability to operate in accordance with a set of rules, requests or orders (ICA, 2019) while regulation refers generally to a set of rules issued by a regulatory body which has the authority to

ensure compliance and apply appropriate sanctions when the rules are violated (ICA, 2019). Regulatory compliance, therefore, is a set of rules set by regulatory bodies used to govern, and which are aimed at protecting societies from the negative effects of the operations of the members of that organisation (Malesky & Taussig, 2017).

(Dobbin & Sutton, 1998) showed that some regulatory features characterised benefits and safety initiatives by documenting how the regulatory framework of the United States had led to the restructuring of policies by managers to increase efficiency. The researchers (Dobbin & Sutton, 1998) found out that ambiguities in the compliance standards in the United States of America during the period under review led organisations to set up special units in efforts to show their commitments to the adherence to compliance issues.

2.7.1 Regulatory Compliance in the Banking Sector

Regulation of banks has existed for many centuries and provided the positive impact of reducing the probabilities of failure thereby increasing the confidence in the banking sector (Cyree, 2016). However, the concept of compliance in banks has evolved over time from the period when regulators only provided a set of rules which had to be met by banks. Today, banking compliance involves the identification of the risks that banking institutions are confronted with and finding the appropriate mitigating factors. This concept is aptly depicted by the Financial Services Authority (FSA) of the United Kingdom, in their Financial Regulation rules through the aims, content, guidance notes, and structure (Haynes, 2005).

Regulation and supervision of banks offers an external mechanism of obligations and rights within which banks can operate regulated activities in financial markets. Regulation and supervision, therefore, provide a platform for undertaking business in a regulated environment where risks can be managed sufficiently to ensure that profitability and competitiveness do not threaten to destabilise the firm, customers' interests or market confidence (Singh, 2005).

Increasingly, organisations are being required to demonstrate credible corporate financial governance by complying with numerous financial regulations and legislations such as the International Financial Reporting Standards (IFRS) and the Sarbanes-Oxley Act 2002 (Mundy & Owen, 2013). Prior to the recent financial crisis, it was assumed that the financial system was fairly stable and quite clearly understood. However, the crisis revealed there was more work to be done. In view of this, new regulatory roles have been

created with responsibilities, which aim at monitoring the stability of the whole financial system instead of individual organisations or sectors such that banking regulators have started ‘stress-testing’ big banks to simulate how banks will react under various macroeconomic situations (Diamond, et al., 2017).

Though bankers have argued that there are usually significant increases in regulatory burdens when regulations are enacted after a crisis, these also tend to inure to their benefit. A typical example being the benefit banks enjoyed when the ceiling for deposit insurance in the United States of America was increased after the financial crisis of 2007-2008. However (Cyree, 2016) argues that in spite of the positive effects of bank regulation, it is the regulatory cost burden is being passed on to and whether the results justify the financial burden.

On the other hand, the risk of large penalties due to non-compliance with regulations serves as an incentive for firms to promote compliance by minimising errors as well as formalising the collection and reporting of data (Rice & Weber, 2012). The compliance function occupies a central part of a bank’s accountability system, and the responsibility to comply with rules and regulations set by regulatory bodies, transcends the whole firm (Singh, 2005).

2.7.2 Regulatory Compliance Monitoring of Banks

It is the responsibility of supervisory bodies to monitor the financial health of banks through the enforcement of legislature and regulatory policies (Lopez, 1999). However, (Akhigbe & McNulty, 2011) assert that the effective monitoring of banks has been hampered by the lack of an effective monitoring measure. In an attempt to address this issue, some substitute measuring mechanisms have been proposed (Clendon, 2018) (Sampagnaro, et al., 2015). For example, (Billet, et al., 1995) proposed the use of credit ratings while (Johnson, 1997) suggested provisions for loan losses as a metric for monitoring banks.

Even though a lot of the information required for the regulatory supervision of banks can be obtained from regulatory reports, on-site examination helps to confirm the accuracy of these reports (Lopez, 1999). Banking supervisors may adopt different frameworks to provide a summary of the conditions of the bank, notable among which is the CAMELS Rating. CAMEL which is an acronym for Capital Adequacy, Asset-Quality, Management, Earnings and Liquidity, was created by bank regulatory agencies in the United States of

America in the year 1979 (Bastan, et al., 2016). However, in 1997, a sixth component was added to measure banks' Sensitivities to market risks, thereby changing the acronym to CAMELS (Lopez, 1999). Applying a rating scale of 1 to 5 (1 being the best and 5 the worst) to each of the six components, the overall condition of the bank is measured.
In their examination of the usefulness of CAMELS in the supervision of banks, (Hirtle & Lopez, 1999) concluded that the framework was a useful tool. However, (Cole & Gunther, 1998) identified that though CAMEL was very useful, it tended to decay quickly (changes in financial conditions may decrease the applicability of the CAMELS rating). The information used for the analysis, therefore, needed to be collected as close to the forecast period as possible.
On-site examinations, however, tend to be expensive to perform though they have the ability to unearth detailed information concerning the condition of a bank. Regulators, therefore, tend to rely more on ratios and statistical models for the identification of banks under distress (Wheelock, 2005). (Basel Committee on Banking Supervision, 2010) of the Bank for International Settlement provides a regulatory framework which emphasises on the improvement of capital, efficient risk management, and provision of adequate liquidity for ensuring more robust banking systems globally.

The Financial Services and Markets Act 2000 designates the Financial Conduct Authority of the Bank of England as the competent authority for the regulation of market abuse and any supplementary EU regulation (Crown, 2000). This act, therefore, mandates the regulator with the responsibility of maintaining confidence in the financial system of the United Kingdom, promoting understanding of the public, protecting consumers and reducing crime opportunities (Haynes, 2005). It can, therefore, be concluded that the primary objective of the regulator is to change behaviour (MacCarthy, 2004).

Interest has risen in the arrangement for supervision of banks for reforms to distinguish between micro and macro-prudential monitoring (Dewing & Russell, 2012). (Commission of European Communities, 2009) issued a directive on a proposed enhanced supervisory framework in Europe where macro-prudential supervision entails the formation of a European Systemic Risk Council and a micro-prudential supervision involves the formulation of a European system of financial supervisors.

Banking supervisors are duty-bound to ensure that they are satisfied that compliance policies and procedures in banks are effective and management embarks on the right

corrective methods when breaches are identified (Basel Commission on Banking Supervision, 2005). However, banking supervision and regulation are not intended to eliminate the risk of fraud or loss but rather minimise the likelihood through effective corporate governance (Singh, 2005). In line with this, (Duffie, 2019) observed that a well supervised system would have been more robust to face to the financial crises which began in 2007 had the regulators in the United States of America not failed in their duties of safeguarding the financial system. According to (Duffie, 2019), this happened because some of the largest banks in America such as Lehman Brothers, Morgan Stanley, and Merrill Lynch were allowed to operate with insufficient liquidity and capital in comparison with their risks in the years before the crises. It is, therefore, of no surprise that some financial regulators such as the Federal Reserve changed their approach to regulation after the crises (Duffie, 2019).

2.7.3 Summary – Regulatory Compliance

The concept of compliance in banks has evolved over time from the period when regulators only provided a set of rules which had to be met by banks. Today, banking compliance involves the identification of the risks banking institutions are confronted with and finding the appropriate mitigating factors to ameliorate some of these risks (Haynes, 2005). Though it is the responsibility of supervisory bodies to monitor the financial health of banks through the enforcement of legislature and regulatory policies (Lopez, 1999), the effective monitoring of banks has been hampered by the lack of an effective monitoring measure (Akhigbe & McNulty, 2011). In an attempt to address this issue, some substitute measuring mechanisms such as the use of credit ratings (Billet, et al., 1995) and provisions for loan loss as a metric for monitoring banks (Johnson, 1997) have been proposed.

Table 2.6: Summary of Regulatory Compliance

Type	Explanation	Author/Reference
Regulatory Compliance	The set of rules set by regulatory bodies to govern which is aimed at protecting societies from the negative effects of the operations of the members of that organisation.	(Malesky & Taussig, 2017).

Regulatory Compliance in the Banking Sector	Regulatory compliance has evolved over time from the period when regulators only provided a set of rules which had to be met by banks to involve the identification of the risks banking institutions are confronted with and finding the appropriate mitigating factors.	(Haynes, 2005).
Regulatory Compliance Monitoring in the Banking Sector	Supervisory bodies have the responsibility of monitoring the financial health of banks through the enforcement of legislature and regulatory policies.	(Lopez, 1999)

Source*: The researcher compiled the summary from the articles reviewed under "Regulatory Compliance".*

2.8 Bank Failures in Africa

Africa has had its fair share of bank failures and in this section the researcher reviews literature on bank failures in Sub-Saharan Africa. According to (Honohan & Beck, 2007) bank failures in Africa have been different from other parts of the word because these African bank failures have been caused by banking and regulatory governance problems. In line with the assertion by (Honohan & Beck, 2007), a research by (Daumont, et al., 2004) revealed that the banking crises in Sub-Saharan Africa have been associated with heavy government influence. However, the results of the study by (Daumont, et al., 2004) revealed that for banks in ten sub-Saharan countries studied between the year 1985 and 1995, the failures were caused by non-performing loans, insolvency and illiquidity. This buttresses earlier conclusions by the researcher of this thesis that bank failures are caused by indicators of the CAMELS analysis. Another study by (Brownbridge, 1998) of bank failures in Nigeria, Kenya, Zambia and Uganda revealed that insider lending, lending to high-risk borrowers, macro-economic instability, lack of liquidity support and inefficient prudential regulations were the causes of bank failures in these countries.

A critical look at the literature on bank failures in Africa all point to the need for a more robust regulatory system and (Nyantakyi & Sy, 2015) of the African Development bank reiterate the need to regulate and supervise banks to ensure a properly functioning banking

system. According to the researchers, banks in Africa need to regulate to ensure that the role of channelling funds from depositors to borrowers is being performed to avoid diversification of funds. Secondly, African banks need to be regulated to protect depositor funds and also to ensure the stability of the financial system. In Africa, according to (Caprio & Levine,2009), banks are regulated on their activities involving capital requirement, healthy competition and deposit insurance.

After a critical analysis of literature on bank failures in Africa, the researcher concluded that banking crises in Africa are not different from other parts of the world. The main differences in the Africa situation identified was the presence of governmental influence and the lack of contagion effect in Africa.

2.9 Ghana

The Republic of Ghana is a country located in West Africa along the Gulf of Guinea, which borders it to the south. Its other neighbours are Togo to the East, Ivory Coast to the West and Burkina Faso to the North. The country occupies a land space of approximately 238,535 square kilometres and has a population of about 29.6 million (2018) (The World Bank, 2018) from various ethnic and religious backgrounds.

Ghana (formerly known as the Gold Coast) gained independence from British Colonial Rule on 6th March 1957 and became a Republic on 1st July 1960. Being the first country in sub-Saharan Africa to gain its independence, Ghana has experienced many political dispensations ranging from multi-party to one party socialist and military governments. However, since Ghana adopted the multiparty democratic system of governance in 1992, which ushered the country into its fourth Republic, this West African nation has become a beacon of democracy in Africa for sustaining good and democratic governance (Friedrich Ebert Stiftung Ghana Office, 2014). Ghana has sixteen (16) administrative regions (Graphic-online.com) which are further subdivided into districts, and municipal assemblies. The 1992 constitution of Ghana declared the nation as a unitary multi-party republic with separation of powers between the executive, legislature and the judiciary (The Commonwealth, 2019).

2.9.1 Economy of Ghana

Just like its political history, the economy of Ghana has undergone a metamorphosis of waxes and wanes. At independence, Ghana's economy seemed prosperous and stable, with

Ghana being the leading global producer of cocoa. The then President, Dr. Kwame Nkrumah leveraged on this by taking loans to build manufacturing industries with cocoa revenues as security. However, when the price of cocoa collapsed in the mid-1960s, the stability of the economy was destroyed, making it almost impossible for President Nkrumah to carry on with his plans (Federal Research Division: Library of Congress, 1994). In 1965, the per capita growth became negative and by the early 1980s the per capita Gross Domestic Product (GDP) had hit its lowest. Between 1970 and 1981, the GDP of Ghana had fallen by 3.2% annually (Federal Research Division: Library of Congress, 1994).

After a considerable period of adverse economic decline and inflation rates above 100%, the Economic Recovery Programme (ERP) was launched by the Government of Ghana in conjunction with the International Monetary Fund (IMF) in April 1983 to reverse the economic decline which had plagued the nation. The aim of the programme was to adopt a market-oriented approach and strengthen the private sector involvement in the economy (Government of Ghana ; IMF; World Bank, 1998-2000). The Economic Recovery Programme (ERP) which lasted from 1983 to 1986 produced impressive results and saw an increase in cocoa production, restoration of monetary and fiscal stability and the reduction of external debts. However, the economy still faced some challenges which could impede growth if not addressed.

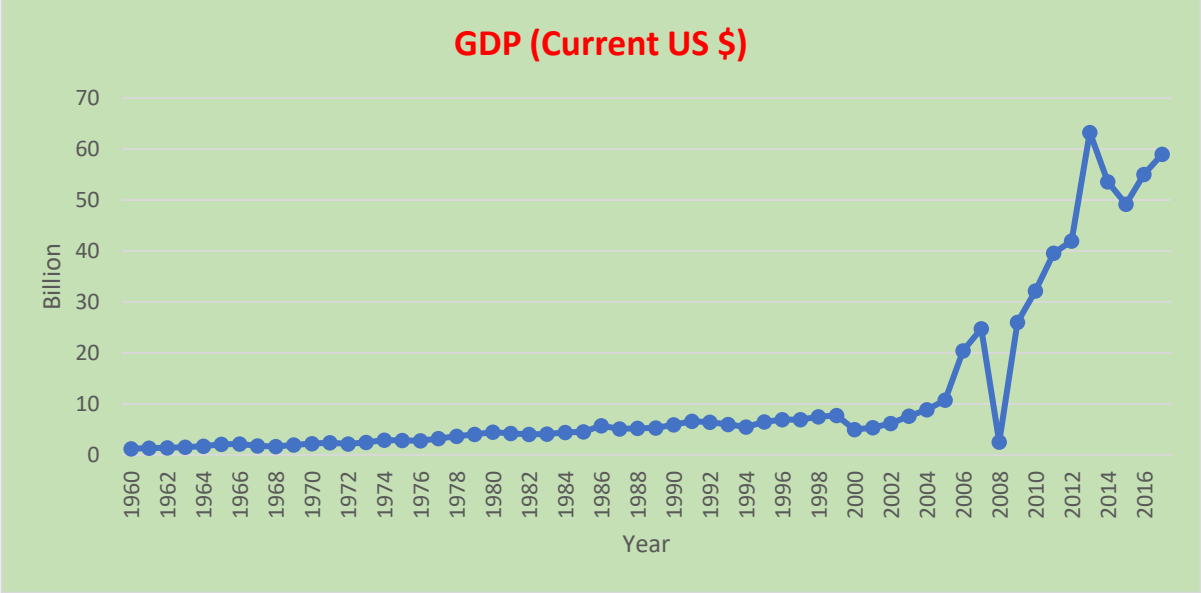
The Government of Ghana, therefore, launched the Structural Adjustment Program (SAP) which focused on policies aimed at the improvement of incentives and the management of public resources between 1987-1988. To manage public resources, the Public Investment Programme (PIP) was embarked on in 1988–1990, where selected state enterprises were either sold or liquidated to reduce the burden on government from running these enterprises (The World Bank Report No. 7515-Gh, 1989).

The strategic role played by an efficient financial system to the success of the ERP, led the government and the World Bank to initiate the Financial Sector Reform Programme (FINSAP) in 1988. This programme was aimed at supporting the financial sector adjustments by the liberalisation of the banking sector; the improvement of the mobilisation and allocation of resources; restructuring of banks that were distressed and strengthening the banking supervision and regulatory framework (The World Bank Report No. 14158, 1995).

Again in February 2002, under the leadership of President J A Kuffour, Ghana qualified for assistance from the International Development Association of the World Bank (IDA) under the Highly Indebted Poor Countries (HIPC) scheme, where the country benefited from a 67.4% reduction in the servicing of debt between 2000 and 2022 on outstanding disbursed credits as at the end of 2000 (The World Bank, 2004). The main aim of joining the programme was to limit the load of government debt by reducing debt-service payments, reducing inflation and reducing interest rates (IMF;IDA, 2002).

Figures 2.1 and 2.2 below illustrate the positive effects the various economic intervention programmes instituted from 1983 had on the economy of Ghana.

Figure 2.1 : Graph of GDP of Ghana



Source: (The World Bank, 2019)

Figure 2.2 : Graph Showing the GDP Growth of Ghana

Source: (The World Bank, 2019)

On the 15th December 2010, the British Broadcasting Corporation (BBC) announced that Ghana had started pumping oil in commercial quantities since oil wells were discovered in 2007 at the Jubilee Field by a consortium led by the British Company, Tullow Oil. Starting with 55,000 barrels per day and expected to increase to 120,000 barrels per day in six months, this oil discovery was expected to contribute $400 million (£254 million) to the economy of Ghana during the first year (BBC, 2010).

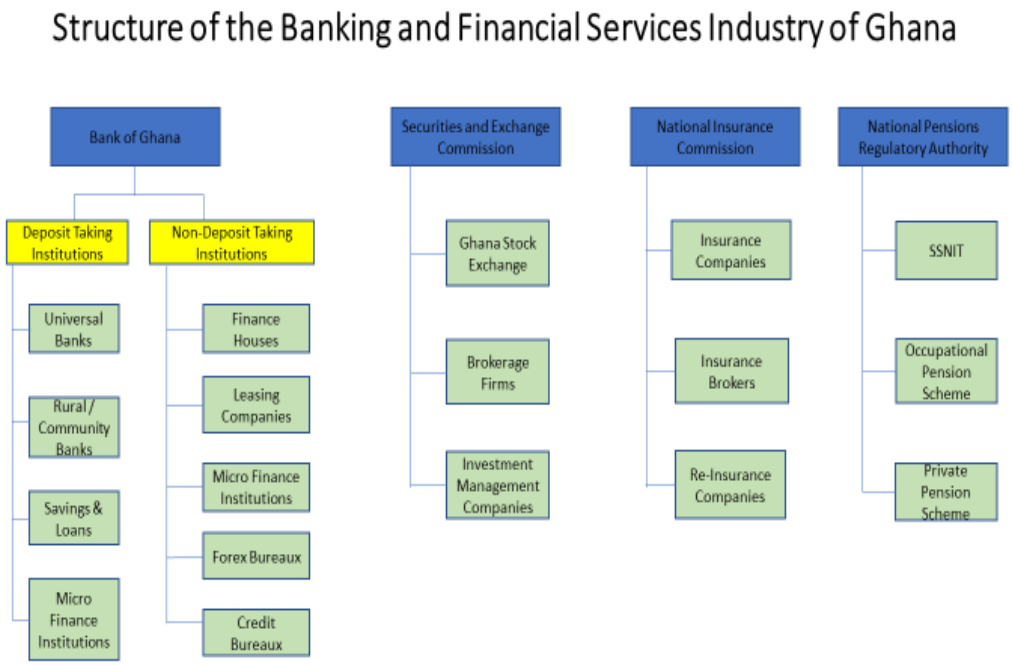
Ghana currently has two additional oil and gas projects since the Jubilee Field commenced production in the year 2010. These are the Tweneboa, Enyera, Ntomme (TEN) and the Sankofa fields which have added 50,000 and 45,000 barrels of oil per day respectively to the Jubilee Field's 31,000 barrels of oil per day, bringing the total oil production of Ghana to 126,000 barrels of oil per day (Skaten, 2018). With the resolution of the maritime border dispute between Ghana and Cote D'Ivoire in Ghana's favour on 23rd September 2017 by the International Tribunal for the Law of the Sea (ITLOS) (ITLOS, 2017), the TEN field is expected to increase production to 80,000 barrels of oil per day while new discoveries in the Tano blocks are also expected to increase Ghana's oil production to 300,000 barrels of oil per day within a few years.

After experiencing a lengthy period of economic growth from the year 2000 coupled with the discovery of oil, Ghana moved from a low-income to a lower-middle-income economy in November 2010. However, since the year 2012, macroeconomic conditions have declined causing domestic and external imbalances in the economy. The government of Ghana, therefore, implemented a multiyear fiscal stabilisation plan in 2015 to stabilise the

economy with support from the IMF, The World Bank and other development partners (The World Bank, 2017).

It is a policy of the current president of Ghana, Nana Addo Dankwa Akufo-Addo to build a nation which manages its own resources properly to foster economic and social growth instead of depending on donor funds. This policy which goes under the mantra "Ghana Beyond Aid", is at the forefront of most of the government's developmental policies such as the "one district- one factory" (Government of Ghana, n.d.). After a period of slow growth between 2014 and 2016, (The World Bank, 2018) press release indicated an improvement in the macroeconomic performance of Ghana in 2017 after a difficult period in 2016, and for the fifth consecutive quarter in September 2017, the nation's economy expanded at a rate of about twice what it did in 2016 (from 3.6 % in 2016 to 8.5% in 2017). The third economic update of the World Bank Group on Ghana which focused on Agriculture as an engine of jobs and jobs creation attributed the expansion of the economy largely to the significant contribution of the petroleum and mining sectors which lodged a growth rate of 16.6% as compared to 11.5% in March 2017 and 11.2% in September 2016 (World Bank Group, 2018).

Figure 2.3: Structure of the Ghana Banking and Financial Services Sector



Source: Bank of Ghana (Bank of Ghana, 2016)

2.9.2 Ghana's Banking and Financial Services Industry

The Banking and financial services industry in Ghana is made up of various institutions which fall under the monitoring umbrellas of the Bank of Ghana. These monitoring umbrellas are the Securities and Exchange Commission, the National Insurance Commission and the Pensions Regulatory Authority.

2.9.2.1 Bank of Ghana

The Central Bank of Ghana was established two days before political independence was declared in Ghana, on 4th March 1957, according to the Bank of Ghana Ordinance No. 34 of 1957 (Bank of Ghana, 2016). The objectives for setting up the bank were the issuance and redeeming of bank coins and notes; keeping and using reserves and influencing the credit situation with the aim of sustaining monetary stability in Ghana; and acting as a financial adviser and banker to the government.

The Bank of Ghana, which is also the Central Bank of the country, is responsible for monitoring the activities of deposit-taking institutions such as universal banks, rural and community banks, savings and loans companies and micro finance institutions. Non-deposit taking firms such as finance houses, leasing companies, microfinance institutions, forex and credit bureaux, also fall under the jurisdiction of the Central Bank (Bank of Ghana, 2016).

2.9.2.2 Securities and Exchange Commission (SEC)

The Securities Regulatory Commission of Ghana was established in 1998 was established in September 1998 as an independent regulator (under the PNDC law 1993) of the capital markets with oversight responsibilities for the Ghana Stock Exchange, Brokerage Firms and Investment Management Companies. Its name was later changed to the Securities and Exchange Commission (SEC) under an Act of Parliament, Securities Industry Amendment Act 200 (Act 590) (Securities and Exchange Commission Ghana, 2017).

Established by the Securities Industry Act, 2016, the Securities and Exchange Commission (SEC) has the objective of regulating and promoting the development and growth of a transparent, fair and efficient securities market in Ghana. The functions of the SEC include advising the government on issues concerning the securities industry; maintaining oversight over the activities in the securities market to ensure a fair, equitable and orderly transactions in securities; registering, licensing, authorising and regulating players in the securities market; formulating principles for guiding the securities industry; monitoring the

solvency of licenced participants and promoting the interest of customers (Securities and Exchange Commission Ghana, 2017).

2.9.2.3 National Insurance Commission

The National Insurance Commission (NIC) was established by the Insurance Act, 2006 (Act 724) with the main objective of ensuring effectual administration, regulation, supervision, control and monitoring of the insurance business in Ghana. The NIC was therefore established with the ultimate objective of establishing a fair, efficient, safe and stable insurance market, which promotes healthy competition among market players and progress in the interest of policyholders. The NIC must ensure that Insurance Companies in Ghana are financially equipped to honour their responsibilities towards policyholders. Activities of insurance companies, insurance brokers and re-insurance companies are regulated by the NIC (National Insurance Commission, n.d.) The functions of NIC include among others, assisting the government to formulate policies to promote a stable and efficient insurance sector; approving and setting standards; encouraging compliance; providing a complaints bureau; and arbitrating insurance claims in conflict (National Insurance Commission, n.d.).

2.9.2.4 National Pensions Regulatory Authority

The National Pensions Regulatory Authority (NPRA) was set up in August 2009 to control both private and public pensions schemes in Ghana (National Pensions Regulatry Authority, n.d.). Complaints over the then existing pensions scheme and agitations by Ghanaian public servants over the implementation of a pensions system to ensure a decent retirement for public servants led to the initiation of a major pensions reform in Ghana in July 2004, where a presidential commission was given the responsibility of examining the existing pensions policy and recommending appropriate replacement schemes. The commission submitted its final report in March 2006 which led the Government of Ghana to issue a white paper (W.P. No. 1/2006) in July 2006 for the creation of a three-tier pensions scheme to replace the existing ones. The Board of Directors of the NPRA was inaugurated on August 31, 2009 and the new scheme was launched on September 16,2009 and was implemented on January 1, 2010 (National Pensions Regulatry Authority, n.d.).

2.10 The Ghana Banking Sector

In 1896, the Bank of British West Africa (BBWA) was opened in Accra of the Gold Coast. Soon after that, BBWA acquired the business of running the government account and introduced cheques for the payment of government bills which made it popular with the public. By 1918, the success of the BBWA had attracted other expatriate banks to the Gold Coast. Barclays Bank commenced operations in Accra in 1925 as a merger between Barclays Bank, The Colonial bank, The National Bank of South Africa and The Anglo-Egyptian Bank. The BBWA and Barclays Bank dominated the banking sector in the Gold Coast between 1920 and 1950. Then in 1953, with independence on the horizon, Bank of the Gold Coast (BGC) was established by the Government and Alfred Engleston later became the first governor of the Bank of Ghana. BGC was split into two in 1956 with the Bank of Ghana overseeing the issuance of notes and the Ghana Commercial Bank as the banker of government departments and agencies (Bank of Ghana, 2019). When the Gold Coast gained independence from the British in 1957, it brought in its wake the establishment of more banks including the Agricultural Development Bank, the Ghana Investment Bank, the Merchant Bank, and the Social Security Bank between 1957 and 1965.

Though the first government had a large surplus in its balance of payments, the country faced many economic hardships and political unrests until 1983 when the Provisional National Defence Council (PNDC) government embarked on the Economic Recovery Programme (ERP) with the International Monetary Fund (IMF) to reverse the downward economic situation (Government of Ghana ; IMF; World bank, 1998-2000). The ERP embraced privatisation, divestiture of government institutions and the liberalisation of the financial sector which led to the enactment of the PNDC Law 225 (Ghana Banking Law 1989) (Library and Documentation Office, 2007), enabling private entities to establish banking institutions in Ghana. Among the banks established were Ecobank, Cal Merchant Bank, Meridian (BIAO), The Trust Bank and the Metropolitan and Allied Bank. As at the beginning of August 2017, there were 33 licensed banks in Ghana.

On 14th August 2017, the Bank of Ghana revoked the licenses of UT Bank Ltd and the Capital Bank due to insolvency. Then on 20th March 2018, Unibank Ghana Ltd went under administration to save it from collapse due to poor risk management practices, under capitalisation and poor corporate governance. These occurrences led the researcher to investigate the reason for the bank collapses and how an effective regulatory monitoring

environment can help to minimise these failures. This is the main focus of this research and thesis.

The Bank of Ghana embarked on banking sector reforms to clean up and strengthen the sector. As part of this exercise, banks were issued with the directive (BG/GOV/SEC/2017/19) on 11th September 2017 to increase their minimum paid-up capital to GHC400 million by 31st December 2018 (Bank of Ghana, 2017). At the end of this exercise, the licences of seven additional banks were revoked leaving the sector with twenty-three universal banks who had met the minimum capital requirement (Bank of Ghana , 2019).

2.10.1 Major Occurrences in the Ghana Banking Sector

Table 2.7 below contains the major occurrences in the banking sector of Ghana in a chronological order.

Table 2.7: Major occurrences in the Ghana Banking Sector

1896	Bank of British West Africa (BBWA) was opened in the Gold Coast.
1918	Other expatriate banks were attracted to the Gold Coast as a result of the success of BBWA.
1925	Barclays Bank commenced operations in Accra in 1925 as a merger between Barclays Bank, the Colonial bank, the National Bank of South Africa and the Anglo-Egyptian Bank.
1953	With independence on the horizon, Bank of the Gold Coast (BGC) was established by the Government and Alfred Engleston who later became the first governor of the Bank of Ghana.
1956	BGC was split into two in 1956 with the Bank of Ghana overseeing the issuance of notes and the Ghana Commercial Bank as the banker of government departments and agencies.
1957 - 1965	Establishment of more banks including the Agricultural Development Bank, the Ghana Investment Bank, the Merchant Bank, and the Social Security Bank.
1983	The PNDC government embarked on the Economic Recovery Programme with the International Monetary Fund (IMF) to reverse the downward economic situation (Government of Ghana ; IMF; World bank, 1998-2000).

13/8/17	The ERP embraced privatisation, divestiture of government institutions and liberalisation of the financial sector which led to the enactment of the PNDC Law 225 (Ghana Banking Law 1989) (Library and Documentation Office, 2007), enabling private entities to establish banking institutions in Ghana. Among the banks established were Ecobank, Cal Merchant Bank, Meridian (BIAO), the Trust Bank and Metropolitan and Allied Bank and as at beginning of August 2017, there were 33 licensed banks in Ghana.
14/08/17	The Bank of Ghana revoked the licenses of UT Bank Ltd and Capital Bank due to insolvency.
20/03/18	Unibank Ghana Ltd went under administration to save it from collapse due to poor risk management practices, under capitalisation and poor corporate governance.
16/08/207 - 31/12/18	Licences of seven banks revoked.

Source: **(Bank of Ghana, 2020)**

2.10.2 Regulatory Compliance in the Ghana Banking Sector

By the powers vested in it by the Bank of Ghana Act 930 (Bank of Ghana, 2018), the Central Bank of Ghana is mandated with the regulation, supervision and direction of the banking system in Ghana to ensure safe and sound operations. These regulatory and legal frameworks of the Bank of Ghana have been designed to be in line with the core principles for banking supervision of the Basel Committee, which is the generally accepted minimum standard for effective prudential supervision and regulation of banking systems and banks. These core principles address the issues of systemically important banks (SIBs); macroprudential issues and systemic risks; crisis management recovery and resolution; and corporate governance, disclosure and transparency (Basel Committee on Banking Supervision, 2012).

2.11 Bank of Ghana's Regulatory Framework (Transferred from Chapter 4)

The Central Bank of Ghana, through its Banking Supervision Department (BSD), monitors the activities of banks in Ghana to enforce the mandate of regulating, supervising and directing the banking and credit system of Ghana. This is done through the inspection of prudential returns from the banks to the Central Bank as listed in Table 4.1 below, which was obtained from one of the commercial banks in Ghana and confirmed by the Bank of Ghana as being the prudential requirements expected from the banks to the regulator.

This was done for the researcher to ascertain whether some of the reasons cited for the bank failures formed part of the monitoring framework of the regulator and should have, therefore, been captured and dealt with earlier. The identifications of any causes which form part of the regulatory requirement of the Central bank of Ghana but went unchecked and led to any bank failure could be an indication of regulatory monitoring lapses. Notable amongst these prudential returns are the liquidity reserve returns, statements of assets and liabilities, capital adequacy returns, current results and the balance sheets.

Table 2.8: List of Bank of Ghana's Prudential Returns

Report	**Frequency**
Liquidity Reserve Return	Weekly
Twenty largest withdrawals over the counter	Weekly
Daily Net Open Position	Weekly
Statement of Assets and Liabilities	Monthly
Report on Foreign Currency Exposures	Monthly
Large Exposures – Advances and Deposits	Monthly
Sectoral analysis of Overdrafts, Loans and other Advances	Monthly
Capital Adequacy Return	Monthly
Maturity Analysis of Assets and Liabilities	Monthly
Current Year Results	Monthly
Consolidated Balance Sheet	Quarterly

Source: Bank of Ghana

2.11.1 Liquidity Reserve Returns

On a weekly basis, banks are expected to send their weekly reserve returns to the Central Bank of Ghana to ensure compliance with the statutory liquidity reserve requirements. These reports indicate the daily expected reserves required to be kept by the banks with the regulator as a collateral for depositors' funds as according to (Chadha, et al., 2012), the

motivation for reserve provision is need to provide a buffer to act as a fall back for customers in the event of a run down.

Banks must indicate to the regulator the source of the funds making up the reserve amount, which could be the bank's own funds or borrowing from the interbank market. Failure to meet the reserve amount results in punitive actions against the bank. Defaulting banks also suffer reputational risks from other players on the interbank market.

Based on these reports, the regulator can identify if a particular bank is going through any liquidity challenges. For instance, if a bank borrows for the long period of time from the interbank market to meet its reserve requirements, that bank must be experiencing liquidity challenges.

2.11.2 Twenty Largest Withdrawals Over the Counter

This report helps the Central Bank of Ghana to monitor liquidity as well as tracking any potential money laundering issues and is expected to be reviewed by the Central Bank of Ghana on a weekly basis.

Money laundering is known to have three sequential stages: placement, layering and integration. Placement involves physically moving illegally acquired funds to a less suspicious place or form; layering involves the use of several complicated financial transactions to separate funds from original illegal sources; and integration involves converting illegal funds into seemingly legal business incomes (Bergstrom, et al., 2011). As part of its Anti-Money Laundering (AML) activities, therefore, the regulator monitors cash withdrawals to flag and deal with any suspicious activities (Bank of Ghana , 2018).

2.11.3 Daily Net Open Position

An open position occurs when a bank enters into a foreign currency trade which has not been closed through buying or selling foreign currency. This exposes banks to foreign exchange risks because any open position can be affected by fluctuations in foreign currency rates. Since the risk exists until the position closes, the regulator monitors this for banks on a weekly basis to ensure that banks are not being unnecessarily exposed (Cassar & Gerakos, 2010).

Net open position is the difference between the total open foreign currency amount of a bank and the total of closed foreign currency positions.

2.11.4 Statement of Assets and Liabilities

A monthly review of the statement of assets and liabilities of banks in Ghana is done by the Central Bank of Ghana. This statement is expected to provide details of the composition of the assets and liabilities of a bank to the regulator (Barker & Teixeira, 2018). From this report, the regulator is expected to identify the quality of a bank's assets and liabilities. Any problematic or recurring non-performing loans must be flagged by the monitoring officer.

2.11.5 Report on Foreign Currency Exposures

Banks which engage in foreign currency trade can be exposed to foreign exchange risks that arise from the fluctuations in the foreign currency exchange rates (Celebuski, et al., 1990). These exposures include making international trade payments on behalf of customers in overseas currencies, borrowing or lending activities in foreign currency and investing in foreign currencies (foreign currency assets). Since these foreign currency activities can expose banks to a lot of risks, the Bank of Ghana monitors the foreign currency exposures of banks to ensure that they fall within the approved limits.

To assess the exposure of individual banks, the regulator takes a number of factors into account, which include the currencies and amounts involved, fluctuations in the currencies involved and any mitigating or hedging factors the bank has implemented. This report is monitored monthly by the Bank of Ghana.

2.11.6 Large Exposures – Advances and Deposits

Though banks are in the business of accepting deposits and giving out loans, it is not advisable for a greater percentage of deposits to come in from a few high net worth clients or for huge loans to be given out to a few customers as this will expose the bank to Concentration Risk. The regulator in Ghana monitors to ensure that banks spread this risk as much as possible.

2.11.7 Sectoral Analysis of Overdrafts, Loans and other Advances

The regulator monitors the exposure of banks to companies in the different sectors of the Ghanaian Economy, namely, agriculture, manufacturing, mining, services, tourism and oil and gas. This is to ensure that Concentration Risk in terms of loans, and overdrafts are widely spread across the various sectors of the economy instead of being limited to one particular sector. This report is sent from the banks to the regulator every month.

2.11.8 Capital Adequacy Return

Monthly and quarterly, the Central Bank of Ghana expects from all banks, a ratio of their capital to their risk-weighted assets. According to (Shome, et al., 1986), regulators are able to promote the soundness in financial systems by monitoring the capital adequacy of financial institutions as capitalisation has a bearing on the stability of banks and the failure of banks also has the ripple effect of endangering other financial institutions, thereby causing systemic risk.

2.11.9 Maturity Analysis of Assets and Liabilities

Banks must manage their assets and liabilities by analysing the maturity profiles of their assets and liabilities to identify any funding gaps to avoid liquidity and funding problems. To do this, most banks perform a gap analysis of the maturity profiles of their assets and liabilities. This maturity analysis is required by the regulator monthly to check any funding gaps in a bank's assets and liabilities portfolio. This report is sent to the regulator in both the local and foreign currencies monthly.

2.11.10 Current Year results

Every month, results of the banks' activities for a year up to that month are required by the Central Bank of Ghana. The current year result is usually useful for determining the earnings (profitability) of a bank. Annual reports also contain sections on the composition of the Board of Directors and Senior management of a bank to help the regulator to assess whether qualified people have been entrusted with running the affairs of the bank.

2.1.11 Consolidated Balance Sheet

The Central Bank of Ghana requires the consolidated balance sheet, which presents the assets and liabilities of the banks and any subsidiaries at a particular time, to be submitted quarterly. (Boshara & Emmons, 2015) believe that balance sheets give a good perspective of financial successes by uniting a wide range of capabilities about a common context; and also, because the strategies employed for building a healthy balance sheet invariably reinforce financial prudence.

2.11.12 Onsite Monitoring

In addition to the monitoring of banks through the routine reports sent by the banks to the Bank of Ghana, the regulator also performs and sometimes ad hoc onsite inspection of banks to ensure the correctness of the routine reports. Routine onsite monitoring is usually

carried half-yearly or yearly but sometimes circumstances demand the regulator to pay unannounced visits to banks.

