NEAR EAST UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
BANKING AND FINANCE PROGRAM

DETERMINANTS OF BANK PERFORMANCE EVIDENCE FROM THE GAMBIA

FODAY JOOF

MASTER'S THESIS

NICOSIA
2019

DETERMINANTS OF BANK PERFORMANCE EVIDENCE FROM THE GAMBIA

FODAY JOOF

NEAR EAST UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
BANKING AND FINANCE PROGRAM

MASTER'S THESIS

THESIS SUPERVISOR
ASSOC. PROF. DR. ALIYA ISIKSAL

NICOSIA
2019

ACCEPTANCE /APPROVAL

We as the jury members certify the 'Determinants of Bank Performance Evidence from The Gambia' prepared by the Foday Joof defended on 07/08/2019 has been found satisfactory for the award of degree of Master

JURY MEMBERS

.....

Assoc. Prof. Dr. Aliya Isiksal (Supervisor)
Near East of University
Faculty of Social Sciences and Department of Banking and Accounting

.....

Asst. Prof. Dr. Behiye Tuzel Çavuşoğlu (Head of Jury)
Near East of University
Faculty of Social Sciences and Department of Economics

.....

Asst. Prof. Dr. Nil Günsel Reşatoğlu
Name of University
Faculty of Social Sciences and Head of Department of Banking and Finance

.....

Prof. Dr. Mustafa Sağsan

Graduate School of Social Sciences
Director

DECLARATION

I Foday Joof, hereby declare that this dissertation entitled '**Determinants of Bank Performance Evidence from The Gambia**' has been prepared myself under the guidance and supervision of ' **Assoc. Prof. Dr. Aliya Isiksal**' in partial fulfilment of the Near East University, Graduate School of Social Sciences regulations and does not to the best of my knowledge breach and Law of Copyrights and has been tested for plagiarism and a copy of the result can be found in the Thesis.

- The full extent of my Thesis can be accesible from anywhere.
- My Thesis can only be accesible from Near East University.
- My Thesis cannot be accesible for two(2) years. If I do not apply for extention at the end of this period, the full extent of my Thesis will be accesible from anywhere.

Date 7th of July, 2019

Signature

Name Surname Foday Joof

ACKNOWLEDGEMENTS

Foremost, I would like to thank Allah for the blessing He bestowed on me during the course of writing this thesis.Sincere gratitude to my supervisor Assoc. Prof. Dr. Aliya Isiksal for the continuous support of my master's study and research; for her patience, motivation, enthusiasm, and immense knowledge. I could not have imagined having a better supervisor for this my thesis. Sincerest gratitude to my parents (Dodou and Amie), my wife Siga Faye who has encouraged me all the way from starting to ending and my daughter Aisha Joof who have been affected in every way possible by this quest. To my siblings Malick Joof, Ida Joof and Awa Joof for their support.

ABSTRACT

DETERMINANTS OF BANK PERFORMANCE EVIDENCE FROM THE GAMBIA

The highlights the determinants of bank profitability of six (6) trustworthy banks in The Gambia during 2008Q1-2018Q4. The motive is to conduit the fissure in literature hence studies were not performed in this parameter in The Gambia, using the FMOLS, DOLS, Random Effect and DH-Causality analysis. The outcomes of the study suggest that liquidity has a negative association with earnings while profitability is positively associated with Capital adequacy. Consequently, size is positively associated with ROE but negatively significant on NIM. However, financial leverage (debt ratio) has an insignificant association on bank performnace. Furthermore, inflation as a macro-economic factor has a positive association with profitability. Finally, the DH-Causality analysis establish a unidirectional causal association moving from ROE to capital adequacy, size and inflation (ROE→CAR, SIZE INFL), however a unidirectional causation moving from liquidity to ROE. The outcome from model 2 explained a neutral causal association amid NIM and liquidity, moreover there is a unidirectional association flowing from capital adequacy and bank size to NIM. The analysis further establishes a unidirectional causation moving from NIM to debt ratio while a feedback association is confirmed amid NIM and inflation.

Keywords: bank profitability, ROA, ROE, NIM and The Gambia.

ÖZ

Gambiya'dan Banka Performans Kanıtının Belirleyicileri

Bu tez, Gambiya'daki altı bankanın banka kârlılığının belirleyicilerini 2008Ç1-2018Ç4 döneminde belirlemektedir. Bunun nedeni, literatürdeki boşluğu doldurmaktır, dolayısıyla Gambiya'da bir FMOLS, DOLS, Rastgele Etki ve D1H-Nedensellik analizi kullanılarak bu alanda hiç veya sınırlı çalışma 1yapılmamıştır. Çalışmanın sonuçları, likiditenin kârlılıkla negatif bir ilişki içinde olduğunu, Sermaye yeterliliğinin de karlılıkla pozitif yönde önemli bir ilişki içinde olduğunu göstermektedir. Sonuç olarak, büyüklüğün NIM'de anlamlı derecede negatif olan ROE somunu üzerinde pozitif ve anlamlı bir ilişkisi vardır. Ancak, finansal kaldıraç (borç oranı) hem olumsuz hem de olumlu sonuçlara sahiptir, ancak performans önemsizdir. Öte yandan, makroekonomik bir gösterge olan enflasyon, finansal performansla olumlu yönde ilişkilidir; bu, Gambiya'daki enflasyon oranındaki bir artış, bankaların karlılığının artmasına neden olacaktır. Son olarak, DH-Nedensellik analizi, ROE'den sermaye yeterliliği, büyüklüğü ve enflasyonuna (ROE→CAR, SIZE INFL) hareket eden tek yönlü bir nedensel ilişki kurar; Model 2'den elde edilen sonuç, NIM ve likidite arasında nötr bir nedensellik ilişkisini açıkladı; ayrıca, sermaye yeterliliği ve büyüklüğünden NIM'e akan tek yönlü bir ilişki var. Analiz ayrıca NIM'den borç oranına geçen tek yönlü bir nedensellik tespit ederken, NIM ve enflasyon arasında bir geri bildirim birliği doğrulandı.

Anahtar Kelimeler: banka karlılığı, ROA, ROE, NIM ve Gambiya.

TABLE OF CONTENT

ACCEPTANCE /APPROVAL i
DECLARATION iii
ACKNOWLEDGEMENTS iii
ABSTRACT iv
ÖZ vi
LIST OF TABLES x
INTRODUCTION 1
i. Research Problem 2
ii. Objectives of Study 2
iii. Significance of the Study 3
iv. Research Questions 3
v. Research Hypotheses 3
vi. Limitation of Study 4
vii. Thesis Structure 5
CHAPTER 1 6
THE BANKING SYSTEM 6
1.1 Historical Recordson Banking 6
1.2 Conventional Banking 8
1.2.1 Types of Conventional Banking 9
1.2.2.1 Commercial Banking 9
1.2.2.2Investment Banking 9
1.2.2.3Universal Banking 9
1.2.2.4 Online Banking 9
1.2.2 Importance of Banking in an Economy 10
1.3 History of Central Bank of The Gambia (CBG) 10
1.3.1 Central Bank of The Gambia Regulations of the Financial System 12
1.3.2 The Gambia Commercial Banking Sector 14
CHAPTER 2 15
THEORITICAL FRAMEWORK AND LITERATURE REVIEW 15
2.1 Theories 15

2.1.1 Structure- Conduct- Performance Hypothesis 15
2.1.2 Galbraith - Caves Risk Avoidance Hypothesis 17
2.1.3 Expense- Preference (EP) Hypothesis 19
2.1.4 Efficient- Structure (ES) Hypothesis 20
2.2 Review of Earlier Studies 21
2.2.1Bank Specific (Internal Determinants) Perfromance 25
2.2.1.1Cost Efficiency 25
2.2.1.2 Liquidity 27
2.2.1.3 Credit Risk 28
2.2.1.4 Capital Adequacy 30
2.2.1.5 Bank Size 30
2.2.1.6 Financial leverage 31
2.2.1.7 Bank location and Profitability 33
2.2.2 External Antecedents of Bank Profitability 34
2.2.2.1 Interest Rate 34
2.2.2.2 Gross Domestic Product 35
2.2.2.3Competition 36
3.2.2.4 Inflation 36
3.2.2.5Concentration 37
3.2.2.6 Market Share 38
2.2.2.7 Market Growth 39
2.2.2.8 Ownership 40
2.2.2.9 Regulations 41
2.2.4 Gap in Earlier Studies 48
3.2.4.1Solving the Gap in Previous Literature 48
CHAPTER 3 49
REAESRCH METHODOLODY 49
3.1 Introduction 49
3.2 Research Design 49
3.3 Data Collection 50
3.3.1 The Study Sample 50
3.3.2 Source of Data 50
3.4 Variable Choice 51
3.5 Specification of Model 52

3.5.1 Dynamic Model 53
3.5.2 Dumitrescu and Hurlin (DH) 53
3.4.3 Static Model 54
3.4. 4 Prodedures to approaching the Analysis 54
CHAPTER 4 55
DATA PRESENTATION AND ANALYSIS 55
4.1 Descriptive Statistics 55
4. 2 Test of multicollinearity 56
4.3 Correlation Analysis 57
4.4 Unit Root Test 58
4.5 Panel Cointegration Analysis 60
4.6 The Dynamic Regressions 60
4.7 Random Effect Models 64
4.8 Dumistrescus and Hurlin Causality 67
CHAPTER 5 68
SUMMARY OF STUDY 68
6.1 Introduction 68
5.2 Summary of Analysis 68
5.3 Conclusion 70
5.4 Recommendations 71
5.5 Future Researchable Areas 71
REFERENCES 72
APPENDIX ..... Hata! Yer işareti tanımlanmamış.
PLAGIARISM REPORT 85
ETHICS COMMITEE APRROVAL 86

LIST OF TABLES

Table 2.1Summary of Previous Studies 43
Table 3.1: Defination and Notaion of the Variables 522
Table 4.1 Statistical Description 55
Table 4.2: Correlation Matrix 56
Table 4.3A: Correlation for ROE as a Depenent Indicator 57
Table 4.3B: Correlation for NIM as a Dependent Indicator 58
Table 4.4A: Unit Root Test of Levin, Lin and Chu 59
Table 4.4B: Unit Root Test of Breitung 59
Table 4.5: Kao's Panel Cointegration 60
Table 4.6A: FMOLS for ROE 60
Table 4.6B: DOLS for ROE 61
Table 4.6C: FMOLS for NIM 62
Table 4.6D: DOLS for NIM 63
Table 4.7A: Random Effect-ROE as Dependent Variable 65
Table 4.7B: Random Effect-NIM as dependent Variable 66
Table 4.8: Dumistrescus and Hurlin Causality for ROE and NIM 67

ABBREVATIONS

CAR	**CAPITAL ADEQUACY**
CBG	**CENTRAL BANK OF THE GAMBIA**
GCDB	**THE GAMBIA COMMERCIAL AND DEVELOPMENT BANK**
DH	**DIMITRESCU AND HURLIN CAUSALITY**
DOLS	**DYNAMIC ORDINARY LEAST SQUARE**
DR	**DEBT RATIO**
FE	**FIXED EFFECT MODEL**
FMOLS	**FULLY MODIFIED ORDINARY LEAST SQUARE**
INFL	**INFLATION**
LIQ	**LIQUIDITY**
NIM	**NET INTEREST MARGIN**
RE	**RANDOM EFFECT MODEL**
ROA	**RETURN ON ASSET**
ROE	**RETURN ON EQUITY**

INTRODUCTION

The global banking sector has undergone through major conversion on its working atmosphere in modern days; altogether “external and internal” antecedents have pretentiously impacted its profitability and structure. Prominent external factors like financial crisis, dilapidated financial deregulation, technological financial modernization, global interest rates and globalization are certainly pretensingnovel intimidation for the financial industry and have lead to the perception of effectiveness more imperative for corporations (Altunbas et al., 2001). Whilst domestic initiatives like inflation, regulations of central bank andreorganizations have impacted banks’ performance. All these antecedents will undoubtedly have inference on the expenses-and earnings flow of firms (bank).

The economic expansion of nations heavily depends on a sound financial system; due to the vital contribution it offers. Thus the subprime crises of 2007/2009 prove the significant role that banking sector performs in an economic-thereby leading to the collapse Lehman brothers and the development of “too big to fail” postulate. To further highlight on the vitality of banks is the “great depression” of 1930 which arises as a result of various factor one of which is bank panic. These two crises are largely attributed to collapse in the “financial system.

Because of its significance performance banks has engrossed the concentration of numerous researchers like (Bourke, 1989; Goddard, 2004). Even though their researches have made paramount contributions toward evaluating performance, “net interest margin” (NIM) was deserted in examining performance. Furthermore, their focal point was on ‘internal determinants” and relinquishing the external forces, which create room for deviancies. There has been far-reaching literature probing the prospect and returns of banking sector in industrialized nations however, only a handful elucidated on underdeveloping nations.