2.11.13 Summary of the Regulatory Framework of the Bank of Ghana

The content analysis of the Regulatory Framework of the Bank of Ghana satisfied the following research objectives:

i. To examine the existing Regulatory Framework for banks in Ghana.
ii. Identify the monitoring framework of the Bank of Ghana.

In this section, the researcher delved into the mode of monitoring banks in Ghana by the regulator. It was identified that as mandated by the Bank of Ghana law, the bank of Ghana, through the Banking Supervision Department, collects and analyses Prudential Returns from banks which help the regulator to determine the soundness of individual banks and the industry as a whole.

Table 2. 9: Summary of the Regulatory Framework of the Bank of Ghana

Bank of Ghana's Regulatory Framework	The regulatory framework of the Bank of Ghana involves the Banking Supervision Department of the Bank of Ghana being in charge of ensuring the compliance of banks with the regulations governing their operations.
Bank of Ghana's Prudential Returns	The Bank of Ghana has a number of Prudential Returns banks are required to submit to the regulator to monitor Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity.
Frequency of Prudential Returns	Frequency for submission of Prudential Returns by banks ranges from daily to half-yearly.
Onsite Monitoring	In addition to monitoring reports from banks, the regulator also conducts

	onsite monitoring of banks half-yearly, yearly or on ad hoc basis to confirm the correctness of the reports.

Source: The researcher compiled the summary from the information obtained from bank of Ghana and the banks in Ghana about the regulatory framework for the banking sector in Ghana.

2.11.14 Conclusion

From the list of the prudential returns that banks in Ghana are expected to report on to the Central Bank of Ghana, and the frequency of reporting requirements, the researcher concluded that it would be almost impossible for banks to hide their true statuses when monitoring is done efficiently.

Subsequently, the researcher performed a Content Analysis where various perspectives of different writers were analysed on the reasons for the recent bank failures in Ghana.

2.12 Various Perspectives on Reasons for Recent Bank Failures in Ghana

After the collapse of the first two banks in August 2017, the Bank of Ghana issued a statement (Bank of Ghana, 2017) attributing the incidence to high insolvency which implied that the liabilities of the banks exceeded their assets; a situation which meant that the banks would be unable to meet their financial obligations. Subsequently, five other banks also collapsed and the reasons cited by the Central Bank of Ghana after the subsequent collapse of the five additional banks were, inadequate capitalisation, high non-performing loans, and ineffective corporate governance structures. These observations, according to the Bank of Ghana, were made after an Asset Quality Review (AQR) of banks in Ghana was carried by the regulator in 2015 and repeated in 2016 (Bank of Ghana, 2018).

In this section, the researcher reviews the perspectives of other writers on this subject. The articles were obtained through a search on the internet by the researcher using phrases "reasons for the recent bank failures in Ghana", "causes of the recent bank failures in Ghana" and "why did the banks fail in Ghana?" as the search criteria on Google to search on the online media landscape of Ghana for writings and articles by various writers and journalists on the recent bank failures in Ghana. Articles obtained through the search were then analysed by the researcher and presented in this section.

2.12.1 Ghana Banking System Failure: The Need for Restoration of Public Trust and Confidence

According to (Banahene, 2018), the recent failure of banks in Ghana was the result of an amalgamation of many factors which include regulatory lapses, lack of ethics and ineffective corporate governance structures. The researcher believes that, had the Central Bank of Ghana abided by the tenets of the Banking Act 2004 (Act 673) which gave specific guidelines on how the activities of the banks must be regulated in regard to licensing, capital and reserves, lending, supervision, auditing and reporting, the incidence of bank failures in Ghana would have been minimal.

On the issue of corporate governance, the researcher goes on to suggest that the challenge facing the practice of corporate governance in Ghana is the concentration of control around shareholders with majority shareholdings irrespective of whether they have the right qualification to influence effective governance. As a remedy to this phenomenon, the researcher suggested pragmatic management styles of the banking system in Ghana, with strict supervision for risk minimisation and the provision of a framework to forestall the incidence of potential bank failures in an orderly manner in order to improve the confidence of the Ghanaian public, and beyond, in the banking system.

2.12.2 Feature: Why the local banks in Ghana are Collapsing

In another article written by Jerry J. Afolabi (a financial and economic columnist), on the Ghanaian website, *Ghana web* on 18th July 2018 (Afolabi, 2018), the collapse of the banks in Ghana were attributed to breaches in corporate governance, risk management, non-performing loans and ineffective regulatory monitoring. The writer made the observation that, most of the banks which failed were non-compliant with the basic corporate governance principles, which led to the breakdown of controls. Lack of independence of internal auditors, resulting in a weak risk management framework, was also mentioned. Thus, the inability of the banks to deal with the most prevalent risk, which is credit risk, resulting from non-performing loans. The regulatory responsibility of the Central Bank of Ghana in ensuring the credibility of the country's banking system was also mentioned by the writer, who charged the Central Bank of Ghana to ensure strict adherence of banks to their regulatory requirements.

2.12.3 Bank Failures and Regulatory Inertia in Ghana: The Blame Game Commences

Writing on the Modern Ghana online portal on 18th January 2019, Kwadwo Kusi-Frimpong (a Governance, Regulatory and Financial Crime Expert with extensive experience of working with financial institutions in the United Kingdom, The Netherlands and Switzerland) blamed the bank failures in Ghana on political and shareholder interferences, weak corporate governance structures, non-performing loans and lack of regulatory supervision protocols (Kusi-Frimpong, 2019).While lauding the Bank of Ghana for increasing the minimum capital requirements for banks in Ghana from GH₵120 million to GH₵ 400 million, (Owusu, 2018) questioned whether that was the panacea for curbing the incidence of bank failures in the country, after suggesting that the recent failures were caused by poor risk management practices, poor corporate governance and poor regulatory inertia. The writer answered the question by suggesting that, in addition to the minimum capital requirements, the Banking Supervision Department of the Central Bank of Ghana must be strengthened with experienced personnel and innovative tools to handle the challenges of the Ghana banking sector.

2.12.4 Ex-Governors Blamed for Banks' Collapse

In a book entitled "Fate of System Thinking: Lessons for Decision Optimisation; Stories from UT Bank, Capital Bank and Unibank", written by Samuel Okyere, a former employee of the defunct UT Bank, the author blamed former governors of the Central Bank of Ghana, the Securities and Exchange Commission and the auditors for the failures of the Ghanaian banks (Okyere, 2018).

2.12.5 Why Bank of Ghana is 'Complicit' in the Current Banking Crises

In an article published on www.myjoyonline.com on 23rd August 2018, Patrick Kwabena Stephenson (an economic and development consultant with experience in country risk, public policy, financial and economic analysis) laid the blame squarely at the doorstep of the regulator by citing inadequate supervision, ineffective enforcement of regulations and doubtful licensing procedures as being the reasons for the collapse of the banks in Ghana. The writer made reference to the role of the Central Bank of Ghana in issuing licenses to new banks and questioned why three of the collapsed banks were cited for obtaining licenses "*by false pretences through the use of suspicious and non-existent capital*…". Referring to section 44 of the ACT 930, which outlines the requirements for licensing a financial holding company and demands that the source of capital, and a 10 year financial position of major shareholders be disclosed before a license is issued, the writer again

questioned how the regulator could be exonerated from the responsibility of the enforcement of the Banking Law of Ghana as related to licensing (Stephenson, 2018).

2.12.6 How BoG's Weak Supervision Resulted in Capital and UT Banks' Collapses

Arguing along similar lines to (Stephenson, 2018), Jonas Nyabor (a journalist with Citi FM in Ghana, specialising in environment, climate change and social development) pointed to the lapses in the supervisory framework of the Central Bank of Ghana as the reason for the recent collapses of some of the banks in Ghana. The writer indicated that the regulator erred in issuing licenses to banks such as Capital Bank when the latter had not fully met the requirements to be granted the license (Nyabor, 2018). In the case of Capital Bank, (Nyabor, 2018) indicated that the regulator did not ensure that the requirements for issuing a complete banking license had been met after issuing them with an interim license for providing some of the initial capital required.

Additionally, according to (Nyabor, 2018), in the 2014 annual review of Capital Bank, the regulator identified twenty-four problems including poor corporate governance, declining financial performances, poor credit risk management, and traits of insolvency. However, when the 2015 annual examination revealed that only four out of the required twenty-four items had been rectified, the regulator failed to apply the appropriate sanctions. The writer also cites the failure of the regulator in appointing an advisor for the supervision of the liquidity support extended to the two banks although the regulator was required to do so. The writer, therefore, concluded that the failure of the Bank of Ghana in the enforcement of regulations concerning granting of licences and supervision of banking operations resulted in the collapse of the UT Bank and the Capital Bank.

2.12.7 Banking Reforms So Far: Topmost Issues on the Minds of Bank CEOs

(Ashiagbor, 2019) reiterated the concerns of many of the numerous other commentators for the regulator to initiate the needed actions for the enhancement of supervision and compliance in the Ghana banking sector. According to the writer, Vish Ashiagbor, who is the Country Senior Partner of PwC in Ghana, this effective supervision will help banks to streamline their businesses in order to avoid issues of illiquidity and capital inadequacy which led to the recent collapses of a number of banks in Ghana.

2.12.8 'You Are Criminals' – Ex-BoG Economist to Some Staff

In an article written on the Daily Guide Network on 11th September 2018 (Abudu, 2018), a former Chief Economist of the Bank of Ghana, Dr. A.O. Abudu partly blamed the bank failures on the criminality of some staff of the Bank of Ghana. The writer reiterated that the failure of some staff of the regulators' office to work diligently was the reason why the banking sector had been plunged into a mess. He, therefore, admonished staff of the Bank of Ghana to be disciplined and diligent in the execution of their duties in order to avoid any future repetition of the occurrences.

2.12.9 BoG Blames Former Management

In another article on the DailyGuide Network by Samuel Boadi (Senior Business reporter – Daily Guide), the current management of the Central Bank is seen blaming the former management for the inadequacies which led to the banking crises. The former management of the Bank of Ghana was blamed in the article for turning a blind eye to issues of insolvency in some banks and continually providing liquidity support without ensuring that the liquidity was applied properly and corrective actions taken by the banks involved to get back onto the track of being liquid (Boadi, 2019).

2.12.10 Fundamentals of Banking Crises – …Understanding the Ghana Situation

In a feature on the Business and Financial Times Online, Robert Owusu (an experienced banker and a fellow of the Chartered Institute of Bankers - Ghana) indicated that although the failure of the banks in Ghana was significantly due to deficiencies in capital and insolvency, there were other underlying reasons such as poor corporate governance practices and poor lending practices which were exacerbated by weak risk management systems (Owusu, 2019). The writer tabulated the causes that led to the failure of each of the banks as shown in Table 4.3 below.

Table 2.10: Reasons Why Licences of Banks Were Revoked

BANK	REASONS WHY LICENCE WAS REVOKED
Unibank Ghana Ltd.	Capital Inadequacy
The Royal Bank Ltd.	Capital Inadequacy

Construction Bank Ltd.	Banking License was obtained questionable and non-existent capital.
Beige Bank Ltd.	Banking License was obtained questionable and non-existent capital.
Sovereign Bank Ltd.	Banking License was obtained questionable and non-existent capital.

Source: (Owusu, 2019)

The writer reiterated the call by other writers for the regulator to strengthen the regulatory framework for banks in Ghana to ensure the stability and safety of banking institutions; protect depositors; support fragile banks as a lender of last resort; and manage potential systemic risks. This, according to the writer, can be achieved if the regulator plays its financial stability and prevention of crisis roles by:

- Enforcing compliance with the laws and prudential regulations governing banking activities.
- Introducing more advanced techniques for the inspection and monitoring of banks through enhanced information technology systems.
- Reinforcing follow-up of issues identified during inspection to ensure adequate resolution of problems.
- Dealing with the problem of non-performing loans with other stakeholders such as government agencies.
- Learning from history to prevent future re-occurrences of banking crises.

2.12.11 Summary of Perspectives of Writers on Reasons for Bank Failures

The content analysis on the perspectives of various writers on the reasons for the recent bank failures in Ghana helped the researcher to achieve the fourth research objective which was "to examine the causes of the recent bank failures in Ghana".

The content analyses revealed that different reasons were cited for causing the recent bank failures in Ghana. These reasons included insolvency, inadequate capitalisation, high levels of non-performing loans, regulatory lapses, lack of ethics, ineffective corporate governance, auditing, political and shareholder interference. However, one theme that ran through was the fact that, irrespective of the challenges faced by the banks, it was the responsibility of the regulator to ensure a sound banking system prevailed.

The articles analysed and the reasons identified for causing the recent bank failures are listed in Table 2.11 below:

Table 2.11: Summary of Perspectives of Writers on Reasons for Bank Failures

Article and Author	Reasons Cited	Suggested Solutions
Banahene, K. O., 2018. Ghana Banking System Failure: The Need for Restoration of Public Trust and Confidence. *International Journal of Business and Social Research,* 8(10), pp. 1-5.	Regulatory lapses, lack of ethics and ineffective corporate governance structures.	The Central Bank of Ghana needs to abide with the Banking Act which gives specific guidelines on how the activities of the banks must be regulated with respect to licensing, capital and reserves, lending, supervision, auditing and reporting.
Afolabi, J. J., 2018. *Feature: Why the local banks in Ghana are Collapsing.* [Online] Available at: https://www.ghanaweb.com/GhanaHomePage/business/Feature-Why-the-local-banks-in-Ghana-are-Collapsing-669688 [Accessed 20 December 2019].	Breaches in corporate governance, risk management, non-performing loans and ineffective regulatory monitoring. Lack of independence of internal auditors resulting in a weak risk management framework. The regulatory responsibility of the Central Bank of Ghana in ensuring the credibility of the banking system was not adhered to.	The Central Bank of Ghana to ensure strict adherence of banks to regulatory requirements.
Kusi-Frimpong, K., 2019. *Modern Ghana - Bank failures and Regulatory Inertia in Ghana: The Blame*	Political and shareholder interference, weak corporate governance structures, non-	The writer suggested that in addition to the minimum capital requirement, the Banking

Game Commences. [Online] Available at: https://www.modernghana.com/news/909812/bank-failures-and-regulatory-inertia-in-ghana.html [Accessed 20 December 2019].	performing loans, poor risk management practices, poor corporate governance, regulatory inertia and lack of regulatory supervision.	Supervision Department of the Central Bank of Ghana must be strengthened with experienced personnel and innovative tools to handle the challenges of the Ghana banking sector.
Okyere, S., 2018. *Fate of System Thinking: Lessons for Decision Optimisation; Stories from UT Bak, Capital Bank and Unibank.* Paperback ed. Accra: Speakers' Hub Ltd.	The author blamed former governors of the Central Bank of Ghana, the Securities and Exchange Commission and external auditors for the banks' failure.	Banks must not lose their visions and must avoid over-confidence in their management of credit risk.
Stephenson, P. K., 2018. *Why Bank of Ghana is 'Complicit' in Current Banking Crises.* [Online] Available at: https://www.myjoyonline.com/business/2018/august-23rd/why-bank-of-ghana-is-complicit-in-current-banking-crises.php [Accessed 21 December 2019].	The writer laid the blame squarely at the doorstep of the regulator by citing inadequate supervision, ineffective enforcement of regulations and doubtful licensing procedures as the reasons for the collapse of the banks. Specifically, the writer made reference to the role of the Central Bank of Ghana in issuing licenses to new banks and questioned how it had been possible for three of the collapsed banks to have obtained	The regulator must diligently carry out the provisions of the banking law which mandates the Central bank of Ghana to "*ensure the soundness and stability of the financial system and the protection of the depositor*".

	"*by false pretences through the use of suspicious and non-existent capital…*".	
Nyabor, J., 2018. *Citi newsroom - How BoG's Weak Supervision Resulted in Capital,UT Banks' Collapse.* [Online] Available at: https://citinewsroom.com/2018/08/how-bogs-weak-supervision-resulted-in-capital-ut-banks-collapse/ [Accessed 21 December 2019].	Lapses in the supervisory framework of the Central Bank of Ghana as the reason for the recent collapse of some of the banks in Ghana. The writer indicated that the regulator erred in issuing licenses to banks such as Capital Bank when the latter had not fully met the requirements. The writer also cited the failure of the regulator in appointing an advisor for the supervision of the liquidity support extended to the two banks although the regulator was required to do so. The writer, therefore, concluded that the failure of the Bank of Ghana in the enforcement of regulations concerning granting of licences and supervision of banking operations resulted in the	Due diligence must be followed by the regulator in the issuance of licences to prospective banks.

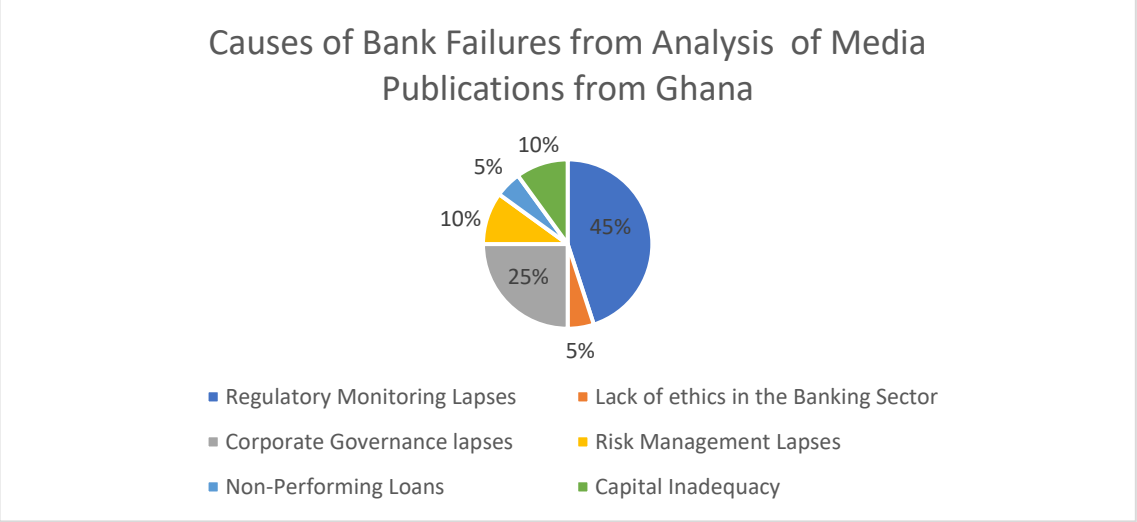
	collapse of UT bank and Capital Bank.	
Ashiagbor, V., 2019. *Banking Reforms So Far: Topmost Issues on the Minds of Bank CEOs.* [Online] Available at: https://www.pwc.com/gh/en/assets/pdf/ghana-banking-survey-2019.pdf [Accessed 13 February 2020].		The writer suggested the enhancement of supervision and compliance in the Ghana banking sector to help minimise failures.
Abudu, A., 2018. *'You Are Criminals' – Ex-BoG Economist to Some Staff.* [Online] Available at: https://dailyguidenetwork.com/you-are-criminals-ex-bog-economist-to-some-staff/ [Accessed 18 April 2020].	Criminality of some staff of the Bank of Ghana and the failure of some staff of the regulator to work diligently.	Staff of the Bank of Ghana need to be disciplined and diligent in the execution of their duties to avoid any future repetition of the occurrence.
Boadi, S., 2019. *BoG Blames Former Management.* [Online] Available at: https://dailyguidenetwork.com/bog-blames-former-management/ [Accessed 18 April 2020].	Former management of the Bank of Ghana turned a blind eye to issues of insolvency in some banks.	
Owusu, R., 2019. *Fundamentals of banking crises – …understanding the*	Capital inadequacy, insolvency and poor	Enforcement of compliance with regulations, improved

Ghana situation. [Online] Available at: https://thebftonline.com/2019/features/fundamentals-of-banking-crises-understanding-the-ghana-situation/ [Accessed 18 April 2020].	corporate governance practices.	inspection framework and dealing with the problem of non-performing loans.

Source*: The researcher compiled the summary from the information obtained from Perspectives of Writers on Reasons for Bank Failures*

From the summary, it was identified that out of the twenty reasons given by the writers studied, nine (45%) attributed the failures to regulatory monitoring lapses, one (5%) to the lack of ethics in the banking sector, five (25%) to ineffective corporate governance structures, two (10%) to risk management lapses, one (5%) to non-performing loans and two (10%) to capital inadequacy as illustrated in the pie chart in Figure 4.1 below.

Figure 2.4: Pie Chart illustrating percentages contributed by the various causes of bank failures as obtained from the perspectives of various writers.



Source: The researcher

2.12.13 Conclusion from the Perspectives on Reasons for Recent Bank Failures in Ghana

The researcher concluded from the content analysis that though many reasons were cited by the writers of the various articles analysed, as being the causes of the recent bank failures in Ghana, the regulator, through the Banking Supervision Department of the Bank of Ghana was ultimately responsible for the supervision of the activities of banks in Ghana, and it was their remit to ensure compliance with regulations in order to avoid or minimise bank failures.

The Content Analysis answered the first, second and third research questions which were:

i. What is the regulatory framework for banks in Ghana?
ii. Is the regulation of banks in Ghana effective?
iii. What caused the recent bank failures in Ghana?

Having obtained this information from the content analysis, the researcher then proceeded to do a survey data analysis to collect and analyse data from middle managerial banking professionals on the research objectives.

2.15 Research Gap

According to (Yee, et al., 2016), the majority of the recent literature on Regulatory Compliance such as Ayres and Braithwaite (1992), Hawkins (1994), Levi (1997), Winter and May (2001), May (2004) and Tyler (2006) are all based on data from Western countries. Therefore, it can be argued that the available literature would not be applicable to situations in developing countries such as Ghana. Though regulatory enforcement scholars such as Araral (2013) and Braithwaite (2006) have expressed increasing interests in bridging this gap, the number of comprehensive studies on Regulatory Compliance in developing countries has continued to be limited.

In emerging economies, regulatory non-compliance is greater, and the authoritative capacity of governments for enforcement is weaker than in advanced countries. However, ambitious but achievable goals for governments in emerging economies is known to be weak administratively but strong normatively (Dobbin & Sutton, 1998). This implies that emerging economies must follow practices which foster legitimacy between their stakeholders in order to attain regulatory compliance (Malesky & Taussig, 2017).

Though there have been other studies on certain aspects of the Ghana Banking Sector and the recent bank failures such as the studies by (Banahene, 2018), (Benson, 2019) , (Biekpe, 2011), (Adam & Agbemade, 2012) and (Tweneboah-Koduah & Farley, 2016); none has addressed the issue of how effective regulatory compliance monitoring can minimise bank failures in Ghana. And this has created a gap that this research aims at closing. This study is aimed at contributing to bridging this gap by carrying out a research on the how effective regulatory compliance monitoring can help to minimise bank failures in Ghana.
Some of the research works carried out about the Ghana Banking Sector are listed in the Table 2.8 below.

Table 2.12: Some Research on the Ghana Banking Sector

Author	Reference	Research Article
Kwabena Owusu Banahene	(Banahene, 2018)	Ghana Banking System Failure: The Need for Restoration of Public Trust and Confidence.
Elijah Benson	(Benson, 2019)	Banking Failure in Ghana: What accounted for the Collapse of Unibank?
Nicholas Biekpe	(Biekpe, 2011)	The Competitiveness of Commercial Banks in Ghana.
Samuel Adams John Agbemade	(Adam & Agbemade, 2012)	Financial Liberalisation and Banking Sector Performance in Ghana
Ernest Yaw Tweneboah-Koduah Augustine Yuty Duweh Farley	(Tweneboah-Koduah & Farley, 2016)	Relationship between Customer Satisfaction and Customer Loyalty in the Retail Banking Sector of Ghana

Source: The Researcher

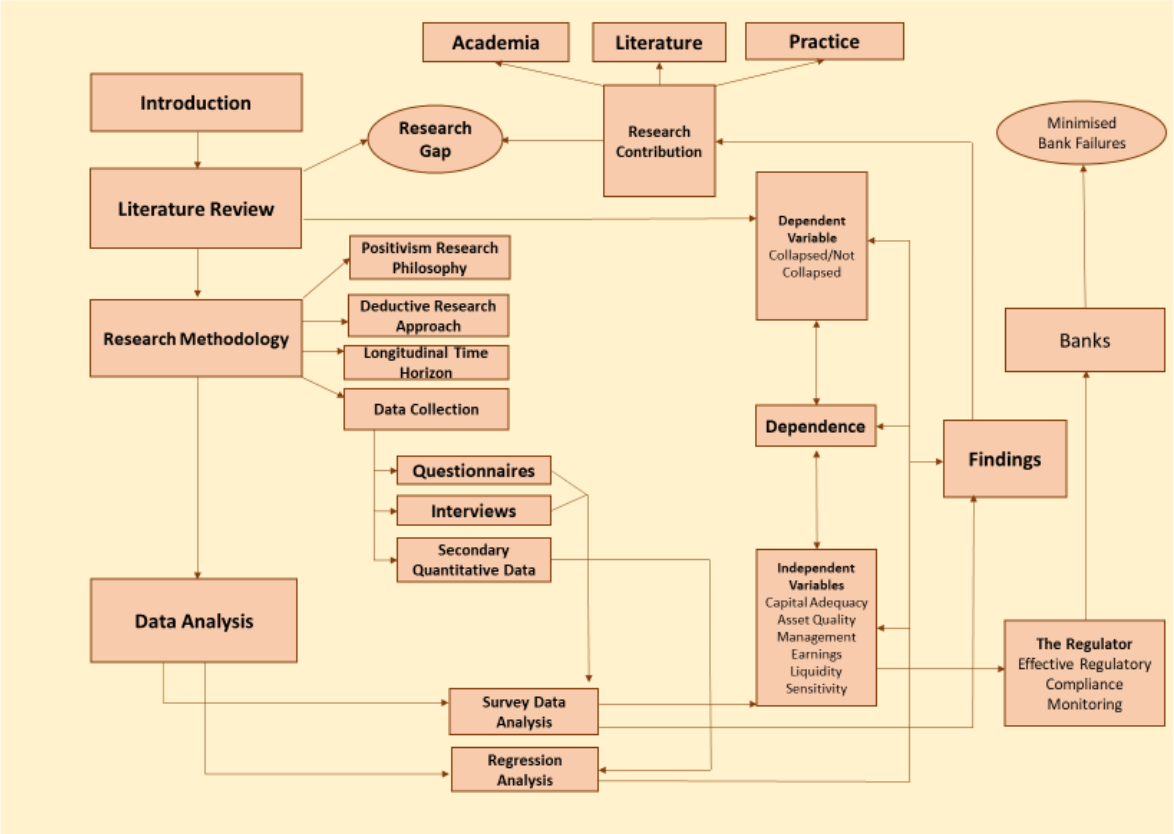
2.15 Conceptual Framework of the Research

This conceptual framework in Figure 2.5 is derived from the hypothesis that, Effective Regulatory Compliance Monitoring minimises bank failures. The status of a bank, therefore, which can be either collapsed or not collapsed, is influenced by effective regulatory compliance monitoring. According to the IMF, financial soundness indicators give an insight into the soundness and financials health of financial institutions (International Monetary Fund, 2019). Since (Restoy, 2017) has suggested the CAMELS framework and a good financial service indicator, it can be concluded that the status of a bank is dependent on the indicators in the CAMELS analysis which are Capital Adequacy, Asset Quality, Management Quality, Earnings, Liquidity and Sensitivity.

From the introduction of the research, through to the literature review where the research gap is identified, to the methodology where the researcher identifies the appropriate research philosophy, research approach, time horizon and data collection methods, all actions are taken to answer the main research question. Data collected through questionnaires, interviews and secondary sources are analysed to determine the causes of the recent bank failures in Ghana. A regression analysis is performed based on the identified dependent and independent variables.

The dependent variable, according to (Magnusson, 2010), refers to the responses to the outcomes from the analyses of the independent variables. This implies that the value of the dependent variable responds to changes in the values of the independent variables.
The status of a bank as being collapsed or not collapsed was chosen by the researcher to be the dependent variable because the researcher believed that the performance of this dependent variable was highly influenced by the indicators in the CAMELS analysis as indicated by the Bank for International Settlement (Restoy, 2017). The researcher, therefore, believed that the soundness of a bank which determined whether it would collapse or not, was influenced by the Capital Adequacy, Asset Quality, Management Quality, Earnings, Liquidity and Sensitivity. Thus, the choice of the status of a bank (collapsed or not collapsed- the dependent variable-and the indicators of the CAMELS analysis-the independent variables.

Figure 2.5: Conceptual Framework of the Research



Source: The Researcher

2.16 Summary of the Literature Review

In chapter two, the researcher has critically analysed the extant literature on various aspects of banking failures related to the research focus and identified the gap in literature that this research aims to fill. In the critical analyses of existing literature, the researcher has met the following objectives of the research:

i. To examine the existing Regulatory Framework for banks in Ghana.

ii. To identify the monitoring framework of the Bank of Ghana.

iii. To develop a model that helps to identify and eradicate the known causes of bank failures in Ghana.

In the next chapter (Chapter Three), the researcher will outline the methodology employed for the research.

CHAPTER THREE

CHAPTER THREE: Methodology and Design

3.0 Chapter Overview

Research is a methodical process of collecting, analysing and interpreting information with the aim of increasing the appreciation of a phenomenon (Leedy & Ormrod, 2014). It follows a systematic process of the definition of an objective, management of data and communication of findings in accordance with established guidelines and frameworks (Williams, 2007) . To achieve this objective, the research must have a design (philosophy, an approach, a strategy, and data collection methods) (Saunders, et al., 2003).

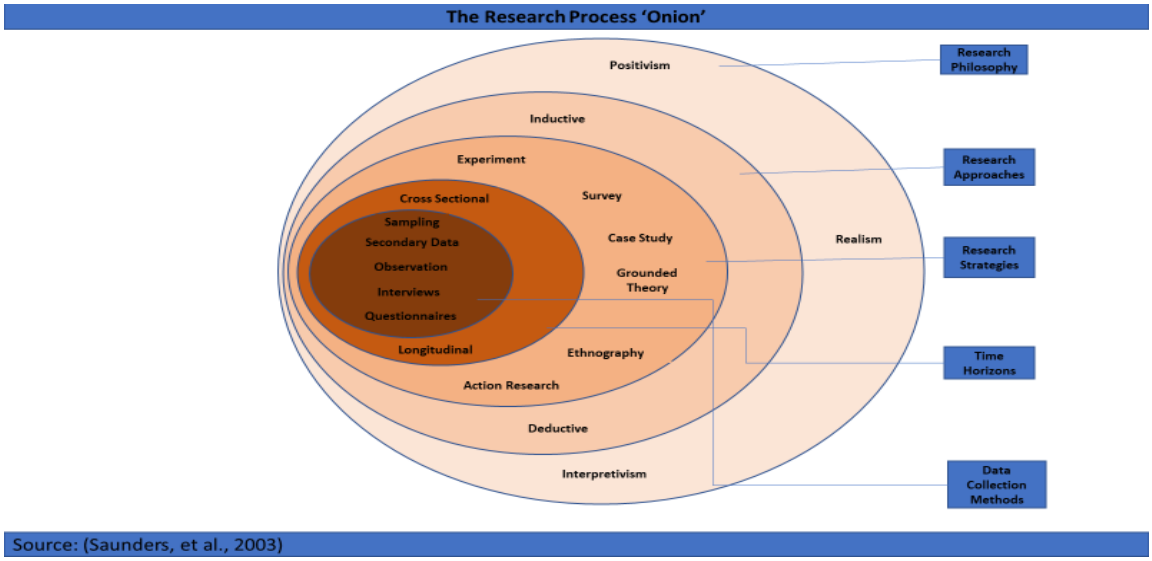
This chapter discusses the methodology used in this research by discussing the research philosophy and design adopted for the research in comparison with other philosophies; the research approach, by making a choice between deductive and inductive studies as well as quantitative and qualitative studies; the research strategy by elaborating on the methodologies employed; and the data collection instruments utilised. The data analyses methods have also been outlined in this chapter. The researcher selected the positivism research approach, the deductive research approach, the survey research strategy, the longitudinal time horizon.

The mixed method of data collection was selected to be used to collect both quantitative and qualitative data with questionnaires, interviews and document review as the data collection methods. The data will then be subjected to statistical, CAMELS and Regression analyses.

3.1 Research Design

The Research Design provides an important connection between the arguments and theories which inform a research, and the data collected (Zefeiti & Mohamad, 2015). The direction for the collection and analysis of data is also provided by the research design. (Saunders, et al., 2003) have established that the layers of an onion can be used to represent the research process, with each layer representing a different stage. All the stages which are the research philosophy, approach, strategy, and time horizon, therefore, must be considered before the core (data collection and analysis) is addressed.

Figure 3.1: The Research Process Onion (Saunders, et al., 2003)



According to (Bono & McNamara, 2011), the fundamental principles of a good research design are the abilities to match the chosen design to the question; matching concept definition with operationalisation; cautiously specifying the research model; using procedures with recognised validity or providing evidence; choosing samples and procedures which are suitable for the unique research question. (Angrist & Pischke, 2010) emphasise that the benefits of a good research design are most easily seen in the quality of work produced by the researcher.

The first layer of (Saunders, et al., 2003)'s research onion is the research philosophy. A research philosophy is the belief concerning the mode of data collection and analysis for a research. It borders on the "known truth" and the "believed truth" which are known as epistemology and doxology respectively (Mingers, et al., 2013). The three major research philosophies are positivism, interpretivism and realism (Saunders, et al., 2003). Positivism subscribes to the view that only scientifically gained knowledge can be trusted; interpretivism research philosophy adopts the view that knowledge of reality is socially constructed by human actors (Walsham, 1995) (thus, human interests are integrated into a research); while the research philosophy of realism is founded on the belief that there exists reality which is not influenced by human beliefs.

The approach for the research is the second layer of the research onion. A research requires a plan or an approach consisting of the steps of broad assumptions, data collection, data analysis and interpretation. This involves several decisions which are based on the research problem or the topic under study as this will dictate the research methodologies to be adopted for data collection and data analysis. Starting a theory with the right approach

helps the researcher to offer more comprehensive and accurate results by generating coherent predictions based on the underlying approach (Shaw, 2017). A research approach can be either deductive or inductive. The deductive approach begins with a theory from which a hypothesis is developed and then data is collected and analyses to test the hypothesis. the inductive approach on the other hand begins with empirical observations from which patterns are generated and theories formed.

The third layer of the research onion is the research strategy. There are many different research strategies a researcher can adopt to suit the research objectives and answer the research questions. Some research strategies include surveys, experiments, case studies, ethnographies, grounded theories, action research, exploratory, descriptive, and explanatory studies. Though some of these strategies may be aligned to the deductive or inductive approaches, what is important is not the simplistic allocation of strategies but the choice of an appropriate strategy for the research in question (Saunders, et al., 2003).

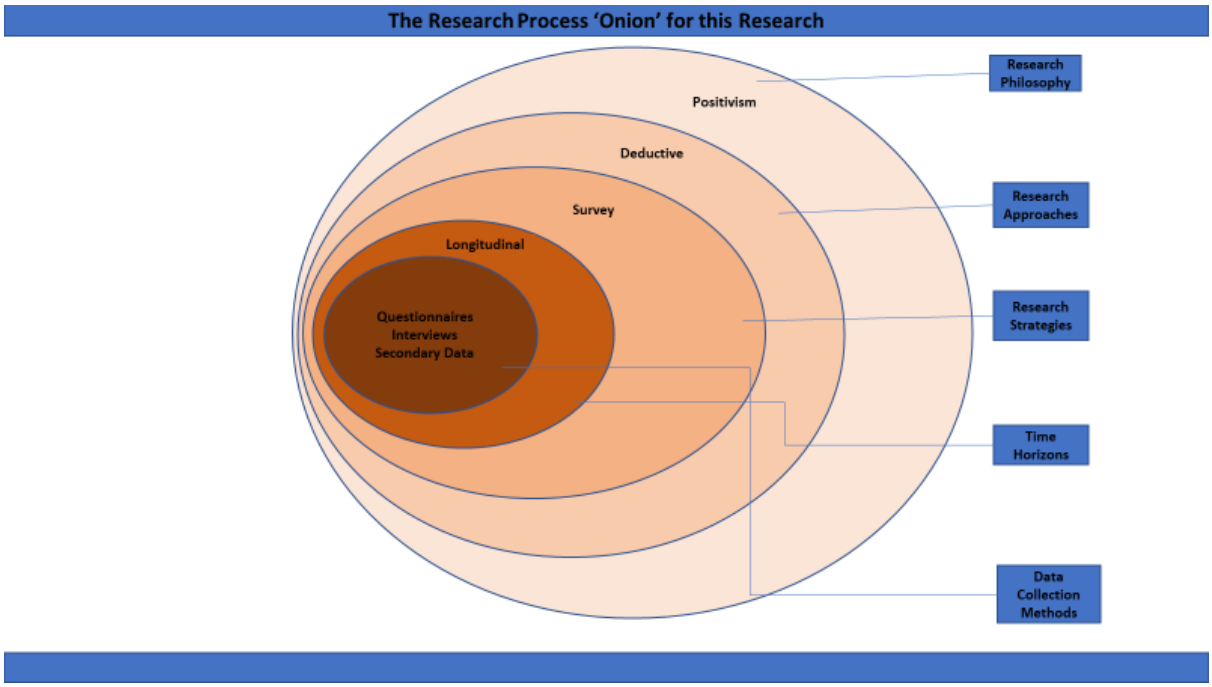
The fourth layer of the research onion is the time horizon as all research takes place in time. Depending on the research question, a research can either represent a 'snapshot' of events at a certain time or a diary of events over a specified period. The snapshot is referred to as a cross-sectional study while the diary is called a longitudinal study (Saunders, et al., 2003).