The motive of the paper is to highlight and buttress on the “determinants of bank performance or profitability” in The Gambia. The ration of investigating

this association is because of the paramount role banking entails and contributes to national development in The Gambia, thus it entails %90 of Gambia's "financial sector", in spite of this magnificent role, no research highlighted on "determinants of bank profitability in The Gambia".

i. Research Problem

The banking sectors have turn into a more complex industry due to globalization, liberalization, technological development and rapid transformation of the financial sector. These changes have strengthened business and risk management have turn out to be a fundamental part of business. In answer to these threats, stakeholders as well as management are now more engrossed in indentifying the antecedents of profitability of banks.

Thus various scholars have tried to unveil the "determinants of bank profitability" in advanced countries. For instance :(Williams et al., 1994; Molyneux and Forbes, 1995), whilst a few concentrates in underdeveloping nations Atasoy (2007). Moreover, only a few studies concentrated on financial firm whilst majority were conducted on non-financial corporations.

Nevertheless, the thesis concentrated on "internal and external determinants" in The Gambia, with a focus on banking institutions. Likewise the differentiating indicator of this survey from other papers is that, I utilized "net interest margin" and ROE as dependent variable, in which base on my acquaintance no study in The Gambia was able to capture.

ii. Objectives of Study

To recognize the factors that influence profitability of bank in Gambia

To highlight the association that arises amid the antecedents and bank performance in The Gambia

To highlight the mutual (joint) consequences of the variables on bank profit return in The Gambia.

iii. Significance of the Study

The research will play a pivotal role in enlightening the different stakeholders (investors, shareholders, creditors, managers, suppliers etc)in the Gambia, thus it endeavors to bolster the various apparent antecedents of profitability of bans. Hence it will:

- assist banks to apprehend the present day condition of the "banking industry" they're concerned in, and the vitalfactors they must recollect in mounting new rules for development.
- aid stakeholders in applying consideration to predominant banking services which could assist in growing profits and performance of banks as compared to other non financial institutions
- Add value in scholarly works by presenting a new outlook analysing profit effectiveness of Gambian banks and further adding to the contemporary literature, which will support the neo studies.

iv. Research Questions

- What consequence does the chosen indicator have on bank performance in The Gambia?
- Can this research improve bank manager's effectiveness in The Gambia?

v. Research Hypotheses

Molyneux and Thorton (1992), establish a fragile inverse association amid liquidity and bank returns. Thus I foresee a negative connection amid liquidity and prosperity in earnings. Postulation:

H1: negative association amid profitability (ROE and NIM) and liquidity.

Athanasoglou et al. (2005) postulated that capital is the most appropriate antecedent of bank effectiveness, since higher earnings possibly consequence to a boost in capital. This highlighted that "well-capitalized banks" are confronted with small bankruptcy risk, and consequently declines financing cost.

H2: positive asssociation amid proformance and capital adequacy

A establish a positive connection amid bank size and earning, mainly since immense (large) banks may undoubtedly gain economic of scale as contrast to medium banks Akhavein et al.,(1997). A positive association is probable to subsist among size of bank and profitability. Supposition analysed:

H3: positive connection amid performance and bank sze

Huang and Song (2004) discovered an inverse liaison amid profit and debt, and later affirmed by (Berger and Bonaccorsi, 2006; Rao et al., 2007). They highlighted that debt is not allied to corporate profitability.

H4: negative liaisson between leverage (debt) performance.

A positive association amid inflation and bank earning was established by (Molyneux and Thornton, 1992). Atasoy (2007) examined “inome-expenditure structure” of banks in turkey, establishing a positive liaison amid profit and inflation. Moreover, a negative connection between return and inflation was elucidated by (Sayilgan and Yildirim)

H5: There ought to be a positive affiliation amid bank earnings and inflation.

vi. Limitation of Study

Even though the utilization of professional verdict is a widespread procedure in attaining a conclusion, but this thesis is anticipated not offer an inclusive portrait of the subject assessment thus, there were a number of inescapable boundaries. Because of time factor, this thesis only focused on a petite sample of six (6) banks. For that reason to take a broad view of the outcome for entire banking industry, the analysis ought to entail the thirteen (13) banks.

vii. Thesis Structure

The thesis is structured as follows: subsequent to the introduction that is highlighted in phase 1, section 2 “elucidates on the review of banking and the banking sector of the Gambia”. Segment 3 “is the critical applicable literature on the determinants of bank profitability, hypotheses are derived from here”Phase4 “outlines the research methodology ”. “findings of the study are presented and investigated in segment” 5. Segment 6 “ concludes the research and gives some hints for prospect resrearches”.

CHAPTER 1

THE BANKING SYSTEM

1.1 Historical Recordson Banking

Banks are corporations that take funds from investors and grant loans to borrowers. The Banking was commemorated in the primeval Mesopotamia in the B.C., in which documentation was a common practice. These standards were component of regulations of “Hammurabi the king of Babylonia”. Indisputably these ancient banking activities were very distinct contrast to the existing banking activities. The constituent of their deposits inculcates “cattle, gain and precious metals”. Dirt (clay) tablet substituted as papers top document dealings amid parties. Moreover, some the topical banking actions were adapted from primordial banking scheme, considerably ranging from deposits acceptance, and making finance to stakeholders to magnetize interest payable (Davies, G. 2002). “This form of banking transaction were also found in the prehistoric civilization of Egypt, however, in the Egyptian banking system, the grain harvested were stockpile in the state warehouse and depositors withdraw the necessary quantity of grains and use written documents as a mode payment. These forms of activities still exist nowadays in the personal banks that deal with coinage and other valuable metals.

During the era of medieval bank expansion, the banks situated in Venice, Florence and Genoa in Italy were at their peak-this is due to the shape of the cities and the water bodies around the country. The Italian bankers give loans to the princes to use for financing purpose and also for her profligate standard of living. In reality, several wealthy families who engage in domestic commercial activities and or international trade, such as Peruzzi and Bardi families took charge of the city of Florence in the14th era and initiated the construction of banks in the country and various region in Europe to facilitate commerce (Hoggson, N. F. 1926).

The most renowned bank in Italy established in 1397, was Medici bank by Giovanni Medici. The actions of the banks were comprehensive in this era and the statistics of staffs significantly amplified[1]".

The founder of the banks possessed remarkable experience and was determined to accomplish expansion in the sector, therefore he comprehensively augment the branches up to north of London. This bank was fancied by the Pope, he supported the proprietor and hence he further move additional branches in Italy and allover and rest of Europe. Later on, "Bank of Amsterdam" was instated in 1587 to 1609. Followed suit was the "Bank of Hamburg"in 1619, and "Bak of England"also instated in 1694, with a borrowed capital of 1,200,000 pounds which attracts 8% alongside an added 4000 pounds annuity derived from clients. In on time, the bank stretches to other nations, such as America. Furthermore, the Islamic banks contributed pivotally in the development of banking, particularly in the Muslim regions (Hildreth, R. 2001).

"The development period of Islamic banking can be alienated into three periods such as early, middle and modern era. In the early era, the commencement of Islamic activities was during the life of Prophet Muhammad (peace and bless upon him). When Mecca severed as a center of trade among state, in this era the trading activities were govern by the Shariah law and this period defunct when the Calipha al Rashidin (the four

[1] Hoggson, N. F. (1926). Banking Through the Ages.Third printing. New york, dodd, mead & company. Pp 55-56-57.

rightly guided caliphs) ended. The Middle age of Islamic banks development begins with the end of Othman caliphate. The disintegration of the Islamic realm and the Roman realm brought about a rapid decline in the economy of the Islamic countries. European countries expanded their economic activities to the Muslim countries in the 12th. The modern era begins in 1963 with the establishing of Mit Ghamr Saving Bank in Egypt. The Islamic jurisprudence of trading was used as a conduct of governing their terms of services like loans, investments and equity services. furthermore, Organization of Islamic Cooperation Countries (OIC) was initiated in 1969 by King Faisal of Saudi Arabia, which is a reputable international organization that consist of 57 member states. The motive is to serve as the voice of Islamic world and exists to defend and execute the interests of the Muslim population by encouraging stillness and serenity and to recommend members' states establish their own banking sector.

After that Islamic development bank (IDB) was set up in 1975. Besides, Dubai Islamic bank set up in 1975. Faisal Islamic bank was initiated 1977 in Egypt; Bank Islam Malaysia Berhad began 1983. The improvement of Islamic banks ensues by imitating Islamic inter-bank money market in 1994. The AAOIFI, accounting and auditing firm was then set up in 1990[2]".

1.2 Conventional Banking

This is the most paramount banking methods in the globe which rely on interest as a core source of revenue. The foremost engagement of these banks is functioning on interest rate, since they act as mediators amid, "lender and investors". The connection amid banks and clients is pedestal on "Debtor and Creditor" liaison. The role of the bank changes base on its stands on the transaction that is whether is given the loan or taking the deposit (bank is creditor when it issues a loan and debtor when receive a loan).

[2]Nor I. (2014). History and Development of Islamic Banking System, first chapter of Islamic banking, course (FAB 1233), Astin collage

1.2.1 Types of Conventional Banking

Conventional banks are of various types but i propounded on the below:

(i) Commercial Banking
(ii) İnvestmentt Banking
(iii) Universal Banking
(iv) Online Banking

1.2.2.1 Commercial Banking

Commercial banks are regarded as the most widespread structure of firms (banks), and are corporations ordained by regulations to collect finance depositors, after which they use to give out loans. They further tender “trust services” firms and personal clients. The core actions of these banks are: saving acceptance from clients, fund disbursement, performing as mediator amid client and firms (other banks).Furthermore, fiduciary engagements and financial asset investments are also preponderated by commercial banks

1.2.2.2Investment Banking

İnvestement banking deals with capital creattion for corporation and government. They assist in underwriting financial securitties and inventing neo financial products like derivative, facilitation of mergers and acquisiions. Moreover, they give guidance to issuing houses about placement of stock.

1.2.2.3Universal Banking

Universal banking comprises of financial firms that offer various services that are offered by both investment and commercial banks. They are widely found in Europe; however in US banks are obliged to separate their investment bank services and commercial bank services. Pro-universal banks argued that risk can better be diversified with this type of banking system.

1.2.2.4 Online Banking

Online banking system involves banks that facilitate the conducting of transactions using the internet. They provide all the services offered in

traditional commercial banking system like transfers, payments and even deposits using a desktop or mobile application.

1.2.2 Importance of Banking in an Economy

According to Mishkin (2004), banks are termed as corporations (financial mediators), who attract finance typically via the tendering of "checkable deposit"(money on which customers can draw checks), "saving deposits" (money that do not allow holders to draw checks but payable on claim) and time deposit (deposit payable on a fixed time maturity). Banks perform a crucial pose in Gambia's financialstructure The main component of the financial system is the flow of resourcesfrom creditorstoward borrowers through banks in an orderly conduit. They tender expertise monetary services thathelp in minimizing the cost of acquiring information concerning borrowing and savings prospects.

Thus according to John (2001), the financial mediators aid in guaranteeing efficiency and effectiveness in the general economic expansion.Commercial banks transformed considerably in dimension moving from "money centre" banks situated in localized areas (financial centers) that provides an unreserved range of conservative and non-conservativeservices, entailing transnational loans, to medium regional banks and bordering banks affianced in other usual banking actions, like clientand industrial lending. Banks obtain proceeds from and mortgage loans. A mounting quantity of banks moreover obtain income via patrons utilization of online system (John, 2001).

1.3 History of Central Bank of The Gambia (CBG)

The end of British colonialism provoked the institutionalization which led to the founding of nationalized improvement bank in The Gambia to handle tasks and become the engine of national and economic development. This prompted the founding of "The Gambia Commercial and Development Bank (GCDB)" in 1972 according to parliament Act. No.13

GCDB was handle by three key players (stakeholders) that is “The Gambia Co-operative Union (GCU), The Gambia Produce Marketing Board (GPMB)andThe Gambia Government” with each party controlling 23%, 26% and 51% respectively.

The primary aim of GCDB was facilitate economic expansion especially in the following areas:“promoting trade, industry, agriculture, fisheries, mining, public works, communication and other sectors of the economy in addition, to carryout all the necessary banking business concerning both commercial and development banks in accordance with the by-laws of the bank1”.

Base on this pivotal role the GCDB was mandated to promote small firms, facilitate loan for agricultural sector via the GCU and also assist in providing finance for public corporations. This distinguished it from conventional banks found in the rest of the globe at that time. Nevertheless, this did not highlight that the lack of managerial effectiveness and capriciousness was as a result of the growth development mission.

The services that were offered by the GCDB ranges from deposits and loans to mainstream Gambians who were not privileged to access services offered by foreign banks. Prior to1972 “Standard Chartered Bank (SCBG) and Banque Internationale pour le Commerce et l'industrie (BICI)” owed by Britain and France were the only loan providing corporations in The Gambia, and only a handful of individuals businesses and big corporations that were able to obtained their services (most especially credits).

To resolve this predicament, with the establishment of the GCDB, it became the most important institution in facilitating credit to individuals, local organizations and other institutions.In the early 1980s, the GCDB was recognized as the most prevalent conventional bank in Gambia, handling %50 of national deposits, %88 national loans and has the most assets (approximately %50).It became the largest market share holding corporation in the commercial sector in both deposits and loan portfolio. Therefore the GCDB was a force to recon with, unfortunately the expansion of the GCDB was followed by quick managerial decision.

At the end of 1990, GCDB has already incurred a lot of nonperforming and bad debts on its statements as well as problem of bad assetrecuperation from courts.The GCDB undergo through diminishing profitability as a result of poor performing loans which mounted up the losses and weaken the entire performance and optimal implementations of determinants, (CBG reports 1992).These relentlessly influence the entire goal and mission of the GCDB, thereby resulting to capital flight, liquidation and non-corporative with constitutional and legal requirements. The cause of its failure can be attributed to that fact that GCBD was the only public bank hence this mounted “political and social” conflict to embark on less profitable and unjustifiable financial decisions. Furthermore, limited knowledge of “asset-liability management” and inexpert management worsened the extension of nonperforming loans. According to Sillah (2005) the “toxic assets (asset that have fallen in value) worsened the financial condition of the bank, thus limiting its ability to finance creditworthy borrowers, to the detriment of national economic development”.Recent in 2005, the central bank embarked on a review to improve bank practices to the standard of present-day standards of central banking requirements. This was conducted to prevent government in interfering in central bank policies and to further increase the responsibilities and powers establish good policies and proper utilization of its resource.

1.3.1 Central Bank of The Gambia Regulations of the Financial System

The CBG is the main institution responsible for the supervision and regulation of the financial system (commercial banks, Insurance instutions, Micro Finance Institutions, Foreign Exchange Bureaus, and is the guardian of the payment and settlement system) in The Gambia. Various sections are taking care of each sector of the financial system. The key sources of legislation utilized to supervise and control banks are the 2009 Banking Act, “the 2005 Central Bank Act and and the Anti Money Laundering and Counter Financing of Terrorism Act 2012”. The Insurance industry is regulated by Insurance Act 2003 and Insurance Regulation 2005, likewise regulations highlighted by the banks govern the dealings of Foreign Exchange Bureaus and Micro Finance. The “Financial institution Act 2003” was reformed as the Banking Act 2009 to

inculcate and cater for Islamic Banking. This mark the incorporation of AGIB as the first Islamic bank in The Gambia. The Insurance Act 2003 was reformed to inculate the needs of Takaful (Islamic Insurance).In 2005 the premiere “Takaful insurance” was incorporated and now Islamic Micro Finance corporation framework is existing in The Gambia. Furthermore non bank institution bill that would initiate regulations and legislation for Islamic Microfinance. The Islamic Micro Finance have caught the eyes of many stakeholder thereby showing a great prospect in The Gambia. However, much work has to be done thus there is less awareness among the masses .

Licensing strategies: Banks are licensed under Section 3 of the Banking Act 2009.

Banks are supervised using the following approaches:

- Off-site monitoring: it entails monitoring of banks within The Central Bank through analysis of returns submitted to the Bank by commercial banks.
- On-site Examination: Periodically, the CBG conducts onsite examinations. At the end of the exercise, reports are produced which spell out the salient findings and recommendations.
- Collaboration with External Auditors:The Bank conducts bi-lateral meetings with Auditors at the planning stage of annual audits.Tripartite meetings with bank management, CBG and Auditors are held at the conclusion of audit exercises.
- Annual Prompt Corrective Action (PCA) assessment: The PCA framework is a means to promote a safe and sound financial system by monitoring each bank’s compliance and performance against five “critical elements” and progressively ensuring that corrective measures are taken in response to the deteriorating compliance or performance of a bank.
- Issue of Directives: In addition to the off-site and on-site functions, the Bank issues Directives to banks periodically. Some of the directives issued include: Minimum Capital Requirement: To further strengthen the banking industry, the CBG increased the minimum capital

requirement to D150million and D200 million to be observed by end-December 2010 and 2012 respectively. Capital adequacy –banks are required to maintain a minimum capital adequacy ratio of 10% with a corresponding gearing ratio of 10 times.

1.3.2 The Gambia Commercial Banking Sector

The Gambia's banking sector consists of 12 commercial banks, one of which is an Islamic bank. The banking system is under the supervision of the Central Bank of The Gambia. The banking industry is largely dominated by subsidiaries of foreign banks from Nigeria. It should be understood that these subsidiaries are literally independent of their parent companies and majority-owned by Gambian entities. The banking system is highly liquid and banks are profitable. Most of the operational banks meet the regularity requirements of the central banks in terms of capital adequacy and liquidity hence the industry risk-weighted capital adequacy ratio averaged 30.0 percent in 2014, over and above the required minimum of 10.0 percent and the liquidity ratio stood at 85.0 percent, over and above the statutory minimum requirement of 30.0 percent.

The banking industry recorded a net profit after of D680.0 million in 2014. The return on assets and return on equity rose to 11.0 percent and 71.0 percent compared to 2.0 percent and 14.0 percent respectively in 2013 and the banks disproportionately depend on government assets (treasury bills).

The banking sector accounts for about 90% of the Gambian financial system, and in 2014 the total assets of the industry increased to D24.5 billion, or 16.4 percent on the other hand, Loans and advances, accounting for 22.1 percent of total assets, decreased to D5.4 billion, or 10.4 percent owing primarily to the 9.0 percent decline in private sector credit in 2013. While Deposit liabilities rose to D16.8 billion, higher than the D15.2 billion in 2013. The analysis of the peer group on the industry based on total assets showed that three big banks accounted for 53.33%, while one medium size bank with 13.85% and eight undersized banks sharing the residual 32.82% of total assets. And the ratio of non-performing loans to gross loans declined substantially from 20.0 percent in 2013 to 7.0 percent in 2014.

CHAPTER 2

THEORITICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Theories

2.1.1 Structure- Conduct- Performance Hypothesis

This hypothesis highlighted that “market structure conditions” determined the level of competition, particularly the entry and exist condition in the market as well as firm’s size and number. This competition results to special offering of prices, earnings and other market performance indicators to improve. Therefore conduct, the general performance of companies in a market is attached to the form of the marketplace. Stigler (1964) highlighted that this postulate is a resultant of the oligopolistic conduct of corporations which signifies that formal provisions or arrangements are more cost effective to sustain in markets that are concentrated. The postulation of SCP hypothesis is that the level of market concentration that is, the size and number of corporation distribution in a market, put forth direct consequences on the level of rivalry between organizations. Markets that are extremely concentrated experiences low collusion cost and promote vivid and or ambiguous collusion on corporations. Due to the collusion, monopoly earnings are generated by all corporations (Fraser, et al, 1972b). The SCP hypothesis was primarily employed by academicians utilizing “manufacturing-

firm data" which became very popular and widely used in the 1960s.Weiss, L. (1974) conducted an extensive assessment on the literature of SCP for manufacturing firms, using 46 research papers commencing from Bain (1951) to Hannan (1991). The entire literature used affirmed a positive correlation amid profit and concentration. Hannan,T.(1991), highlighted that the this postulate was primarily introduced in the banking sector to evaluate the consequences on concentration on profit (measured banks deposits in domestic markets). Additional indicators of profit inculcate interest rates charge on deposits, profit rates, interest rate paid on loans. Consequences of market concentration on earnings of banks commence to gain noticed from scholars in 1970. Uniformity was observed in the outcomes of studies using the "Herfindahl Index and concentration ratio". Furthermore, Gilbert (1984) highlighted that foremost limitation in studies used in market structure of banks is the deficiency theorization which help to conceptualize banks statutory requirement when propounding on the consequences of earnings and market structure. He highlighted that problems might arise from the vehement interactive impact of various indicators and regulations thus this can hinder the association amid profitability and concentration.

Moreover, Berger (1995) and Speaker (1992) buttressed profitability impact on competition in banking industry thereby supporting this hypothesis. Their outcome highlighted that augmentation in rivalry (competition) coming from financial sector reforms can prevent proper pricing including the domestic markets which are extremely intense (concentrated). Thus, the refusal to include the consequences of bylaws on competitive stipulation might cause occasional fragility and insignificant association amid profit and concentration. Nevertheless, other studies evidenced the "SCP hypothesis". Base on this Bourke (1989) on the "determinants of international bank profitability", it was established that profit (ROA) and concentration has a fairly positive liaison. Furthermore, Molyneux and Forbes (1995) and William et al. (1994) highlighted a positive liaison amid earnings and concentration in Europe thereby evidencing the "SCP hypothesis". Few studies were accomplished across countries with almost all evidencing the "SCP hypothesis". Ruthenberg (1994) highlighted that an augmentation in profit is

triggered by a raise in concentration most particularly when there are high entry requirements. A similar outcome was also buttress by Molyneux and Teppet, (1993) in five European nations. Vennet (1993) also performed similar survey but not inculcating efficiency in the equation. He buttress that “SCP hypothesis” was evidenced in majority of European nations. In USA Neuberger (1998), buttressed that majority of the survey conducted on “structure performance” in banking utilized concentration in domestic market proxing as market structure. Thus micro and segment markets data are basically unavailable in many European nations; domestic markets are utilized in Europe by (Ruthenberg, 1994; Molyneux et al.1994). A major constraint of the method is it did not inculcate the demographic circumstances of various banks operating in various markets. Universal banks basically entail both big and medium banks with national and domestic significance. In conclusion the SCP postulate have not been analysed in Malaysia on the ground that Malaysia has no or lacks data on segment banking.

2.1.2 Galbraith - Caves Risk Avoidance Hypothesis

The “risk- aversion hypothesis”was proposed by Galbraith (1967)which was then extended by Cave (1970), which is later to be known as “The Galbraith-Cave or risk avoidance hypothesis”. Edwards and Heggested (1973), highlighted that banks establish in highlyconcentrated marketplaces could select to trade-off by potential choosing less riskier investment thereby reducing their monopolized profit.Hence Clark (1986) buttressed that choosing less riskier investments (assets and liabilities) according to risk averseness, monopolized banks establish in concentrated marketplaces, could decline risk in change of monopolized profit. Thus this postulate could give enlightenment for the neutral association amid “market concentrate, monopoly power” and bank earnings. Scholars have propounded various elucidations for risk adverse postulate. According to Vernon (1971), due to the legal entity status of banks, to some extend managers determined the level of risk disclosure of banks hence they determine the composition of

portfolios held by the banks and that banks are managed by managers instead of proprietors. Conversely, the undesirable consequences of wrong management decision can overshadow the plunders of effective managerial assessment. Therefore management will tend to chose decisions that are less risky so to avoid the adverse consequences of failure and bankruptcy. Edwards and Heggestad (1973) observed that the level of risk, as evaluated via the coefficient of changes of big bank's earnings over a period of time decline considerably as the extent of concentration declinedin therelevant financial institution's market will increment. Therefore, imparting further aid for the "risk avoidance hypothesis". Heggestad (1977) highlighted an alternative enlightenment that firms (banks) level of adverseness of risk might be due to regulations, thus the key motive of the regulation is to constrained and reduce bank riskiness by confining banks choice of portfolio. Proper portfolio guidelines will help banks to invest in less risky portfolios, thereby supporting the "risk-avoidance hypothesis". Furthermore, Heggested (1977) highlighted that level of concentration as risk is entailed as an explanatory variable in the profit equation.

Therefore, refusing to put risk as a control indicator on the profit equation to reduce "inter-bank differences" in risk could probably be a main cause for decline on R2 highlighted in majority of baking sectors (Gilbert, 1984).Clark (1986) highlighted the presence idiosyncratic association risk, concentration and profit as propounded by "risk-avoidance hypothesis". He buttressed that selection of liability and asset portfolio, profit and risk are correlated thus they are estimated concurrently. Therefore, he employed the "two-stage least squares" analysis to run the regressions concurrently. The analysis highlighted that bank risk is negatively liaised with con\centration; however concentration is positive with earnings.