The data collection methods employed for a research form the final layer of the research onion. Data refers to the information collected for examination or consideration for decision-making, which can either be primary or secondary. Primary data refers to information collected by a researcher from an original source and obtained first-hand by the researcher. Primary data is usually collected for a specific research problem with procedures (such as surveys, or questionnaires) that best fit the problem at hand. Primary data always add to existing knowledge once they are collected. Secondary data on the other hand, are obtained from surveys, experiments or studies which have been conducted by other people.

Data collection is the procedure involved in the gathering and measurement of information on areas of interest, in an established and orderly manner which enables a researcher to answer research questions, test hypotheses, arrive at results and assess these results. It involves the use of primary and secondary data collection methods such as sampling, observation, interviews and questionnaires, and analyses (Saunders, et al., 2003).

After a careful consideration of the research philosophies, approaches, strategies time horizons and data collections methods available, the researcher adopted a positivism research philosophy, a deductive approach, a survey research strategy and a longitudinal time horizon. The data collection methods employed were questionnaires, interviews and the use of secondary data.

Figure 3.2: The Research Process Onion for this Research



3.1.1 Research Philosophy

The researcher adopted the research philosophy of positivism because positivism is a methodological philosophy in research where methods in natural science are applied in social research by measuring and supporting with evidence (Hunt, 1991). Positivism subscribes to the view that only scientifically gained knowledge can be trusted. Such scientific knowledge can be obtained through measurements and human senses. Positivism, therefore, relies on quantifiable data which can be statistically analysed. Positivism also espouses an ontological view of things and adopts a deductive approach to research. In a research based on positivism, both the researcher and the research are independent, thereby making no room for human interests (Hunt, 1991).

Though positivism has been criticised for the "absence of cultural sensitivity and historical specificity" (Calhoun, 1992), it is best suited for this research because the alternative, which is interpretivism, is not appropriate since interpretivist philosophy is based on a

relativist ontology which perceives the subjectivity of reality such that it is based on interpretations of experimental and social levels; and a subjectivist epistemology, where there cannot be a separation of people from their knowledge, creating a linkage between the research subject and the researcher (Weber, 2004). For this research, the researcher depended on quantifiable observations which led to statistical analyses, with the researcher being independent from the study and having no personal interests. With the aim of conducting a strictly objective research, the researcher maintained very little contact with the participants but rather focussed on data to be collected.

In summary, ontologically, positivists subscribe to the belief that reality and the person doing the observation are separate. Epistemologically, positivists believe that reality is the basis for human knowledge and tend to use experiments and surveys as their preferred research method (Weber, 2004).

3.1.2 Research Approach

In the deductive research approach, a hypothesis is deduced from a theory by suggesting the relationship between two variables. The hypothesis is then tested and the outcome of the researched examined. In the situation where the hypothesis is not confirmed, the theory will be modified. The deductive research approach is beneficial in its ability to explain the connection between variables and concepts by quantitatively measuring the concepts and generalising the research findings (Newstead, et al., 2004).

It was the most suitable approach as the researcher developed a hypothesis based on existing theory, and then tested the hypothesis with designed a strategy (Wilson, 2010). The importance of regulatory compliance monitoring has been established through research by researchers such as (Lopez, 1999), (Wheelock, 2005) and (Basel Committee on Banking Supervision, 2010) of the Bank for International Settlement which provides a regulatory framework emphasising on the improvement of capital, efficient risk management, and provision of adequate liquidity for ensuring more robust banking systems globally. Based on this, therefore, the researcher sought to deduce a relationship between effective regulatory compliance monitoring and the status of a bank (failed or not failed) in Ghana by establishing that if the causes of the recent bank failures in Ghana were parameters which should have been monitored by the regulator, then effective monitoring could have minimised the failures.

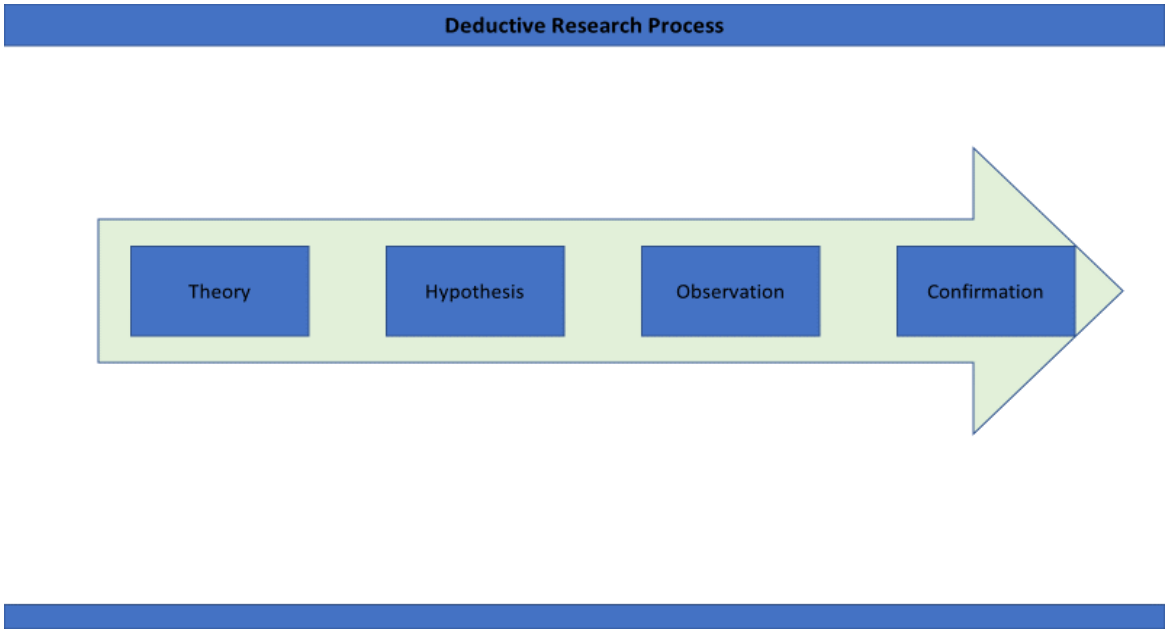
3.1.2.1 Deductive Research Approach

In a deductive research, a conclusion is drawn from a premise which usually requires the integration of two or more premises. Usually, the relationships existing between situations or objects is expressed by each premise (Oberauer, et al., 2005)

Data can either be collected quantitatively or qualitatively. Quantitative data collection depends on structured data collection instruments and random sampling which fit varied experiences into responses, which are predetermined in order to generate results that can be easily summarised, compared and generalised. Additionally, a hypothesis is usually tested in a quantitative research. Some quantitative data collection techniques include experiments, observations and surveys with closed-ended questions.

Data collection techniques commonly used in qualitative research include in-depth interviews, observations and document reviews. Qualitative data collection is time-consuming: this is because they tend to have open-ended questions and iterative interviews. They also rely on triangulation to improve the integrity of their findings.

Figure 3.3: Deductive Research Process



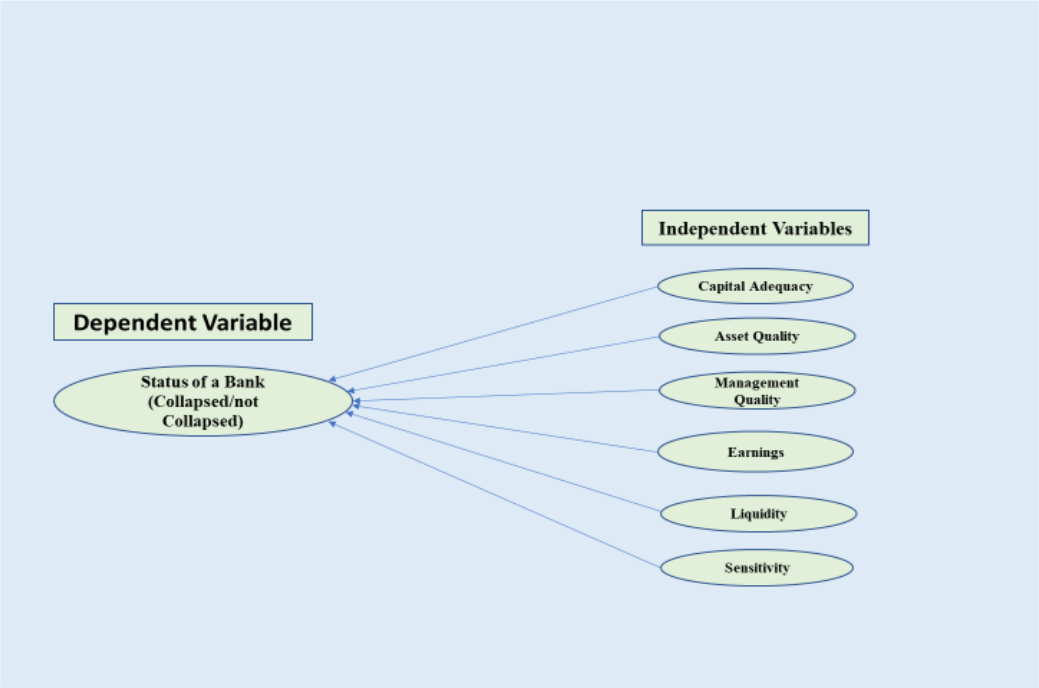
Source: The Researcher

3.1.2.2 Dependant and Independent Variables

To deduce a causative relationship in a research, there must be a dependent and independent variable. The dependent variable, according to (Magnusson, 2010), refers to the responses to the outcomes from the analyses of the independent variables. This implies that the value of the dependent variable responds to changes in the values of the independent variables.

The status of a bank as being collapsed or not collapsed was chosen by the researcher to be the dependent variable because the researcher believed that the performance of this dependent variable was highly influenced by the indicators in the CAMELS analysis as indicated by the Bank for International Settlement (Restoy, 2017). The researcher, therefore, believed that the soundness of a bank which determined whether it would collapse or not, was influenced by the Capital Adequacy, Asset Quality, Management Quality, Earnings, Liquidity and Sensitivity. Thus, the choice of the status of a bank (collapsed or not collapsed- the dependent variable-and the indicators of the CAMELS analysis-the independent variables.

Figure 3.4: Dependent and Independent Variables



Source: The Researcher

3.1.3 Research Strategy

The research strategies that the researcher could use were experiment, survey, case study, grounded theory, ethnography, and action research. Out of these, the researcher settled on survey for the purpose of identifying the effect of effective regulatory compliance monitoring on minimising bank failures.

To answer the research question, the researcher needed a cost-effective strategy with the flexibility of being administered through multiple ways such as emails, online, paper or

telephone. The survey strategy provided these in addition to the dependability of the data collection as the anonymity of respondents allows more candid responses. Survey strategies are also extensive for describing the attributes of a large population in a way that no other strategy does.

As compared to experiments, which measure a limited number of variables using a controlled variable (Saunders, et al., 2003), surveys have the capacity to be used to describe large populations. Case studies on the other hand are about the nature and complexity of the case under study mainly as a strategy for carrying out a research that encompasses an empirical investigation of a specific current phenomenon within its exact context using numerous sources of evidence (Robson, 2002), while surveys are more flexible. Ethnography, which emanates from the field of anthropology, is a methodical study of people and cultures where data gathering involves participant observation. The ethnographer participates and observes with no aim of changing the situation (Baskerville & Myers, 2015). Ethnography, therefore, tends to be more time consuming due to the mode of data collection and is common with inductive approach as compared to the survey strategy. Grounded theory also tends to be more time-consuming as it relies heavily on observations, detailed interviews and analyses of documents to identify processes used by people for addressing issues. As an organised approach to qualitative research, grounded theory compares many concepts articulated by participants of a study (Mello & Flint, 2009). Action research was also not suitable for the research because it is usually carried out for solving an immediate problem where the researchers work in teams or communities to find solutions to problems (Durcikova, et al., 2018) and perceived as rigorously insufficient (Kock & Lau, 2001).

The relative usefulness of a research strategy as compared to others is dependent on the requirements of the research. Thus, having reviewed the other research strategies, it was evident that the most suitable one was survey strategy.

3.1.3.1 Surveys

Survey research is an important research strategy, especially in social sciences research, which involves responses to questions posed to respondents by the researcher. Survey research permits the recruitment of participants and the collection of data using different instruments which can be either qualitative or quantitative (Hulland, et al., 218). Though a relatively younger field as compared to others, survey research has gone through three eras

of the invention of the basic components (1930-1960), the growth in the use of survey research (1960-1990) and the decline in the participation rates after 1990 (Groves, 2011). However, survey research has recently developed into a rigorous strategy detailing the sample, method and ways of reducing nonresponse rates.

Though survey research is useful in obtaining data on the attitudes, perceptions and beliefs of respondents, it also poses challenges such as coverage error where no individual in the population is included in the sample; sampling error where respondents are not representative of the features of the population; measurement error where data collection instruments do no illicit appropriate answers, and low or non-response from persons in the sample. These problems can be resolved through multimode designs; clear identification of population; reliable and valid collection instruments; and user-friendly designs as well as follow-up mechanisms with non-responders (Spekle & Widener, 2018).

3.1.3.1.1 Components of Surveys

Survey research strategy involves sampling, interviewing and the total design of the survey (Floyd J Fowler, 2014). The selection of the subset of the population based on which the research will be focused is very key to the overall success of the study such that the sample must be selected to give members of the population an equal likelihood of being chosen. The mode of the collection of data must also be the most cost-effective with the ability to produce the highest quality of data. Finally, the survey must be designed to enhance the resources available through the sample size and response rate.

The researcher therefore chose a sample of the middle managers in both current and failed banks in Ghana for the questionnaires and seasoned bankers such as Chief Finance Officers and Treasurers for the interviews. The most cost-effective mode of data collection was through questionnaires administered through the email to one person per company who then administered to other middle managers to make the most of the limited financial resources.

3.1.4 Time Horizons

A research can either be based on a longitudinal or cross-sectional time horizon and according to (Saunders et al,2009), the time spent on the research is independent of the methodology chosen.

A study in which the data is collected once, probably within days, weeks or months to answer a research question is known as one-shot or cross-sectional studies. Usually carried out for the estimation of the frequency of the result for a given population, cross-sectional studies are mostly used for descriptive studies where there is no hypothesis. However, indications of the sequence of events cannot be given since they are carried out at a given time (Rindfleisch, et al., 2008). It must be noted that time perspectives are not dependent on the research strategy (Saunders, et al., 2003).Longitudinal data, on the other hand, is made up of measurements from the same individuals taken repeatedly over a period of time (Spagnoli, et al., 2015). This is generally encountered in medical sciences, psychology, economics and social sciences (Zhang, et al., 2015).

When a researcher wants to study people or phenomena at different points in time to answer the research question, longitudinal studies are used. A typical example is when the behaviour of employees is studied in relation to the period before and after a major organisational change to measure the effect of the change. The longitudinal time horizon was adopted for its flexibility, precision in observing changes and efficiency in determining variable patterns over a period.

3.1.5 Data Collection

The data collection methods selected by a researcher is closely linked with the research strategy adopted.

3.1.5.1 Data Collection Methods

Data collection involves information gathering from relevant sources to solve a research problem. Data can either be primary or secondary. Secondary data can be obtained from published books, journals and newspapers while primary data must be generated by researchers. Primary data collection methods can either be qualitative or quantitative (Lee & Hubona, 2009). Data collection approaches are dependent on the type of research method being employed, which are the strategies, processes or techniques employed in the collection of data or evidence for analysis for uncovering new information or creating a better understanding of a subject. Different types of research methods exist and apply different techniques for data collection. It can qualitative, quantitative or mixed. (The University of Newcastle Australia, 2019) .

3.1.5.1.1 Quantitative Data Collection

Quantitative data collection is based on mathematical computations (Stafford, 2011), which are usually generated using questionnaires with close-ended questions and analysed with statistical methods such as median, mean, mode, regression and correlation analysis. Quantitative data collection methods which include surveys, questionnaires, observations, documents screenings and experiments (The University of Newcastle Australia, 2019), tend to be cheaper due to the standardisation of the methods employed. However, quantitative methods are rarely able to capture inherent richness and complexities surrounding research issues due to the restricted nature of information gathered.

3.1.5.1.2 Qualitative Data Collection

In contrast to quantitative data collection, qualitative data collection and analyses do not involve numbers and computations. They rather include questionnaires with open-ended questions, case studies, interviews and focus groups, thereby making the information gathered rich (Avison & Myers, 2002). Qualitative data can be collected through interviews, focus groups, content analysis, observation, document analysis, oral history or life stories (The University of Newcastle Australia, 2019).

3.1.5.1.3 Mixed Methods Research

However, it is possible to combine quantitative and qualitative methods into a mixed methods research where rich insights are developed into studies which cannot be carried out with neither quantitative nor qualitative methods alone (Venkatesh, et al., 2013). Thus, diversity of methods in research is considered a major advantage (Robey, 1996).

The nature of this research required the use of both quantitative and qualitative data collection methods to carry out the analyses for answering the research question. The quantitative data was made up of secondary data obtained from annual financial reports of some selected banks in Ghana. To obtain the qualitative data, the researcher administered questionnaires and conducted interviews. The main methods of collecting quantitative data are interviews, probability sampling, observation, questionnaires and document review.

Questionnaires, interviews and document review were relied on as the data collection methods for this mixed research.

3.1.5.2 Data Collection Tools

Depending on the research type (qualitative and quantitative), data collection tools (Hentschel, 1999) may include interviews, questionnaires, focus groups, observations, document analyses, content analyses, document screenings, experiments and oral histories. According to (The University of Newcastle Australia, 2019), data collection tools include qualitative and quantitative tools. Qualitative research tools include interviews, observations, document analyses, oral histories, content analyses and Delphi Techniques, while

3.1.5.2.1 Questionnaires

A questionnaire is a written set of questions for collecting data while a survey is made up of both the set of questions and the procedure for the collection, aggregation, and analyses of the answers to the questions. A survey is a data collection tool for gathering information about study participants. It may focus on actual information or the opinions of individuals. Surveys, which are a very conventional way of carrying out a research, are very valuable for non-experimental descriptive designs, which are aimed at describing reality. They can be cross-sectional, longitudinal or explanatory.

The researcher administered one hundred questionnaires developed with open and close ended questions to one hundred respondents, out of which ninety-seven were returned. The sample space for the questionnaires was limited to middle-level managers in both current and collapsed banks who had the requisite knowledge to provide the information needed for the experiment as compared to the senior managers who were more difficult to reach or the lower-level employees who did not have the information required.

The survey questionnaires returned both qualitative and quantitative data. As a result, the researcher employed both nominal and ordinal scales in analysing the survey data.
The questionnaires which contained both open and closed ended questions, were meant to obtain the following information from the respondents:

- Effectiveness of the regulatory framework of the banking sector in Ghana.
    - Role of the Central Bank of Ghana
    - Compliance Monitoring
    - Penalties for non-compliance
- Indicators of the health of a bank

- Causes of the recent bank failures in Ghana.
- Ways the failures could have been minimised.

The survey data analysis helped the researcher to meet the following research objectives:

i. To examine the existing Regulatory Framework for banks in Ghana.
ii. To identify the monitoring framework of the Bank of Ghana.
iii. To identify the soundness of the failed banks before the failure
iv. To examine the causes of the recent bank failures in Ghana.
v. To make recommendations for an effective regulatory compliance monitoring framework which can minimise such failures in Ghana.

The questionnaires, therefore, included questions skewed towards collecting data to cover all the objectives listed above.

4.2.2.1 Nominal Scale

The nominal scale can be characterised into categories which include 'Yes/No' or 'Agree/Disagree'. For the nominal scale, the researcher classified data with no quantitative value and analysed the number of respondents who chose that option or which of the options was most selected (Perreault & Leigh, 1989). In the case where numbers were used, they were only meant for the identification of certain objects.

4.2.2.2 Ordinal Scale

Ordinal scales are employed for the depiction of the order of values. Since some ranks are higher than others, quantitative values exist. Statistically, both the median and the mode can be analysed from the ordinal scale. The ordinal scale can also be analysed using cross-tabulation analysis (Jansen, 1990).

In the questionnaires for this research, respondents were required to choose between options supplied by the researcher in response to the questions. The researcher, therefore, employed a nominal scale of questioning where respondents selected options from a list of possible answers. This helped the researcher to easily compare between variables, get results and draw useful conclusions.

3.1.5.2.2 Interviews

A research interview is a qualitative research data collection tool that involves an interviewer soliciting information from the interviewee(s) to explore the perspectives of the interviewee(s) on particular ideas or situations (Marshall, et al., 2013). This is usually achieved through the interviewee(s) providing answers to verbal questions posed by the

interviewer. Interviews can be structured, semi-structured or unstructured in-depth sessions.

Structured interviews are formal and follow a standardised and predetermined set of questions which follow similar manners (Hartwell, et al., 2019). Due to their structured nature, they can easily be replicated. However, the answers generated may be similar to quantitative data which lack the reasons behind the behaviour of people. According to (Morin & Denis, 2010), experimental studies have proven that the structured interview benefits from the advantage of authority comparable to that of mental aptitude tests. Semi-structured interviews are verbal interchanges involving the interviewer asking the interviewee(s) questions to obtain information. The interviews proceed in a conversational manner where participants are offered the chance to address the important issues.
Also referred to as 'discovery interviews', unstructured interviews follow the pattern of guided conversations rather than strict interviews. Through responses to open-ended questions, respondents are allowed to give in-depth answers which help the researcher to obtain a good understanding of the situation. However, this method of data collection consumes a lot of time.

The researcher the semi-structured format for collecting qualitative primary data from seventeen participants who were selected from both current and collapsed bank and made up of three bank treasurers, two chief finance officers, one finance manager two auditors, three legal directors of banks, two private legal practitioners a an official from the Central Bank of Ghana.

3.1.5.2.3 Document Analysis

Document analysis is a methodical process for evaluating or reviewing documents, which requires data to be analysed and interpreted to extract meaning, gain understanding and develop empirical knowledge (Corbin&Strauss,2008). This data collection method is usually used together with other qualitative research methods for triangulation. For corroboration and convergence, the researcher must use a minimum of two sources of evidence; that is, to seek convergence and corroboration through the use of different data sources and methods for evidence, credibility and thereby reducing any potential bias that a single source may cause.

The researcher collected quantitative secondary data from annual reports of five banks namely GCB Bank, Ecobank, CalBank, UT Bank and the Standard Chartered Bank between the year 2010 and 2013. The limitation of the non-availability of data from the collapsed banks after the year 2013 compelled the researcher to focus the quantitative analysis on this period to provide the trend of the performance of the five banks sampled in the years before the bank failures in Ghana. Though it can be argued that the validity of the data used for the quantitative analysis was four years before the bank failures, under the circumstance the researcher was limited because out of the failed banks, one of them which was listed on the Ghana Stock Exchange published annual reports which also ceased after the year 2013. The inability of a listed bank to publish annual reports for four consecutive years is indicative of the likelihood of a bank facing some difficulties, which had been noticed in the years before the annual financial publications ceased. The data obtained, therefore, provided a trend of the health of the failed bank before the final collapse in the year 2017.

3.1.5.2.4 Sampling

Sampling is the technique of appropriately selecting units from a population in order to generalise results. There are different sampling techniques which include random, pseudo-random (haphazard or opportunistic), and stratified sampling. In random sampling, samples are selected such that every member of the population gets an equal chance of being selected, while in pseudo-random sampling, units are selected in the most accessible and easiest way without regard to quality. However, in stratified sampling, the researcher ensures the representation of desired variables instead of relying on chance (Cassady, 1945). Selection of a research sample is critical since a good sample can strengthen the study, and minimise time and money spent (Zhelonkin, et al., 2016). Sampling techniques include probability sampling, quota sampling, selective sampling and convenience sampling.

Though probability sampling is quite popular, the researcher relied on selective sampling by choosing from the group of bankers in Ghana, questionnaire and interview respondents who had the knowledge and availability to be participants of this study.

In probability sampling, a sample from a bigger population is chosen using a form of random selection by setting a process to ensure that different units within the population have the same chance of being selected (Kirkbride, 1969). Types of probability sampling

include simple random sampling, stratified random sampling, cluster random sampling and systematic sampling.

i. In simple random sampling, there is a fair representation where every member of the population has an equal chance of being chosen.
ii. Stratified random sampling is the classification of a population into strata (homogenous groups) based on shared characteristics.
iii. In cluster random sampling, the population is divided into clusters by the researcher. Random groups are then selected through systematic or simple random sampling methods to collect and analyse data.
iv. Usually used as an extended application of probability sampling, systematic sampling is used by researchers to precisely target their desired population. (Heckman & Navarro-Lozano, 2004)

Selective (subjective or purposive) sampling is a sampling method which is not based on probability (Denrell & Kovacs, 2008). Rather, sample elements are selected based on the assessment of the researcher.

3.1.5.2.4.1 Sample Space

The sample for the respondents for the questionnaires was chosen from middle managerial staff of various banks in Ghana as well as some collapsed banks. The choice was influenced by the fact that junior staff did not have the requisite knowledge and experience to provide the information required by the researcher. Top management, on the other hand, were not suitable as they had limited availability and were not involved in the operational activities of the various banks. The most suitable group, therefore, was staff in the middle managerial level who had enough operational experiences, the required knowledge and were also available to provide answers to the various questions on the questionnaire prepared by the researcher.

Respondents for the interviews were experienced bankers and legal luminaries.

Table 3.1: Respondents for Interviews

Participant	Current Banks	Collapsed bank
Treasurer	2	2
Chief Finance Officer	1	1
Finance Manager	2	2
Legal Director	1	1

Private Legal Practitioner	2
External Auditor	2
Bank of Ghana	1
Total	**17**

Source: The Researcher

Table 3.2: Total Respondents

Questionnaires	**No. Distributed**	**No. Returned**
	100	97
Interviews		**Total Number Interviewed**
		17
	Total No. of Respondents	**114**

Source: The Researcher

3.1.5.3 Data Analysis

The data collected were the analysed through quantitative and qualitative data analyses techniques. The quantitative data analyses involved data validation, editing and coding, after which the CAMELS and Regression Analyses were performed.

Additionally, some of the data obtained from the questionnaires were subjected to statistical operations to determine the mean, median, mode and frequencies of some of the responses such as the causes of the bank failures.

The data obtained from the questionnaires were then subjected to a second level of certification where the researcher interviewed some experienced professionals in the field of banking and legal to confirm or refute the results of the survey analyses.

3.2 Ethical Responsibilities

In research, ethics refer to the moral principles which regulate how researchers must carry out their work. These ethical principles outline research guidelines approved by governing

bodies. Researchers, therefore, must adhere to any applicable regulations in their research areas. Though specific professions have their guiding principles, generally, all research must have principles to ensure that participants are protected (University of Wales Trinity Saint David, 2020).

These principles include but are not limited to:

- Obtaining the informed consent of participants.
- Treating participants, who are research partners, with sensitivity.
- Protection of the dignity, mental and physical health of participants. (Hooks & Jr, 1996 Supplement)

Adhering to research ethics has assumed high importance, particularly as growth in research projects has necessitated the serious adherence to the sound collection and analysis of data, and the challenges confronting editors and reviewers. According to (Pinto, et al., 2020), the conditions under which research ethics must be understood and applied are extremely important because growth in research has given rise to the realisation of ethical issues that can threaten the integrity of research projects.

It is important to adhere to ethical principles in research for numerous reasons which include the promotion of the research objectives; the promotion of the values of professional bodies; and the possibility of holding researchers accountable for their works. Additionally, since research is more likely to attract funding when it is ethically done, adherence to research ethics helps to attract funding.

Most importantly, lapses in research ethics can cause harm, especially when they are related to the health and safety of individuals.

As required by the University of Wales Trinity Saint David (University of Wales Trinity Saint David, 2020), the following ethical considerations guided the data collection phase of the research.

3.2.1 Responsibilities to Respondents

The researcher ensured that, in the quest to gather information, respondents were not adversely affected in any way such that no psychological, physical or social harm were done to the well-being of participants. To ensure the physical, psychological and social well-being of participants, the researcher minimised any potential disturbance especially in the area of interference with their work schedules by allowing respondents to choose the most suitable time to participate in the research.

3.2.2 Respondents' Informed Consent (Adults)

The sample space for this research was made up of sane and competent adults who understood the requirements of the research. The respondents gave informed, voluntary and competent consent in accepting to participate in the study after they had been informed about the aim, expected benefits and the methods of the research.

3.2.3 Honesty

The researcher was careful to avoid any deception or misrepresentation in the data gathering, analysis and presentation.

3.2.4 Rigour

Appropriate methods were employed by the researcher to follow to approved protocol where necessary and draw any inferences in adherence with established standards.

3.2.5 Confidentiality and Anonymity

The identity of respondents and responses they provided remained confidential and used for academic purposes only, with no threat of responses being used against them. The researcher did this by upholding the rights of participants to anonymity and confidentiality. Thus, questionnaire-respondents were not required to provide any personal details. Additionally, any of the interview respondents who chose not to be recorded had their requests complied with by the researcher.

3.2.6 Beneficence and Non-Malfeasance

This research, which was supervised by competent academics, was preceded by a careful assessment of any potential risks in comparison with the projected benefits. The risks of air travel to Ghana for data collection and ensuring the safety of the researcher during interviews were far outweighed by the benefits of identifying the causes of the recent bank failures in Ghana and establishing that effective regulatory compliance monitoring can minimise bank failures in Ghana. The safety of the researcher during interviews was ensured by avoiding secluded locations.

3.2.7 Time Management

The research is expected to be completed in 24 months. The Gantt Chart in Table 3.3 below specifies the time allocation for each of the critical steps in the research process.

3.2.8 Plan of Work

The research was carried out in accordance with the time plan in the Table 3.3 below.

Table 3.3: Research Time Plan

Action	Writing	Target Completion Date
Deciding on research question.	Introduction	31st October 2018
Reading background literature.	Literature review (outline)	30th November 2018
	Chapter 1	31st December 2018
	Chapter 2 (draft)	31st March 2019
Obtain Approval for Research Proposal		21st June 2019
Obtain Ethical Approval		10th September 2019
Methodology	Chapter 3	30th November 2019
Data Collection and analysis	Chapter 4	31st January 2020
Discussion on Findings	Chapter 5	31st March 2020
Conclusions and Recommendation	Chapter 6	15th April 2020
	Literature Review (final version)	30th April 2020
	Footnotes and bibliography	30th April 2020
Draft Submission to supervisor		5th May 2020
Corrections based on supervisor's comments		20th June 2020
Proof Reading		20th July 2020
Final Submission		15th August 2020

Source: The Researcher

3.3 Limitations

The researcher experienced some difficulty with the availability and accessibility of the respondents and overcame this challenge by giving sufficient time notice for interview meetings and completion of questionnaires. An effective follow-up procedure adopted by the researcher ensured that 97% of the responses were received.

Another limitation encountered by the researcher was the unavailability of financial data for the failed banks except UT Bank. Even for UT Bank, which was listed on the Ghana Stock Exchange and was required by law to publish annual financial reports, information was available only up to the year ending 2013. The researcher was, therefore, compelled to base the analysis on the data available and draw conclusions from the analysis thereof.

3.4 Summary and Conclusion

This chapter of the research has discussed the research methodology adopted by the researcher by highlighting the research philosophy and the research design. After discussing the available options, the researcher chose the Positivism Research Philosophy because this research is aimed at measuring and supporting conclusions with evidence. The mixed method of data collection was adopted, and the researcher selected surveys, semi-structured interviews, content analyses, CAMELS analyses, and Regression analyses for data collection and analyses. Issues of ethics were also addressed to ensure that the data collection phase of the research were conducted to avoid any adverse effects to participants.

Having successfully discussed the methodology in this chapter (Chapter three), the researcher then proceeded to chapter four for the Analyses and Discussions following the data collection exercise.

CHAPTER FOUR

CHAPTER FOUR: Findings and Analyses

4.0 Chapter Overview

In this chapter, a record of the data collected by the researcher is made and analysed using the methodology specified in chapter three. Both primary and secondary data have been utilised for comprehensive and effective analyses. For the purpose of answering the research question, previously collected data in the area of this research was collected by the researcher from annual reports of selected banks in Ghana between the years 2010 and 2013. Additionally, various perspectives on the recent bank failures in Ghana were collected from online sources, especially online portals of news houses in Ghana.

The analyses involved detailing the regulatory framework of the Bank of Ghana by examining the approved limits of indicators and benchmarking against international criteria. A quantitative analysis involving a CAMELS Analysis of some selected banks in Ghana is performed using published data from their annual reports (secondary data) to ascertain the Capital Adequacy, Asset Quality, Management, Earnings (profitability), Liquidity and Sensitivity to confirm the soundness of the banks reviewed prior to the recent bank collapses in Ghana. Additionally, a regression analysis was performed to deduce the effects the variables in the CAMELS analysis had on whether a bank collapsed or not. The data for the regression analysis were also gathered from secondary data from the annual reports of the selected banks. These were collected, tabulated and analysed according to thematic subjects with SPSS software.
A mixed data analysis was performed using survey data collected with the help of questionnaires. The questionnaires were used to collect primary data from selected respondents on the effectiveness of the regulatory framework for banks and the causes of the recent bank failures in Ghana. The interviews were then used to ascertain the reliability of the responses received from the questionnaires by interviewing industry experts for their opinions on the issues which were brought to bear by the questionnaires.

The quantitative analysis involved a CAMELS analysis as well as a regression analysis. The CAMELS analysis was performed to check the health of one selected collapsed bank as compared to four other banks which did not collapse, using data from 2010 to 2013.
A regression analysis was also performed to deduce the relationship between the status of bank (“collapsed” or “not collapsed”) and the variables in the CAMELS analysis.

Data for the quantitative analyses (both CAMELS and regression) was secondary data collected from the annual reports of the selected banks in Ghana.

The findings of the analyses and discussions presented thematically to answer research question, "How can an effective regulatory compliance monitoring framework minimise bank failures in Ghana?" The Thematic areas discussed were:

i. Existing regulatory framework for banks in Ghana.
ii. Loopholes in the regulatory framework of the Bank of Ghana.
iii. Soundness of banks before the failure.
iv. Causes of the recent bank failures in Ghana.
v. Recommendation and development an effective regulatory framework that can help minimise such failures.

The findings from the analyses are discussed in chapter five, with conclusions drawn in chapter six. Contributions made by this research to various stakeholders and recommendations by the researcher are also outlined in chapter six.

4.0.1 Answering the Research Question

The researcher took the following steps to answer the research question:

i. A qualitative analysis to assess the regulatory framework of Ghana. This was done because research has shown that effective monitoring system can only exist within an efficient regulatory framework (Akhigbe & McNulty, 2011).
ii. A survey analysis was conducted with the help of questionnaires issued to employees in the banking sector of Ghana for their perspectives on the regulatory framework; the causes of the recent failures; the role the regulator played and what difference effective regulatory compliance monitoring could have made.
iii. The results of the survey analysis were submitted to scrutiny by interviewing industry experts in banking, legal professionals and an official of the Central Bank of Ghana to quality assure the results obtained from the questionnaires.
iv. To determine the health of banks before the collapse, the researcher conducted a quantitative CAMELS analysis of some selected banks. This was done because the Bank for International Settlements suggested the CAMELS rating system as an effective tool for determining the status or health of a bank (Restoy, 2017). Additionally, the indicators in the CAMELS analysis are all part of the monitoring framework of the regulator of banks in

Ghana. Therefore, if the monitoring aspect of regulation is carried out effectively, any outliers can be addressed before they crystallise into problem areas.

v. Finally, the researcher performed a regression analysis to establish the relationship between the status of a bank (collapsed or not collapsed) as the dependent variable and the indicators in the CAMELS analysis (which determines the health of a bank), as the independent variable.

4.1 Theme 1: Existing Regulatory Framework for Banks in Ghana

The researcher examined the existing regulatory framework of the Central Bank of Ghana in terms of the prudential returns, the application thresholds and the globally prescribed parameters for monitoring banks.

The researcher gathered that the Central bank of Ghana through the inspection of prudential returns from the banks to the Central Bank as listed in Table 4.1 below, which was obtained from one of the commercial banks in Ghana and confirmed by the Bank of Ghana as being the prudential requirements expected from the banks to the regulator. This was done for the researcher to ascertain whether some of the reasons cited for the bank failures formed part of the monitoring framework of the regulator and should have, therefore, been captured and dealt with earlier. The identifications of any causes which form part of the regulatory requirement of the Central bank of Ghana but went unchecked and led to any bank failure could be an indication of regulatory monitoring lapses. Notable amongst these prudential returns are the liquidity reserve returns, statements of assets and liabilities, capital adequacy returns, current results and the balance sheets.

Additionally, the researcher analysed data collected through the questionnaires and semi-structured interviews on the theme of how the existing regulatory framework of the Bank of Ghana works.

4.1.1 Bank of Ghana Prudential Returns

Table 4.1: List of Bank of Ghana's Prudential Returns

Report	Frequency
Liquidity Reserve Return	Weekly
Twenty largest withdrawals over the counter	Weekly
Daily Net Open Position	Weekly
Statement of Assets and Liabilities	Monthly

Report on Foreign Currency Exposures	Monthly
Large Exposures – Advances and Deposits	Monthly
Sectoral analysis of Overdrafts, Loans and other Advances	Monthly
Capital Adequacy Return	Monthly
Maturity Analysis of Assets and Liabilities	Monthly
Current Year Results	Quarterly
Consolidated Balance Sheet	

Source: Bank of Ghana

4.1.1.1 Liquidity Reserve Returns

Globally, banks are required by their regulators to keep a minimum reserve at the central bank against liabilities (Gray, 2011). These reserve amounts vary depending on the jurisdiction.

On a weekly basis in Ghana, banks are expected to send their weekly reserve returns to the Central Bank of Ghana to ensure compliance with the statutory liquidity reserve requirements. These reports indicate the daily expected reserves required to be kept by the banks with the regulator as a collateral for depositors' funds as according to (Chadha, et al., 2012). The motivation for reserve provision is to provide a buffer to act as a fall back for customers in the event of a rundown of the bank.

The current reserve required to be kept with the Central Bank of Ghana is 8% of the bank's total deposits.

Banks must indicate to the regulator the source of the funds making up the reserve amount, which could be the bank's own funds or borrowing from the interbank market. Failure to meet the reserve amount results in punitive actions against the bank. Defaulting banks also suffer reputational risks from other players on the interbank market.