Kushner et.al (1989), investigated consequences of size on risk and returns for 10"chartered banks and the national trust and loan companies in Canada". The analysis gives a mixed evidenced risk avoidance postulate. Primarily, the analysis does not confirm the notion of the hypothesis that big banks can achieve needed level of risk and earnings. Nevertheless it highlighted that big banks (firms) with high market share functions at a

minimal risk. This outcome evidenced the “risk-avoidance hypothesis” amongst big commercial banks thereby further elucidating on the significance of risk as a paramount antecedent of bank returns.

The consequences of the existence of “risk-avoidance behavior” in the banking sector is that debt would be utilized on only safe investments or business that are capable of monopolizing the market.

2.1.3 Expense- Preference (EP) Hypothesis

Hannan and Mavinga (1980) elucidated that in disparity to “profit-maximizing policy”, the“Expense Preference hypothesis” (EP) predicts the firm as a utility maximizing element in the course of quest for non-profit-maximizing strategies.Furthermore, the manager augmented employee’s expenses, administrative emoluments and optional earnings for which they encompass a positive partiality. The EP postulate was first propounded by Becker (1957), and was later extended by Williamson (1963), who utilized banks as per the study of Edwards (1977). Edwards (1977)establish that salary expenses of banks augment with the level of monopolistic power and this signifies the subsistence of“expense-preference behavior”. Furthermore, the analyses wereaffirmed by Hannan (1979) who establish that the number of individuals employed by banks found in monopolistic markets weregreater than the individuals employed competitive market operating banks.However the outcome of Smirlock and Marshall (1983) debunked these analyses and buttresses that expenses entailed in the corporations structure that differentiate owners and managers might caused apparent divergence from profit optimization.

Bourke (1989) utilized a further vigorous analysis to examine the occurrence of the “expense preference behavior” in banks. He employed a “value added measure of profitability”, to get rid of the consequences of managerially-induced expenses and labor union negotiated salary demands from net earnings. In the perspective of banking, “value added” might be explained as loan interest and other revenue less deposit interest and other non-wage expenses. Thus, evidence for the EP hypothesis is establish, when the concentration variable co-efficient maintains positive sign but

augment in size whenever a “value added” measure of earning is employ as dependent variable. He establishes a fairly positive correlation amid concentration and ROA. However, surprisingly the symbol of concentration co-efficient was evidenced to be negative when a “value added”evaluation of profitability was utilized. Therefore, the analysis of Bourke is against the subsistence of the EP hypothesis in banks.

2.1.4 Efficient- Structure (ES) Hypothesis

The “Efficient-Structure” (ES) hypothesis, affirmed corporations that have the ability to make profit and more effective and as a result they are able to increase market share which eventually results to concentration. Hence the positive connection amid concentration and earnings is attributed to low production cost due to effective managerial ability. This hypothesis serves as a substitute to SCP postulate which endeavors to highlight the association between profit and concentration.Demsetz (1973) was the first to propose this postulate followed by Peltzman (1977). Demsetz (1973) stated that “profits do not arise because firms create „ artificial scarcity‟ through a reduction of output. Nor does profit arise because of collusion as in SCP Theory. Superior performance or high profit can be attributed to the combination of great uncertainty plus luck or a typical insight of the management of a firm”. Corporation that has advantage against competitors in terms of productivity are better secured and have greater market share which leads to a more market concentration. Hence, concentration is distant from resulting to collusion, it actually comes from

Thus concentration, far from leading to collusion, actually emerges from the competitive practice. Therefore, Demsetz (1973) proposed that the association linking profit and concentration was bogus hence it was proxied as the interrelationship amid superior effectiveness, boost in market concentration and share. Smirlock (1985) was the first scholar to utilize this postulate on the banking system and establish instead of concentration its market share that has a positive liaison with earnings. Nevertheless, after using concentration as a control variable, market share further have a positive liaison with return. This analysis seems to up held the ES hypothesis

in banking industries. The survey of Evanoff and Fortier (1988) is in conformity with this result regarding the postulate. The consequence of this analysis highlights that economic welfare and efficiency will decline if any banking challenges to decline market concentration through its policies. Contrarily, Clark (1987) disparages the general applicability and validity of the finding of Smirlock (1985), by putting up two paramount probable factors that affect the data. Primarily, the major constraint is the use of cross-sectional data by Smirlock in 1978; as a result the association amid profit and concentration is vague (that is transitory or long-run).Which is a key constraint thus the "Efficient- Structure and Structure- Conduct-Performance" hypotheses are base on long-run association. Finally, rural banking industries entailing a mean of 3 (three) ratio of concentration of 0.86 was employed by Smirlock as sample. Thus his sample can be biased on the association amid profit and concentration.

2.2 Review of Earlier Studies

This study adopts an explanatory approach in analyzing the existing literature on the topic. It elucidated on international journals that were written both in developed and emerging economies to addressed the models and concepts of performance measurement.

There are numerous studies that were conducted on the determinants of bank performance, the study on the determinants began in the late 1970's when Short (1979) examined the relationship between profit rate and the bank concentration. Categorizing the factors into internal and external determinants, this study was further extended by Bourke (1989), who used banks from twelve countries in Australia, Europe and North America.

The study of Demirgüç-Kunt and Huizinga (1998), Mendes and Abreu (2003), Goddard *et al.* (2004), Pasiouras and Kosmidou (2007) concluded that the most performing are the banks with high equity; moreover they have a low default risk and lower financing costs. The efficiency variable has a negative and significant impact over profitability, meaning that costs and revenues

management is inefficient (Dietrich and Wanzenried, 2010; Kosmidou *et al.*, 2007; Athanasoglou *et al.*, 2008).

Another important result of the Demirgüç-Kunt and Huizinga (1998) research paper was the influence of the bank owner's structure on the bank profitability. They discovered that foreign banks are more profitable than the domestic ones in developing countries. The findings of Micco *et al.* (2007) and Athanasoglou *et al.* (2006) are confirming this evidence. On the contrary, Molyneux and Thornton (1992) concluded that the owner's nature is not relevant in explaining the bank profitability.

Athanasoglou *et al.* (2006) have analyzed the profitability determinants in seven countries from Central and Southern Europe in the period between 1998 and 2002. They included among the bank specific factors the index that reflects the bank reform progress that is characteristic to transition economies. The relationship between this indicator and bank profitability (ROA and ROE) is negative and significant. On the contrary, Brissimis *et al.* (2008) and Fang *et al.*(2011) found a positive effect, both on efficiency and productivity, but negative on interest rate margin. The progress of regulation implementation, the credit expansion and progressive adoption of sound macroeconomic policies conducted to an increase of competitively in the banking sector. The banks were offering competitive rates for deposits and loans that affected the profits. Beltratti and Stulz (2012), Bolt *et al.* (2012), Dietrich and Wanzenried (2010), Berger and Bowman (2013) and Cull and Martinez-Peria (2013) analyze he impact of recent global financial crisis on bank performance.

Beltratti and Stulz (2012) questioned why some banks evolved better during the crisis and analyzed the impact of bank governance, country governance, domestic regulation, bank balance sheet and the profit before crisis on bank performance. Banks got better performance in the countries with strict capital adequacy requirements and independent supervision authorities. On the other hand, banks from countries with powerful supervision authorities recorded low market returns, as the shareholders were asked to raise new equity during crisis, which was very costly for the shareholders.

Kamarudin et al. (2016) analyzed the financial performance of banks before and after the crises and pointed out the performance of the ownership structure of commercial banks. The study found that bank profitability performance and efficiency depend on different dynamics. Following the crises, both groups had a fall in their efficiencies, but private banks suffered a worse performance when compared to private commercial banks. During the period of 2004–2011, Capraru and Ihnatov (2014) analyzed the profitability determinants of 143 commercial banks in Romania, Hungary, Poland, Bulgaria and the Czech Republic. After the global crises, debt crises continued in Europe. Average ROE, ROA and NIM were used as profitability measures. However, their results indicated that the negative effect of the crisis can be seen in all measures. Albulescu's (2015) study on developed and emerging economies proved the negative effect of crises on bank financial performance, pointing out that nonperforming loans were the primary reason for this. According to them, the negative effect of the crises could be seen on the nonperforming loans. Regarding impersistent credit performance, the performance of the banking sector in both developed and emerging countries declined after the global crises. Albulescu (2015) pointed out that in emerging countries bank profit declined due to easy ways of reaching credits, which, in turn, caused nonperforming loans to rise. By aiming to strengthen bank capital, profit declined in the short term. Bhimjee et al. (2016) investigated the banking systems of 41 developed and emerging economies before and after crises. The banking systems of emerging economies investigated and probable regime differences are tried to be determined. The results indicated that banking performances have two different clusters and each has unique regime dynamics. In the period before crises, the securities in developed countries had a high performance. In the second group, the banks of emerging economies had a low performance. During the crises, banks in different groups showed similar patterns and regarding this regime synchronization went up and regime dynamics differences disappeared. Such results, like global crises with systemic dimensions and different dynamics, made the synchronization go up and such crises with an international spread and contingency potential can be seen. After the global crises, conventional banks faced huge debts and

generated risks, causing a collapse in the system. As Islamic banks showed a better performance after the crises, there has been an increase in the comparative studies that include Islamic banks and conventional. Studies done by Gökalp (2014) and Olson and Zoubi (2016) are primary examples of these comparative studies. The wholesale and Islamic bank performance in the Middle Eastern, African and Southeast Asian areas is investigated by Olson and Zoubi (2016) He found out that ROA and ROE performances converged in two different categories. Despite the different operational structures' profit convergence, after the crises profit convergence depends on the post-crises.

Berger and Bouwman (2011) made a study on the impact of bank equity on survival probability and market share during different financial crises and normal periods. The period considered was 1984-2010 and included 2 banking crises, 3 financial crises and 2 "normal" periods. Their findings show that a high level of equity increases the survival probability and market share of small banks during banking crises.

Bolt *et al.* (2012) concluded that the bank profitability during the current recession is influenced by the economic cycle. They demonstrated that if real GDP contracts by 1% during deep recessions, then ROA reduces by 0.24% at banking industry level. This finding can be explained by the fact that bank loans granted to private sector are depending significantly on the GDP level. A GDP drop deteriorates the asset quality and increases the non-performing loans.

Cull and Martinez-Peria (2013) analyzed the impact of bank ownership on the level of loans granted in pre-crisis and during the crisis in emerging countries from Latin America and Eastern Europe. In the case of domestic banks, both from Latin America and Eastern Europe, the growth rates of loan portfolios had decreased during crisis. The growth rates of loan portfolios of foreign banks in Eastern Europe have decreased more quickly than in the case of domestic banks, mainly due to the decrease of corporate loans. In Latin America, the growth rates of loans granted by government owned banks overtook the growth rates in the case of private domestic and foreign banks.

2.2.1Bank Specific (Internal Determinants) Perfromance

2.2.1.1Cost Efficiency

Ncube (2009) in South Africa elaborated on the procedures to enumerate on the efficiency and profitability of banks. The outcome highlighted that cost and return in South African banks has enhanced recently, after the financial crisis.Mlambo and Ncube (2011) moreover highlighted that there is still room for improvement for “South African Banks” in both efficiency and profitability. Further another study demonstrated that the global financial crises of 2008 have not impacted on the productivity, efficiency, effectiveness and profitability on almost all “South African banks.

Corporations that are efficient possess the potentials to archive and augment their level of profitability (Berger et al., 1993). Various studies followed suit to highlight that a positive liaison amid earnings and cost (expenses), for instance: Dietrrich and Wanzenried, (2011). However, Berger and Mester, (1997) highlighted that cost efficiency in US is negatively linked to earnings. Maudos et al., (2002), buttress that normally in Europe returns are always smaller than cost. In a research led in Jordan, it became observed that CIR is an essential antecedent of profit level of businesses and has a strength and influence on it (Almumani, 2013). Furthermore, Maredza and Ikhide, (2013), highlighted in “Africa South” cost is reported to posse a negative liaison with firms (banks), Kiyota, (2011) highlighted that medium banks are more profit oriented compared to large firms (banks). Applying similar procedures, Maredza and Ikhide (2013) buttress that profitable firms (banks) posse’s greater potential in obtaining high operational productivity.