Based on these reports, the regulator can identify if a particular bank is going through any liquidity challenges. For instance, if a bank borrows for the long period of time from the interbank market to meet its reserve requirements, that bank must be experiencing liquidity challenges.

4.1.1.2 Twenty Largest Withdrawals Over the Counter

Globally, the Financial Action Task Force (FATF), which is an intergovernmental organisation for fighting money laundering and terrorism financing, sets standards for Anti-Money Laundering (FATF, 2020)

which countries are expected to comply with. These include monitoring he cash transactions since criminals prefer to use cash to avoid traceability. In line with the FATF regulations, the Central Bank of Ghana monitors the weekly largest cash withdrawals for banks in Ghana.

This report helps the Central Bank of Ghana to monitor liquidity as well as tracking any potential money laundering issues and is expected to be reviewed by the Central Bank of Ghana on a weekly basis.

Money laundering is known to have three sequential stages: placement, layering and integration. Placement involves physically moving illegally acquired funds to a less suspicious place or form; layering involves the use of several complicated financial transactions to separate funds from original illegal sources; and integration involves converting illegal funds into seemingly legal business incomes (Bergstrom, et al., 2011). As part of its Anti-Money Laundering (AML) activities, therefore, the regulator monitors cash withdrawals to flag and deal with any suspicious activities (Bank of Ghana , 2018).

4.1.1.3 Daily Net Open Position

An open position occurs when a bank enters into a foreign currency trade which has not been closed through buying or selling foreign currency. This exposes banks to foreign exchange risks because any open position can be affected by fluctuations in foreign currency rates. Since the risk exists until the position closes, the regulator monitors this for banks on a weekly basis to ensure that banks are not being unnecessarily exposed (Cassar & Gerakos, 2010). The Net open position is the difference between the total open foreign currency amount of a bank and the total of closed foreign currency positions.

The foreign exchange positions of banks resulting from foreign currency transactions may lead to exchange risks for banks because a high foreign exchange position can affect profitability and capital adequacy. It is therefore one of the financial soundness indicators that must be monitored by regulators.

Countries have different limits for Net Open Positions (Hofstetter, et al., 2018) , ranging from 5% to 30% of the regulatory capital. In Ghana, the approved Open Position for a single currency is 5% of the regulatory capital and 10% for the cumulative open positions of all foreign currencies.

4.1.1.4 Statement of Assets and Liabilities

A monthly review of the statement of assets and liabilities of banks in Ghana is done by the Central Bank of Ghana. This statement is expected to provide details of the

composition of the assets and liabilities of a bank to the regulator (Barker & Teixeira, 2018). From this report, the regulator is expected to identify the quality of a bank's assets and liabilities. Any problematic or recurring non-performing loans must be flagged by the monitoring officer.

One of the core businesses of banks is to provide loans. When a borrower honours the obligation of repaying the required instalments as scheduled, then the loan is classified as a "performing loan". However, if the borrower is unable to repay, the loan is required to be classified as "non-performing" or "bad" (European Central Bank, 2016).

In Ghana, a loan is classified as non-performing if the borrower is unable to pay the agreed instalments for more than 90 days. This causes a loss to the bank as projected revenue in the form of interest is lost (Ozurumba, 2016).

4.1.1.5 Report on Foreign Currency Exposures

Banks which engage in foreign currency trade can be exposed to foreign exchange risks that arise from the fluctuations in the foreign currency exchange rates (Celebuski, et al., 1990). These exposures include making international trade payments on behalf of customers in overseas currencies, borrowing or lending activities in foreign currency and investing in foreign currencies (foreign currency assets). Since these foreign currency activities can expose banks to a lot of risks, the Bank of Ghana monitors the foreign currency exposures of banks to ensure that they fall within the approved limits.

To assess the exposure of individual banks, the regulator takes a number of factors into account, which include the currencies and amounts involved, fluctuations in the currencies involved and any mitigating or hedging factors the bank has implemented. This report is monitored monthly by the Bank of Ghana.

4.1.1.6 Large Exposures – Advances and Deposits

Though banks are in the business of accepting deposits and giving out loans, it is not advisable for a greater percentage of deposits to come in from a few high-net-worth clients or for huge loans to be given out to a few customers as this will expose the bank to Concentration Risk. The regulator in Ghana monitors to ensure that banks spread this risk as much as possible.

The Basel Committee on Banking Supervision advices that banks must measure, supervise and control concentration risk in their portfolios (Basel Committee on Banking

Supervision, 2013). The Bank of Ghana does this banks directing banks to ensure that not more than 20% of their total deposit or loan portfolio is attributable to one customer.

4.1.1.7 Sectoral Analysis of Overdrafts, Loans and other Advances

The regulator monitors the exposure of banks to companies in the different sectors of the Ghanaian Economy, namely, agriculture, manufacturing, mining, services, tourism and oil and gas. This is to ensure that Concentration Risk in terms of loans, and overdrafts are widely spread across the various sectors of the economy instead of being limited to one particular sector. This report is sent from the banks to the regulator every month.

4.1.1.8 Capital Adequacy Return

Monthly and quarterly, the Central Bank of Ghana expects from all banks, a ratio of their capital to their risk-weighted assets. According to (Shome, et al., 1986), regulators are able to promote the soundness in financial systems by monitoring the capital adequacy of financial institutions as capitalisation has a bearing on the stability of banks and the failure of banks also has the ripple effect of endangering other financial institutions, thereby causing systemic risk.

The threshold for banks in Ghana is a minimum Capital Adequacy Ratio of 10% which is in line with the Basel Committee's limit of 10.5% made up of an 8% capital requirement and a 2.5% conservation buffer.

4.1.1.9 Maturity Analysis of Assets and Liabilities

Banks must manage their assets and liabilities by analysing the maturity profiles of their assets and liabilities to identify any funding gaps to avoid liquidity and funding problems. To do this, most banks perform a gap analysis of the maturity profiles of their assets and liabilities. This maturity analysis is required by the regulator monthly to check any funding gaps in a bank's assets and liabilities portfolio. This report is sent to the regulator in both the local and foreign currencies monthly.

According to the (Basel Committee on Banking Supervision , 1997), maturity gap analysis must be preformed by banks to ensure that there are corresponding assets for liability maturities and vice versa to avoid interest rate risks.

4.1.1.10 Current Year results

Every month, results of the banks' activities for a year up to that month are required by the Central Bank of Ghana. The current year result is usually useful for determining the

earnings (profitability) of a bank. Annual reports also contain sections on the composition of the Board of Directors and Senior management of a bank to help the regulator to assess whether qualified people have been entrusted with running the affairs of the bank.

4.1.1.11 Consolidated Balance Sheet

The Central Bank of Ghana requires the consolidated balance sheet, which presents the assets and liabilities of the banks and any subsidiaries at a particular time, to be submitted quarterly. (Boshara & Emmons, 2015) believe that balance sheets give a good perspective of financial successes by uniting a wide range of capabilities about a common context; and also, because the strategies employed for building a healthy balance sheet invariably reinforce financial prudence.

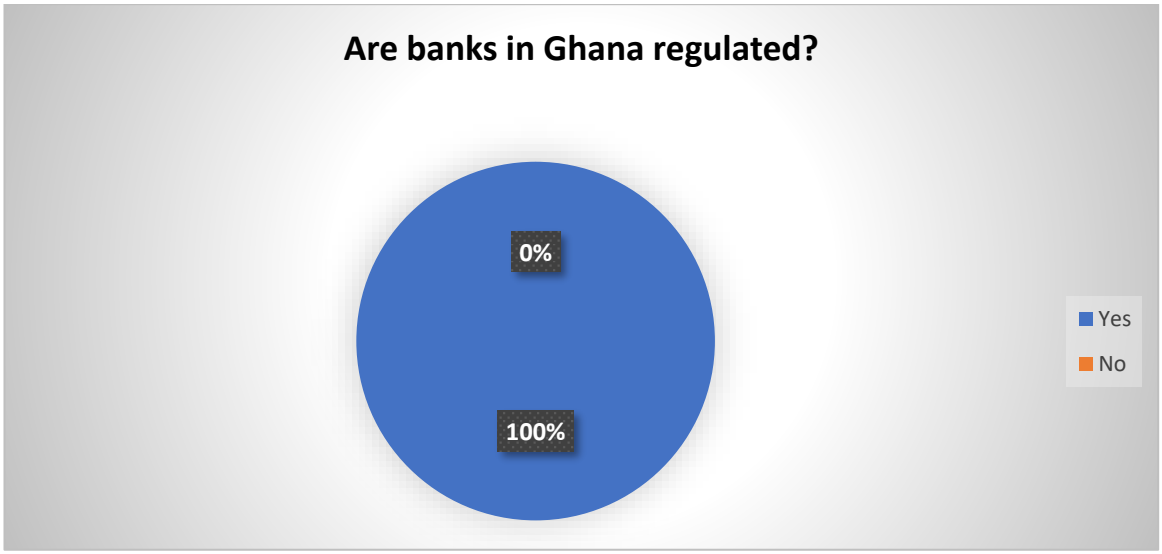
4.1.2 Onsite Monitoring

In addition to the monitoring of banks through the routine reports sent by the banks to the Bank of Ghana, the regulator also performs and sometimes ad hoc onsite inspection of banks to ensure the correctness of the routine reports. Routine onsite monitoring is usually carried half-yearly or yearly but sometimes circumstances demand the regulator to pay unannounced visits to banks.

4.1.2.1 Survey question 1: Are banks in Ghana regulated?

This was a nominal scale question which required a 'Yes/No' response. All the respondents unanimously answered that banks in Ghana are regulated.

Figure 4.1: Chart for response to survey question 1



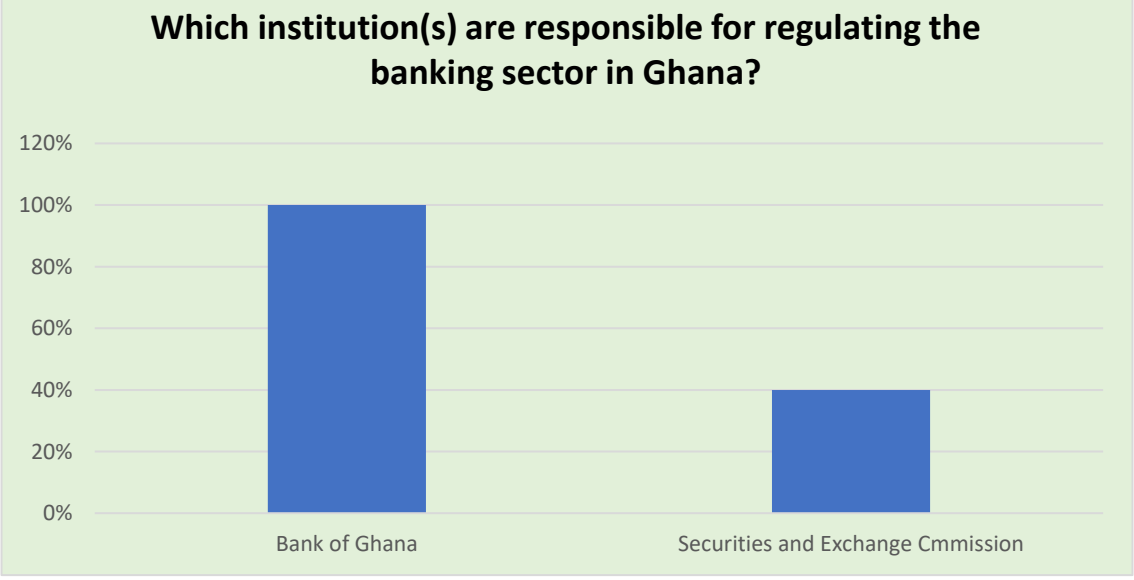
Source: The Researcher

This question was part of the group of questions the researcher used to meet the first research objective of examining whether Ghana's banking sector was regulated. With a unanimous affirmation by respondents that the sector was regulated, the researcher then proceeded to find out from the respondents the institutions in charge of regulating the banking sector in Ghana.

4.1.2.2 Survey question 2: Which institution(s) is(are) responsible for regulating the banking sector in Ghana?

This was an ordinal scale question which sought to find out from respondents the institutions responsible for regulating the banking sector in Ghana. This question was aimed at meeting the objective of examining the regulatory framework for banks in Ghana. On the issue of the regulatory bodies of the banking sector in Ghana, there was a unanimous response from all respondents that the responsibility of regulating the banking and the financial sector in Ghana had been entrusted to the Bank of Ghana. About 40% of the respondents also added that listed banks were also regulated by the Securities and Exchange Commission who oversee all listed companies in Ghana.

Figure 4.2: Chart for response to survey question 2



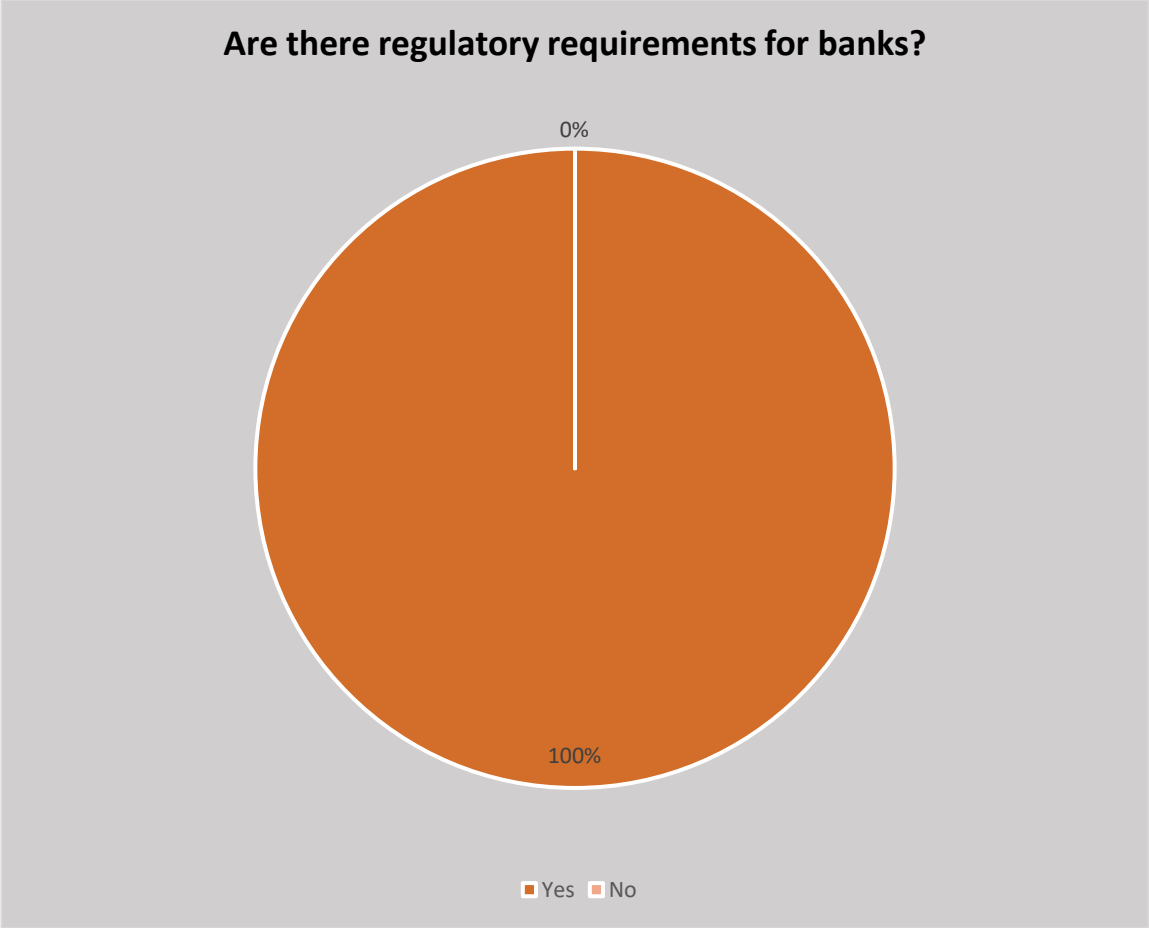
Source: The researcher

With this response, the researcher gathered that the regulatory framework for banks in Ghana was made up of the Bank of Ghana (for all banks) and the Securities and Exchange Commission as additional regulators of banks listed on the Ghana Stock Exchange (GSE).

4.1.2.3 Survey question 3: Are there regulatory requirements for banks?

This nominal scale question which required 'Yes/No' response was aimed at examining the regulatory framework for banks in Ghana. A unanimous 'Yes' response from all respondents indicated to the researcher that banks in Ghana had regulatory requirements.

Figure 4.3: Chart for response to survey question 3

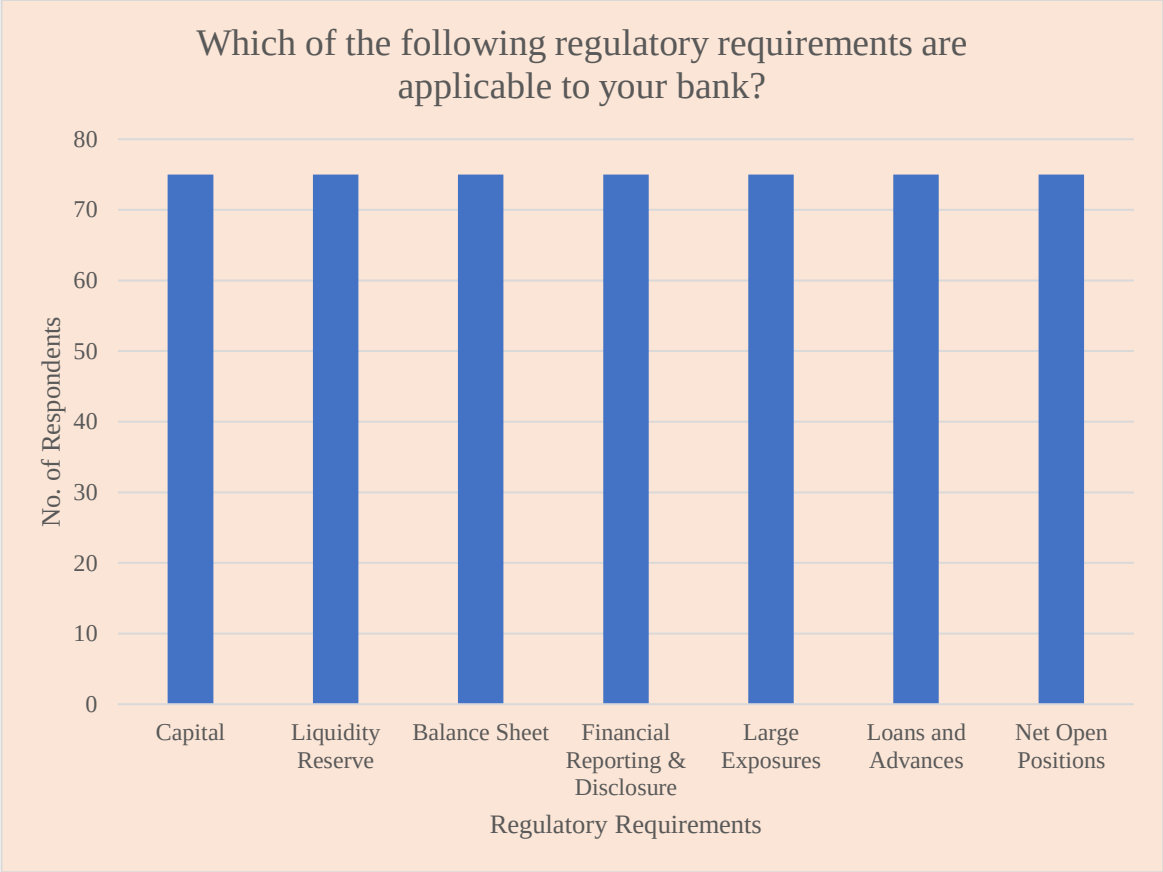


Source: The researcher

4.1.2.4 Survey question 4: Which of the following regulatory requirements is applicable to your bank?

This ordinal scale question required respondents to choose from a list of responses, the regulatory requirements their banks were expected to comply with. It was evident from the responses that all the respondents were aware that banks had regulatory obligations such as Capital Requirements, Liquidity Reserve Requirements, Consolidated Balance Sheets, Financial Reporting and Disclosure Requirements, Large Exposures, Loans and Advances, as well as Net Open Positions.

Figure 4.4: Chart for response to survey question 4



Source: The researcher

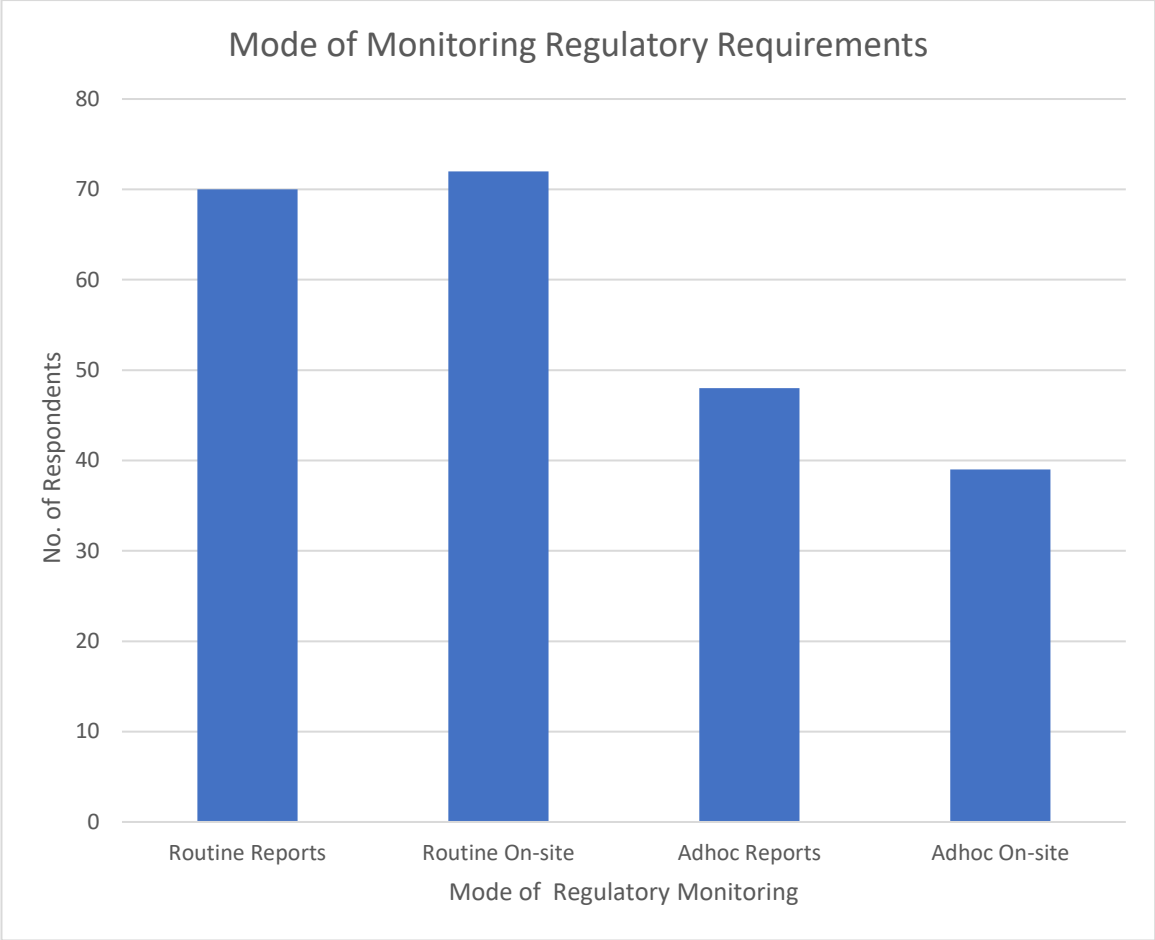
The responses indicated that the banking regulation framework in Ghana had regulatory requirements which were applicable to all banks.

4.1.2.5 Survey question 5: How are the regulatory requirements monitored by the regulator?

From this ordinal scale question, where respondents were expected to choose from the four options of (i) Routine Reports Submission, (ii) Routine On-site Monitoring, (iii) Ad hoc Requests from the Regulator and (iv) Ad hoc on-site monitoring, the researcher sought to find out from respondents the mode the regulator employed to monitor the activities of banks in Ghana.

The responses revealed that the regulator employed all the monitoring strategies to monitor the activities of banks in Ghana. Respondents explained that the regulator adopted routine monitoring of reports and routine on-site visits to the banks in order to carry out their monitoring activities. However, when the need arose, the regulator could request for reports outside the routine reporting framework or pay unannounced visits to banks.

Figure 4.5: Chart for response to survey question 5



Source: The researcher

4.1.2.6 Survey question 6: What is the frequency for monitoring the regulatory requirements?

By asking respondents about the frequency for monitoring the regulatory indicators, the researcher aimed to find out, through an ordinal scale, the timeframe within which the regulator monitored the activities of banks. This was meant to help the researcher to conclude whether it was conclusive through the frequency of monitoring activities that any non-compliance must be captured by the regulator through trends in reporting overtime.

According to the respondents, the regulatory requirements were monitored through daily, weekly, monthly, quarterly, half-yearly and yearly reports to the regulator. Additionally, routine (and sometimes ad hoc) on-site monitoring by the Banking Supervision Department of the Bank of Ghana were also conducted.

Table 4.2: A Specimen of the Frequency of Monitoring Regulatory Returns Form

	Frequency of Monitoring					
	Daily	**Weekly**	**Monthly**	**Quarterly**	**Half-Yearly**	**Yearly**
Capital						
Liquidity Reserve						
Consolidated Balance Sheet						
Financial Reporting & Disclosure						
Large Exposures						
Loans and Advances						
Net Open Positions						

Source: Bank of Ghana

With the cross-tabulation of the ordinal scale in this question, the researcher gathered that with such a system in place, the regulator was in a position to determine any non-compliance if monitoring was carried out effectively.

4.1.2.7 Survey question 7: What are the penalties for non-compliance with regulatory requirements?

Fines and loss of banking licenses were mentioned by respondents as the sanctions for non-compliance with banking regulatory requirements, which could also result in reputational risks, where affected banks suffered the loss of trust from other players on the interbank market.

4.1.2.8 Survey question 8: Are the penalties applied when banks are found to be non-compliant? Support your answer with reasons.

There was a split in the responses to this question between “yes” and “no”. The reasons attributed to a positive response included the citing of examples of banks such as ABSA Ghana (then Barclays Bank of Ghana) who were fined GH₵4,579,256.36 in 2019 for providing misleading quotes on the Interbank Foreign Exchange market in Ghana, an action that breached the Ghana Interbank Forex Market Conduct rules and regulations.

On the other hand, some respondents were of the opinion that there was no equity in the application of sanctions because they believed that though some banks had similar problems to the ones which collapsed, not all licences were revoked. However, there were no substantive examples to buttress this point.

4.1.3 Semi-structured Interview with the Bank of Ghana Official

4.1.3.1 Role of the Bank of Ghana in the Regulatory Framework of Banks in Ghana

In line with the other responses received, the official confirmed that the Bank of Ghana is mandated by the Bank of Ghana Act 930 2016 which gives it the power to issue and revoke licenses as well as issue directives on how to conduct banking business in Ghana. Banks are monitored through off-site and on-site examinations. For the off-site examinations, banks are expected to submit daily, weekly, monthly, quarterly, half-yearly and annual reports to the Central Bank of Ghana where ratios are computed by automated systems to monitor the performance of the banks. Relationship managers from the Central Bank of Ghana are assigned to each bank to examine the submitted reports for any anomalies. Banking supervision officials must also pay routine visits to the banks to ascertain the veracity of the routine reports sent to the regulators. However, when necessary, the regulator can organise an ad hoc visit to a bank or call for other reports apart from the routine ones.

4.1.3.2 What Happens When Banks Breach Regulatory Limits?

A breach of regulatory requirements by a bank gives an indication to the regulator that the bank may be having challenges. The new Bank of Ghana Law (Act 930 2016) has stipulated prompt corrective actions when such a situation arises. Still using the Capital Adequacy Ratio as an example, any bank whose ratio falls below 10% is stopped from paying out dividends, receives more frequent visits from the regulator and board members are tasked to present a roadmap for recovery.

4.1.4 Semi-structured Interview with Seasoned Professionals

4.1.4.1 Semi-structured interview – Seasoned Professionals :Regulatory Framework for Banks in Ghana)

The respondents agreed that the Bank of Ghana had the responsibility of regulating the banking sector, with the Bank of Ghana Law (Act 930 2016) as the source of authority. Additionally, banks listed on the Ghana Stock Exchange are also regulated by the

Securities and Exchange Commission according to the stipulation of the Securities and Exchange Commission Law.

4.1.4.2 Semi-structured interview – Seasoned Professionals: Effectiveness of the Regulatory Framework

According to the respondents, the banking sector in Ghana was stable until August 2017 when the licenses of two banks were revoked and five others followed subsequently. This presupposes that the regulatory was effective. However, the legal experts pointed out that based on a recommendation from the International Monetary Fund (IMF), the Bank of Ghana Act 673 2004 was amended to Bank of Ghana Act 930 2016 because the former had certain loopholes which allowed banks to get away with non-compliance issues. The respondents also alluded to the fact that the effectiveness of the regulatory framework could only be tested by the implementation of the law to the letter.

However, the interviewees pointed to lapses in the monitoring aspects of the regulatory framework as the major cause of the recent bank failures because the regulator could have requested for the review of the banking law earlier to make their work more effective.

4.1.4.3 Summary of the Regulatory Framework of the Bank of Ghana

The researcher identified that Banks in Ghana are regulated by the Bank of Ghana, with the Securities and Exchange Commission providing additional oversight for banks listed on the Ghana Stock exchange.

After analysing data collected through the examination of secondary material, questionnaires and semi-structured interviews on the theme of the regulatory framework of the Bank of Ghana, it was identified that as mandated by the Bank of Ghana law, the Bank of Ghana, through the Banking Supervision Department, collects and analyses Prudential Returns from banks which help the regulator to determine the soundness of individual banks and the industry as a whole. Additionally, since Bank of Ghana has adopted the Basel Framework for Banking Supervision, for applicable parameters such as the Capital Adequacy ratio, these are aligned to those of the Basel Framework.

The Banking Supervision Department also conducts routine and adhoc on-site monitoring of banks to confirm the veracity of the routine reports sent by the banks for prudential purposes. Banks found floating any of the regulatory requirements are expected to be sanctioned by the regulator, which could be a fine or loss of the operating licence.

However, the researcher obtained information from some of the respondents who thought that the sanctions were not fairly applied because more banks should have had their licences revoked per the criteria applied to some of the ones that failed.

Table 4.3: Summary of the Regulatory Framework of the Bank of Ghana

Bank of Ghana's Regulatory Framework	The regulatory framework of the Bank of Ghana involves the Banking Supervision Department of the Bank of Ghana being in charge of ensuring the compliance of banks with the regulations governing their operations.
Bank of Ghana's Prudential Returns	The Bank of Ghana has a number of Prudential Returns banks are required to submit to the regulator to monitor Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity.
Frequency of Prudential Returns	Frequency for submission of Prudential Returns by banks ranges from daily to annually.
Onsite Monitoring	In addition to monitoring reports from banks, the regulator also conducts onsite monitoring of banks half-yearly, yearly or on ad hoc basis to confirm the correctness of the reports.
Penalties for Non-Compliance	Fines and loss of operating license.

Source: The researcher compiled the summary from the information obtained from bank of Ghana and the banks in Ghana about the regulatory framework for the banking sector in Ghana.

4.1.4.4 Conclusion

From the list of the prudential returns that banks in Ghana are expected to report on to the Central Bank of Ghana, and the frequency of reporting requirements, the researcher concluded that it would be almost impossible for banks to hide their true statuses when monitoring is done efficiently.

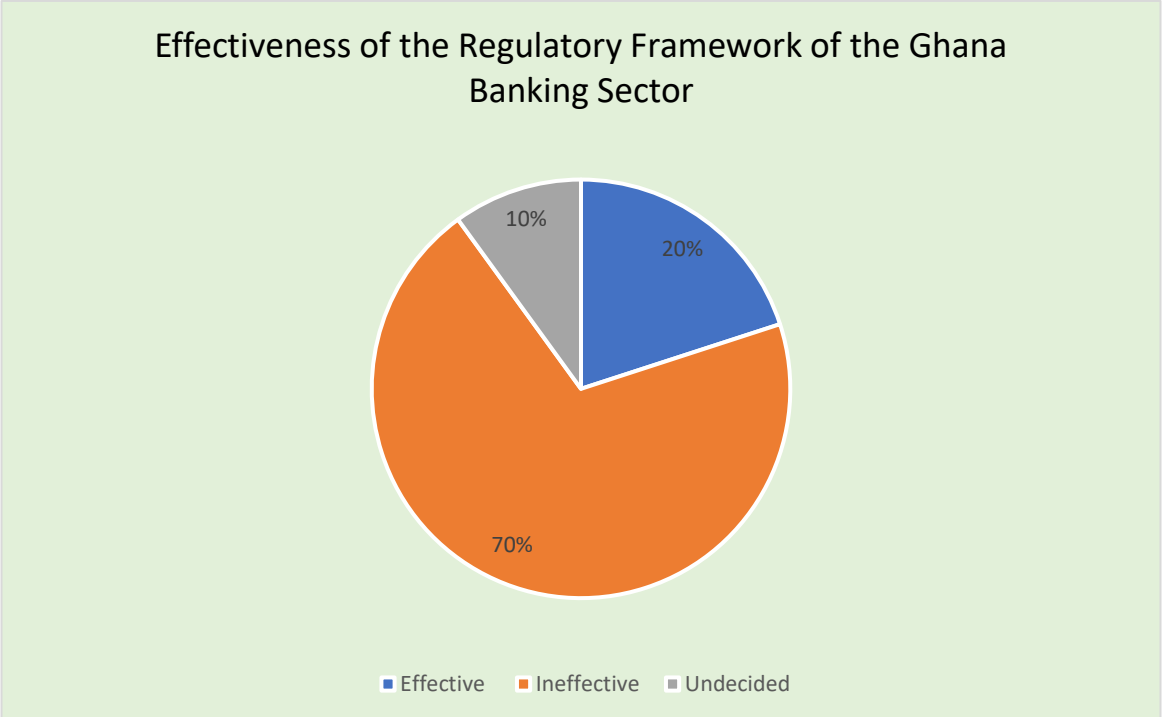
4.2 Theme 2: Loopholes in the Regulatory Framework for Banks in Ghana

After establishing the nature of the regulatory framework of the Central Bank of Ghana, the researcher then proceeded to examine the regulatory framework for any shortfalls that could have led to the failure of the banks and found the following data from the survey analysis involving data collected through the questionnaires and interviews as outlined below.

4.2.1 Survey question 9: In your opinion, is the regulation of the banking industry in Ghana effective? Support your answer with reasons.

There was a divided opinion on the effectiveness of the regulatory framework of the banking industry in Ghana. Only 20% of the respondents agreed that the regulatory framework for banks in Ghana was effective. The respondents argued that though the banking framework, made up of the banking and civil laws was effective because it had sustained the banking sector until the recent failures in 2017–2018, they cited weak enforcement of the banking laws as the main cause of the recent failures. 70% of respondents submitted that they thought Ghana had an ineffective regulation of the banking industry while 10% remained undecided.

Figure 4.6: Chart for response to survey question 9



Source: The researcher

The main reasons given by the 70% of respondents, who believed the regulatory framework was ineffective, was that was some sort of inertia in the application of sanctions by the banking regulators when banks were found to have flouted regulatory requirements contributed significantly to the banking failures.

4.2.2 Semi-structured Interview with BOG Official: Effectiveness of the Regulatory Framework

The Bank of Ghana Act 673 2004 had some loopholes that banks could take advantage of by not being compliant. However, the new law, Act 930 2016, is a detailed instrument that gives full authority to the regulators to carry out their compliance monitoring activities.

In terms of the resources to carry out their monitoring activities, the official stated that though banking supervision officers were adequately resourced, efficiency was sometimes lacking due to the volume of work which had to be dealt with. In line with this, the official informed the researcher a new software was being developed for an early warning system to alert the regulators about any discrepancies in the reports submitted by the banks. Additionally, the reduction in the number of banks has reduced the workload for officials, thereby leading to more efficiency.

4.2.3 Semi-structured Interview - BOG Official: What Prompted the Amendment of the of the Bank of Ghana Act 673?

The official stated that the regulators realised the need for the amendment since the loopholes the banks were exploiting made it difficult for the regulator to crack the whip on non-compliant banks. Upon recommendations from the International Monetary Fund (IMF), therefore, a bill was submitted to the Parliament of Ghana for an amendment to the existing law.

4.2.4 Summary Analysis of the Loopholes in the Monitoring Framework

The main shortfalls identified were unfair application of sanctions when banks flouted regulatory requirements and ineffective supervision and monitoring.

4.2.5 Conclusion from the Analysis of the Loopholes in the Monitoring Framework

Though the regulatory framework of the Bank of Ghana can generally be considered effective, there were some loopholes which some banks took advantage of and which led to the amendment of the Banking Law in 2016.

4.3 Theme 3: Causes of the Recent Bank Failures in Ghana

The next theme the researcher analysed was the causes of the recent bank failures in Ghana. This was done through a secondary analysis of the perspectives of some writers in the Ghanaian media. The publications were identified by searching for "Causes of recent bank failures in Ghana" on the internet through search engines such as google.
The researcher also collected data on the theme of the recent bank failures through the questionnaires and came up with the following results.

4.3.1 Perspectives of Writers on Reasons for Bank Failures

The analysis on the perspectives of various writers on the reasons for the recent bank failures in Ghana helped the researcher to examine the causes of the recent bank failures in Ghana.