Kim and Kim (1997) highlight on the liaison amid profit composition US and Korean firms (banks). In comparing the profit level of the selected banks,

seven variables were explored as internal antecedents and ROE and ROA as proxies. The seven indicators are: “shareholders’ equity to total assets, liquid assets to assets, total loans to total deposits, fixed assets to total assets, total borrowed funds to total assets, reserves for loans to total assets and a reciprocal value of total assts”. It highlighted that Korean banks are short behind banks in U.S in profit and level efficiency. He further highlighted that “capitalization rate, reserves for loan losses, and the size” have significant implications on the earning level of banks in both nations. A comparative study on government and non-governmental banks in Turkey during 1997to2006 employing “net profit-loss and ROA”, as measures of profit, In calculating operational efficiency they employed “net profit, net assets efficiencies relative to total employment and total number of branches”. The breakthrough highlighted that “state-claimed banks” and private banksare impacted by same measurement of productiveUnal et al., (2007).Furthermore, it was highlighted that banks might be benefiting from efficient are not typically cost orientated, since less cost oriented banks can curtain their ineffectiveness by augmenting prices to match competitors Maudos et al. (2002). Cost orientation focuses on ensuring efforts/inputs are not simply match for its associated yield and cost rationalization, but making sure that inputs yield more than necessary cost incurred.

Falkena et al. (2004), highlighted that the global yardstick for CIR is pegged at 60%, although “Kenyan bnanks” were advise to maintaining a CIR of below 50% Mathuva (2009). Borke (1989) highlighted that the better the esteem, the weaker the firms ineffectiveness, "decrease in costs improves the productivity and profit of a financial corporation, inferring a negative connection between a working capital expenses proportion and profitability ". Berger et al. (2000) highlighted a required negative liaison amid profitability and operational efficiency, insinuating that a fall in operational expenses will trigger an augmentation on profit.

.

An assessment conducted by Ariff and Can, (2008) on banks in China, establish that the score of cost effectiveness is about 80%, this signifies the possibility for banks to achieve supplementary yield without incurring and

further output of 20%. However, base on the examination of Isik and Hassan, (2002), this number turnout to be 72% in Turkey and 82% in Europe (Maudos et al., 2002). Furthermore, Ncube, (2009) evidenced a comparable outcome in Sub-Saharan and South Africa (85%); demonstrating that banks higher efficiency produce better. Muvingi and Hotera, (2015) propounded the presence of 71% efficiency in Zimbabwe from 2002 to 2012.

Majority of the papers used CIR to examine efficiency, however only a handful explicitly analyzes profit effectiveness (Isik and Hassan, 2002). According to Berger and Mester, (1997), profit efficiency has more significant influence on banks earnings than cost effectiveness. They also elucidated that due to lack of research on profit effectiveness, banks are less engrossed in higher returns than cost management.

2.2.1.2 Liquidity

Liquidity is an as a paramount internal indicator of firm's performance since panics can arise due to liquidity problems; It ensued when banks are unable to raise ample funds and their borrowing ability decline to meet withdrawals and additional cash requests (Athanasoglou et al. 2006). To mitigate liquidation, banks frequently embrace liquid assets so to readily transform them into cash.

Though, "liquid assets" are normally connected with lesser return; as a result, there is a trade offs amid liquidity and earnings, which implies that the greater assets tied-up, the inferior the earnings. The scrutiny is evidenced by the postulate that flimsy opposite liaison is amid return and liquidity Molyneux and Thorton (1992).

As "loans to deposit ratio" augments, consequently liquidity plunged, thus banks become cautious to loan out thereby prompting to expensive interest rates. After which banks with low "loans-deposit ratio" generally offer lower rate on loan rates when contrast with illiquid banks (Graham. H, 1993).

Slovin and Sushka (1984) further evidenced that banks that experience quick development in deposit, normally have high liquidity and lower rates on loans. Accordingly, given the association amid liquidity and rates of loans, the association amid bank return and liquidity would depend more likely on the financing cost elasticity of loan demands during 1983-1987.Their findings highlighted that an augmentation in capital dimension causes banks to expand on asset risk. Thus, in relation to risk-return association, higher "capital assets ratio" may perhaps be allied to greater probable returns. In this context, a high positive liaison amid capital ratios and returns in European banking markets was highlighted by (Molyneux and Forbes, 1995).

The earning rate of South African banks from 2005to2009 was investigated, Kumbirai, and Webb (2010) employed ratios analysis to compute returns and liquidity of the five largest banks operating in South African. Their study revealed that taken as a whole bank returns amplified noticeably in the foremost two years of the scrutinization, thereafter paramount decline was observed at the inception the "global financial crisis" in 2007, attainment its crest in 2008-2009. This leads to t reduce in returns, and liquidity.

Samad (2004) experiments "the performance of Bahrain's commercial banks with respect to credit (loan), liquidity and profitability using t-test" from 1994to2001. Ten (10) financialratios are employed in analsing liquidity, credit and profit. The findings of his paper showed that commercial banks' level of liquidity does not move at same level with other banks. And that Commercial banks are comparatively are face with lower profit and liquidity risk as contrast to other forms of banks, with regard to the relationship between credit and performance no clear conclusion highlighted.

2.2.1.3 Credit Risk

Credits risk: is the probability of debtors failing to repay the loans or unable comply with contractual obligations (debt). Cooper et al., (2003) on credit risk, institute that variation in credit risks may possibly replicate adjustments

in a bank's portfolio of loans which influences the bank's returns. Moreover, finding shows that the dissimilarity in bank returns are basically allied to fluctuations in credit risk, hence an increase in credit risk is generally allied with a dwindle in earnings (Duca and McLaughlin, 1990). Furthermore another research conducted revealed a negative affiliation amid "credit risk" and returns, which imply that banks threaten with increase-credit risk, experience argumentation on accruals of unrecovered debts, thus decline the returns (Miller and Noulas, 1997).

Kargi (2011) analysed consequences of credit on banks returns in Nigeria from 2004-2008 employing regression method. The outcome highlighted a significant effect of credit risk on profit. It further highlights a negative liaison amid profit and "loans and advances, non-performing loans and deposits" as a result making banks prone to financial distress. Furthermore, in Costa Rica, Epure and Lafuente (2012) highlighted on the association amid profit and risk from 1998 to 2007. The outcome revealed that profit augmentation arises from regulatory reforms and the variation in banks earnings is caused by risk factor, while ROA is negatively influenced by non-performing loans.

Kithinji (2010) elaborates on the consequences of risk and profit of banks in Kenya from 2004-2008. He highlighted that a large chunk of banks profit is not affected by "credit and non-performing loans" thus proposing that profit is influence by other factors. Furthermore, Felix and Claudine (2008) examined the liaison amid "performance and credit risk management". They highlighted that ROE and ROA are inversely liaised with "ratio of non-performing loan to total loan of financial institutions" thus causing a reduction in returns. Ahmed et al. (1998) highlighted a positive liaison amid nonperforming loans and provision on loans. Thus high provision on loans raises risk on credits thereby decline quality loan and negatively affect profitability. Al-Khouri (2011) reviewed the consequences of bank risk and the entire banking sector (43 banks) in six "Gulf Cooperation Council (GCC)" nations amid 1998 to 2008 utilising FE estimation. He highlighted that indicators like (liquidity risk, credit risk and capital risk) are key antecedents of profitability (ROA).

2.2.1.4 Capital Adequacy

Another significant bank indicator of profitability is Capital; Bourke (1989) revealed thatcapital and returns of are positively allied. A positive liaison amid returns and capital, and that high profit may possibly upshot to a boost in capital which entails that banks that are highly capitalized are confronted with lesser risks of ruins (bankruptcy), thus it trim down their costs of financing Athanasoglou et al. (2005). A related study was conducted by Naceur and Goaied(2001) who scrutinize the indicators of deposit in Tunisian from 1980 to1995. The results showed that the antecedents of profitability are of diverse level of significance such as: “capital efficiency, portfolio composition, employees’ productivity and bank capitalization”.

2.2.1.5 Bank Size

Bank size is used to show the shock of size on a firm’s return, Short (1979) present substantiation which elucidated a positive association amid size and banks capital adequacy, and that outsized banks have a propensity to incur cheap capital, which enable them to create higher returns. Capraru and Ihnatov (2015), establish the present of a positive significant liaison linking bank size and returns, mostly since immense banks can advantage disproportionally from their size as contrast to banks with small size. A positive significant liaison amid size and returns of bank was highlighted by Akhavein et al. (1997). Moreover, Boyd and Runkle (1993) reveal firms can attain economic of scale due to their large size of assets, which can lead to reduction in the production costs that is the entire production cycle. The study of Berger and Miller (1987) and Atanasoglou et al. (2008) establish that increasing bank size has little effect on minimizing a firm’s cost. Athanasoglou et al. (2006) propounded that the consequences of size on earnings may perhaps be positive to a certain degree and beyond which it could result to a decline due to numerous contributing indicators like period and sampled region. They establish inconclusive association that exists amid

the returns and bank size. Halkos and Salamouris (2004) elucidated on banks in Greece, stating that a raise in total assets of banks, leads to high efficiency in operation. Furthermore, Bikker (1999) highlighted positive liaison amid “size and profit” in Europe. Berg et al. (1993) employed the “data envelopment approach” (DEA) to measure bank efficiency in three Nordics countries from1993to2004. They concluded that major banks in Sweden were found to be the most competent, and, consequently, they predicted that these banks are most likely to develop in the future. Further, studies

In Italy, Turkey and Japan by (Girardone, 2004; Isik and Hassan, 2002; Drake et. al.,2003) respectively, have not found a conclusive association amid size and efficiency. However,Drake et. al. (2003) elucidated that technical effectiveness deteriorates when bank size deteriorates from the medium size bank, this implies a positive correlation. Further, variables such as employee’s expenses, proportion of “loans to assets”, proportion of “equity to assets” are correlated to the profitability (Mamatzakis and Remoundos, 2003). They explained that expansion in size of production plays an undisputable part in markets, and is positively liaised with profitability. Furthermore, they also found that the size of the market and external factors, explained by money supply significantly cause a shock on returns.

2.2.1.6 Financial leverage

Nasrollah et al (2013) research consequences of leverage and funding diversification on earnings- increasing earning control. The effects display that leverage coefficient is significant at stage of 95% significance, therefore, leverage has an impact on on “income-increasing earnings management”. Enuju and Soocheong (2005) observe the imlications of economic leverage on profitability and threat of companies. Tthey highlighed that leverage does not conssequence retuirns of restaurant. it's far noteworthy that financial leverage is positive which means that greater leveraged companies had more earnings on average although it was reported unstatistically. The examinatiion of Nazir and Saita (2013) studies

monetary leverage and corporation fee, proof of Pakistan. The examine observed out that popular and admin rate into to sales proportion is negatively associated with all 4 leverage ratio. Taani (2012) studied effect of “working capital management policy and economic leverage on financial performance” The outcome highlighted that commpany’s “leverage, working capital management policy, and firm size” have enormous association to net income and also no significant impllication on (ROE) and (ROA).Akbarian (2013) research impact of monetary leverage and environment danger on performance companies of listed organizations in Tehran stock market. The outcome suggests that there is a poor inverse liasson aamid financial leverage and cash gererated and variables like market risk and leverage with ROEare positively associated. It additionally indicates that economic leverage, market hazard and economic hazard with ROE have positive considerable relationship. Gleason, et al (2000) on their examine of “European countries”, found a sizable assocciation among the leverage and ROE and NIM. Deesomsak (2004) in Malaysia additionally discovered a negative coonection amid monetary leverage and net interest margin. Huang and Song (2004) studid chinese companies and discovered an inverse connection among short-term debt and ROA, in addition to between all of the liability and go ROA. Berger and Bonaccorsi (2006) proof that neither high degree of debt nor minimum capital of the firm, are liinnked with better effectiveness of corporation’s performance. Additionally, Rao et al. (2007) affirm the negative llink among leverage and overall profitbility result.Alcock, et al (2013) examines the position of economic leverage inside the overall performance of “private equity real Estate funds”. The outcomes shows that overall funds are not able to substantial influence on the idea of managerial ability, this is unrelated to the exposure to the different within the underlying marketplace return. It additionally highligted that the effect of transactional expenses, charges and different market frictions that are specially prevalent inside the direct real estate funding industry, given the particularly low level of liquidity of the assets. in addition it highlighted that extra fund return have been approximately proportional to extra marketplace return, meaning that those to their stakeholders effecient tto the entire fortold assets.

2.2.1.7 Bank location and Profitability

Vernon (1971) is categorized to be one of the early scholars who examine size and profit. Further Emery (1971) also examine this association thereby providing five groupings and establish that big banks earned highest profits, with the use of variance estimation he highlighted that size has impacted on various banks level of returns. Nonetheless, total asset was utilized to estimate size and found insignificant liaison amid the two (Vernon (1971). Moreover, Kwast and Rose (1982) inculcated location in the model and highlights a significant liaison with returns, which seems to evidence Vernon's outcome.

Heggested (1977) employed 238 medium banks in metropolitan region and highlights no significant connection amid profit and size. He argues that deposits help in capturing the variation arising from various product mix and economies of scale of frims (banks) of various sizes. Gallick (1976) propounded the degree of association amid size and profit. He used ROE to evaluate the entire bank degree of return. He highlighted that the existence of divergence for medium firms (banks) to earn less returns on equity than big banks, in almost all the years. However, did not prove any increment in returns caused by rising banks size.

A U-shape connection amid size and when "non-interest expenses to total assets ratio", further they highlighted an inverted U-shape association amid ROA and size while the operating cost and returns seems to establish a negative liaison as wells as the association amid profit and overhead cost. In a survey in conducted US from 1986to1989 on the consequences of size and return (Rhoades and Savage, 1991).Mullineaux (1978) is the premier scholar to connect size to efficiency and earnings. He buttressed a that size significantly affect profit and big firms (banks) earned more profit than small firms (banks) and also bank branches earn less than unit banks. Smirlock (1985) argue big firms (banks) are more probable to earn higher diversification of loan and services. This high diversification suggests small

cost of capital arising from low risk factor. He further highlighted that size and location is insignificant on profit and supports Kwast and Rose(1982).

2.2.2 External Antecedents of Bank Profitability

2.2.2.1 Interest Rate

The study of Vejzagic and Zarafa (2014) revealed a positive association amid interest rate and bank profit. Cost of loan has been cited as an important antecedent of profit in nearly all studies on banks return. Thus NIM paramountly has consequnces on the earning and performance of banks, derived from the distinction amid interestsobtained on assets and interest costs. Keeley (1990) highlighted a positive association amid interest rates and apparent bank profit. Moreover, in “dealer model” Saunders and Schumacher (2000) highlighted interest rate are positively liaised to bank profit (NIM), in 614 banks from America and Europe during 1988to1995.

Foreign banks were highlighted to lead the chat in lowering interest rates as compared to local banks in US, which explains the inverse interest rate elasticity, and that highlighted greater disparity foreign banks as compared to national banks. Further foreign banks were more influence during the financial distress than national banks Galac and Kraft (2000).

Peng et al. (2003) investigates the consequences of interest rate on the return of Hong Kong’s banking industry. Their regression results demonstrated that a decline in interest rate brings about a raise in net profit margin whereas a boost in the cost of loan in United States has a petite outcome on net profit margin.

Mashamba et al. (2014) buttresses on “Analyzing the relationship between Banks’ Deposit Interest Rate and Deposit Mobilization” They employed OLS analysis to elucidate on the affiliation among the explanatory variables and

the dependent variable. The results of the study revealed an inverse association amid interest and NIM.

2.2.2.2 Gross Domestic Product

The investigation of Kosmidou (2008) on the antecedents of profitability twenty-three banks in Greece during 1990to2002, utilizing (ROAA) and classified the indicators into bank-specific and macroeconomic indicators. He unveils that GDP has a positive liaison with profit whilst inflation consequence negatively on profit.

Comparably, Neely and Wheelock (1997) demonstrated that “per capita income” has a positive association with bank returns. A positive association was establish amid GDP and profit by (Pasiouras and Kosmidou, 2007).

Moreover, in an investigation on the consequences of indicators like: “the level of moneterization measured by M2/ GDP and the level of capitalization, financial development measured by financial interrelation ratio (FIR), size, age of the bank, business orientation measured by the ratio of non-interest income, and per capita GDP on the Chinese commercial banks”, Wum et al, (2007) highlighted that banks increase their profits when the financial system is abnormal. However, profit (ROAA) was negative liaised with business orientation and size.

Athanasglou et al. (2006) highlighted on the consequences of few determinants on bank profitability in the “South Eastern European Region” amid 1998-2002 periods with panel data. In which they highlighted a positive associations exist amid GDP and profit.

2.2.2.3 Competition

Competition is well thought-out to be imperative in ensuring that banks augment efficiencies by creating and maintaining a firm knob on cost effectiveness. The implication of a soaring “HHI score points” to the continuation of an oligopoly market, which entails that the intensity of competition essential to initiate effectiveness enhancement may perhaps cease to exist (Dawar, 2015;). Obstinately, duo surveys in Switzerland and Greece establish that there is no association amid the banking industry concentration and returns (Dietrich and Wanzenried,2011).

3.2.2.4 Inflation

It was pointed out by Revell (1979) that the consequences of inflation is determine by the rate at which the wages and operational costs of the bank grows more rapidly than inflation. Further, it was highlighted that the consequences of bank-profit and inflation highly rely on the level of inflation that, if the inflation is foreseen or unforeseen (Perry, 1992). He further sated that anticipated inflation rate signifies bank’s ability to properly amend “interest rates” to augment gains above costs thereby obtaining a positive liaison. Moreover, non-forecasted inflation brings about unsound amendments of interest rate, thereby probable causing inflated cost in contrast to revenues. Most surveys highlighted a positive association amid profit and inflation for instance: (Bourke, 1989).

The survey of Sayilgan and Yildirim (2009) investigated the liaison amid ROA and ROE for a selected sample of banks in Turkish during from 2002-2007 by means of monthly data. The banking sector appeared augment in profitability with a dilapidating inflation rate. In an exploration of “profitability determinants and expenditure-income structure of Turkish banking system” from 1990-2005, Atasoy (2007) highlighted ROA has a positive association with inflation.

3.2.2.5 Concentration

The consequences of concentration on the banking structure have been widespreadly analyzed by researchers amid 1970-1980s. Edwards (1965), studied the “effect of concentration on the gross interest rates on business loans”, thereby establishing that greater the concentration ratio in a market and/or smaller the quantity of banks, the more expensive the mean interest factor. Although the outcome evidenced the “structure-conduct performance (SCP) theory”, there exist precincts. As stated by Benston (1973), nearly all of these studies have grave statistical theoretical deficiencies which mean the results are of limited value. Heggested (1979) analyzed 44 banks in his studies from 1961-1976 using “loan rate, profitability, deposit rate and number of bank branches” as dependent variables. He propounded that out of the 44 banks concentration only significantly influence 26 banks. Comparably, Gilbert (1984) also demonstrated that out of 56 banks 27 evidenced that concentration influences earning capacity of firms, in his study on concentration. To the contrary, the survey of Kwast and Rose (1982) evidenced that “concentration” has a positive association with both high and low performing banks. They segment banks into superior and inferior performingbanks utilizing the H index to gauge concentration. Smirlock(1985) utilized deposit ratio of three banks to measure concentration he establish that concentration and returns have a positive association with market share in the regression however excluding market share from the regression there was no positive association.

On the other hand,Hannan and McDowell (1984) examine the diffusion rate of “automatic teller machine (ATMs)” with some explanatory variables together with concentration. The outcome highlighted that concentration is positively associated with diffusion rate. This outcome is more inline with the “differential efficiency hypothesis” hence dominant banks probably attained that position by uninterruptedly investing in less costly technology.

Delis and Papanikolaou (2009) explores the indicators of bank effectiveness. The results highlighted that banks from the tested nations have gradually progressed in their intensityof efficiency. The model employed during this research exploration highlights that diverse antecedents like size, concentration and investment opportunities are positively liaised with bank's effectiveness. Chirwa (2003) gave in his examination in Malawi banks about the association amid "market structure" projected by level of concentration and earning from1970to1994. He highlighted that there exist a positive association amid concentration and returns.

3.2.2.6 Market Share

Market share is termas a paramount indicator of profitability because the greater the marketplace share, the bigger the organization's possible for higher returns. Large market share moreover indicates supplementary power grants bank the ability to control products and prices offered to clients (Heggested and Mingo, 1976). Moreover Heggested (1977)understood that consequences of increase in market share on firm's earning might be positive or negative. A raise prices could be triggered by an increase in demand as well as affect operational cost of banks. Heggested (1977) highlighted weak inverse connection amid profit and market growth. Likewise, he further buttressed a weak negative link amid the two variables putting level of risk in the regression. This negative connection is because price impact is less as compared to cost factor. However, Smirlock (1985) is of the opinion that market share has a greater consequence on banks than concentration. His analyses involve 2700 banks and establish market share positively consequence on returns rather than concentration. Moreover, Smirlock (1985) postulated that market growth produced greater growth potential for banks and thus generate high profits. He furtherestablishes that market growth has positive considerable bond with profits.

2.2.2.7 Market Growth

Rhoades (1980) and Molyneux and Thornton (1992), highlighted thatmarket growth is a vital macro-economic indicator of profit. They relied on the postulation that market expansion will create opportunities for banks to generate high returns. Per capita income is utilized to proxy market expansion, and that greater “per capita income” is anticipated to raise both the supply and demand for funds (Heggestad and Mingo, 1976). Further Heggested (1977) recommended that “had suggested that the price elasticity of demand for bank product will be lower in markets with higher per capita income. Since prices vary inversely with elasticity of demand, prices of bank products may increase with capita income”.Conversely, Berger and Hannan (1989) experiments the consequences of“per capita income and market growth”on supply situationof account deposits of banks. They buttress that a boost in per capita income was negatively associated with deposits. However, the joint consequences of “per capita income” on funds supplied and demanded of banks will highlight a greater NIM and bank earnings. Significantly, inflation pressures and increase operational expenses of banks when the market moves faster than the expected demands- therefore making the banks to have high average cost due to over capacitation, thus this great a negative association amid profit and per capita earnings.According to Bourke (1989), development in overall banking sectorwill of assuredlyassist banks to optimize returns, especiallyin existence of entry market barriers. Money supply was us to evaluate market development; the analysis postulated a positive liaison amid bank profit and market expansion (Bourke, 1989).Employing the same method and variables as Bourke (1089), Molyneux and Thornton (1992) regurgitate this association however the outcome opposes a positive correlation.

2.2.2.8 Ownership

The implications of ownership on bank returns are not extensively highlighted in the literatures. The first trial to differentiate the overall performance associated with ownership was conducted by Vernon (1971). In his examination, Vernon tested the profitability of management controlled banks and proprietor-managed banks. He discovered that proprietor-managed banks earn less profit on invested capital compared to “management controlled banks”.Mullineaux (1978) categories his study into two groups which are individual bank holding firms and multi branch bank holding firms. He highlighted “multi bank holding firms” are less profitable than individual bank holding firms. According to Short (1979), government owned firms have negative consequences on bank returns. Using a dummy to represent state ownership, Bourke (1989) highlighted a negative connection amid state ownership and ROA and capital- which serve as dependent variables. Surprisingly, a positive association was establish when “value added” evaluate of profitability is employed as dependent indicator. He explain value added as“interest income less interest expense and other non wage expenses”.

Thus employee’s expenses aresubtracted from bank earnings in the “value added” evaluation of profitability. Thus, the conflicting symbol of the co-efficient of the dummy of state ownership could entail that banks owned by the state were unproductive in administrating employee’s expenses. Instead, it could also advocate inferior labor efficiency in government owned banks contrast to individual owned banks. Afterword Marriot and Molyneux (1991)furtherpostulated a negative connection amid return on capital and government ownership. Nevertheless, Molyneux and Thornton (1992) highlighted that surveys based on illustration of extremely outsized banks, comparable to that of Bourke (1989). In comprising, Marriott and Molyneux (1991) utilized a of the largest 92 banks in Europe in his surveyfrom 1986 and 1988 to approximate related regression and demonstrateda negative affiliation linking state ownership toreturn on capital. This result could possibly be cause by decline in economic of scale that is low working

efficiencies or merely as a result of non-profit orientationof government banks. Conversely toprior studies, Molyneux and Forbes (1995) also highlighted a positive and significant connection among government banks and return on capital in Europe. The outcome point out that private banks earn lower return on equity as compared to there competitors (governmentbanks). The probable cause can be as a result that government banks have low ratio of capital which can raise the anticipated ROE.

2.2.2.9 Regulations

To attained effective mediation procedure and to ensure preferred stage of explicit bank services. To attain such objectives rules are forced on banking industries and administrative. These laws impose on administrators essentially wrap the interest rates, lending policy, deposit policy and liquidity requirements. The statutory reforms on the banks inculcate “regulation on the condition of entry, establishment of new branches, ventures, mergers and acquisitions”. Nevertheless, the consequences of reforms on earning level of banks are less studied by the scholars. Gilbert (1984) highlighted that scholars refuse to identify reforms (regulation) as antecedents of profit. For instance: Rhoades (1979) and Fraser and Rose (1972) they highlighted that concentration and interest rate and saving has no liaison, however no enlightenment.

Gilbert (1984) understood that this arises as a result of “Regulation Q (the USA Federal Reserve „s regulation that sets interest rate ceilings payable on deposits. The regulation, however, has been used collectively to refer to the interest rate ceiling regardless of the regulatory agency imposing them. The Monetary Act 1980 called for the phasing out of these regulations by 1986)”. The probable unfavorable consequences on earnings of augmented interest rate inconsistency was establish while ago by Bierwag, G. (1977).