The analysis revealed that different reasons were cited for causing the recent bank failures in Ghana. These reasons included insolvency, inadequate capitalisation, high levels of non-performing loans, regulatory lapses, lack of ethics, ineffective corporate governance, auditing, political and shareholder interference. However, one theme that ran through was the fact that, irrespective of the challenges faced by the banks, it was the responsibility of the regulator to ensure a sound banking system prevailed.

The articles analysed and the reasons identified for causing the recent bank failures are listed in Table 4.4 below:

Table 4.4: Summary of Perspectives of Writers on Reasons for Bank Failures

Article and Author	Reasons Cited	Suggested Solutions
Banahene, K. O., 2018. Ghana Banking System Failure: The Need for	Regulatory lapses, lack of ethics and ineffective	The Central Bank of Ghana needs to abide with the Banking Act

Restoration of Public Trust and Confidence. *International Journal of Business and Social Research,* 8(10), pp. 1-5.	corporate governance structures.	which gives specific guidelines on how the activities of the banks must be regulated with respect to licensing, capital and reserves, lending, supervision, auditing and reporting.
Afolabi, J. J., 2018. *Feature: Why the local banks in Ghana are Collapsing.* [Online] Available at: https://www.ghanaweb.com/GhanaHomePage/business/Feature-Why-the-local-banks-in-Ghana-are-Collapsing-669688 [Accessed 20 December 2019].	Breaches in corporate governance, risk management, non-performing loans and ineffective regulatory monitoring. Lack of independence of internal auditors resulting in a weak risk management framework. The regulatory responsibility of the Central Bank of Ghana in ensuring the credibility of the banking system was not adhered to.	The Central Bank of Ghana to ensure strict adherence of banks to regulatory requirements.
Kusi-Frimpong, K., 2019. *Modern Ghana - Bank failures and Regulatory Inertia in Ghana: The Blame Game Commences.* [Online] Available at: https://www.modernghana.com/news/909812/bank-failures-and-regulatory-inertia-in-ghana.html	Political and shareholder interference, weak corporate governance structures, non-performing loans, poor risk management practices, poor corporate governance, regulatory inertia and lack of regulatory supervision.	The writer suggested that in addition to the minimum capital requirement, the Banking Supervision Department of the Central Bank of Ghana must be strengthened with experienced personnel and innovative tools to

[Accessed 20 December 2019].		handle the challenges of the Ghana banking sector.
Okyere, S., 2018. *Fate of System Thinking: Lessons for Decision Optimisation; Stories from UT Bak, Capital Bank and Unibank.* Paperback ed. Accra: Speakers' Hub Ltd.	The author blamed former governors of the Central Bank of Ghana, the Securities and Exchange Commission and external auditors for the banks' failure.	Banks must not lose their visions and must avoid over-confidence in their management of credit risk.
Stephenson, P. K., 2018. *Why Bank of Ghana is 'Complicit' in Current Banking Crises.* [Online] Available at: https://www.myjoyonline.com/business/2018/august-23rd/why-bank-of-ghana-is-complicit-in-current-banking-crises.php [Accessed 21 December 2019].	The writer laid the blame squarely at the doorstep of the regulator by citing inadequate supervision, ineffective enforcement of regulations and doubtful licensing procedures as the reasons for the collapse of the banks. Specifically, the writer made reference to the role of the Central Bank of Ghana in issuing licenses to new banks and questioned how it had been possible for three of the collapsed banks to have obtained "*by false pretences through the use of suspicious and non-existent capital*…".	The regulator must diligently carry out the provisions of the banking law which mandates the Central bank of Ghana to "*ensure the soundness and stability of the financial system and the protection of the depositor*".

Nyabor, J., 2018. *Citi newsroom - How BoG's Weak Supervision Resulted in Capital,UT Banks' Collapse.* [Online] Available at: https://citinewsroom.com/2018/08/how-bogs-weak-supervision-resulted-in-capital-ut-banks-collapse/ [Accessed 21 December 2019].	Lapses in the supervisory framework of the Central Bank of Ghana as the reason for the recent collapse of some of the banks in Ghana. The writer indicated that the regulator erred in issuing licenses to banks such as Capital Bank when the latter had not fully met the requirements. The writer also cited the failure of the regulator in appointing an advisor for the supervision of the liquidity support extended to the two banks although the regulator was required to do so. The writer, therefore, concluded that the failure of the Bank of Ghana in the enforcement of regulations concerning granting of licences and supervision of banking operations resulted in the collapse of UT bank and Capital Bank.	Due diligence must be followed by the regulator in the issuance of licences to prospective banks.
Ashiagbor, V., 2019. *Banking Reforms So Far: Topmost Issues on the Minds of Bank CEOs.* [Online]		The writer suggested the enhancement of supervision and compliance in the Ghana

Available at: https://www.pwc.com/gh/en/assets/pdf/ghana-banking-survey-2019.pdf [Accessed 13 February 2020].		banking sector to help minimise failures.
Abudu, A., 2018. *'You Are Criminals' – Ex-BoG Economist to Some Staff.* [Online] Available at: https://dailyguidenetwork.com/you-are-criminals-ex-bog-economist-to-some-staff/ [Accessed 18 April 2020].	Criminality of some staff of the Bank of Ghana and the failure of some staff of the regulator to work diligently.	Staff of the Bank of Ghana need to be disciplined and diligent in the execution of their duties to avoid any future repetition of the occurrence.
Boadi, S., 2019. *BoG Blames Former Management.* [Online] Available at: https://dailyguidenetwork.com/bog-blames-former-management/ [Accessed 18 April 2020].	Former management of the Bank of Ghana turned a blind eye to issues of insolvency in some banks.	
Owusu, R., 2019. *Fundamentals of banking crises – …understanding the Ghana situation.* [Online] Available at: https://thebftonline.com/2019/features/fundamentals-of-banking-crises-understanding-the-ghana-	Capital inadequacy, insolvency and poor corporate governance practices.	Enforcement of compliance with regulations, improved inspection framework and dealing with the problem of non-performing loans.

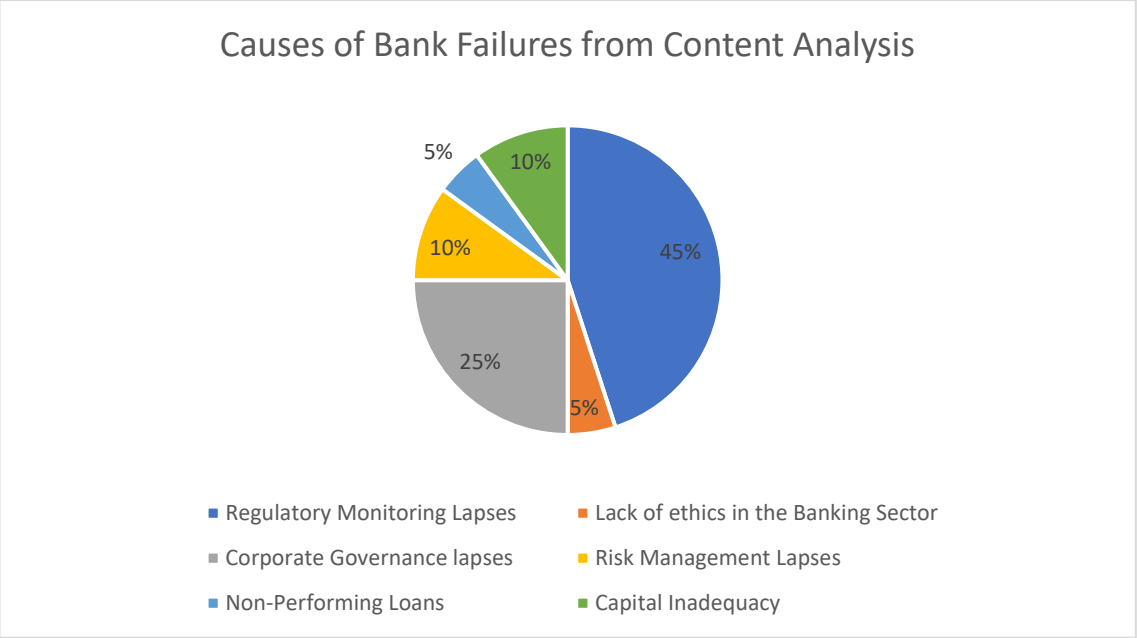
situation/ [Accessed 18 April 2020].		

Source*: The researcher compiled the summary from the information obtained from Perspectives of Writers on Reasons for Bank Failures*

4.3.1.1 Conclusions from the Analysis of the Perspectives of Writers on Reasons for Bank Failures

From the summary, it was identified that out of the twenty reasons given by the writers studied, nine (45%) attributed the failures to regulatory monitoring lapses, one (5%) to the lack of ethics in the banking sector, five (25%) to ineffective corporate governance structures, two (10%) to risk management lapses, one (5%) to non-performing loans and two (10%) to capital inadequacy as illustrated in the pie chart in Figure 4.7 below.

Figure 4.7: Pie Chart illustrating percentages contributed by the various causes of bank failures as obtained from the perspectives of various writers.



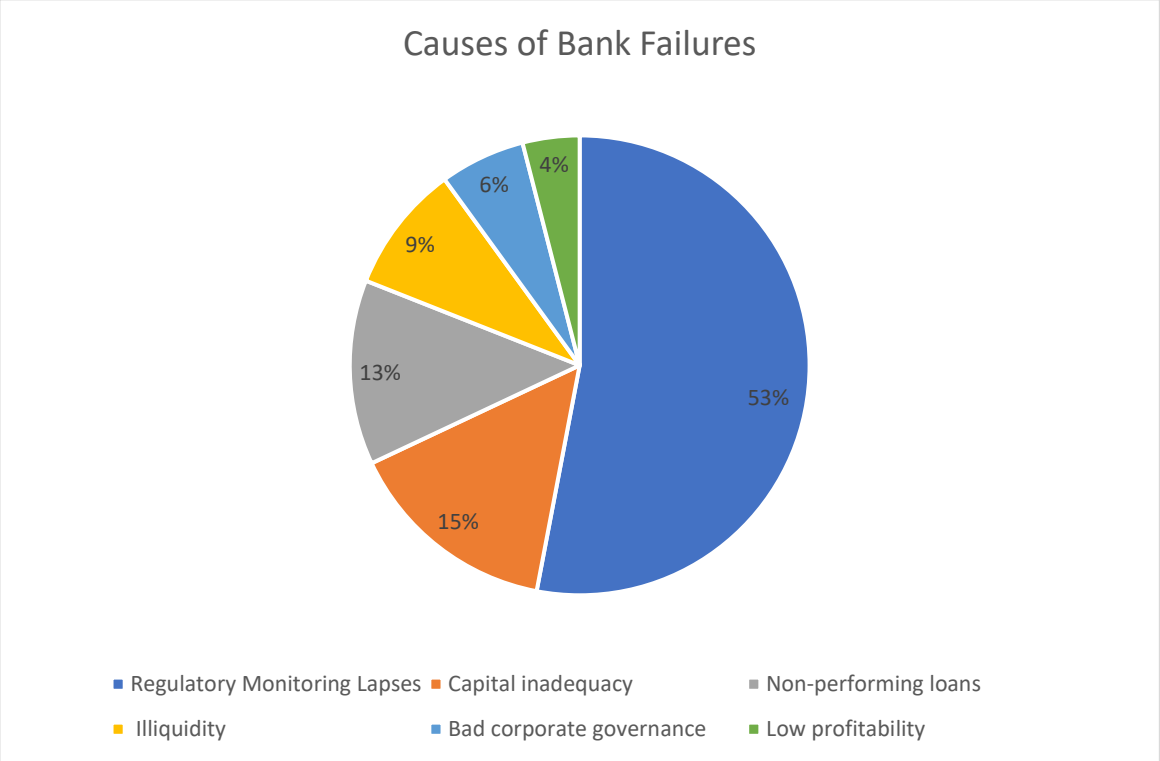
Source: The researcher

4.3.2 Survey Analysis of the Causes of the Bank Failures in Ghana

4.3.2.1 Survey question 11: What were the causes of the recent banking failures in Ghana?

Respondents attributed the recent bank failures in Ghana primarily to lapses in the regulatory framework of the banking industry with emphasis on the monitoring aspect because according to the respondents, an effective monitoring of the compliance of banks with regulations could have unearthed and curtailed many of the problems which led to the failures. Some of the other causes mentioned included capital inadequacy, bad asset quality resulting from non-performing loans, ineffective management resulting from bad corporate governance, low profitability and illiquidity. The distribution of the percentages contributed by each causative factor is illustrated in the pie chart in Figure 4.8 below.

Figure 4.8: Pie Chart illustrating the causes of bank failures as derived from the responses to the survey question 11.



Source: The researcher

4.3.3 Semi-structured Interview with the Bank of Ghana Official

The researcher posed questions to the Bank of Ghana Official and the seasoned professionals on the theme of the causes of the bank failures and received the responses below.

4.3.1.1 What Caused the Recent Bank Failures in Ghana?

The official indicated that there were a number of causes including inadequate capitalisation, illiquidity and a high rate of non-performing loans.

Researcher: Looking at the Reporting Expected from the Banks, the Causes of the Failures you have Given are Monitored by the Bank of Ghana; so Why Were the Issues not Addressed Early Enough?

BOG: The Bank of Ghana did all that was allowed within the Bank of Ghana Act 673. More robust actions were taken with the amendment of the banking law in 2016.

Researcher: It Appears the Regulators were just waiting for more powers under the new Banking Law to Repeal the Licenses of Some Banks. Why Were the Banks not Supported to Survive?

BOG: The regulators did all that was expected.

Researcher: What Role Did the Bank of Ghana Play in the Causes of the Recent Bank Failures in Ghana?

BOG: The official declined to comment on this question.

Researcher: The Reasons You Cited for the Causes of the Bank Failures in Ghana are Parameters Monitored by the Bank of Ghana. Can I, therefore, blame the regulator for the failure of the banks in Ghana?

BOG: The official declined to comment on this question.

4.3.4 Semi-structured Interview with Seasoned Professionals

4.3.4.1 Causes of the Recent Bank Failures in Ghana

The respondents believed that the recent bank failures in Ghana were caused by:

4.3.4.1 Poor supervision by the regulators

Though all the respondents agreed that the enforcement of Ghana's banking rules and regulations was critical, another dimension raised was the equitable implementation of the law. They believed that effective and fair monitoring of the banking rules and regulations by the regulator could have helped with a better management of the liquidity problems that most of the banks which went down faced.

4.3.4.2 Deficiencies in the previous banking law

The respondents of the Delphi methodology gave credence to the claim made by the respondents of the survey analysis that some banks escaped sanctions. due to the deficiencies in the Bank of Ghana Act 673 2004.

4.3.4.3 High non-performing loans

It was confirmed that bad quality assets contributed to the bank failures as some of the banks which collapsed, such as UT Bank, had high incidences of non-performing loans.

4.3.4.4 Illiquidity

Respondents also noted that recent occurrences in Ghana's banking sector, where there were mass convergences of customers at some banks due to rumoured closures, reiterated the need for a more effective management of liquidity risks. Some of the respondents, however, noted that some measures taken by the regulators in an effort to strengthen the sector such as increasing the minimum capital requirements from GHS 120 million to GHS 400 million were too steep within a short time, plunging some banks into tight liquidity situations.

4.3.5 Conclusion from the analysis of the causes of the bank failures

Some of the causes of the recent bank failures include inadequate capitalisation, illiquidity, high rate of non-performing loans.

The researcher concluded from the analysis of the data collected on the theme of the causes of the bank failures that though many reasons were cited by the writers of the various articles analysed, as being the causes of the recent bank failures in Ghana, the regulator, through the Banking Supervision Department of the Bank of Ghana was ultimately responsible for the supervision of the activities of banks in Ghana, and it was their remit to ensure compliance with regulations in order to avoid or minimise bank failures.

This answered the first, second and third research questions which were:

i. What is the regulatory framework for banks in Ghana?

ii. Is the regulation of banks in Ghana effective?
iii. What caused the recent bank failures in Ghana?

Having arrived at this conclusion, the researcher then proceeded to do a survey data analysis to collect and analyse data from middle managerial banking professionals on the research objectives.

4.3.6 Summary of the Analysis of the Causes of the Bank Failures in Ghana

From the analysis on the theme of the causes of the recent bank failures in Ghana, the researcher identified the causes of the failures to be capital inadequacy, illiquidity, high rate of non-performing loans, low profitability and bad corporate governance. However, respondents for all the data collections methods believed that all the other reasons are indicators which are expected to be monitored by the regulator and therefore, the major reasons for the failures was ineffective regulatory compliance monitoring.

4.4 Theme 4: Soundness of Banks in Ghana Before the Failures

Through a CAMELS analysis, which was based on information collected through the survey analysis about the indicators of the soundness of a bank, the researcher determined the soundness of banks before the failures began in August 2017.

4.4.1 Semi-structured Interview with the Bank of Ghana Official

4.4.1.1 BOG Official: Determination of the Health of a Bank

The researcher asked the official from the Bank of Ghana how the regulator determines the health or soundness of banks in Ghana and received the response below.

"*The reports from the various banks to the Central Bank of Ghana are benchmarked against statutory limits. The results of these benchmarking activities determine the status of the bank. For instance, banks in Ghana are expected to keep a minimum Capital Adequacy Ratio (CAR) of 10%. Banks with ratios between 5% and 10% are considered to be undercapitalised. Any bank with a Capital Adequacy Ratio below 5% is classified as being seriously undercapitalised. A bank with a Capital Adequacy Ratio less than zero is insolvent.*"

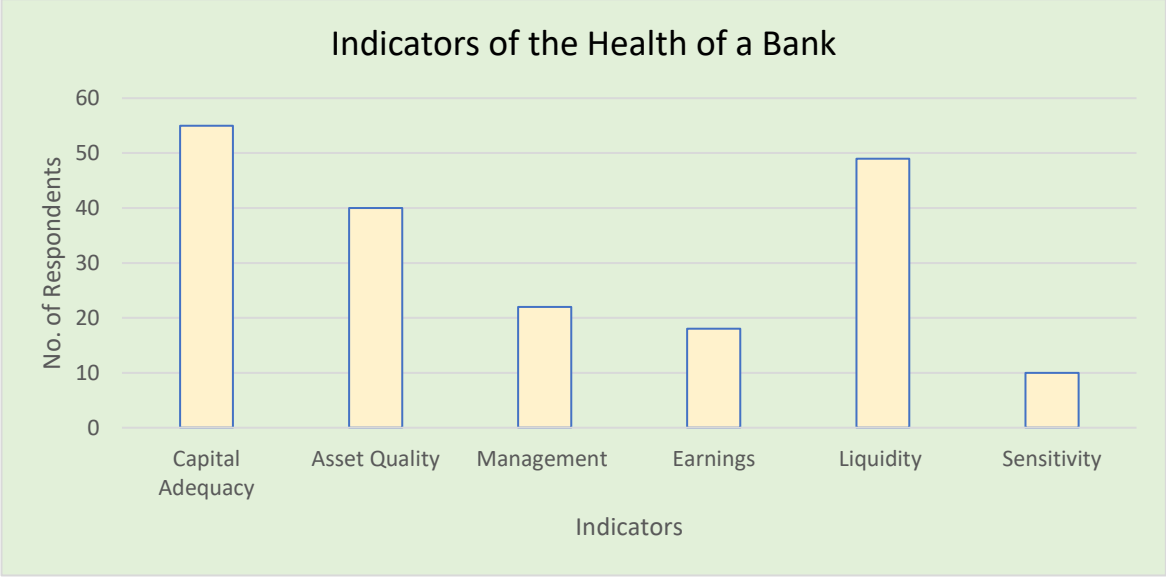
4.4.1.2 Survey question 10: What are the indicators of the soundness of bank?

This question was posed to respondents to ascertain the indicators for determining a bank in good standing. Adopting the usage of the indicators of the CAMELS analysis as suggested by the Bank of International Settlement, the researcher listed these indicators for respondents to select from. Since respondents could select multiple answers, all of them believed that a bank needed to be adequate in terms of capital. Capital Adequacy was followed closely by Liquidity and Asset Quality. These were closely followed by Management, Earnings and Sensitivity in that order.

Through this question, the researcher sought to find out from the respondents, the indicators with which to measure the health of banks before the on-surge of the recent bank failures.

With all indicators being selected by at least one respondent, the researcher carried out a CAMELS analysis of some selected banks in Ghana in the years leading up the bank failures.

Figure 4.9: Chart for response to survey question 10



Source: The researcher

4.4.3 Summary of the Survey Analysis

The survey analysis revealed that capital adequacy, asset quality, management, earnings, liquidity and sensitivity contribute in varying degrees to the health of a bank. The

researcher then proceeded to conduct a CAMELS analysis on a sample of five selected banks to gauge the soundness of banks in Ghana before the failures.

4.4.4 CAMELS Analysis

The researcher used the CAMELS analysis because the Bank for International Settlement suggested it as a framework for measuring the health and performances of banks and financial institutions (Sahajwala & Bergh, 2000). Supervisory and regulatory agencies evaluate the capital, asset quality, management quality, earnings, and liquidity of banks using the CAMELS framework because there exists a relationship between the soundness of banks and these parameters (Brauer, 1984). Under this framework, banks are expected to keep adequate capital, ensure good quality assets, improve management practices, maximise earnings and minimise sensitivity to risk. It, therefore, helped the researcher to evaluate the soundness of some selected banks in the years leading up to the bank failures in Ghana.

A CAMELS analysis of five selected banks from Ghana was performed by the researcher based on the 2010 to 2013 annual reports of the selected banks. The years 2010 to 2013 were selected for the collection of the secondary data for the CAMELS analysis because those years were the most recent available financial statement one of the collapsed banks (UT Bank), which ceased publication of its financial statements in 2013though it was a listed bank and was required to publish annual reports.

To perform the CAMELS analysis, six ratios namely: Capital Adequacy Ratio (CAR), Loan Loss Rate, Net Income to Employee Ratio, Return on Equity (ROE), Liquid Assets to Total Assets and Net Income to Total Assets were used by the researcher. Data for the computation of the ratios of the CAMELS analysis were obtained from published annual reports of these selected banks in Ghana. The ratios selected by the researcher and the corresponding indicators of the CAMELS analysis they measured are listed in Table 4.5 below.

Table 4.5: Ratios for CAMELS Analysis

Ratio	**CAMELS Parameter**
Capital Adequacy Ratio	Capital Adequacy

Loan Loss Rate	Asset Quality
Net Income per Employee	Management
Return on Equity Ratio	Earnings
Liquidity Ratio	Liquidity
Net Interest Margin	Sensitivity

Source: The researcher

4.4.4.1 Capital Adequacy

Capital Adequacy Ratio (CAR) = $\frac{Total\ Capital\ fund}{Total\ Risk\ weighted\ Assets}\ x\ 100$

Banks hold adequate capital depending on the requirements of their respective regulatory bodies. The Capital Adequacy Ratio (CAR) measures the amount of the Capital a bank holds as a percentage of the exposure to risk weighted assets. The Basel Committee on Banking Supervision (or the Basel Committee), which plays a vital role in the standardisation of bank regulations within many countries, introduced an accord designed for the establishment of the minimum capital levels for banks which are active internationally, with the primary objective of strengthening the capital of banks. The concept has gone through three major stages, namely Basel I, Basel II and Basel III.

In Basel I (Basel Committee on Banking Supervision, 1995), the concept of capital adequacy was introduced with a main focus on credit risk and a ratio of 8% set as the minimum capital adequacy limit. Basel II (Basel Committee, 2004) concentrated on risk-weighted assets by providing a number of measures for the optimal assessment of credit levels, operational and market risk exposures of the bank. Basel III (Basel Committee on Banking Supervision , 2010) shifted the focus from the risk-weighted assets to capital. Prior to the implementation of the Basel Accord, capital had different definitions depending the central banks. However, the Basel Accord brought standardisation to the definition and categorization of assets and capital for risk-weighting. Subsequently, capital is now defined in terms of the Capital Adequacy Ratio (CAR) or the Capital to Risk-Weighted Assets Ratio (CRAR).

4.4.4.2 Asset Quality

Banks collect capital from shareholders and deposits from customers to generate returns by creating assets. A great percentage of the asset portfolio of banks is achieved through their lending activities. The rating of the quality of the assets is reflective of the current and possible credit risks associated with the asset portfolio (loans and investment).

The Asset quality ratio, also known as the loan loss rate, is a measure of the loan impairment charge as a percentage of the total customer loans and advances. A Loan impairment charge is essentially funds reserved by banks in the event that customers are unable to make the needed loan repayments, which may negatively affect the bank's profits.

Loan Loss Rate = Impairment Charge/Loans x 100

4.4.4.3 Management

The assessment of the performance of management reflects the capability of management to identify, assess, manage and control the risks that an organisation is exposed to. It is assumed that companies are able to create wealth when they are properly managed.

The Net Income Per Employee (NIPE) ratio is one of the measures of management performance because it shows the efficiency of employees by measuring the average contribution of each employee to company's net income.

$$\text{NIPE} = \frac{Net\ Income}{No.of\ Employees}$$

4.4.4.4 Earnings

Typically, earnings refer to the net income after taxes have been deducted. According to (FDIC, 2002), for banks, regulators view earnings as essential for absorbing losses and augmenting capital by serving as a safeguard against the depletion of capital. One of the measures of the earnings of a company is the Return on Equity (ROE) ratio. ROE is a measure of the profits generated from shareholders' equity.

$$\text{Return on Equity Ratio} = \frac{Net\ Income}{Shareholder's\ Equity}$$

4.4.4.5 Liquidity

Liquidity is the extent to which short-term financial obligations can be met with available cash or assets which can be easily converted into cash. One of the main identified issues of the financial crisis of 2007-2009 was liquidity mismatches, where long-term illiquid assets were funded by short-term liquid liabilities (Dong & Xiao, 2019). The creation and

maintenance of adequate liquidity by banks is crucially vital to the business of banking. Banks constantly need to balance profitability and adequate liquidity by investing in suitable assets, while reserving cash or liquid assets to meet customer requests. Liquidity can be measured by the ratio of liquid assets to total assets. The higher the ratio, the more liquid assets a company possesses and hence the higher the liquidity.

$$\text{Liquidity Ratio} = \frac{\textbf{\textit{Liquid Assets}}}{\textbf{\textit{Total Assets}}}$$

4.4.4.6 Sensitivity

In finance, sensitivity refers to the extent to which financial instruments such as stocks are influenced by other factors. Here, the sensitivity of the bank to market risks such as changes in commodity prices, interest rates, derivatives and foreign exchange rates are all measured. Most financial securities are affected by market changes to varying extents, depending on the type of security and the market conditions (Sharp, 1995). According to (Kantor, 1971), sensitivity measurement is valuable in the determination of which stocks an individual or company can invest in.

For the purpose of this research, the researcher focused on the impact of interest rate risk (IRR) on the banks for the period under review. This was done by calculating the Net Interest Margin (NIM), which is the Interest Income to Total Assets ratio and reflects the reliance of the banks on interest income.

A low ratio may be an indication that the bank relies more on non-interest income such as charges on transfers and trade finance transactions and are, therefore, not significantly affected by interest rate fluctuations. While a high rate is good, when it is too high, it is indicative of income generated from high interest rates on loans that might be susceptible to default.

$$\text{Net Interest Margin} = \frac{\textbf{\textit{Net Interest Income}}}{\textbf{\textit{Total Assets}}}$$

4.4.4.7 Interpretation of CAMELS Rating

The parameters of the CAMELS analysis were rated using a scale of one (1) to five (5) as listed in the Table 4.6 below, with one (1) being the best and five the worst.

Table 4.6: Interpretation of CAMELS Rating

Rating	Rating Range	Rating Analysis	Indication

1	1.0 – 1.4	Strong	Strong performance and risk management practices that consistently provide for safe and sound operations.
2	1.5 – 2.4	Satisfactory	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
3	2.5 – 3.4	Fair	Flawed to some degree and is of supervisory concern.
4	3.5 – 4.4	Marginal	Poor performance and of serious supervisory concern.
5	4.5 - 5	Unsatisfactory	Unsatisfactory performance that is critically deficient and in need of immediate remedial action.

Source: Adapted from (Dzeawuni & Tanko, 2008)

4.4.4.8 Basis for the Selection of Banks

The researcher analysed five selected banks based on their 2010 to 2013 annual reports for the CAMELS analysis. The banks were selected to represent the different ownership structures of banks in Ghana namely Ghanaian owned, foreign ownership, majority government shareholding, African bank and one defunct bank. There was only one defunct bank because data for the other defunct banks were not available. The UT Bank, the only defunct bank included in the analysis had data till 2013 because as part of the requirements of being a company listed on the Ghana Stock (GSE), they were required to publish their results. However, even the publication of the annual reports of the UT Bank ceased after 2013.

4.4.4.8.1 Standard Chartered Bank

Being the oldest commercial bank in Ghana, the Standard Chartered Bank Ghana Limited (SCB) commenced its business operations in 1896 as the Bank of British West Africa while serving as the Central Bank during the pre-independence period up to 1953 and provided cutting edge financial services to customers as well as the economy of Ghana. Standard Chartered Bank Ghana was listed on the Ghana Stock Exchange in 1991 (Standard Chartered Bank Ghana Ltd, 2017).

The selection of SCB for the CAMELS analysis was based on the fact that it is the oldest bank in Ghana and has foreign ownership.

4.4.4.8.2 GCB Bank

GCB Bank Limited (GCB), which used to be known as Ghana Commercial Bank, is the biggest indigenous financial institution and also the biggest bank in terms of assets and deposits in Ghana. The GCB was established in 1953 as the Bank of the Gold Coast, initially focussing on providing banking services to Ghanaian businesses that could not meet the requirements of the then expatriate banks operating in the Gold Coast. In 1957, when Ghana attained its independence, the Bank of Gold Coast became the Ghana Commercial Bank, concentrating on commercial banking activities because Bank of Ghana had taken over regulatory activities. The Ghana Commercial Bank was listed on the Ghana Stock Exchange in 1996 and rebranded to GCB Bank in 2013 (GCB Bank Ltd, 2019). In August 2017, all deposits and selected assets of the defunct UT Bank and Capital Bank (Ghana) were transferred to GCB Bank Ltd under the approval and supervision of the Central Bank of Ghana (GCB Bank Ltd, 2017).

GCB was chosen by the researcher as it is a Ghanaian bank with majority shareholding from the Government of Ghana.

4.4.4.8.3 Cal Bank

Cal Bank (CAL), which metamorphosed from Continental Acceptances Ltd and Cal Merchant Bank, began its business operations in July 1990 with the provision of outstanding financial services. In 2004, Cal Bank received a Universal Banking License and began the provision of specialised retail banking services in Ghana (CalBank, 2019).

Cal Bank is a privately owned Ghanaian bank.

4.4.4.8.4 Ecobank Ghana Ltd

Ecobank Ghana Limited is a subsidiary of Ecobank Transnational Incorporated (ETI), which is a Pan African financial institution headquartered in Lome, Togo. Ecobank Ghana Limited (EBG), which was licensed for merchant banking on November 10, 1989, began its business operations on February 19, 1990. However, over the years, Ecobank has grown into one of the most recognised banks in Ghana. In the year 2003, Ecobank obtained a universal banking status and was listed on the Ghana Stock Exchange (GSE) in July 2006. Strategically, Ecobank has shifted from a primarily Wholesale Banking to a Universal

Banking with branches, point-of-sale terminals, numerous merchant QR codes in shops and over 200 ATMs situated all over the country of Ghana (Ecobank Ghana Ltd, 2019).

Ecobank Ghana Ltd is an African bank and form part of the Ecobank Transnational Incorporated group of banks.

4.4.4.8.5 UT Bank Ltd

UT Bank Ghana Ltd started as a non-bank financial service institution known as Unique Trust Financial Services in Ghana in 1997. Having acquired majority shareholding in a Ghanaian bank known as BPI Bank in 2008, Unique Trust commenced business as a commercial bank in Ghana in May 2009 under the name UT Bank Ghana Ltd. The bank was then listed on the Ghana Stock Exchange in the year 2010. However, on 14th August 2017, the Bank of Ghana revoked the license of UT Bank, citing insolvency as the reason and UT Bank was taken over by GCB Bank (Reuters, 2019).

UT Bank (UTB) was selected by the researcher for the quantitative analysis because it was the only defunct bank which used to be listed on the Ghana Stock Exchange and was therefore required to publish financial reports annually. Information on the other defunct banks was however not available. Though UT Bank was a listed bank, the period chosen for the analysis was based on the fact that the most recent available annual report for the defunct UT Bank (UTB) was the 2013 annual report. This situation is a cause for worry because between the publication of the 2013 annual report and 14th August 2017 when the bank's license was revoked, the UT Bank did not publish any annual reports. As reiterated by the Ghana Stock Exchange, the UT Bank failed to publish its financial reports on December 31, 2015, which made the 2013 report the last available completed annual report for the bank. This non-publication was a breach of the rules of the Ghana Stock Exchange (Ghana Stock Exchange, 2017).

4.4.4.9 Results of CAMELS Analysis

The results of the CAMELS analysis have been outlined in the tables and charts in this section.

4.4.4.9.1 Capital Adequacy

The Bank of Ghana requires banks in Ghana to keep a Capital Adequacy Ratio of a minimum of 10%. This implies that the ratio of regulatory capital to risk-weighted assets and risk-weighted off-balance sheet assets must be greater than or equal to 10%. The

researcher has tabulated the Capital Adequacy Ratios of the selected banks from the year 2010 to 2013 in Table 4.7 below.

Table 4.7: Results of Capital Adequacy Analysis

	SCB	CAL	EBG	GCB	UTB	Mean	Standard Deviation
2010	16.00%	16.10%	22.51%	10.00%	8.62%	14.65%	0.055608
2011	17.00%	11.60%	13.57%	11.00%	8.62%	12.36%	0.031388
2012	17.00%	20.00%	14.77%	15.00%	13.42%	16.04%	0.025574
2013	23.53%	19.40%	13.69%	21.00%	12.16%	17.96%	0.048532
Mean	18.38%	16.78%	16.14%	14.25%	10.71%		
Standard Deviation	0.034639	0.038526	0.042841	0.049917	0.024619		

Source: The researcher

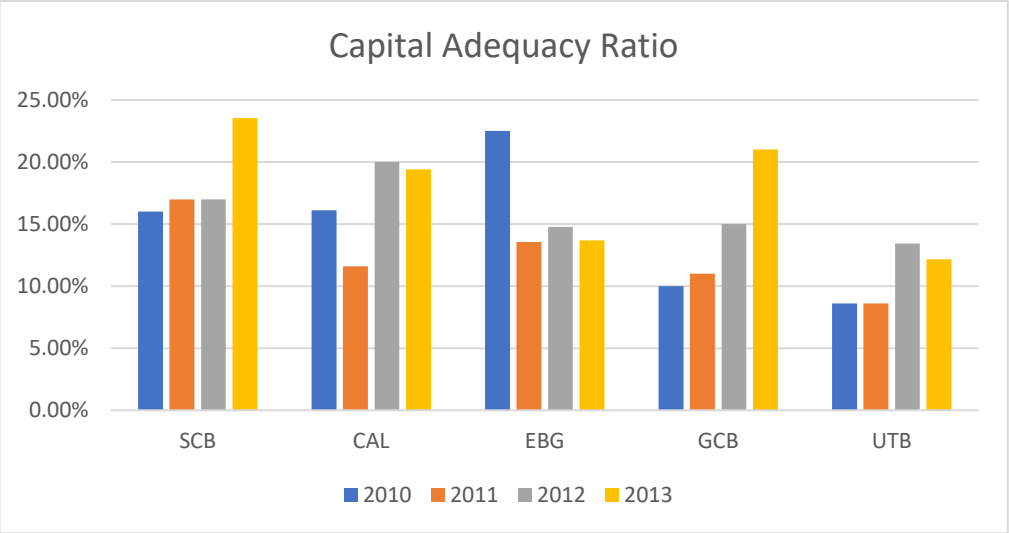
4.4.4.9.1.1 Annual Analysis

From the results of the CAR analysis in Table 4.11 above, the year 2010 recorded the highest standard deviation of 0.055608 from the mean because it had a range of 13.86% since the highest CAR was 22.51% and the lowest was 8.62%. Although there was a wider spread between the ratios recorded by the various banks, all except the UT Bank (UTB) met the minimum requirement of 10% as required by the Bank of Ghana. The events of the year 2010 was closely followed by those of the year 2013 with a standard deviation of 0.048532 due to a range of 11.37%; however, every bank under review complied with this regulatory requirement. The year 2011 recorded a lower standard deviation with the UT bank breaching the minimum requirements for the second consecutive year. The year 2012 recorded the lowest standard deviation of 0.025574 with a range of 6.58%.

4.4.4.9.1.2 Analysis Per Bank

The Standard Chartered Bank (SCB) of Ghana recorded the highest mean CAR of 23.53% with an increasing annual ratio over the period under review. Cal Bank (CAL), Ecobank (EBG) and GCB recorded fluctuating ratios from one year to another, but never breached the 10% minimum requirement. The UT Bank, on the other hand, breached the minimum requirement in the years 2010 and 2011, making a recovery in the year 2012, which was sustained in the year 2013. Since the UT Bank failed to publish any financials after the year 2013, it was difficult to determine whether this improved CAR performance was sustained.

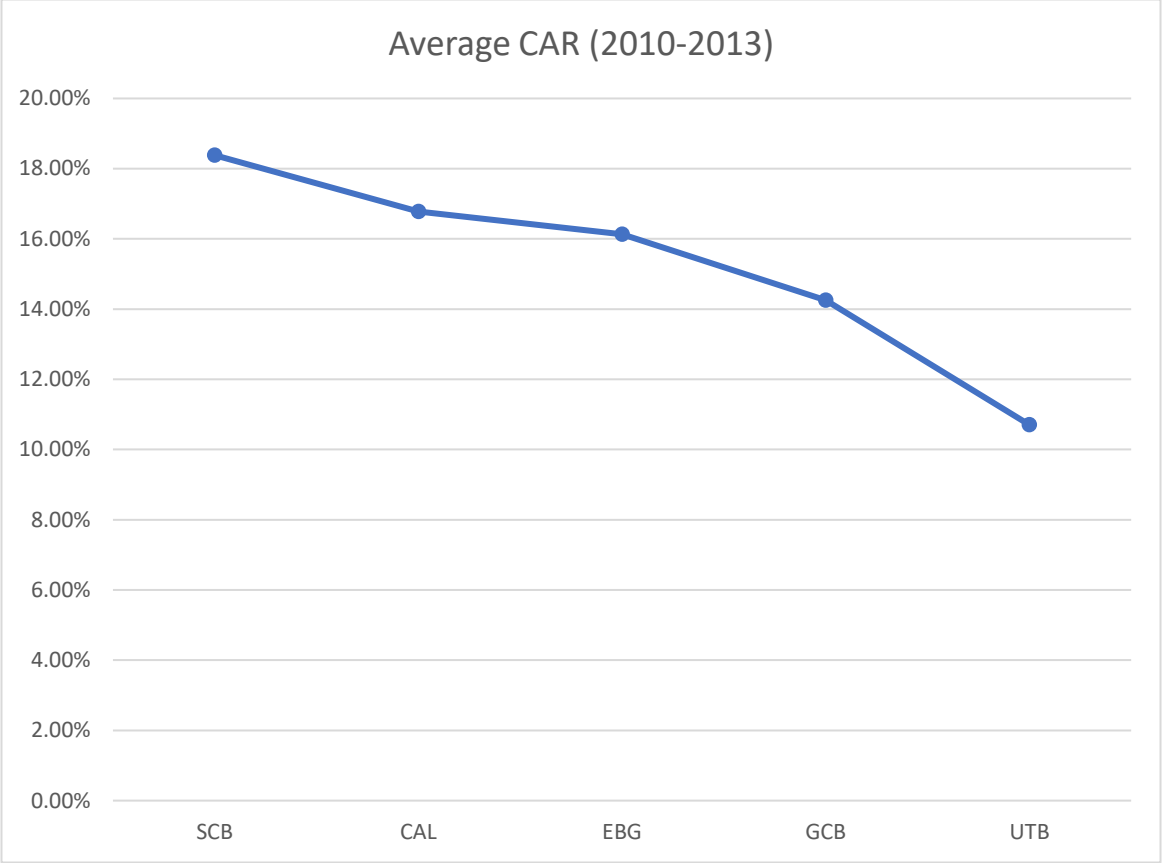
Figure 4.10: Bar Chart - Capital Adequacy Ratio



Source: The researcher

The Bar Chart in Figure 4.11 shows pictorially, the Capital Adequacy Ratios (CAR) for the five banks for the four years under review. In figure 4.11, a line chart of the average ratios for the five banks is illustrated, with SCB having the best ratio, EBG in the middle and UTB with the worst CAR.

Figure 4.11: Line Chart - Average Capital Adequacy



Source: The researcher

Doing a ranking of the CAR for each of the years under review (Table 4.8), it must be noted that whiles the other banks fluctuated between the first and fourth positions, the UT Bank was consistently at the fifth and lowest position. In the year 2011, the recorded CAR for UT Bank was 8.62% which was below the statutory Central Bank of Ghana requirement of 10%. Year on year performances comparisons revealed consistent improvements by SCB and GCB while CAL, UTB and EBG experienced fluctuating increases and decreases. Though the EBG maintained a CAR above the statutory requirement of 10%, there was a huge drop from 22.51% to 13.57% between the years 2010 and 2011 and remained within that range for the next two years.

Table 4.8: Comparison of Capital Adequacy Analysis

2010	1	2	3	4	5
	EBG	**CAL**	**SCB**	**GCB**	**UTB**
	22.51%	16.10%	16.00%	10.00%	8.62%
2011	1	2	3	4	5
	SCB	**EBG**	**CAL**	**GCB**	**UTB**

	17.00%	13.57%	11.60%	11.00%	8.62%
2012	1	2	3	4	5
	CAL	**SCB**	**GCB**	**EBG**	**UTB**
	20.00%	17.00%	15.00%	14.77%	13.42%
2013	1	2	3	4	5
	SCB	**GCB**	**CAL**	**EBG**	**UTB**
	23.53%	21.00%	19.40%	13.69%	12.16%

Source: The researcher

4.4.4.9.2 Asset Quality

The researcher determined the quality of assets of the banks by calculating the loan loss rate as:

Loan Loss Rate = Impairment Charge/Loans x 100

The loan portfolio of a bank, the condition of the collateral and general market conditions are some of the determining factors regulators of banks take into consideration before establishing a loan loss provision rate. A higher rate, therefore, generally indicates a riskier loan portfolio.

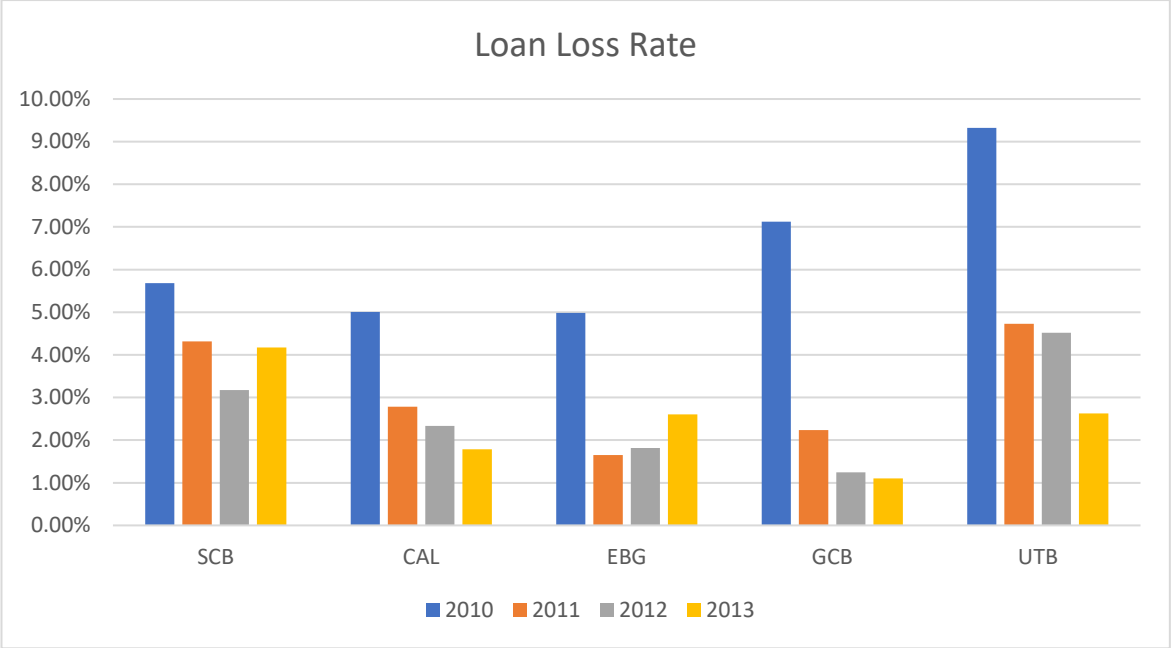
Table 4.9: Results of Asset Quality Analysis

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
2010	5.68%	5.01%	4.98%	7.13%	9.32%
2011	4.31%	2.79%	1.65%	2.24%	4.73%
2012	3.17%	2.34%	1.81%	1.25%	4.52%
2013	4.18%	1.79%	2.60%	1.10%	2.63%
Mean	**4.34%**	**2.98%**	**2.76%**	**2.93%**	**5.30%**

Source: The researcher

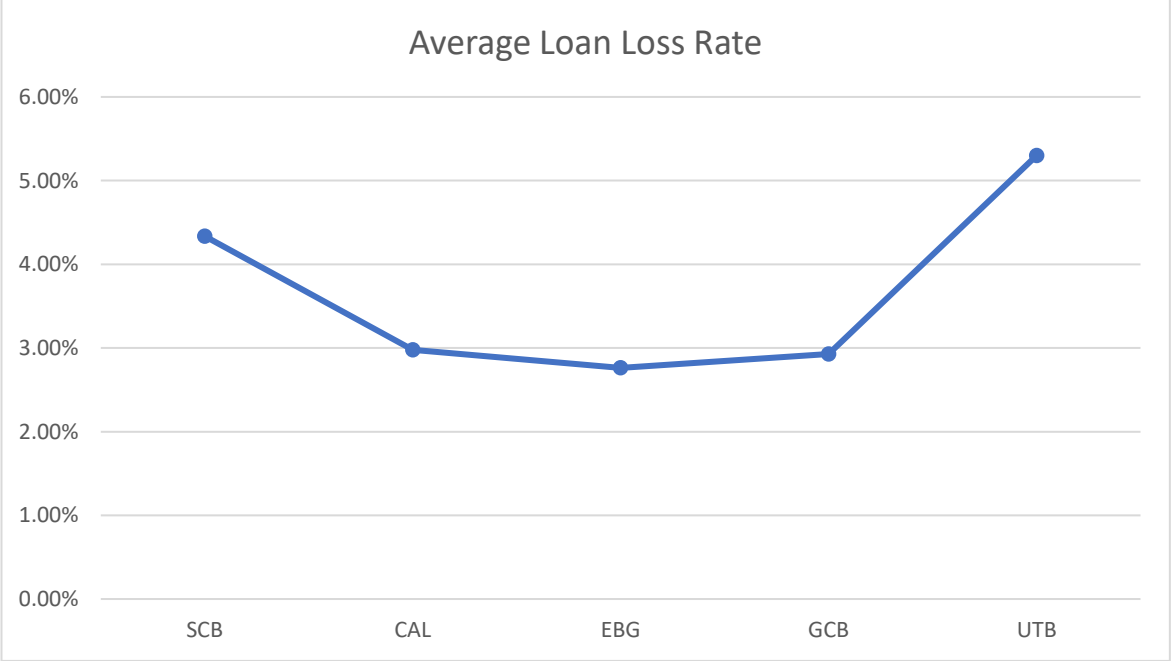
The UT Bank recorded the highest average loan loss rate of 5.30% indicating that they had the riskiest loans; this was followed by Standard Chartered Bank and then, the other three banks. Unlike the SCB which had fluctuating rates year after year, the UTB had a progressively reducing Loan Loss rate which reduced from 9.32% in the year 2010 to 2.63% in the year 2013. It must, however, be noted that for each year except 2013, the UTB recorded the highest rate as compared to the other banks, which was an indication that the quality of the UT Bank's asset portfolio was generally low.

Figure 4.12: Bar Chart - Loan Loss Rate



Source: The researcher

Figure 4.13: Line Chart - Average Loan Loss Rate



Source: The researcher

The line chart indicates in Figure 4.14 demonstrates graphically, that the UTB had the highest average Loan Loss Rate for the period under review.

Table 4.10: Comparison of Asset Quality Analysis

2010	1	2	3	4	5
	EBG	**CAL**	**SCB**	**GCB**	**UTB**
	4.98%	5.01%	5.68%	7.13%	9.32%
2011	1	2	3	4	5
	EBG	**GCB**	**CAL**	**SCB**	**UTB**
	1.65%	2.24%	2.79%	4.31%	4.73%
2012	1	2	3	4	5
	GCB	**EBG**	**CAL**	**SCB**	**UTB**
	1.25%	1.81%	2.34%	3.17%	4.52%
2013	1	2	3	4	5
	GCB	**CAL**	**EBG**	**UTB**	**SCB**
	1.10%	1.79%	2.60%	2.63%	4.18%

Source: The researcher

The comparison of the analysis of the Loan Loss Rate for the selected banks revealed that apart from the year 2013, the UTB consistently had the highest Loan Loss Rate, which was indicative of low-quality assets as compared to the other banks being analysed.

4.4.4.9.3 Management

The researcher assessed the efficiency of the management practices of the five selected banks and came up with the results as follows.

Table 4.11: Results of Net Income per Employee (NIPE) Analysis

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
	GH₵ '000	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**
2010	73	32	68	113	18
2011	82	56	81	122	23

2012	129	100	93	66	36
2013	194	165	130	110	17

Source: The researcher

Table 4.15 above shows that, the UTB had the lowest NIPE for each of the four years under review. This demonstrates that the income generated per employee in the UTB was far below those of the other banks. Additionally, the UTB's average NIPE of GH₵ 23,000 was far below the median average amount of GH₵93,000, an indication that, averagely, (in relation to identifying, assessing, managing and controlling the risks the bank was exposed to for maximum wealth creation) the UTB performed abysmally as compared to the other banks. The Cal Bank, with an average of 421 employees generated GH₵50,000 more per employee than the UT Bank which had an average of 571 employees for the period under review. The management of the Standard Chartered Bank Ghana performed exceptionally well followed closely by the GCB Bank and the Ecobank Ghana.

Table 4.12: Average NIPE

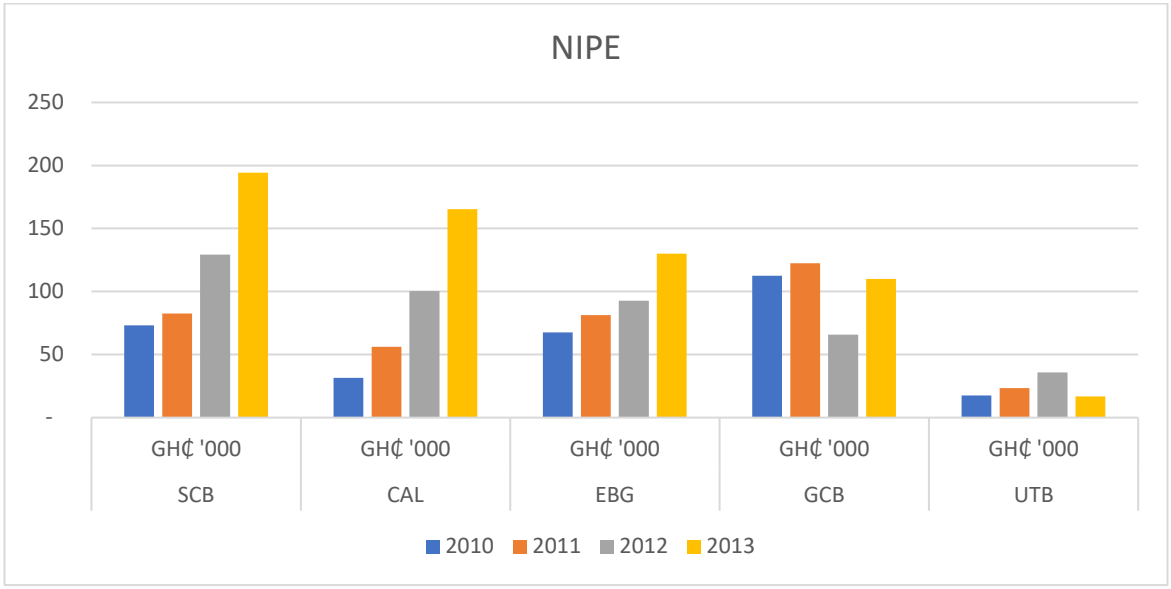
UTB	**CAL**	**EBG**	**GCB**	**SCB**
GH₵ '000	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**
23	88	93	103	120
		Median		

Source: The researcher

Table 4.12 above shows the average net Income Per Employee computed by the researcher. A comparison of the average NIPE computed by the researcher based on the data gathered from the annual reports of the selected banks indicated that the SCB had the highest average NIPE while the UTB had the lowest. Thus, an indication of best management practices at the SCB while the UTB seemingly was not effectively managed.

Figure 4.14: Bar Chart - NIPE

Figure 4.14 is a Bar Chart showing the Net Income Per Employee for the selected banks for the period under review.

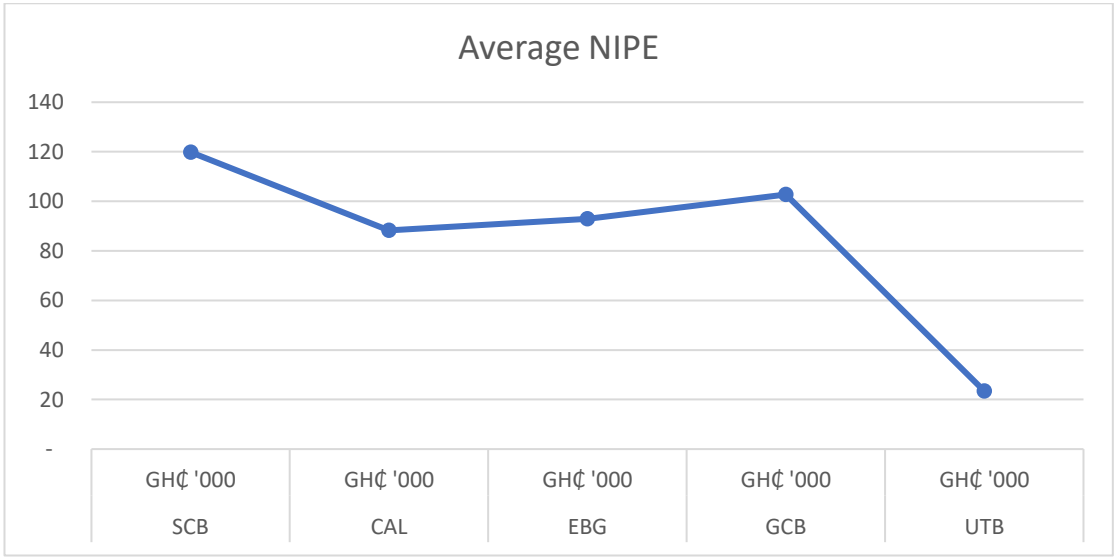


Source: The researcher

Figure 4.15: Line Chart - Average NIPE

Figure 4.15 is a line chart depicting the average NIPE for each bank over the period.

A difference of an average of approximately GH₵100,000 generated by staff of the SCB over that of the staff of the UTB gives an indication of ineffective management practices at the latter.



Source: The researcher

Table 4.13: Comparison of NIPE

2010	1	2	3	4	5
	GCB	SCB	EBG	CAL	UTB

	GH₵ '000	GH₵ '000	GH₵ '000	GH₵ '000	GH₵ '000
	113	73	68	32	18
2011	1	2	3	4	5
	GH₵ '000	GH₵ '000	GH₵ '000	GH₵ '000	GH₵ '000
	GCB	SCB	EBG	CAL	UTB
	122	82	81	56	23
2012	1	2	3	4	5
	GH₵ '000	GH₵ '000	GH₵ '000	GH₵ '000	GH₵ '000
	SCB	CAL	EBG	GCB	UTB
	129	100	93	66	36
2013	1	2	3	4	5
	SCB	CAL	EBG	GCB	UTB
	GH₵ '000	GH₵ '000	GH₵ '000	GH₵ '000	GH₵ '000
	194	165	130	110	17

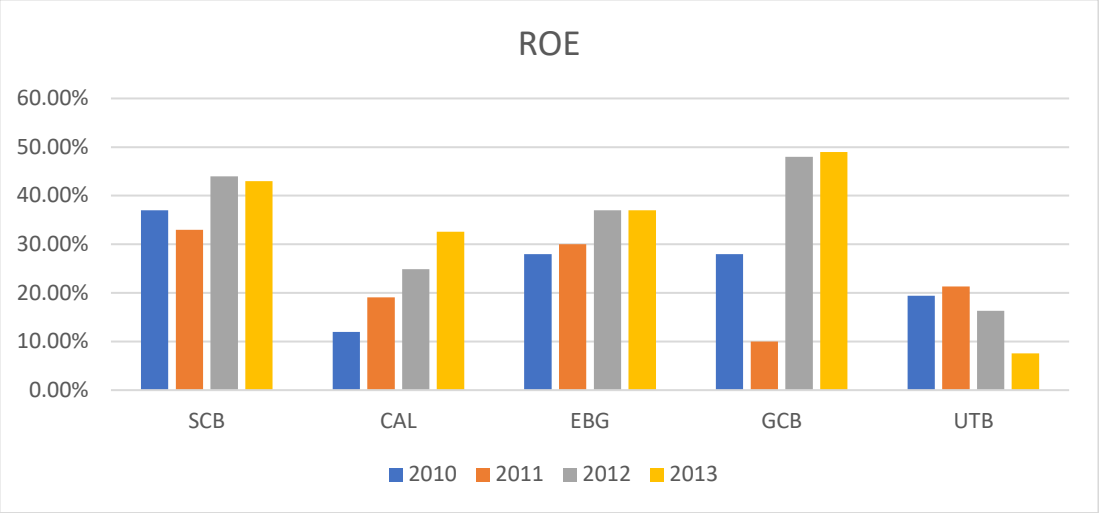
Source: The researcher

Though the Net Income Per Employee for the banks fluctuated over the period under review, the UTB consistently recorded the lowest amount.

4.4.4.9.4 Earnings

The researcher analysed the profitability of the five banks in the following section by comparing their Return on Earnings as obtained from their annual reports.

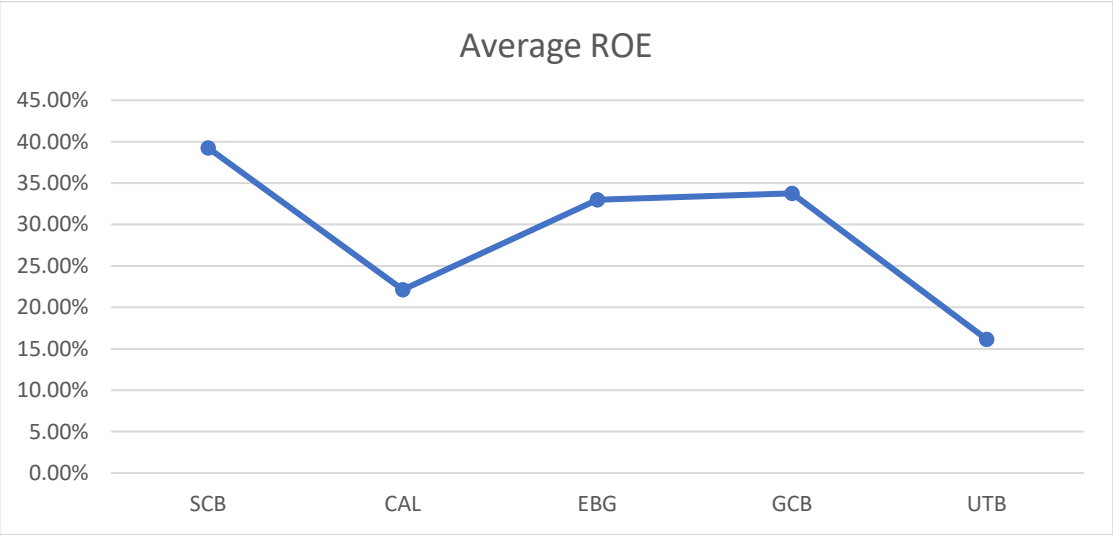
Figure 4.16: Bar Chart - ROE



Source: The researcher

In Figure 4.17 above, the Bar Chart shows a pictorial representation of the Return on Earnings (ROE) for the five selected banks between the years 2010 and 2013, while Figure 4.18 demonstrates the average ROE for each bank over the four years, in a line chart.

Figure 4.17: Line Chart - Average ROE



Source: The researcher

Table 4.14: Comparison of Return on Earnings

2010	1	2	3	4	5
	SCB	**EBG**	**GCB**	**UTB**	**CAL**
	37.00%	28.00%	28.00%	19.39%	12.00%

2011	1	2	3	4	5
	SCB	**EBG**	**UTB**	**CAL**	**GCB**
	33.00%	30.00%	21.34%	19.10%	10.00%
2012	1	2	3	4	5
	GCB	**SCB**	**EBG**	**CAL**	**UTB**
	48.00%	44.00%	37.00%	24.90%	16.30%
2013	1	2	3	4	5
	GCB	**SCB**	**EBG**	**CAL**	**UTB**
	49.00%	43.00%	37.00%	32.60%	7.58%

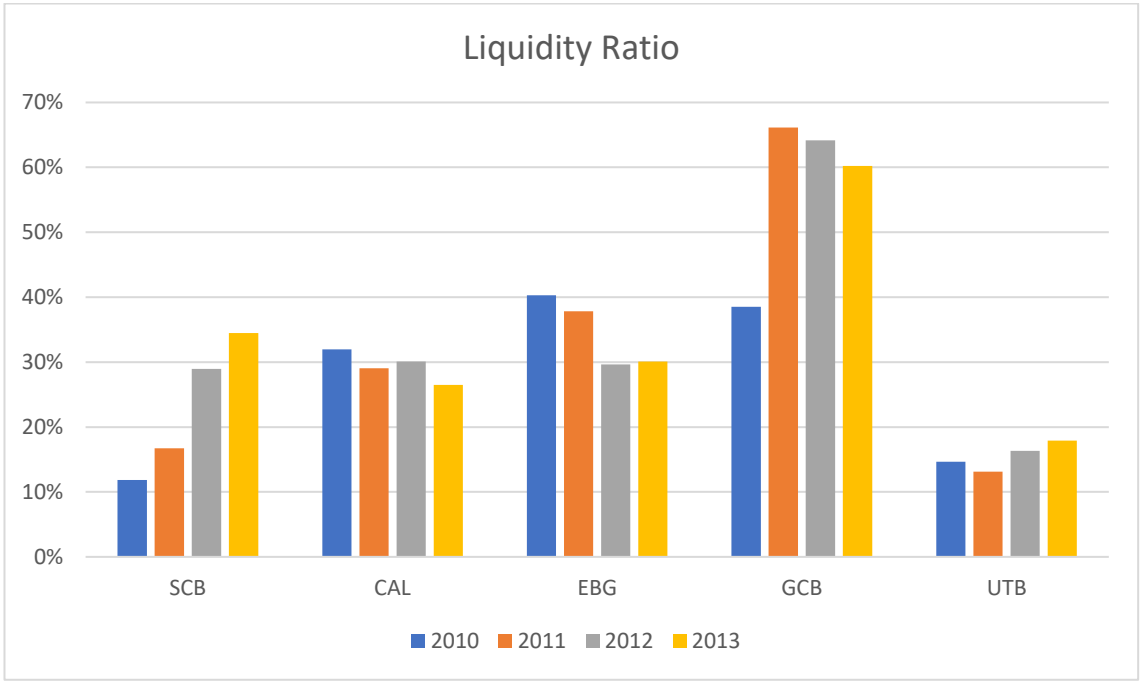
Source: The researcher

The banks under review had varying performances in their ROEs between the years 2010 and 2013. Key among the performances were the SCB which recorded a minimum of 33.00% return on equity. The GCB recorded a low of 10% in the year 2011 but bounced back strongly to 48% in the year 2012. The UTB hovered around 19% in the years 2010 and 2011 and dropped to 16.30% in the year 2012, after which there was a sharp decline to 7.58% in the year 2013. This sharp decline could have been an indication of a bank struggling to generate profit. Unfortunately, there were no subsequent published annual reports until their collapse in in the year 2017.

4.4.4.9.5 Liquidity

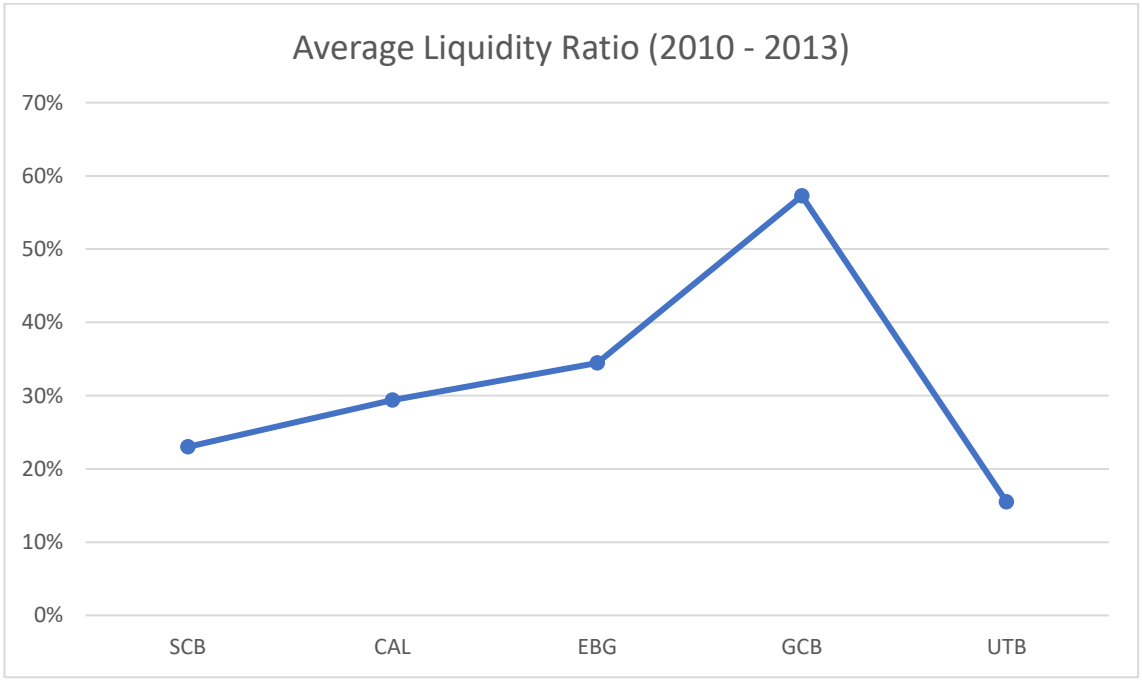
The assessment of the liquidity of the five banks produced the following results.

Figure 4.18: Bar Chart - Liquidity Ratio



Source: The researcher

Figure 4.19: Line Chart - Average Liquidity Ratio



Source: The researcher

Table 4.15: Comparison of Liquidity Ratios

2010	1	2	3	4	5

	EBG	**GCB**	**CAL**	**UTB**	**SCB**
	40%	39%	32%	15%	12%
2011	1	2	3	4	5
	GCB	**EBG**	**CAL**	**SCB**	**UTB**
	66%	38%	29%	17%	13%
2012	1	2	3	4	5
	GCB	**CAL**	**EBG**	**SCB**	**UTB**
	64%	30%	30%	29%	16%
2013	1	2	3	4	5
	GCB	**SCB**	**EBG**	**CAL**	**UTB**
	60%	34%	30%	26%	18%

Source: The researcher

SCB and UTB recorded quite low liquidity ratios of 12% and 15% respectively, which was an indication of a tight liquidity situation. However, by the year 2013, SCB had improved exponentially to 34% while UTB had only improved marginally to 18%. This implies that between the years 2010 and 2013, out of the total assets of the UTB, an average of 16% was liquid. With such a tight liquidity situation, any huge customer transfer request would send the bank onto the money market to borrow from other banks. This means of meeting liquidity obligations is obviously very expensive. It is of no surprise, therefore, that the UTB recorded the highest interest expense figures as shown in the Tables 4.16 to Table 4.20 below, with the expenses depleting averagely 50% of the interest revenue generated as compared to the other banks, some of which recorded as low as 14% interest expense to interest income ratio..

In Tables 4.16 to Table 4.20, the researcher computed the interest expense as a ratio of the interest income for the five banks between the years 2010 and 2013. This was aimed at showing the percentages of the interest incomes of the banks which were eroded by the costs incurred in having high interest expenses as a result of borrowing at high rates to fund liquidity.

Table 4.16: Interest Income/Expense for UTB

UTB	Interest Income	Interest Expense	Interest Expense / Interest Income
	GH₵ '000	GH₵ '000	
2010	74,706.00	40,429.00	54%
2011	99,901.00	50,232.00	50%
2012	134,110.00	72,621.00	54%
2013	187,888.00	116,231.00	62%

Source: The researcher

Table 4.17: Interest Income/Expense for CAL

CAL	Interest Income	Interest Expense	Interest Expense / Interest Income
	GH₵ '000	GH₵ '000	
2010	69,750.00	32,675.00	47%
2011	75,814.00	34,420.00	45%
2012	145,660.00	61,084.00	42%
2013	266,731.00	122,988.00	46%

Source: The researcher

Table 4.18: Interest Income/Expense for GCB

GCB	Interest Income	Interest Expense	Interest Expense / Interest Income
	GH₵ '000	GH₵ '000	
2010	389,096.00	102,812.00	26%

2011	256,619.00	49,735.00	19%
2012	376,092.00	50,917.00	14%
2013	552,063.00	92,104.00	17%

Source: The researcher

Table 4.19: Interest Income/Expense for EBG

EBG	**Interest Income**	**Interest Expense**	**Interest Expense / Interest Income**
	GH₵ '000	**GH₵ '000**	
2010	141,526.00	32,463.00	23%
2011	170,526.00	41,926.00	25%
2012	353,354.00	83,163.00	24%
2013	473,557.00	84,003.00	18%

Source: The researcher

Table 4.20: Interest Income/Expense for SCB

SCB	**Interest Income**	**Interest Expense**	**Interest Expense / Interest Income**
	GH₵ '000	**GH₵ '000**	
2010	213,941.00	61,193.00	29%
2011	195,775.00	45,372.00	23%

2012	222,725.00	52,982.00	24%
2013	375,526.00	95,046.00	25%

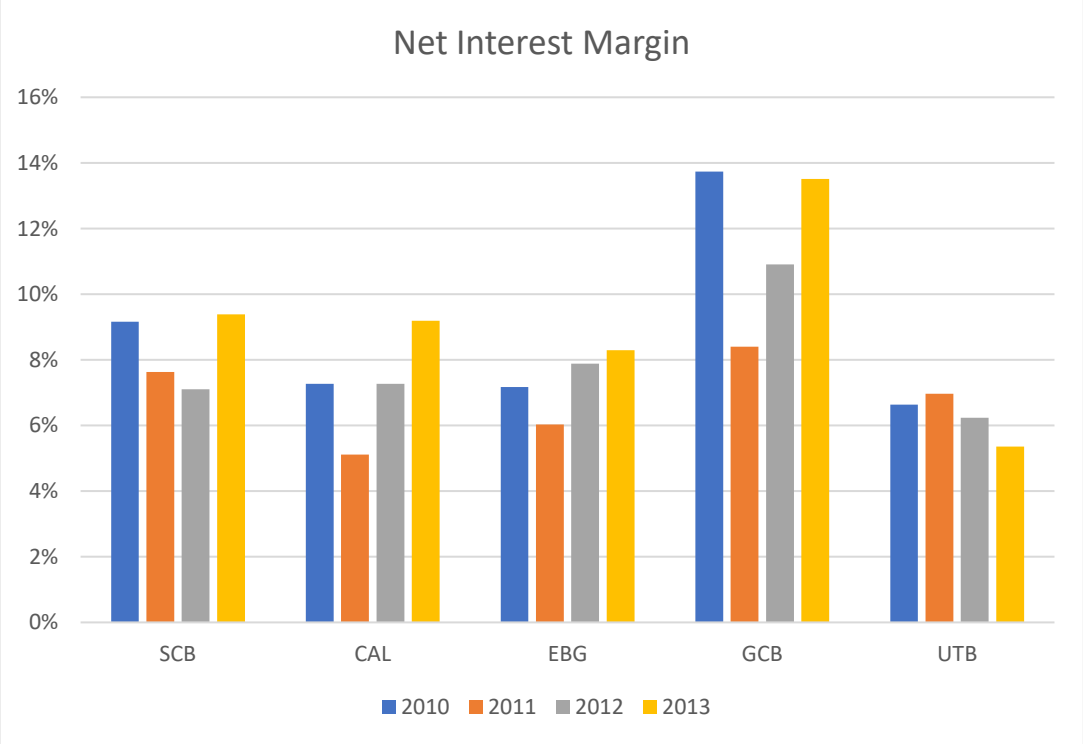
Source: The researcher

4.4.4.9.6 Sensitivity Analysis

In this section, the researcher analysed the sensitivity of the banks to interest rate fluctuations.

Figure 4.20: Bar Chart – Net Interest Margin

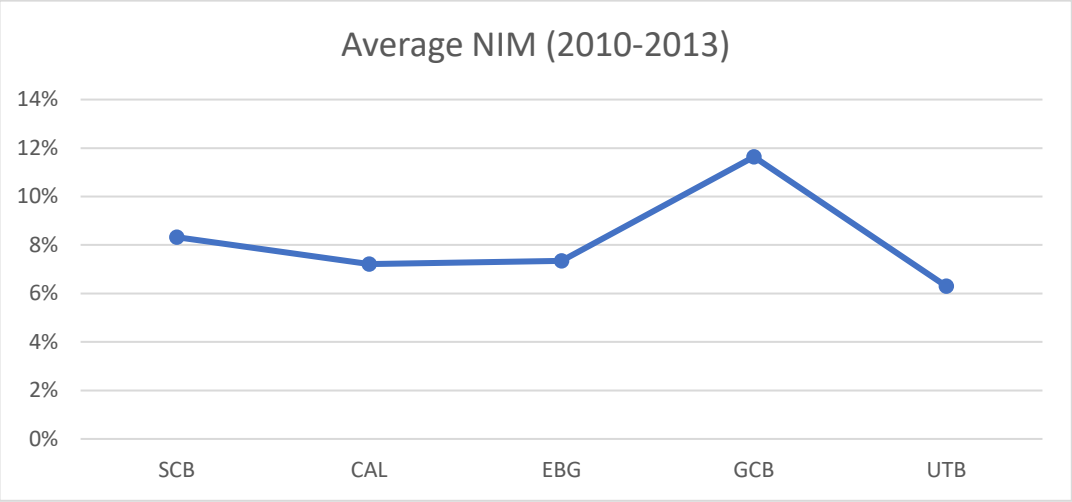
In Figure 4.20, the Net Interest Margins for the banks are depicted in a bar chart.



Source: The researcher

Figure 4.21: Line Chart - Average Net Interest Margin

Figure 4.21 below is an illustration of a Line Chart for the Average Net Interest Margins for the banks.