Furthermore, Flannery (1981) highlighted consequences of reforms that lead to variation interest rates on bank earnings and buttress that intra period changes did not impact on expenses and earnings. Likewise Hancock (1985)

confirmed Samuelson (1945) who highlighted that earning rise with interest rates. Nonetheless, Spellman (1980) debunked that restrictive reforms, price rivalry can be alternated by non-price rivalry especially in terms client expediency services. This might decline bank operational expenses and thus counterbalance severe consequences of financial reforms on NIM (net interest margin).The soundness of the disagreement will rely on the effortlessness at which clients expediency services are substitutable. Nonetheless, Flannery (1983) highlighted that there might be any severe consequences on earning of banks arising from augmented average interest rates on deposits because of:

- Banks will be optimistic embark on higher efficiency to decline various non- operational interest expenses.
- Production expenses and price of services become better associated

Nevertheless, Rose (1987) highlighted the consequences regulatory restrictions on earnings of 240 banks in US amid 1970-1983. The outcomes highlighted bank profits drastically decrease over time, this evidenced the “earning reduction hypothesis”. Humphrey (1993) confirmed this hypothesis “earning reduction hypothesis”.

Hawtrey (1994) in case of Australia highlighted that efficiency and competitive price in instituted branch networks are primary experience of financial regulatory restrictions procedures. Longterm consequences of regulatory restrictions (deregulation) will be better on competition and price in endeavor to distinguish their services aside competitors. Therefore, the short-term observable fact\ is declining the operating expenses (Graddy et al., 1985). Zaim (1995) in Turkey highlighted that his analysis evidenced Hawtrey`s primary phenomenon of financial regulatory restrictions reform. Banks in Turkey embark on severe reforms to decline expenses by shutting down and downscale less profitable branches after the liberalization. Thus banks level of profits augmented meaningfully.

Table 2.1: Summary of Previous Studies

Table 2.1: Summary of Previous Studies

Authors	Period Studied	Variables	Results	Methodology	Country
Capraru and Ihnatov (2014)	2004–2011	Average ROE, ROA	Their results indicated that the negative effect of the crisis can be seen in all measures.	Panel Data regression	Romania, Hungary, Poland, Bulgaria and the Czech Republic
Kumbirai and Webb (2010).	1994-2001	profitability, liquidity and credit quality	Their study revealed that overall bank performance increased considerably in the first two years of the analysis. A significant decline was noticed at the onset of the global financial crisis in 2007, reaching its peak during 2008-2009. This leads to the falling profitability, low liquidity and declining credit	Ratio Analysis	South Africa

			quality in the South African Banking sector.		
Samad (2004)	1991-2001	credit (loan), liquidity and profitability	Findings of his paper showed that commercial banks' liquidity performance is not at par with the banking industry. Commercial banks are relatively less profitable and less liquid and, are exposed to risk as compared to banking industry. With regard to credit performance this study finds no clear conclusion.	t-test	Bahrain
Naceur and Goaied (2001)	1980-2001	capital productivity, portfolio composition, labor productivity and bank capitalization	The results showed that the determinants of a bank's performance and profitability were of different level of importance	Panel Data regression model	Tunisia
Berg et al.	1993-2014	Profitability and	They concluded that largest Swedish	data envelo	Finland,

(1993)		productivity and competition	banks were found to be the most efficient, and, hence, they predicted that they are most likely to expand in a future common Nordic banking market.	pment approach (DEA)	Norway and Sweden
Saunders and Schumacher (2000)	1988 to1995	Net interest margin volatility, interest rate and regulatory requirement	Across the countries the volatility, interest rate and regulatory requirements have positive effects on bank's net interest margin.	the dealer model	Europe and United States
Kosmidou (2007)	1990-2002	ROAA, size and growth of GDP	He found that the impact of size and the growth of GDP were positive, while inflation had a significant negative impact.	unbalanced pooled time series dataset	Greece
Sayilgan and Yildirim (2009)	2002-2007	ROA, ROE, capital adequacy, inflation rate, industrial production	The profitability of the banking sector seems to have improved along with decreasing inflation rate, consistently increasing industrial production index and	OLS time series regression	Turkey

		index and budget balance	improving budget balance. It is found that profitability is positively affected by capital adequacy and negatively by growing off-balance sheet assets.		
Chirwa (2003)	1970-1994	Profitability and concentration	The findings showed that there was a positive relationship between concentration and performance.	OLS time series data	Malawi
Delis and Papanikolaou (2009)	1994-2005	Bank size, concentration, Investment environment GDP and Inflation	Bank size, industry concentration and the investment environment have a positive impact on bank's efficiency.	two-stage semi-parametric process	EU countries
Smirlock (1985)	1973-1978	Market share, concentration	his study and found that concentration did not have a positive significant relationship with profitability when market share was included in the	Profitability equation	US

			equation. But positively significant without market share.		
Heggested (1979)	1961-1976	profitability, loan rates, deposit rates, and the number of bank offices	He found that concentration had either a significant or small effect on the dependent variables.		
Kwast and Rose (1982)	1970–1977	H Index as a measure for concentration	They found that concentration had a significant positive relationship with both high and low profit banks.	The traditional statistical cost accounting model	US
Atasoy(2007)	1990-2005	ROA, ratio of total asset to equity, inflation rate and concentration	He determines that ROA is affected positively by the ratio of equity and total assets and inflation rate and negatively byconcentration ratio in the banking sector, ratio of banking sector asset size to national income and ratios of fixed assets and special provisional cost of	Multivariable single-equationregression method	Turkey

			total assets.		
Athanasoglou, Delis ad Stakouras (2006)	1998-2002	Real GDP per capita, inflation, liquidity, concentration and ROA	They found that a positively correlation exist between bank profitability and concentration and also inflation has a strong impact on performance while real GDP per capita fluctuations has less significant on banks profits.	Unbalanced panel data set	South Eastern European Region

2.2.4 Gap in Earlier Studies

Focusing on the literature, there is a deficiency thus nearly all earlier surveys declared exploit ROA and ROE to scrutinize profitability but only a only some apply NIM to determine profit. Moreover, to the preeminent of my acquaintance no preceding study highlighted on the antecedents of bank performance in The Gambia.

3.2.4.1Solving the Gap in Previous Literature

This thesis search to abridge the conversation thus it included “net interest margin” to gauge bank earnings, and to highlight on the antecedents of profitability in Gambia. It is probable to adjoin significantly in the financial sector and most especially in the academics fraternity. Furthermore, the study will enlighten the investors on the potential consequences on each of the determinats of performance.

CHAPTER 3

REAESRCH METHODOLODY

3.1 Introduction

The section gives detailed procedures required to attain the motive of the study. Base on the type of data used, quantitative technique is utilized on this thesis. The section is sub-categorized into “research design, variable choice and data collection (sampling technique sources of data), model specification method of analysis”.

3.2 Research Design

The thesis concentrates on evaluating performance of banks in The Gambia. Using income statements and statements of financial position reclaimed from Central Bank of The Gambia (CBG) from 2008-2018 quarterly data from 2008 to 2018. “Return on equity” (ROE) and “net interest margin” (NIM) are the dependent antecedents. NIM facilitates means to evaluate managerial effectiveness in maintain a balance amid supply and demand of funds and is calculated as interest spread relative to total earning asset. ROE reflects incomes derived from shareholders equity, calculated as “net income to equity”. Capital adequacy, liquidity, debt ratio, bank size and inflation are the

explanatory indicators. Dynamic and static models are used to obtained the motive of the research.

3.3 Data Collection

3.3.1 The Study Sample

According to Trochim (2006) sampling is a “method of choosing units (e.g. people or organization) from a population of interest so that by studying that sample we may fairly generalize our results back to the population from which they were chosen”.

The survey entails a population of 13 (thirteen) and a sample 8 (eight) banks from banks in the Gambia of which 2 (two) banks (FiBank and Mega bank) were excluded because of uncovered financial statement in CBG database. The data is derived from following banks:

(i) Standard Chartered Bank
(ii) Trust Bank
(iii) Access Bank
(iv) EcoBank
(v) AGIB Bank
(vi) GTBank

A non-probability sampling system is conducted on this thesis that is purposive method, whereby firms are chosen on certain criterion pertaining to the topic, which entails financial might, profitability and size.

3.3.2 Source of Data

In evaluating bank performance, a secondary source of data was used via income statements and statements of financial position reclaimed from Central Bank of The Gambia (CBG) from 2008-2018 quarterly data. Other vital sources were obtained from publications. The thesis adapts a quantitative analysesthus it atempts to explore financial ratios in applying the dynamic analysis of cointegration.

3.4 Variable Choice

The segment propounds on chosen antecedents of bank performance. Performance is frequently evaluated by the use of ROE and ROA for instance: Onaolapo and Kajola (2010), Karaduman et al. (2011). Nevertheless, ROE and NIM are employed to evaluate various phases of profitability.

Liquidity was evaluated as ratio of current asset to total asset according to (and Thornton, 1992; Bourke, 1989). They highlight negative association of liquidity on profit.

Capital Adequacy was evaluated as equity over total assets according to (Bourke, 1989; Goddard et al., 2004; Athanasoglou et al., 2005). They highlighted profit and capitalization has a positive association.

Bank size was evaluated as “natural logarithm of total assets” it was employed by (Padachi et al., 2010, Karaduman et al., 2011). I adapted due to its frequent use in measuring profitability.

Debt Ratio was derived as “total debt over total assets”. Ekwe and Duru (2012) argue that borrowed external funds can magnify a firm’s returns when invested rationally.

Inflation was derived from “consumer price index” (CPI) it was utilized by (Molyneux and Thornton, 1992; Perry, 1992). Who highlighted that the consequences of inflation on prosperity of returns depends on the predictability of inflation. Below is the exeplanation of the indicators:

Table 3.1: Defination and Notaion of the Variables

	Variable	Measure	Notation	expectation
Dependent variable	Profitability	Return on Equity (ROE) = Net Profit/Equity Net Interest Margin(NIM)= Net Interest Income/ Total Assets	ROE NIM	
Internal factors (explanatory variables)	Bank Size	Natural Logarithm of Total Assets	SIZE	+
	Liquidity Capital Adequacy Debt Ratio	Liquid Assets/Total Equity / Total Assets Total Debt /Total Assets	LIQR CAR DR	-/+ + -/+
External factors (explanatory variables)	Inflation rate	Consumer Price Index	INFL	-/+

3.5 Specification of Model

The sample of 6 (six) banks is experimented from 2008q1 – 2018q4. “Panel data is a data set that comprises both cross-sectional and time series elements in a models, the data set consigsts of n cross-sectional units, denoted i = 1,…,N, observed at each of T that is time periods, t = 1, ….,T. nxT represents the total observation in the data set. The framework for the panel data is explained according to the following regression model “(Brooks, 2008).

3.5.1 Dynamic Model

Subsequent to the stationarity technique performance that is Levin, Lin and Chu and Breitung (2000) unit root analysis, the cointegration analysis of kao (1999) is also conducted hence the dynamic model makes it a prerequisite for the variables to be stationary at first-difference and also cointegrated. Both techniques have a null proposition of no cointgration which is discarded at 5% significance. The FMOLS, DOLS and CCR proposed by Phillips and Hansen (1990), stock and Watson (1993) and park and Philips (1988, 1989) respectively are used in this thesis to establish the association amid the selected determinants. These techniques help in checking the serial correlation and problems of endogeneity in the mode, which assist in averting spurious analysis. In the second regression we included debt ratio in order to findout whether the level of debt can impact on net interest margin. All variables are run in log form.

$\ln ROE_t = a_{it} + \beta_{1i}\ln LIQ + \beta_{2i}\ln CAR + \beta_{3i}\ln SIZE + \beta_{4i}\ln INFL + e_{it}$; i=1,2,…., N, t=1,2,…T (1)

$\ln NIM_t = a_{it} + \beta_{1i}\ln LIQ + \beta_{2i}\ln CAR + \beta_{3i}\ln SIZE + \beta_{4i}\ln DR + \beta_{4i}\ln INFL + e_{it}$; i=1,2,…., N, t=1,2,…T (2)

wherea_{it} symbolizes bank specific effects, *lnROE*is the natural log of return on asset, *lnLIUQ*is the natural log of liquidity, *lnCAR* is the natural log of capital adequacy, lnSIZE is the natural log of bank size, *lnINFL* is the natural log of inflation andε depicts error condition, i=1,2,…., N are banksd, and t=1,2,…T depicts the time interval.

3.5.2 Dumitrescu and Hurlin (DH)

In order to examine the causal association amid the regressors, DH causality technique (2012) is utilized. This analysis can assist in providing more validity to the outcome of the study.

$$z_{i,t} = \upsilon_t + \sum_{c=1}^{C} \mu^{(c)} z_{i,t-c} + + \sum_{c=1}^{C} \beta^{(c)} h_{i,t-c} + e_{it} \qquad (3)$$

where, *e* is the error expression.