Source: The researcher

Table 4.21: Comparison of Net Interest Margin

2010	1	2	3	4	5
	GCB	**SCB**	**CAL**	**EBG**	**UTB**
	14%	9%	7%	7%	7%
2011	1	2	3	4	5
	GCB	**SCB**	**UTB**	**EBG**	**CAL**
	8%	8%	7%	6%	5%
2012	1	2	3	4	5
	GCB	**EBG**	**CAL**	**SCB**	**UTB**
	11%	8%	7%	7%	6%
2013	1	2	3	4	5
	GCB	**SCB**	**CAL**	**EBG**	**UTB**
	14%	9%	9%	8%	5%

Source: The researcher

By comparing the Net Interest Margins, the researcher noticed that although an average of 66% (as shown in table 4.21) of the total assets of the UTB was the contribution from loans during the period under review, they had the lowest average NIM as compared to the other banks. This could be attributed to the high incidence of non-performing loans as already indicated. The other banks have loan contributions to the total assets ranging between 19% and 63% but recorded higher Net Interest Margins than the UTB which had comparatively more loans in their books as shown in Table 4.22 to Table 4.26 that a greater percentage of the assets of UTB was made up of loans.

Table 4.22: Total Assets/Total Loans for UTB

UTB	**Total Loans**	**Total Assets**	**Total Loans / Total Assets**
	GH₵ '000	**GH₵ '000**	
2010	315,297.00	516,632.00	61%
2011	475,232.00	712,864.00	67%
2012	679,648.00	986,805.00	69%
2013	917,053.00	1,336,336.00	69%

Source: The researcher

Table 4.23: Total Assets/Total Loans for CAL

CAL	**Total Loans**	**Total Assets**	**Total Loans / Total Assets**
	GH₵ '000	**GH₵ '000**	
2010	256,634.00	509,992.00	50%
2011	411,582.00	809,364.00	51%
2012	747,385.00	1,162,855.00	64%

2013	980,407.00	1,564,074.00	63%

Source: The researcher

Table 4.24: Total Assets/Total Loans for GCB

GCB	Total Loans	Total Assets	Total Loans / Total Assets
	GH₵ '000	GH₵ '000	
2010	995,356.00	2,084,656.00	48%
2011	476,211.00	2,463,377.00	19%
2012	847,872.00	2,981,141.00	28%
2013	960,707.00	3,404,826.00	28%

Source: The researcher

Table 4.25: Total Assets/Total Loans for EBG

EBG	Total Loans	Total Assets	Total Loans / Total Assets
	GH₵ '000	GH₵ '000	
2010	496,043.00	1,521,229.00	33%
2011	849,893.00	2,132,183.00	40%
2012	1,396,514.00	3,428,070.00	41%
2013	2,126,820.00	4,694,261.00	45%

Source: The researcher

Table 4.26: Total Assets/Total Loans for SCB

SCB	Total Loans	Total Assets	Total Loans / Total Assets
	GH₵ '000	GH₵ '000	
2010	467,152.00	1,667,882.00	28%

2011	596,724.00	1,971,062.00	30%
2012	959,597.00	2,390,684.00	40%
2013	1,130,244.00	2,988,358.00	38%

Source: The researcher

Table 4.27 Table Showing the Overall CAMELS Ratings

In Table 4.27 below, the researcher combined all the results obtained from the various components of the CAMELS Analysis, where a scale of 1 to 5 (strong performance to unsatisfactory performance respectively) was applied for rating the various indicators analysed.

Indicator	**Ratio**	**Bank**	**4-Year Average (2010 - 2013)**	**Rating**	**Remarks**
Capital Adequacy	Capital Adequacy	SCB	18.38%	1	Strong performance and risk management practices that consistently provide for safe and sound operations
		CAL	16.78%	2	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		EBG	16.14%	2.5	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		GCB	14.25%	3	Flawed to some degree and is of supervisory concern
		UTB	10.71%	4	Poor performance and of serious supervisory concern.
Asset Quality		SCB	4.34%	4	Poor performance and of serious supervisory concern.

		CAL	2.98%	3	Flawed to some degree and is of supervisory concern
	Non-Performing Loans	EBG	2.76%	1	Strong performance and risk management practices that consistently provide for safe and sound operations
		GCB	2.93%	2	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		UTB	5.30%	5	Unsatisfactory performance that is critically deficient and in need of immediate remedial action.
Management Performance	Net Income per Employee (GH₵ '000)	SCB	120	1	Strong performance and risk management practices that consistently provide for safe and sound operations
		CAL	88	2	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		EBG	93	2	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		GCB	103	1	Strong performance and risk management practices that consistently provide for safe and sound operations
		UTB	23	5	Unsatisfactory performance that is critically deficient and in need of immediate remedial action.
Earnings	Return on Equity	SCB	39.25%	1	Strong performance and risk management practices that consistently provide for safe and sound operations
		CAL	22.15%	3	Flawed to some degree and is of supervisory concern

		EBG	33.00%	2	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		GCB	33.75%	2	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		UTB	16.15%	4	Poor performance and of serious supervisory concern.
Liquidity	Liquidity Ratio	SCB	23.01%	3	Flawed to some degree and is of supervisory concern
		CAL	29.39%	2.5	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		EBG	34.46%	2	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		GCB	57.27%	1	Strong performance and risk management practices that consistently provide for safe and sound operations
		UTB	15.50%	4	Poor performance and of serious supervisory concern.
Sensitivity	Net Interest Margin	SCB	8.32%	2	Satisfactory performance and risk management practices that consistently provide for safe and sound operations.
		CAL	7.21%	3	Flawed to some degree and is of supervisory concern
		EBG	7.35%	3	Flawed to some degree and is of supervisory concern
		GCB	11.64%	1	Strong performance and risk management practices that consistently provide for safe and sound operations

					Poor performance and of serious supervisory concern.
		UTB	6.30%	4	

Source: The researcher

4.4.4.9.7 Summary of the Analysis of the Soundness of Banks before the Failures

The CAMELS analysis as summarised in Table 4.30 above revealed that, although each of the banks suffered some challenges with respect to some of the indicators during the years under review, the UTB appeared to have challenges with most of the indicators for most of the years reviewed. The researcher believes this situation should have been identified by the regulators and managed before the bank's final collapse. Additionally, as a listed bank since the year 2010, the UTB failed the comply with the "Continuing Listing Requirements" (Ghana Stock Exchange, n.d.) of the Ghana Stock Exchange (GSE) by not publishing their annual reports after 2013. The bank was however sanctioned with a cessation in the trading of the UTB shares by the GSE on the 5th of January, 2017 (Ghana Stock Exchange, 2017).

Considering the regulatory framework of the Central Bank of Ghana and the Ghana Stock Exchange, these non-compliant actions should have triggered remedial or disciplinary actions immediately they occurred.

4.4.4.9.8 Conclusion from the Analysis of the Soundness of Banks before the Failures

From the results of the CAMELS analysis and the questions posed to the official of the Bank of Ghana, it can be concluded the effective regulatory compliance monitoring could have minimised the recent bank failures in Ghana. The prudential returns to the regulators by banks in Ghana include reports that monitor each parameter of the CAMELS analysis. Effective regulatory monitoring would have picked up on the issues confronting the banks which collapsed, for remedial actions to be taken.

The CAMELS Analysis answered the fourth research question which was "What was the health of the failed banks before the collapse?".

After the CAMELS analysis to ascertain the health of the selected banks before the bank failures, the researcher also performed a Regression Analysis to determine the relationship between banking failures and effective regulatory compliance monitoring based on the

premise that having identified the indicators of the health of a bank, the effective monitoring of these indicators would lead to more stable banks.

4.5 Establishing the Relationship Between the Indicators of the CAMELS Analysis and the Status of Banks

4.5.1 Regression Analysis

The regression analysis performed was used by the researcher to mathematically establish whether the indicators in the CAMELS analysis had any impact on whether a bank collapsed or not. This is because the causes of the Ghana banking sector failures, as obtained from the analysis of the theme of the causes of the bank failures, included the parameters in the CAMELS analysis. If it is established that there is a relationship between the status of a bank and the CAMELS indicators, it can then be concluded that effective regulatory compliance monitoring can identify and these issues. The regression analysis was, therefore, employed to determine the contribution each of these variables made to the status of the bank.

For the regression analysis, the Statistical Package for the Social (SPSS) was used. The independent variables employed in the analysis were Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Sensitivity; while the dependent variable was the status of the bank, which could either be collapsed or not collapsed.
Due to the unavailability of data for all the collapsed banks except UT Bank, the researcher performed two different regression analyses to deduce the relationship between the status of a bank(collapsed or not collapsed) and the indicators of the CAMELS analysis.

The Probit Regression Model, Goodness of Fit Test, Omnibus Test, Test of Model Effects and Parameter Estimates were determined through the Regression Analysis to determine the relationship between the status of a bank (as the dependent variable) and the indicators of the health of a bank. In each of the tests the P-value obtained led the researcher to either accept or reject the significance.

P-Value

P-value is a numerical value which ranges between zero (0) and one (1) and helps to determine the significance of the results of a test in comparison with the null hypothesis, where the null hypothesis indicates that there is no relationship between the variables being researched.When the *p*-value less than 0.05 ($p \leq 0.05$), then it is has statistical significance

that a indicates compelling evidence against the null hypothesis. Therefore, the null hypothesis is rejected, and the alternative hypothesis accepted.

A *p*-value which is greater than 0.05 (p> 0.05) does have not statistical significance and shows a strong confirmation for the null hypothesis. Thus, the null hypothesis is retained and the alternative hypothesis is rejected (Andrade, 2019).

4.5.1.1 Regression Analysis 1

The first analysis was performed using all banks in Ghana. Since data for some banks were unavailable, the researcher assigned zeros to the figures for where the bank details were unavailable. The independent variables chosen were Asset Quality, Liquidity and Profitability, which were based on the responses received from the survey analysis as being the causes of the recent bank failures in Ghana.

Table 4.28: Dependent and Independent Variables for Regression Analysis 1

Independent Variables	Dependent Variable
Asset Quality (Impairment/gross loan)	**Status of bank;** Collapsed or Not collapsed
Liquidity (liquid funds/total deposits)	
Profitability (Net Interest margin)	

i. The Probit Regression Model was used for this type of analysis since the dependent variable, status of bank could take only two values, (Collapsed or Not collapsed).
ii. Collapsed was used as the reference category and Not Collapsed as the response.
iii. The purpose of the model was to estimate the probability that an observation with particular characteristics will fall into a specific one of the categories; moreover, classifying observations based on their predicted probabilities is a type of binary classification model.
iv. Financial data from secondary sources (banks' financial reports) for the years 2010 to 2013 was analyzed.
v. The categorical variable information below shows 44.4% of the sampled banks were Collapsed and 55.6% were Not collapsed.

Table 4.29: Categorical Variable Information

			N	Percent
Dependent Variable	Status	Collapsed	32	44.4%
		Not Collapse	40	55.6%
		Total	72	100.0%

4.5.1.1.1 Goodness of Fit Test

The goodness of fit test is a statistical hypothesis test to see how well sample data fit a distribution from a population with a normal distribution. This test indicates if the sample data represents the data you would expect to find in the actual population or if it is skewed by any means. There are many different ways of determining the good-of-fit in a regression analysis which include the Anderson-Darling Test, Shipiro-Wilk Test and the Chi-Square Test.

The researcher chose the Chi-Square Goodness-of-fit test which is employed for finding out if an observed value is substantially different from what is expected by comparing the observed sample with what is expected.

The Pearson Chi-Square value of P=1.072 which is greater than 1.0 and out of the range of the acceptable values for P, indicates that the sample fitting was over-dispersed and could be attributed to the unavailability of data for some of the banks.

Table 4.30: Goodness of Fit Test Results

	Value	df	Value/df
Deviance	38.268	40	.957
Scaled Deviance	38.268	40	
Pearson Chi-Square	42.896	40	1.072
Scaled Pearson Chi-Square	42.896	40	
Log Likelihood[b]	-20.882		
Akaike's Information Criterion (AIC)	49.764		
Finite Sample Corrected AIC (AICC)	50.361		
Bayesian Information Criterion (BIC)	58.871		
Consistent AIC (CAIC)	62.871		

4.5.1.1.2 Omnibus Test

The omnibus test is a likelihood-ratio chi-square test of the current model versus the null (in this case, intercept) model. The P-value=0<0.05 and hence signifies that the test is significant. Based on the premise that even if only one variable exerts a significant effect on the dependent variable and the other does not, conclusions that may be drawn from the one significant variable.Therefore, though the goodness of fit test indicated that the model was over dispersed model, the Omnibus test indicated that the test was significant.

Table 4.31: Omnibus Test Results

Likelihood Ratio Chi-Square	df	Sig.
30.365	3	.000

4.5.1.1.3 Tests of Model Effects

The results below showed profitability is significant to the test as P=0.000<0.05. The remaining P-values for asset quality and liquidity which were 0.931 and 0.428 were not significant to the test i.e. P>0.05. The intercept which is constant is 8.84 has p-value =0.003<0.05 was significant to the test.

This result once again can be attributable to the over dispersed model due to inadequate data. However, it must be noted that profitability of banks is largely dependent on adequate liquidity and profitability among others. According to (Bordeleau & Graham, 2010), profitability is generally improved if banks hold some liquid assets. Additionally, according to (Ashoka, et al., 2020), asset quality has significant effects on the profitability of banks.

Therefore, once Profitability is significant, it is inherently implied that Liquidity and Asset Quality are also significant.

Table 4.32: Tests of Model Effects

Source	Type III		
	Wald Chi-Square	df	Sig.
(Intercept)	8.614	1	. 003
AssetQ	.008	1	.931
Liquidity	.627	1	.428
Profitability	13.698	1	.000

4.5.1.1.4 Parameter Estimates

The data in the regression coefficients' column are interpreted as follows:

- The **intercept** of minus 0.737 is not significant to the analysis as P=8.614>0.05.
- The coefficient of **AssetQ** which is 0.590 was significant to the test since **P=0.008<0.05.** This means that a unit change in Asset quality will increase chances that a bank will collapse.
- The coefficient of Liquidity which is minus 0.355 means a unit change in liquidity will reduce the chances of a bank collapsing. However, this was not significant to the test. P=0.627>0.05.
- The coefficient of profitability is 19.953. What this means is that a unit change in profitability will increase the chances of a bank collapsing. This result did not prove significant to the test i.e. P=13.698>0.05. This means, the profitability of bank may not determine whether the bank is collapsed or otherwise.
- Since the regression model contains independent variables that are statistically significant, a reasonably high R-squared value indicates that changes in the independent variables correlate with shifts in the dependent variable.

Table 4.33 : Parameter Estimates

Parameter	Regression Coefficients	Std. Error	95% Wald Confidence Interval		Hypothesis Test	
			Lower	Upper	Wald Chi-Square	df
(Intercept)	-.737	.2513	-1.230	-.245	8.614	1
AssetQ	.590	6.7948	-12.727	13.908	.008	1
Liquidity	-.355	.4477	-1.232	.523	.627	1
Profitability	19.953	5.3912	9.387	30.520	13.698	1
(Scale)	1[a]					

Table 4.34 : Parameter Estimates

Parameter	Hypothesis Test	Exp(B)	95% Wald Confidence Interval for Exp(B)	
	Sig.		Lower	Upper
(Intercept)	.003	.478	.292	.783
AssetQ	.931	1.805	2.970E-006	1096868.351
Liquidity	.428	.701	.292	1.687
Profitability	.000	462984943.129	11928.219	17970415837658.953
(Scale)				

4.5.1.1.5 Summary of Regression Analysis 1

From the Test of Model Effects and the Parameter Estimates, the researcher had Asset Quality, Profitability and Liquidity being significant to the test in at least one of the tests. Therefore the

regression equation will then be written as follows:

Status=0.590AssetQ-0.355Liquidity+19.953Profitability-0.737

4.5.1.1.6 Conclusion from Regression Analysis 1

This implies that liquidity, asset quality and profitability all had effects on whether a bank has collapsed in Ghana or not. Since liquidity and asset quality are the indicators which are monitored by the Central Bank of Ghana, then effective monitoring could have identified banks with liquidity and asset quality problems earlier to prevent their failures.

As a control for the Regression Analysis 1 where data for some banks were unavailable, the researcher performed a second regression analysis using the five selected banks which were used for the CAMELS Analysis since data for those banks were available.

4.5.2 Regression Analysis 2

The results obtained from the Goodness-of-fit test for the first regression analysis that involved all the banks albeit data for most of the collapsed banks was unavailable and therefore had to be represented by zeros, prompted the researcher to perform another test using the banks which were used for the CAMELS analysis.

For the second regression analysis, the sample space adopted by the researcher was the five banks used for the CAMELS analysis, namely: The Standard Chartered Bank Ghana, the GCB Bank, the Cal Bank, the Ecobank and the UT Bank. This was meant to test if any other factors would have an effect on the status of a bank if a smaller sample space was chosen.

Table 4.35: Dependent and Independent variables for Regression Analysis 2

Independent variable	Dependent variable
Liquidity	**Status of bank;** Collapsed or Not collapsed
CAR	
NPL	
ROE	

The Probit Regression Model was used for this type of analysis since the dependent variable, status of bank could only take two values, i.e. Collapsed or Not collapsed. Collapsed was used as the reference category and Not Collapsed as the response.

Table 4.36: Model Information for Regression Analysis 2

Dependent Variable	Status[a]
Probability Distribution	Binomial
Link Function	Probit

The purpose of the model was to estimate the probability that an observation with particular characteristics would fall into a specific one of the categories. Classifying observations based on their predicted probabilities is a type of binary classification model. Financial data from secondary sources (banks' financial reports) for four years (2010 – 2013) were analysed.

Table 4.37: Categorical Variable Information for Regression Analysis 2

			N	Percent
Dependent Variable	Status	Collapsed	4	20%
		Not Collapsed	16	80%
		Total	20	100%

The categorical variable information below shows 20.0% of the sampled banks were Collapsed and 80.0% were Not collapsed.

Table 4.38: Continuous Variable Information for Regression Analysis 2

	N	Minimum	Maximum	Mean	Std. Deviation

Liquidity	20	.12	.66	.3190	.16075
CAR	20	.09	.24	.1535	.04392
NPL	20	.01	.09	.0370	.02080
Covariate					
ROE	20	.08	.49	.2885	.12457
Sensitivity	20	.05	.14	.0810	.02469

The Continuous Variable Information below shows a dispersed sample as standard deviations move away from the mean. The Table also shows the highest and lowest measures among the samples analysed.

Table 4.39 : Goodness of Fit Results for Regression Analysis 2

	Value	df	Value/df
Deviance	.000	14	.000
Scaled Deviance	.000	14	
Pearson Chi-Square	.000	14	.000
Scaled Pearson Chi-Square	.000	14	
Log Likelihood[b]	.000		
Akaike's Information Criterion (AIC)	12.000		
Finite Sample Corrected AIC (AICC)	18.462		
Bayesian Information Criterion (BIC)	17.974		
Consistent AIC (CAIC)	23.974		

As stated earlier, the goodness of fit test is a statistical hypothesis test to see how well sample data fit a distribution from a population with a normal distribution. In this instance,

the Pearson Chi-Square value of P=0.00 was obtained and therefore indicating a more reasonable fit.

Table 4.40: Omnibus Test for Regression Analysis 2

Likelihood Ratio Chi-Square	df	Sig.
20.016	5	.001

The Dependent Variable was the Status of the bank and the independent variables (Model Intercepts) were Liquidity, CAR, NPL, ROE and Sensitivity. This test compares the fitted model against the intercept-only model.

The omnibus test explains whether the explained variance in a data is significantly greater than what the unexplained variance is. The P-value=0.001<0.05 signifies that the test is significant. If only one variable exerts a significant effect on the dependent variable and the other does not, then the omnibus test may be non-significant. This fact does not affect the conclusions that may be drawn from the one significant independent variable.

Table 4.41: Parameter Estimates for Regression Analysis 2

Parameter	Regression Coefficients	Std. Error	95% Wald Confidence Interval		Hypothesis Test
			Lower	Upper	Wald Chi-Square
(Intercept)	-41.297	28442.996	-55788.545	55705.952	.000
Liquidity	85.368	52045.7147	-101922.358	102093.094	.000
CAR	114.934	142046.324	-278290.746	278520.613	.000
NPL	118.874	0	-660612.037	660849.784	.000

ROE	79.135	337113.802 1	-108678.107	108836.377	.000
				671044.215	
Sensitivity	-197.041	55489.4084			
Scale	1[a]	342476.321 4			
			-671438.296		

The dependent Variable was the Status of the bank and the independent variables ((Model Intercepts) were Liquidity, CAR, NPL, ROE and Sensitivity, which were fixed at the displayed value.

Table 4.42: Results of Regression Analysis 2

Parameter	Hypothesis Test
	Sig.
(Intercept)	.999
Liquidity	.999
CAR	.999
NPL	1.000
ROE	.999
Sensitivity	1.000
(Scale)	

The following are the observations as evident in the data in Table 4.45 above;:

- The Regression Coefficients column has the various regression coefficients.
- The intercept of minus 41.297 is not significant to the analysis as P=0.999>0.05.
- The coefficient of Liquidity which is 85.368 was not significant to the test. That is, P=0.999>0.05. This means that a unit change in Liquidity will increase chances that a bank will collapse.
- The coefficient of CAR which is 114.934 means a unit change in liquidity will increase the chances of a bank collapsing. However, this was not significant to the test. P=0.999>0.05.
- The coefficient of NPL is 118.874. Meaning, a unit change in NPL will increase the chances of a bank collapsing. This result was not significant to the test.ie P=1.0>0.05.
- The coefficient of ROE is 79.135, implying that a unit change in ROE will increase the chances of a bank collapsing. This result was not significant to the test as P=0.999>0.05.
- The coefficient of sensitivity was minus 197.041(- 197.041) implies that a unit change in sensitivity will decrease the chances of a bank collapsing. This result was not significant to the test.ie P=1.0>0.05.
- The Regression equation will therefore be written as Status=85.368Liquidity+114.934CAR+118.874NPL+79.135ROE-197.041sensitivity-41.297

4.5.2.1 Summary of Regression Analysis 2

The Goodness of Fit Model indicated that the Pearson Chi-Square value of P = 0.00, which is less than one (1.00) shows a reasonable model. Additionally, the Parameter Estimates indicated that the status of a bank (collapsed or not collapsed) was dependent on the liquidity, capital adequacy, non-performing loans, return on equity, and sensitivity as proved and shown in the Regression Equation.

4.5.2.2 Conclusions from Regression Analyses

The purpose of the Regression Analyses was to test if there was any relationship between the dependent variable, which is the status of a bank(collapsed or not collapsed) and any of the independent variables, namely; liquidity, asset quality(NPL), capital adequacy and profitability (ROE).

The researcher undertook two different regression analyses as a control over the issue of the non-availability of data for the collapsed banks except the UT Bank.

In both of the scenarios, the results proved that the status of a bank in Ghana was dependent on at least one of the independent variables.

Since all the independent variables are indicators which are monitored by the Bank of Ghana and the regulators of the banking and financial industry in Ghana, then effective regulatory compliance monitoring could have identified non-compliance and possibly minimised the magnitude of the recent banking failures in Ghana.

4.6 Theme 5: Recommendations on How Such Failures Could be Minimised

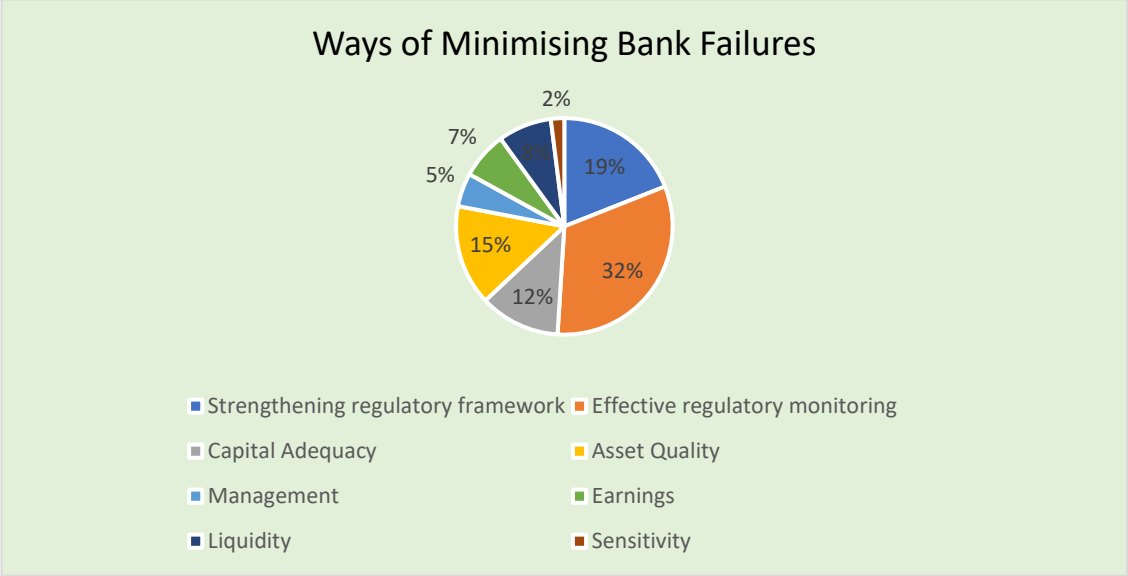
4.6.1 Ways of Minimising Future Failures

To minimise future bank failures, interviewees who took part in the Delphi Methodology suggested the following measures:

4.6.1.1 Survey question 12: How could the bank failures have been minimised?

In line with the responses to question on the causes of the bank failures, 32% of the respondents believed effective regulatory compliance monitoring could have minimised the bank failures; 19% wanted a strengthening the regulatory framework for banks in Ghana. This was followed by 15% who advocated for the reduction in the banks' bad assets of which non-performing loans played major roles. Respondents believed better credit risk analysis, a wholistic credit reference bureau and more suitable collaterals could improve the quality of banks' assets by reducing the incidences of non-performing loans. 12% of respondents also thought that improved capital adequacy could have prevented the failures. 22% indicated that better liquidity, earnings, management and sensitivity could have reduced bank failures in Ghana.

Figure 4.22: Chart for response to survey question 12



Source: The researcher

4.6.1.2 Strengthening of the regulatory framework of the Ghana Banking Sector with emphasis on monitoring.

The interviewees believed that the regulatory framework needed strengthening and, therefore, the amendment of the Bank of Ghana ACT 673 to Act 970 to plug certain loopholes and make the law more robust, was a step in the right direction. It must be noted, however, that the Bank of Ghana Act 673 was amended by the Parliament of Ghana to Act 930 on 14th September 2016 (The Parliament of the Republic of Ghana, 2016) after the former had been used to regulate the banking sector since 2004.

4.6.1.3 Building the capacity of banking supervision officials of the Bank of Ghana through training.

Interviewees believed that staff of the Banking Supervision Department of the Bank of Ghana needed to have capacity building through training and more enhanced Information Technology systems. For technical training, it was suggested that the regulator needed to recruit experienced personnel from the some of the commercial banks, who would be in a better position to identify critical issues from the reports banks submit due to their wealth of experiences in commercial banking.

Additionally, respondents wanted a more robust information technology system which had the ability to highlight any potential problem areas concerning banks before they crystallised into problems that could lead to bank failures.

4.6.1.3 Creating an enabling environment for supporting struggling banks through better engagement with the banks.

Interviewees wanted a congenial relationship between the regulator and the banks so that banks could open up to the regulator about challenges they were facing in order to access help instead of the scenario where banks were constantly afraid of punitive measures from the regulator.

To this end, participants suggested that the regulator needed to implement a procedure for banks to report difficulties when they occurred, instead of waiting to be found out by the regulators.

4.6.1.4 Revisiting the issue of the minimum required capital with a possible downward revision.

Some interviewees thought that the recent upward adjustment of the minimum capital for banks from GH₵ 120 million to GH₵400 million in order to strengthen the banking industry was too steep and must be reviewed downward in order to free some liquidity for banks to do business with.

4.6.1.5 Dealing with the issue of Non-Performing Loans.

Since non-performing loans have plagued banks in Ghana for many years and were contributory factors to the collapse of several of the banks, respondents suggested the following measures to solve this problem:

i. A designated court to prosecute loan defaulters.
ii. A better address system for houses in Ghana to track loan defaulters.
iii. An effective credit bureau for keeping data on borrowers from banks.

Respondents believed that if these measures were effectively implemented, it would go a long way to create an environment where loans defaults could not thrive.

4.6.1.6 Summary of the Analysis of How Such Failures Could be Minimised

The participants of the study suggested the following as ways in which bank failures on such a large scale within a short time could be minimised.

i. Improved adherence to the indicators of the CAMELS framework.
ii. Creation of an enabling environment to support struggling banks instead of solely focusing on punitive measures.
iii. Better management of non-performing loans through the creation of a credit reference bureau.

iv. Building the capacity of monitoring officers through training.
v. A more robust regulatory framework.

4.6.1.7 Conclusion from the Analysis of How Such Failures Could be Minimised

It can be concluded that the monitoring aspect of the regulatory function of the Bank of Ghana needs improvement as it would adequately cater for the other measures of minimising the failures.

4.7 Conclusions Drawn from the Data Analysis

Throughout the data analysis, it was observed that though the recent bank failures could be attributed to a number of reasons such as insolvency, illiquidity, poor corporate governance practices and regulation supervision lapses from the Bank of Ghana, it was also constantly reiterated by participants that since the regulators had been mandated by law to ensure the stability of the banking sector, all the causes should have been identified and addressed by the regulators early enough in order not to lead to the bank failures.

Additionally, there it was established through the regression analysis that there exists a relationship between effective compliance monitoring and bank failures because all the parameters listed by respondents as being responsible for the failures are supervised by the Bank of Ghana. Therefore, had these indicators been effectively monitored, the bank failures in Ghana would have been considerably minimised the bank failures in Ghana.

The data collection and analysis answered the research question “How can an effective regulatory compliance monitoring framework minimise bank failures in Ghana?” and met the following research objectives:

i. To examine the existing regulatory framework for banks in Ghana.
ii. To identify the loopholes in the monitoring framework of the Bank of Ghana.
iii. To identify the soundness of the failed banks before the failure.
iv. To examine the causes of the recent bank failures in Ghana.
v. To recommend and develop an effective regulatory framework that can help minimise such failures.

The researcher then proceeded to chapter five for a discussion of the findings of the data collection and analysis.

Table 4.43: Summary of the Findings and Conclusions from the Thematic Analysis

Theme	Findings	Conclusions
Existing Regulatory Framework for Banks in Ghana	The regulatory framework of the Bank of Ghana involves the Banking Supervision Department of the Bank of Ghana being in charge of ensuring the compliance of banks with the regulations governing their operations. There are Prudential Returns banks are required to submit to the regulator to monitor Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity. Frequency for submission of Prudential Returns by banks ranges from daily to annually. In addition to monitoring reports from banks, the regulator also conducts onsite monitoring of banks	From the list of the prudential returns that banks in Ghana are expected to report on to the Central Bank of Ghana, and the frequency of reporting requirements, the researcher concluded that it would be almost impossible for banks to hide their true statuses when monitoring is done efficiently.

	half-yearly, yearly or on ad hoc basis to confirm the correctness of the reports. Penalties for non-compliance may be fines or loss of operating license.	
Loopholes in the Regulatory Framework for Banks in Ghana	The main shortfalls identified were unfair application of sanctions when banks flouted regulatory requirements and ineffective supervision and monitoring.	Though the regulatory framework of the Bank of Ghana can generally be considered effective, there were some loopholes which some banks took advantage of and which led to the amendment of the Banking Law in 2016. The monitoring aspect of the regulatory function of the Bank of Ghana needs improvement.
Causes of the Recent Bank Failures in Ghana	The researcher identified the causes of the failures to be capital inadequacy, illiquidity, high rate of non-performing loans, low profitability and bad corporate governance. However, respondents for all the data collections methods believed that all the other reasons are indicators which are expected to be monitored	The fact that respondents believed that the bank failures were caused by indicators which must be monitored by the Bank of Ghana implies ineffective monitoring of compliance of banks to regulations played a major role in the failure of the banks in Ghana.

	by the regulator and therefore, the major reasons for the failures was ineffective regulatory compliance monitoring.	
Soundness of Banks in Ghana Before the Failures	Although each of the banks suffered some challenges with respect to some of the indicators during the years under review, the UTB (one of the banks which failed), appeared to have challenges with most of the indicators for most of the years reviewed. The Regression Analysis indicated that the status of a bank (collapsed or not collapsed) was dependent on the liquidity, capital adequacy, non-performing loans, return on equity, and sensitivity as proved and shown in the Regression Equation.	It can be concluded the effective regulatory compliance monitoring could have minimised the recent bank failures in Ghana because the prudential returns to the regulators by banks in Ghana include reports that monitor each parameter of the CAMELS analysis. Effective regulatory monitoring would have picked up on the issues confronting the banks which collapsed, for remedial actions to be taken.
Recommendations on How Such Failures Could be Minimised	Bank failures in Ghana can be minimised through the following ways: Improved adherence to the indicators of the CAMELS framework.	The monitoring aspect of the regulatory function of the Bank of Ghana needs improvement as it would adequately cater for the other measures of minimising the failures.

	Creation of an enabling environment to support struggling banks instead of solely focusing on punitive measures. Better management of non-performing loans through the creation of a credit reference bureau. Building the capacity of monitoring officers through training. A more robust regulatory framework.	

CHAPTER FIVE

CHAPTER FIVE: Discussion on Findings

5.0 Chapter Overview

This chapter discusses the findings of the research. The findings of the literature review and findings from the thematic data analyses are discussed in the chapter.

5.1 Findings and Discussions from the Literature Review

From the Literature Review, it was identified that financial systems are constituted of market-based, bank-based or legal-based organisations with components of financial institutions, financial assets, financial markets, financial instruments and financial regulators. The functions of the financial systems include clearing and settling of payments and pooling of financial transfers. For the purpose of this research, the researcher concentrated on the bank-based type of financial institutions.

Banks are critical in the amelioration of any problems which could arise if depositors and lenders dealt directly with each other without any intermediary. Through this intermediary role, banks provide the systems required for the attainment of the functions of financial systems. Thus, banks provide the channels for economies of nations to enforce monetary policies. According to (Bank of England, 2014), banks are types of financial institutions with the critical role of accepting deposits and giving out credit for the effective running of the financial system.

Though banks have been with mankind since 2000 BC, their forms and nature have metamorphosed over the years. Historians and scholars have had diverse opinions on the places of origin and the development of banking systems. (Kelman, 2016) placed it around the medieval renaissance in Italy (from the14th Century to the 17th Century). (Kashyap, et al., 2002) also posited that, economic historians (Roover, 1948), (Lane & Muller, 1985) and (Usher, 1943) confirmed that in Continental Europe, deposit banking evolved from money changing activities.

According to (Connors, 2017), from an institution for the safekeeping of currencies, banking has evolved over the years to involve regulation and redistribution of financial reserves of countries, trade and participation in business deals. Today, banking covers an extensive variety of activities of varying degrees of complexity (Choudhry, 2018).
There are different types of banks today, which are identified based on the services they offer. These include Commercial Banks, Investment or Merchant Banks, Co-operative and

Agricultural Banks, Industrial Banks, Universal Banks and Central Banks. Each type of bank provides a specialised banking service in the banking system.

Since there are various stakeholders such as shareholders, staff and governments who are interested in the business of banking, the performance of banks needs to be measured. The performances of banks are, therefore, assessed periodically using financial and non-financial Key Performance Indicators (KPIs). Key financial indicators for measuring the performances of banks include asset quality, capital adequacy, earnings (profitability) and liquidity. Non-financial indicators include customer retention and market penetration. These KPIs are measured against standards, which are usually ratios.

In addition to their performances, banks are also assessed to ascertain their soundness. This is important because banks play such critical roles in the economies of many nations, therefore ensuring that they are sound cannot be overemphasised. According to (Restoy, 2017) of the Bank for International settlement, the CAMELS rating system is a great tool for assessing the soundness of banks. This rating system assesses the Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Sensitivity. In spite of the availability of the Key Performance Indicators for measuring the performance of banks and the CAMELS analysis for measuring soundness of banks, some banks still fail. Such failures, according to (Calomiris & Mason, 1997), (OCC, 1988), (Mizen, 2008) and (Brunnermeier, 2009), can be caused by fraud, low returns, low profitability, inefficient management policies, and non-performing loans.

The critical role played by banks in financial systems and economies implies that any difficulties in the banking sector will have far reaching adverse effects. Aside the immediate effects of loss of employment and a decline in tax revenue to the government, globalisation and interconnection of countries and businesses have underscored the dangers of systemic risks. The global banking crisis of the years 2007-2009, which started in the United States of America, spread to many nations of the world (Fidrmuc & Korhonen, 2010). A number of interventions have been suggested by researchers as ways of minimising bank failures. Among these interventions are effective supervision (European Central Bank: Banking Supervision, 2018), harmonisation of policies and laws (Atay, 2006), changing the management and banking philosophy of ailing banks (OCC, 1988), regulatory interventions (Bagehot, 1873) (Acharya & Yorulmazer, 2007), deposit insurance for banks (IADI, 2005) and the creation of a financial safety net (Cariboni, et al.,

2016). The researcher concentrated on effective regulatory compliance monitoring or supervision as a way of minimising bank failures in order to meet the objectives of this research.

Just like many organisations, banks have a set of regulations that govern their operations which they are expected to comply with. These regulations are monitored by regulatory institutions with the responsibility of enforcing the set rules and regulations and sanctions are applied if banks fail to comply. Regulatory compliance has evolved over time from the period when regulators only provided a set of rules which had to be met by banks to currently involve the identification of the risks banking institutions are confronted with and finding the appropriate mitigating factors (Haynes, 2005). Today, supervisory bodies have the responsibility of monitoring the financial health of banks through the enforcement of legislature and regulatory policies (Lopez, 1999).

With the study focussed on the Ghana banking Sector, the researcher reviewed some literature on the country. Having gained independence in 1957, the economy of Ghana as well as its banking sector has undergone many changes. Before the on-surge of the banking failures in the year 2017, the Ghana Banking Sector had grown from the Bank of British West Africa (BBWA) opening in Accra during the Gold Coast era in the year 1896 to a sector with thirty-six (36) banks. The regulator of the sector is the Bank of Ghana, which was mandated with the Bank of Ghana Acts 930, (Bank of Ghana, 2018), for the regulation, supervision and direction of the banking system in Ghana to ensure safe and sound operations. The banking failures in Ghana resulted in the reduction of the number of banks in the country to twenty-three (23).

The analysis of the literature revealed that, though a number of research studies have been conducted by (Banahene, 2018), (Benson, 2019) , (Biekpe, 2011), (Adam & Agbemade, 2012) and (Tweneboah-Koduah & Farley, 2016) on the banking sector in Ghana, none has addressed the issue of how effective regulatory compliance monitoring could minimise bank failures in Ghana. This research has, therefore, helped in bridging this gap in the literature, and has contributed to banking literature and practice.

5.2 Theme 1: Existing Regulatory Framework for Banks in Ghana

The researcher identified that Banks in Ghana are regulated by the Bank of Ghana, with the Securities and Exchange Commission providing additional oversight for banks listed on the Ghana Stock exchange.

A study of the Banking Supervision Department (BSD) of the Bank of Ghana's list of reports required from banks indicated that banks were required to send various reports to monitor liquidity, loans, large exposures in loans and deposits, capital adequacy, profitability, balance sheet (assets and liabilities), current year results and foreign currency exposures. These reports which are monitored daily, weekly, monthly, quarterly, bi-annually, and annually, monitor the liquidity, quality of assets and liabilities, sensitivity to foreign currency exposures, capital adequacy, profitability, composition of the Board of Directors and senior Management of banks in Ghana. It was also discovered that, since Bank of Ghana has adopted the Basel Framework for Banking Supervision, for applicable parameters such as the Capital Adequacy ratio, these are aligned to those of the Basel Framework.

In addition to collection of the routine statutory reports, the Banking Supervision Department also conducts routine and adhoc on-site monitoring of banks to confirm the veracity of the routine reports sent by the banks for prudential purposes through bank audits.

After analysing data collected through the examination of secondary material, questionnaires and semi-structured interviews on the theme of the regulatory framework of the Bank of Ghana, it was identified that as mandated by the Bank of Ghana law, the Bank of Ghana, through the Banking Supervision Department, collects and analyses Prudential Returns from banks which help the regulator to determine the soundness of individual banks and the industry as a whole.

Once it was established existing regulatory framework of the Central bank of Ghana for the banking industry had been established by the researcher, the next step was to investigate if there were any loopholes in the existing framework.

5.3 Theme 2: Loopholes in the Regulatory Framework for Banks in Ghana

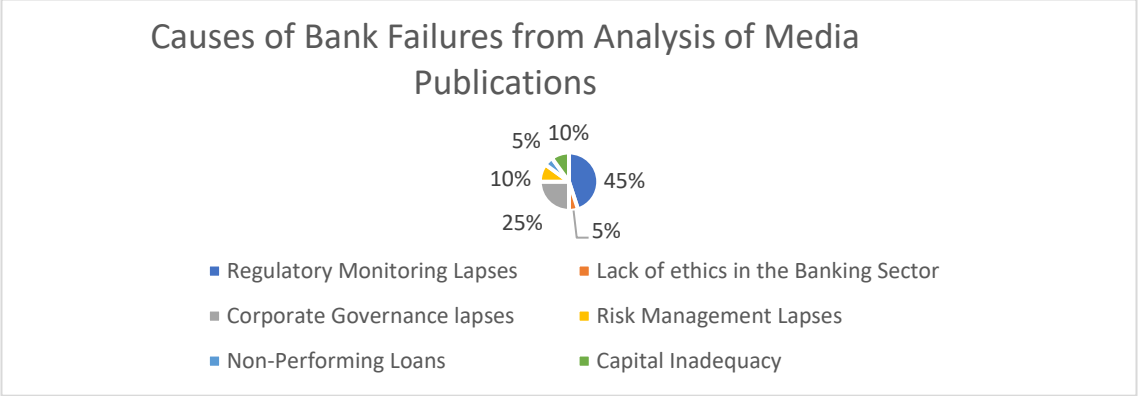
Banks found floating any of the regulatory requirements are expected to be sanctioned by the regulator, which could be a fine or loss of the operating licence. However, the researcher obtained information from some of the respondents who thought that the sanctions were not fairly applied because more banks should have had their licences revoked per the criteria applied to some of the ones that failed. Therefore, one of the identified loopholes in the regulatory system was the fair application of sanctions across all the banks.

Another challenge identified monitoring aspect of the regulatory framework as this issue came up strongly in the review of the online publications in the Ghanaian media space on the causes of the recent bank failures, the questionnaires and the interviews. Respondents believed that the lack of effective regulatory compliance monitoring allowed the other identified causes of the bank failures to go unchecked until the banks failed.

5.4 Theme 3: Causes of the Recent Bank Failures in Ghana

The researcher also studied various business articles in the Ghanaian media space by searching for articles from internet search engines using the phrases “reasons for the recent bank failures in Ghana”, “causes of the recent bank failures in Ghana”, “why did the banks fail in Ghana?”. A total of eleven articles were studied out of which twenty reasons were cited by the writers as being the causes of the bank failures. From the summary, it was identified that out of twenty reasons given by the writers studied, nine (45%) attributed the failures of the banks in Ghana to Regulatory Monitoring Lapses, one (5%) to lack of ethics in the banking sector, five (25%) to ineffective corporate governance structures, two (10%) to Risk Management lapses, one (5%) to non-performing loans and two (10%) to capital inadequacy as depicted in the Pie Chart in Figure 5.1.

Figure 5.1



Source: The researcher

With the majority of respondents attributing the bank failures, to regulatory lapses and submitting that all the other reasons cited for the failures were aspects of the monitoring framework of the Central bank of Ghana, it can be concluded that the major reasons why the banks failed was due to ineffective regulatory compliance monitoring.

5.5 Theme 4: Soundness of Banks in Ghana Before the Failures

Respondents for the survey data collection indicated that the soundness or health of banks in Ghana could be identified through an assessment of capital adequacy, asset quality, management, earnings, liquidity and sensitivity. However, the recent bank failures were primarily attributed to lapses in the regulatory framework, with emphasis on monitoring. Other reasons cited were capital inadequacy, bad asset quality, inefficient corporate governance structures and low profitability. Suggestions were made for the regulator to strengthen the monitoring of the compliance of banks to the regulatory requirements, which they believed could effectively manage all the other causes of the banking failures.

For the CAMELS analysis, the researcher assessed the Capital Adequacy, Asset Quality, Management, Earnings Liquidity and Sensitivity of five selected banks. A CAMELS analysis of five selected banks from Ghana was performed by the researcher based on the years 2010 to 2013 annual reports of the banks. This was because the most recent available financial statement of one of the banks that collapsed, the UT Bank, was for the year 2013. To perform the CAMELS analysis, six ratios namely Capital Adequacy Ratio (CAR), Loan Loss Rate, Net Income to Employee Ratio, Return on Equity (ROE), Liquid Assets to Total Assets; and Net Income to Total Assets were used. The researcher analysed five selected banks based on their 2010 to 2013 annual reports for the CAMELS analysis. The banks were selected to represent the different ownership structures of banks in Ghana. These included Ghanaian ownership, foreign ownership, majority government

shareholding, African bank and one defunct bank. The Cal Bank represented the Ghanaian owned bank, the Standard Chartered Bank has foreign ownership, the GCB Bank has majority government shareholding, the Ecobank is a Pan African bank and the UT Bank is one of the failed banks. There was only one defunct bank because data for the other defunct banks were not available. The UT Bank, the only defunct bank included in the analysis, had data till the year 2013 because as part of the requirements of being a company listed on the Ghana Stock (GSE), they were required to publish their results. However, even publication of the annual reports of UT Bank ceased after the year 2013.

The CAMELS analysis revealed that although each of the banks suffered some challenges with respect to some of the indicators during the years under review, UTB appeared to have challenges with most of the indicators for most of the years reviewed. This situation, the researcher believes, should have been identified by the regulators and managed before the bank's final collapse. Additionally, as a listed bank since the year 2010, the UTB failed to comply with the "Continuing Listing Requirements" (Ghana Stock Exchange, n.d.) of the Ghana Stock Exchange (GSE) by not publishing their annual reports after the year 2013. The bank was however sanctioned with a halt in the trading of the UTB shares by the GSE on 5th January 2017 (Ghana Stock Exchange, 2017). Considering the regulatory framework of the Central Bank of Ghana and the Ghana Stock Exchange, these non-compliant actions should have triggered remedial or disciplinary actions.
The CAMELS analysis helped the researcher to determine the health of the selected banks before the bank failures started in the year 2017.

Having determined the health of the selected banks before the bank failures, the researcher conducted a Regression Analysis to mathematically determine whether the indicators in the CAMELS analysis had any impact on whether a bank collapsed or not. This is because the causes of the Ghana banking sector failures as obtained from the qualitative analysis included the parameters in the CAMELS analysis. Therefore, if there is a relationship between the status of a bank and the CAMELS indicators, then it could be concluded that effective monitoring can identify these issues. The Regression Analysis was, therefore, employed, to determine the contribution that each of these variables made to the statuses of the banks. The Statistical Package for Social Sciences (SPSS) was used for the analysis. The independent variables were Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Sensitivity while the dependent variable was the status of the bank, which could either be collapsed or not collapsed.

Two separate Regression Analyses were performed due to the unavailability of data for all the collapsed banks except the UT Bank Ghana Limited. The first analysis was performed using all banks in Ghana. Since data for some banks were unavailable, the researcher assigned zeros to the figures that were unavailable. The independent variables chosen were Asset Quality, Liquidity and Profitability, which were based on the responses received from the survey analysis as being the causes of the recent bank failures in Ghana.

From the Test of Model Effects and the Parameter Estimates, the researcher had Asset Quality, Profitability and Liquidity being significant to the test in at least one of the tests. The regression equation will ,therefore, be written as:

Status=0.590AssetQ-0.355Liquidity+19.953Profitability-0.737

This implied that liquidity, asset quality and profitability had effects on whether a bank has collapsed in Ghana. Since liquidity and asset quality were indicators which were monitored by the Central Bank of Ghana, then, it can be concluded that effective monitoring could have identified the banks with liquidity and asset quality problems early enough to prevent the bank failures in Ghana.

The researcher undertook two different regression analyses as a control measure over the issue of the non-availability of data for the collapsed banks except the (UT) Bank.
In both of the scenarios, the results proved that the status of a bank in Ghana was dependent on at least one of the dependent variables.

Since all the independent variables are indicators which are monitored by the Bank of Ghana, the regulators of the banking and financial industry in Ghana, then it can be concluded that effective regulatory compliance monitoring could have identified non-compliance and possibly minimised the incidence and magnitude of the recent banking failures in Ghana.

5.6 Theme 5: Recommendations on How Such Failures Could be Minimised

The opinions of some industry experts were sought by the researcher in a Delphi Technique where sixteen respondents were engaged in semi-structured interviews. In

addition to confirming the findings of the survey analysis, they added the dimension of lapses in the Bank of Ghana Act 673 which was in effect until it was amended to Act 970 in 2016. According to the specialists, loopholes in the previous law allowed banks to get away with non-compliance.

An official from the Bank of Ghana who was interviewed for a reaction to the findings confirmed that, the Bank of Ghana was mandated by the Banking Act to regulate the banking industry in Ghana. It was also gathered by the researcher from the Bank of Ghana official that, although the regulatory framework of the Bank of Ghana could generally be considered effective, there were some loopholes which led to the amendment of the Banking Law in 2016. To determine the health of the banks in Ghana, the researcher was informed that the Banking Supervision Officials from the Bank of Ghana monitored the health of banks by monitoring certain indicators, usually ratios, and comparing them with approved standards. Some of the causes of the recent bank failures in Ghana as indicated by the Bank of Ghana Official included inadequate capitalisation, illiquidity and high rates of non-performing loans.

5.7 Conclusion of Discussion of Findings

Equipped with these findings, the researcher proceeded to draw conclusions, highlight contribution of this research to knowledge, literature and practice, and make recommendations. These are all discussed in the following chapter, Chapter Six.

CHAPTER SIX

CHAPTER SIX: Conclusions, Contributions and Recommendations

6.0 Chapter Overview

This chapter concludes the research by discussing the conclusions reached on the objectives and analyses, the contributions the research made to knowledge, literature and practice and the recommendations made. The chapter also called for the need for further research in this subject area. The conclusions are discussed based on the themes Existing Regulatory Framework for Banks in Ghana; Loopholes in the Regulatory Framework for Banks in Ghana; Causes of the Recent Bank Failures in Ghana; Soundness of Banks in Ghana Before the Failures; Recommendations on How Such Failures Could be Minimised.

6.1 Theme 1: Existing Regulatory Framework for Banks in Ghana

The survey data analysis revealed that the Ghana Banking System is regulated by the bank of Ghana and the Securities and Exchange Commission for listed banks. As part of their regulatory monitoring duties, the Bank of Ghana, through the Banking Supervision Department, is mandated to collect routine reports from banks on weekly, monthly, quarterly, half-yearly and yearly basis to ascertain the health of banks. Non-compliant banks are expected to be fined or in extreme conditions, a revoking of their banking licence is applied.

The fact that respondents believed that the bank failures were caused by indicators which had to be monitored by the Bank of Ghana, implies that, ineffective monitoring of the compliance of banks to regulations, played a major role in the failure of the banks in Ghana.

The conclusion from the Survey Analysis is that since the respondents believed that the bank failures were caused by indicators which were supposed to have been monitored by the regulator, then the issue of ineffective regulatory monitoring played a major role in the recent bank failures in Ghana.

With this conclusion from the survey data analysis, the researcher conducted some interviews to gain insights from experienced banking professionals, seasoned lawyers and an official of the Central Bank of Gon the results from the survey. The semi-structured interviews confirmed the findings on the regulatory framework of the Bank of Ghana from the questionnaires.

6.2 Theme 2: Loopholes in the Regulatory Framework for Banks in Ghana

From the responses of the survey analysis conducted through questionnaires, it was concluded that, the main causes of the recent bank failures in Ghana were bad assets (non-performing loans), ineffective regulatory compliance monitoring, liquidity, profitability and ineffective corporate governance practices. Since all the reasons given by respondents as being the causes of the recent bank failures (non-performing loans, illiquidity and ineffective corporate governance practices) were all indicators monitored by the regulator, it is implied that effective monitoring of the compliance of banks with these parameters could have minimised the magnitude of the recent bank failures in Ghana. Therefore, the lack of effective monitoring is one of the loopholes in the regulatory framework.

The responses from the survey analysis were furthered buttressed by the responses the researcher obtained from the interviews where industry experts agreed that the regulatory framework of the banking sector in Ghana needed to be strengthened since the failures had been caused by poor regulatory supervision leading and deficiencies in the previous banking law (BOG Act 673) which led to high non-performing loans, illiquidity and ineffective corporate governance practices. Another identified shortfall of the regulatory framework is the lack of unbiased implementation of sanctions when banks do not meet regulatory requirements.

6.3 Theme 3: Causes of the Recent Bank Failures in Ghana

The researcher concluded from the analysis of the literature review of selected media articles from Ghana that, though many reasons were cited by the writers of the various articles analysed as being the causes of the recent bank failures in Ghana, the regulator, through the Banking Supervision Department of the Bank of Ghana was ultimately responsible for the supervision of the activities of banks in Ghana to ensure compliance with regulations in order to avoid or minimise failures. It was evident from the various perspectives analysed that, though different reasons such as insolvency, inadequate capitalisation, high levels of non-performing loans, regulatory monitoring lapses, lack of ethics, ineffective corporate governance, auditing, political and shareholder interference were cited as being responsible for the recent bank failures in Ghana, one theme that ran through was the fact that, irrespective of the challenges faced by the banks, it was the responsibility of the regulators to ensure a sound banking system. This implied, according to the writers of the articles analysed, that, effective regulatory compliance monitoring

could have minimised the recent bank failures in Ghana. The researcher therefore concluded the that though the bank failures were caused by many factors such as illiquidity and high rate of non-performing loans, but monitoring could have addressed these issues earlier.

6.4 Theme 4: Soundness of Banks in Ghana Before the Failures

The CAMELS Analysis, which was conducted to test the soundness of some selected banks in Ghana before the failures started in the year 2017, revealed that although each of the banks suffered some challenges with respect to some of the indicators during the years under review, the UT Bank (one of the banks which failed), appeared to have challenges with most of the indicators for most of the years reviewed. The researcher believes this situation should have been identified by the regulators and managed before the bank's final collapse.

From the results of the CAMELS analysis, it can be concluded that, the banks which failed were not sound according to the parameters of the CAMELS framework.

A Regression Analysis was performed to determine if there was any relationship between the soundness of banks as indicated by the CAMELS analysis and whether a bank failed or not. The Regression Analyses which tested if there was any relationship between the dependent variable, which was the status of a bank (collapsed or not collapsed) and any of the independent variables, namely, liquidity, asset quality(NPL), capital adequacy and profitability (ROE). The researcher undertook two different regression analyses as a control over the issue of the non-availability of data for the collapsed banks expect the UT Bank. In both scenarios, the results proved that the status of a bank in Ghana was dependent on at least one of the dependent variables. Since all the independent variables are indicators which are monitored by the Bank of Ghana, the regulators of the banking and financial industry in Ghana, then it can be concluded effective regulatory compliance monitoring could have identified non-compliance and possibly minimised the incidence and magnitude of the recent banking failures in Ghana.

6.5 Theme 5: Recommendation of an Effective Regulatory Framework

Based on the conclusions from the analysis, the research has made the following recommendations:

1. The researcher recommends the establishment of a Code of Ethics for the Ghana Banking Sector to guide the activities of Bankers to be more honest, transparent and conduct the banking businesses with integrity.
2. There is the need for the establishment of a Ghana Corporate Governance Code to make the activities of members of the Board of Directors of institutions more transparent.
3. To resolve the persistently high non-performing loans, the researcher recommends a better addressing system for buildings to track loan defaulters, a properly function credit bureau and a legal structure to rapidly prosecute loan defaulters.
4. The researcher believes that when the issue of non-performing loans is resolved, banks will have better control of their liquidity situations and better-quality assets.
5. The researcher believes that effective regulatory can be carried out within a robust regulatory framework and, therefore, believes that the revision of the banking law from ACT 673 to Act 930 in order to plug any loopholes that encouraged non-compliance is a step in the right direction.
6. In addition to the more robust banking law, the research recommends adequate resourcing of banking supervisors. Adequate resourcing will include the following:
    i. Training of staff in the Banking Supervision Department of the Bank of Ghana in commercial practices to identify any malpractices by banks. In line with this, the research also recommends the hiring of experienced staff from the commercial banks to strengthen the capacity of the Banking Supervision Department (BSD) the Bank of Ghana.
    ii. In place of the current system of the submission of regulatory returns to the Central Bank through the email and printed copies, the researcher suggests a robust Information Technology (IT) system with an early warning system embedded where banks can be monitored in real time and regulatory breaches addressed before they crystallise into problems which can cause bank failures.
    iii. Periodic evaluation of the regulatory framework to plug any loopholes to avoid the situation where banks are able to take advantage of such loopholes to bypass regulatory requirements.

iv. Penalise banking supervision officials culpable of not monitoring effectively.

The researcher believes that if these recommendations are implemented by the Bank of Ghana, which is the regulator of the banking sector in Ghana, the monitoring of regulatory compliance in Ghana will be greatly improved and, hopefully, bank failures of the magnitude which occurred between the years 2017 and 2018 will not be repeated.

6.5.1 Recommended Regulatory Compliance Monitoring Framework for Banks in Ghana

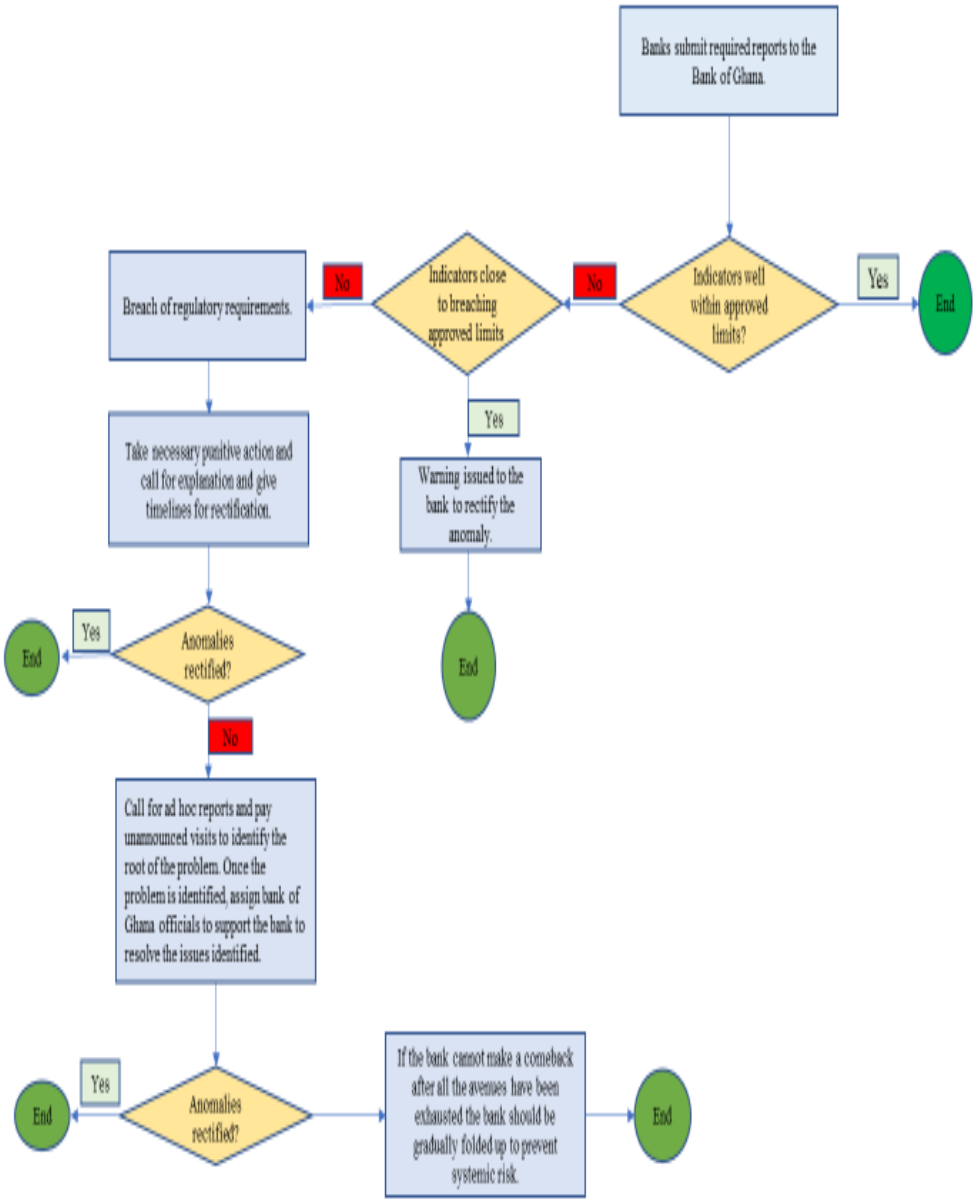
Table 6.1: Recommended Regulatory Compliance Monitoring Framework for Banks in Ghana

Regulatory Requirements	**Findings**	**Actions by the Regulator**
Banks submit required reports to the Bank of Ghana through an electronic platform programmed to flag outliers of regulatory indicators.	Indicators well within approved limits.	No action.
	Indicators close to breaching approved limits.	Warning issued to the bank to rectify the anomaly.
	Breach of regulatory requirements.	Take necessary punitive action and call for explanation and give timelines for rectification.
		If situation persists, call for adhoc reports and pay unannounced visits to identify the root of the problem. Once the problem is identified, assign bank of Ghana officials to support the bank to resolve the issues identified.

		If the bank cannot make a comeback after all the avenues have been exhausted the bank should be gradually folded up to prevent systemic risk.

Source: The researcher

Figure 6.1 Flowchart for Recommended Regulatory Compliance Monitoring Framework for Banks in Ghana



Source: The Researcher

6.11 How Research Objectives Were Met

The objectives of the research were:

i. To examine the existing regulatory framework for banks in Ghana.

ii. To identify the loopholes in the monitoring framework of the Bank of Ghana.

iii. To identify the soundness of the failed banks before the failure.
iv. To examine the causes of the recent bank failures in Ghana.
v. To recommend and develop an effective regulatory framework that can help minimise such failures.

Additionally, all the following research questions have been answered:

i. What is the regulatory framework for banks in Ghana?
ii. Are the regulations of banks in Ghana effective?
iii. What caused the recent bank failures in Ghana?
iv. What was the health of the failed banks before the collapse?
v. How could the bank failures have been minimised?

Based on the research findings and the recommendations made by the research, all the research objectives have been met. The research objectives were met, and the research questions answered through the thematic analysis of the data collected as shown in Table 6.2 below.

Table 6.2: How Research Objectives Were Met

Research Objective	Theme	Conclusion
To examine the existing regulatory framework for banks in Ghana.	Existing Regulatory Framework for Banks in Ghana	Ghana Banking System is regulated by the bank of Ghana and the Securities and Exchange Commission for listed banks. As part of their regulatory monitoring duties, the Bank of Ghana, through the Banking Supervision Department, is mandated to collect routine reports from banks on weekly, monthly, quarterly, half-yearly and yearly basis to ascertain the health of banks.

To identify the loopholes in the monitoring framework of the Bank of Ghana.	Loopholes in the Regulatory Framework for Banks in Ghana	The identified loopholes were poor regulatory supervision, deficiencies in the previous banking law (BOG Act 673) and the lack of unbiased implementation of sanctions when banks do not meet regulatory requirements.
To identify the soundness of the failed banks before the failure.	Soundness of Banks in Ghana Before the Failures	It was identified from the CAMELS Analysis that UT Bank, one of the banks which failed was not sound in the years leading to the bank failures.
To examine the causes of the recent bank failures in Ghana.	Causes of the Recent Bank Failures in Ghana	Though the bank failures were caused by many factors such as illiquidity and high rate of non-performing loans, but monitoring could have addressed these issues earlier.
To recommend and develop an effective regulatory framework that can help minimise such failures.	Recommendation of effective regulatory framework.	A new framework involving an early warning system and training for regulatory monitoring officials recommended.

Source: The researcher

6.5 Summary of the Conclusions Drawn from the Data Analysis

Throughout the data analysis, it was observed that though the recent bank failures could be attributed to a number of reasons such as insolvency, illiquidity, poor corporate governance

practices and regulation supervision lapses from the Bank of Ghana. It was also constantly reiterated by participants that since the regulator had been mandated by law to ensure the stability of the banking sector, all the causes should have been identified and addressed by the regulator to prevent the bank failures.

Additionally, it was established through the regression analysis that there exists a relationship between effective compliance monitoring and bank failures because all the parameters listed by respondents as being responsible for the failures were supervised by the Bank of Ghana. Therefore, if these indicators are effectively monitored, bank failures will be minimised.

6.6 Contributions to Knowledge (Academia), Literature and Practice

The importance of this research is seen by academia, literature and professional practice in banking. Therefore, the research has contributed to knowledge, literature and practice.

6.6.1 Contribution of the Research to Knowledge (Academia)

This research work has added to the body of knowledge on the causes of Bank Failures, Regulatory Framework for banks in Ghana, Regulatory Compliance Monitoring and the impact that Effective Regulatory Compliance Monitoring can have on banking sectors. Additionally, it will serve as a reference material for business students and encourage more research in the topics discussed.

6.6.1.1 Contribution to the Knowledge on Banking Failures

It was identified during the literature review that although there have been a lot of research on the Ghana banking sector, there was a theoritical gap of the effect of regulatory compliance monitoring on bank failures in Ghana. This research therefore fills that theoritical gap and provided new addition to literature. Additionally, this research has reiterated calls by the Basel Committee for Banking Supervision of the Bank for International Settlement for a careful look at the global causes of bank failures. Though the specifics of these failures may vary depending on the country in which they occur, most of these failures have underlying factors related to the soundness of the bank as indicated by the review of literature of the CAMELS Analysis.

The research also threw more light on the effect of these failures which include the loss of funds by individual customers if there was no deposit insurance in place (Ramirez, 2011); the effect on the economy of the country where the bank failure occurred as a result of the

loss of employment, taxes and a possible bailout of the bank; and the global effect due to the interconnectivity of countries and the possible global contagion effect (Gay & Timme, 1991).

For Africa, this research identified that though the causes of bank failures are not too different from other parts of the world, some bank failures could also be caused by political activities and governmental interference in the operations of the banks (Honohan & Beck, 2007).

Ghana, being the focus of this research has experienced many bank failures in the past with different underling factors but the recent large-scale banking failures occurring between the ears 2017 and 2018 were mainly caused by lapses in regulatory compliance monitoring as identified b this research.

6.6.1.2 Regulatory Framework for Banks in Ghana

The research has identified the loopholes in the regulatory framework for banks in Ghana that contributed to the bank failures. These lapses were weaknesses in the law and ineffective monitoring. Hitherto, banking failures in Africa have been erroneously linked to political instability and government interference. It is now evident from this research that, contrary to this long-held belief, lapses in regulatory frameworks could also lead to bank failures (Nyantakyi & Sy, 2015). This has added to the body of knowledge on banking, the importance of ensuring a robust legal system and an efficient regulatory monitoring system.

From this research, practitioners in business schools must educate students about the importance of ensuring a robust regulatory framework for banking systems.

6.6.1.3 Regulatory Compliance Monitoring

Existing knowledge on Regulatory Compliance emphasise on the adherence of organisations to laid down regulations. For banks, the era after the global banking crises of 2008 to 2009 led to a myriad of new regulations for the global banking sector. The emphasis has been on the banks to ensure compliance with regulations. However, this research has drawn attention to the fact that it is equally important to maintain an efficient monitoring system to ensure the adherence of banks to the regulations. Academia must therefore la more emphasis on the monitoring aspect of compliance with more education on effective monitoring through journal articles, conference papers and books.

6.6.2 Contribution of the Research to Literature

From the Literature Review conducted by the researcher, it was revealed that, although a number of research studies have been conducted by (Banahene, 2018), (Benson, 2019) , (Biekpe, 2011), (Adam & Agbemade, 2012) and (Tweneboah-Koduah & Farley, 2016) among others, about the Ghana Banking Sector, no research has addressed the issue of how effective regulatory compliance monitoring could minimise bank failures in Ghana. This research is, therefore, a rich contribution to the literature on regulatory compliance monitoring in the Ghana Banking Sector.

6.6.3 Contribution of the Research to Professional Banking Practice

The findings of this research will be beneficial to both the regulator and the commercial banks in the Ghana Banking Sector.

To the commercial banks, the findings, which emphasise the importance of compliance to regulatory policies, this will underscore the importance of being compliant and reaching out to the regulators for help to avoid any crisis. Banks will also know and be wary of the dangers of misrepresenting the true picture of the health of their banks as they will know from the research that the true picture would eventually be evident and may lead to the loss of their operating licences. This knowledge, if applied, will help banks to stay profitable in the competitive banking sector and as a business in general (Barnett-Quaicoo, 2020) .

To the regulators, the importance of effectively monitoring the compliance of banks to regulations has been proven in this research. A general check of the soundness of the banks within the jurisdiction of the regulators needs be performed regularly and since a relationship has been established through the regression analysis that maintaining a sound bank is directly linked to ensuring that the components of the CAMELS framework (Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Sensitivity) are kept within approved limits as indicated by the Basel Framework (Restoy, 2017).

This research has also thrown more light on the importance of constantly reviewing banking regulations to ensure that banks are not taking advantage of any deficiencies in the law, training for regulatory officials and the application of information technology to enhance monitoring activities.

Though this research was focused on Ghana, the results will be beneficial not only to Ghana but to Africa, since some African countries also have regulatory monitoring issues, and the global banking sector.

6.12 Need for Future Research

Regulatory Compliance has gained importance in the financial sector after the global financial crisis of the years 2007-2009. Prospective business students can, therefore, research on other aspects of regulatory banking compliance aside monitoring and perhaps widen the scope to capture other sectors in addition to banking (evolution of regulatory compliance in other sectors in Ghana).

For the Ghana Banking sector, this study can be broadened to find any similar characteristics (such as ownership structure and board composition) shared by the banks which failed.

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APPENDICES

APPENDIX 1: Questionnaire and Interview Questions

Questionnaire for Staff of Banks in Ghana

1.Are banks in Ghana regulated? **Yes / No**

2. Which institution(s) are responsible for regulating the banking sector in Ghana?

3. Are there regulatory requirements for banks? **Yes / No**

4. Which of the following regulatory requirements are applicable to your bank?

Capital Requirements / Liquidity Reserve Requirements / Consolidated Balance Sheet, Financial reporting and disclosure requirements / Large exposures / Loans and Advances / Net Open Position.

5. How are the regulatory requirements monitored by the regulator?

Routine Reports /Adhoc Reports/Routine Onsite Monitoring / Adhoc Onsite Monitoring

6. What is the frequency for monitoring the regulatory requirements?

Daily / Weekly / Monthly / Quarterly / Half-Yearly / Yearly

7. What are the penalties for non-compliance with regulatory requirements?

8. Are the penalties applied when banks are found to be non-compliant? **Yes / No**

Support your answer with reasons.

9. In your opinion, is the regulation of the banking industry in Ghana effective? **Yes / No**

Support your answer with reasons.

10. What are the indicators of the soundness of bank?

Capital Adequacy / Asset Quality / Management / Earnings / Liquidity / Sensitivity

11. What were the causes of the recent banking failures in Ghana?

12. How could the bank failures have been minimised?

Interview Questions for Official of Bank of Ghana

1. What is the role of the Central Bank in the Ghana Banking Sector?
2. What are the indicators of the financial health of banks in Ghana?
3. What caused the recent bank failures in Ghana?
4. How is this regulatory role performed?
5. Did any action or inaction of the central bank contribute to
6. Does the legal framework within which you operate provide the needed Regulatory Authority?
7. If the answer to question 6 is NO, how can it be improved?
8. Are you adequately resourced with the appropriate logistics to perform your monitoring role?
9. If the answer to question 8 is NO, state the additional logistics required.
10. Do you have the skills and technical know-how to effectively monitor banks in Ghana?
11. If the answer to question 10 is NO, state the areas in which you require training.
12. Can you suggest some improvements to the regulatory framework to strengthen the Ghanaian Banking system?

Questions for Delphi Methodology

1. Is the legal framework within which the Bank of Ghana operates adequate for the effective monitoring of banks in Ghana?
2. If the answer to question 1 is NO, then how can the legal framework be strengthened?
3. If the answer to question 1 is YES, then what was the reason for the recent bank failures?
4. What caused the recent bank failures in Ghana?

5. How can such failures be minimised?

APPENDIX 2: Secondary Quantitative Data Collected from Annual Reports

Data Collected for CAMELS Analysis

Data in Tables A1 to A9 were collected from the annual reports of the elected banks for the computation of the CAMELS ratios.

Table A1: CAR

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
2010	16.00%	16.10%	22.51%	10.00%	8.62%
2011	17.00%	11.60%	13.57%	11.00%	8.62%
2012	17.00%	20.00%	14.77%	15.00%	13.42%
2013	23.53%	19.40%	13.69%	21.00%	12.16%

Table A2: Loans and Advances

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
	GH₵ '000	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**
2010	467,152.00	256,634.00	496,043.00	995,356.00	315,297.00
2011	596,724.00	411,582.00	849,893.00	476,211.00	475,232.00

2012	959,597.00	747,385.00	1,396,514.00	847,872.00	679,648.00
2013	1,130,244.00	980,407.00	2,126,820.00	960,707.00	917,053.00

Table A3: Impairment Charge

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
	GH₵ '000	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**
2010	26,525.00	12,849.00	24,714.00	70,931.00	29,391.00
2011	25,736.00	11,465.00	14,039.00	10,650.00	22,470.00
2012	30,451.00	17,461.00	25,318.00	10,585.00	30,693.00
2013	**47,199.00**	17,516.00	55,326.00	10,569.00	24,110.00

Table A4: Net Income

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
	GH₵ '000	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**
2010	72,208.00	9,466.00	60,117.00	260,575.00	9,905.00
2011	77,676.00	16,905.00	72,381.00	278,086.00	13,065.00
2012	135,288.00	51,716.00	132,557.00	142,972.00	20,931.00
2013	**208,019.00**	93,539.00	190,633.00	229,199.00	9,757.00

Table A5: Number of Employees

	SCB	**CAL**	**EBG**	**GCB**	**UTB**

2010	986.00	300.00	890.00	2,314.00	560.00
2011	952.00	301.00	890.00	2,273.00	560.00
2012	1,047.00	516.00	1,430.00	2,169.00	582.00
2013	**1,070.00**	566.00	1,465.00	2,083.00	582.00

Table A6: ROE

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
2010	37.00%	12.00%	28.00%	28.00%	19.39%
2011	33.00%	19.10%	30.00%	10.00%	21.34%
2012	44.00%	24.90%	37.00%	48.00%	16.30%
2013	43.00%	32.60%	37.00%	49.00%	7.58%

Table A7: Liquid Assets

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
	GH₵ '000	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**
2010	197,288	163,099	613,211	802,772	75,719
2011	329,976	234,970	806,151	1,629,421	93,663
2012	692,566	349,602	1,015,585	1,913,324	161,135
2013	1,030,919	414,000	1,412,355	2,050,754	239,131

Table A8: Total Assets

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
	GH₵ '000	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**
2010	1,667,882	509,992	1,521,229	2,084,656	516,632

2011	1,971,062	809,364	2,132,183	2,463,377	712,864
2012	2,390,684	1,162,855	3,428,070	2,981,141	986,805
2013	2,988,358	1,564,074	4,694,261	3,404,826	1,336,336

Table A9: Net Interest Income

	SCB	**CAL**	**EBG**	**GCB**	**UTB**
	GH₵ '000	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**	**GH₵ '000**
2010	152,748	37,075	109,063	286,284	34,277
2011	150,403	41,394	128,600	206,884	49,669
2012	169,743	84,576	270,191	325,175	61,489
2013	280,480	143,743	389,554	459,959	71,657