3.4.3 Static Model

The static Panel technique entails duo estimation either “fixed effects (FE) or random effects (RE) models".The individual-specific consequences of a RE is permited to be connected with the control variables in the fixed effects model. The logic following RE estimation inculcates an single specific effect of an unassociated random variable with the control variables. The FEmodel is a fitting specification if examining a particular set ofN banks and our inference is constrained to the behavior of the selected banks. And to decide the technique that is suitable for my model, the Hausman test shhould be conducted (Baltagi, 2005). The following are the regression equations to be employed:

$yit = \alpha + '\beta\, xit + uit$

“Where yit is the dependent variable, α is the intercept, β is a kx1 vector of

parameters to be estimated on the independent variables, and xit is a 1 x k vector of observations on the independent variables, t = 1, …,T; i = 1, …,N”.

3.4. 4 Prodedures to approaching the Analysis

Datas explored from financial statements was adapted, hence dynamic and static panel are used, it is a prerequisite to for stationarity and cointegration which is for th’e dynamic regression. Moreover “multicollinearity” was also conducted to avoid high correlation among the explanatory variables.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

4.1 Descriptive Statistics

Table 4.1 Statistical Description

	ROE	NIM	LIQ	CAR	LOGA	DR	INFL
Mean	7.685	0.497	3.334	2.405	7.809	3.753	1.194
Median	7.563	0.461	3.316	2.433	7.858	3.745	1.250
StsDev.	0.246	0.245	0.201	0.133	0.193	0.083	0.242
Skewness	-1.008	-0.470	0.253	-0.330	-1.341	0.311	-0.591
Kurtosis	3.632	2.108	2.600	3.230	3.853	3.152	2.527
Minimum	6.839	-0.510	2.939	2.054	8.014	3.511	0.613
Maximum	8.003	1.040	3.811	2.747	7.235	3.994	1.565
Sum	1106.7	71.61	480.1	346.40	1124.5	5.40.56	172.0

The mean rate of ROE is 7.68%, signifying, investors earn GMD 768 for each GMD 100 spend. The lowest and highest gain of 6.8% and 8% correspondingly, this highlights the probable uppermost forgone alternative profit shareholders might attain if they choose to invest in banks rather

“government risk-free rate investments such as T-Bills and gild-edged securities”.

Moreover, the preceding ROE standard deviation is about 0.24% signifying that the value of variant on data is not widely spread from the given mean. NIM has a mean value of 0.497%, which highlights that GMD49.7 of profit is attained on every 100 Dalasi derived from interest incomes.

The average value of CAR is 2.405%, which highlights that these banks are less capitalized thus the mean percentage is less than the “minimum standard of basel” 10.5%. This implies, these banks are exposed to high risk with regards to credit risk and operational risk.

The above table highlights a middling bank size of 7.809%, when articulate in financial expressions, the mean of GMD48, 799,881.937 is bank size (Antilog 7.809). Where inflation as an antecedent have a mean of 1.119% between 2008-2018, debt ratio (financial leverage) is 3.75%. This suggests that these banks on average they use 96.25% equity and the residual as debt finance. The banks are highly liquid thus the 3.34% highlights that banks have attained a level of liquidity which doubles the minimum standard requirement of liquidity, signifying that can easily pay off short term debts

4. 2 Test of multicollinearity

Table 1. 2 : Correlation Matrix

	InLIQ	InCAR	InSIZE	InDR	InINFL
InLIQ	1.0000				
InCAR	0.5339	1.0000			
InSIZE	0.2063	0.4864	1.0000		
InDR	-0.1248	-0.0652	-0.2652	1.0000	
InINFL	-0.0831	-0.2207	0.0313	-0.0639	1.0000

Note: “LIQ= Liquidity, CAR= Capital Adequacy Ratio, SIZE =Bank Size, DR= Debt Ratio and INFL= Inflation Rate”.

The pair off “correlation matrix method” is applied to check the occurrence of “multi-colinearity” amid the independent variables.

The correlation matrix showing the association amid the variables is pegged at 10% significant level.Thus it highlightethe least correlation to be approximately -0.2652.

Though, the maximum connection is 0.2833 amid liquidity and size. In consequence, the association amongst the two indicators although is the maximum association, the amount is trite to the value of “muliticollinearity at 0.8 point of confidence, (rule of thumb)”.

4.3 Correlation Analysis

Table 4.3A: Correlation for ROE as a Depenent Indicator

Correlation probability	lnROE	lnLIQ	lnCAR	lnSIZE	lnINFL
lnROE	1.000				
lnLIQ	0.112467 {0.1796}	1.000			
lnCAR	0.320308 {0.0001}	0.533974 {0.0000}	1.000		
lnSIZE	0.904429 {0.0000}	0.206345 {0.0131}	0.486474 {0.0000}	1.000	
lnINFL	0.168550 {0.0434}	-0.0831 {0.7631}	-0.2207 {0.0079}	-0.142 {0.0279}	1.000

Source: “generated using eviews. The parenthesis { } represent the P value”.

lnLIQ, lnCAR, lnSize, and lnINFL, are positively associated with ROE, withan association strength 11.2%, 32.0%, 90.4%6 and 16.9% correspondingly. Though, only size and capital adequacies tend to be significant at 1% correspondingly while inflation is significant at 5%, however liquidity was not significant. This specifies that a rise in any one of these indicators would escort to a boost ROE.

Table 4.3B: Correlation for NIM as a Dependent Indicator

Correlation	InNIM	InLIQ	InCAR	InSIZE	InDR	InINFL
InNIM	1.0000					
InLIQ	-0.06026	1.0000				
	{0.3456}					
InCAR	0.04767	-0.55551	1.0000			
	{0.4448}	{0.0000}				
InSIZE	-0.26016	0.16279	0.31839	1.0000		
	{0.0000}	{0.0104}	{0.0000}			
InDR	0.03408	0.10700	-0.03934	0.2890	1.0000	
	{0.0000}	{0.0933}	{0.5383}	{0.000}		
InINFL	0.01550	-0.01399	-0.15585	-0.0737	-0.02970	1.0000
	{0.8084}	{0.8268}	{0.0142}	{0.024}	{0.6422}	

Source: “generated using eviews. The parenthesis { } represent the P value”.

Liquidity and InSIZE are inversely associated with NIM with association strength of -6.0. % and -26.0% correspondingly, the outcome moreover highlights that both size and liquidity are not significant at 5% level. The outcome signifies that 1% upward changes both indicators would consequence a fall NIM.

Moreover, InCAR, InDR and InINFL are positively association with NIM with an association strength 4.8%, 3.4.% and 15.5%% correspondingly. Though only inflation tend to be insignificant, but InCAR and InSIZE are 10% are significant.

4.4 Unit Root Test

The stationarity among the variables was confirmed by unit root tests (Levin, Lin and Chu) and Breitung. There was no stationarity amid the variables at level but at 1(1). Hence following the confirmation of the existence of statioinarity at difference, the appropriate models can be computed to achieving the aim of this thesis.

Table 4.4A: Unit Root Test of Levin, Lin and Chu

	Level			First difference		
Variables	F-STAT.	PV	LAG	F-STAT.	PV	LAG
lnROE	1.3668	0.9142	0	-6.6091	0.0000***	0
lnNIM	1.4579	0.9276	0	-9.2630	0.0000***	0
lnLIQ	0.3411	0.6335	0	-9.3340	0.0000***	0
lnCAR	0.6036	0.7270	0	-13.3039	0.0000***	0
lnLOGA	4.9213	1.0000	0	-11.9231	0.0000***	0
lnDR	0.5352	0.7038	0	-18.0362	0.0000***	0
lnINFL	2.5297	0.9943	4	-19.8311	0.0000***	3

Table 4.4 B: Unit Root Test of Breitung

Variables	Level intercept & Trend		First Difference	
	T-statistics	P Values	T-statistics	P Values
lnROE	3.16163	0.9992	-3.46891	.0003***
lnNIM	0.39067	0.6520	-1.74505	.0405**
lnLIQ	-0.21128	0.4163	-6.20242	.0000***
lnCAR	0.42610	0.3350	-1.7975	.0361**
lnSIZE	3.50802	0.9998	-1.73757	.0411**
lnDR	0.21970	0.5869	-3.04605	.0012***
lnINFL	3.09166	0.9990	-22.8259	.0000***

Note: “LIQ= Liquidity, CAR= Capital Adequacy Ratio, SIZE =Bank Size, DR= Debt Ratio and INFL= Inflation Rate”.

4.5 Panel Cointegration Analysis

Table 4.5: Kao's Panel Cointegration

ROE as dependent variable (model1)

Test	t-statistics	Prob.
ADF	-2.093498	0.0182
Residual variance	0.001865	
HAC variance	0.001898	
NIM as dependent variable(model2) Test	t-statistics	Prob.
ADF	-15.99210	0.0000
Residual variance	0.573492	
HAC variance	0.214255	

The kao analysis evidenced the presence of cointegration amid the variables; hence the p values in both models are < 5% thereby discarding the null proposition of no cointegration amid the variables.

4.6 The Dynamic Regressions

Table 4.6A: FMOLS for ROE

Variables	Coefficient	T-statistics	P Value
InLIQ	-0.344905	-4.179199	0.0001***
InCAR	-0.085108	-0.655686	0.5132
InSIZE	1.685801	7.511949	0.0000***
InINFL	0.140040	3.402552	0.0009***
R2	0.902462		
S.E of Regression	0.079588		
Long-run variance	0.010623		

Table 4.6.B: DOLS for ROE

	Coefficient	T-statistics	P Value
InLIQ	-0.184315	-1.942672	0.0577**
InCAR	-0.073032	-0.384102	0.7025
InSIZE	1.827390	4.745054	0.0000***
InINFL	0.309003	4.489556	0.0000***
R2	0.969844		
Long-run variance	0.003051		
S.E Regression	0.069290		

The regression analysis from FMOLS and DOLS demonstrated that liquidity emerge as an antecedent of performance thus it highlights a 1% significant, it has negative association with ROE. The coefficient of -0.344905 and -0.184315 from FMOLS and DOLS respectively, highlights that when liquidity arguments 1% ROE will diminish by 0.34 and 0.18 percent, respectively. 1st postulate foresees an inverse association amid LIQ and returns. Therefore we accept the null proposition of a negative association and discard the alternative proposition of a positive association. This outcome is inline with the finding of Athanasoglou et al. (2006), who demonstrated an inverse association amid liquidity and returns.

Capital Adequacy is not significant when ROE serves as a dependent variable; however it's negatively linked with ROE. This highlights that the firms are unable to exploit their capital coupled with assets to develop a higher bank earnings. The outcomes from the FMOLS and DOLS showed that a rise in CAR would demonstrate an upward movement in earnings (ROE) by 0.08% and 0.07%. A positive association is postulated in the 2nd hypothesis, the analysis from both regressions demonstrated an inverse insignificant association, and consequently the null proposition is discarded and accepts the undesired hypothesis.

Size is a considerable indicator of ROE, the outcome from the FMOLS and DOLS signifies a positive correlation amid size and ROE. An increase in size

escort to a positive movement on return and 1% upward shift the bank size; will cause earnings to drop by 1.68 and 1.83%. 3rd hypothesis forecast a affirmative association, therefore the outcome affirms the survey the survey of Maredza and Ikhide, 2013 who highlighted that size has a positive association with returns and also Amel et al. (2004) who belief size have both negative and positive consequence. The outcome further relent that the banks wereunable to exploit their asset in earning more returns.

Inflation (INFL) is indicator of bank profitability thus the p value is smaller than 10% significance. The outcome demonstrated a direct association amid ROE and rate of inflation. It further illustrated a 1% augmentation in inflation in model 1 and 2 cause same movement in profitability by 0.14% and 0.31% respectively. The 5th hypothesis postulated a positive association amid inflation and ROE. The outcome affirms the null proposition, we therefore the null proposition is accepted while the substitutive postulate of an inverse consequence is rejected. This confirms the study of Thornton, (1992) who propounded a positive association amid “inflation and bank performance”.

Table 4.6C: FMOLS for NIM

Variables	Coefficient	T-statistics	P Value
InLIQ	-0.210889	-2.406299	0.0169***
InCAR	0.720304	4.698839	0.0000***
InSIZE	-1.123163	-8.291181	0.0000***
InDEBT	-0.120340	-0.564683	0.5728
InINFL	-0.107238	-1.380914	0.1686
R2	0.120062		
Long-runvariance	0.050767		
S.E regression	0.052259		

Table 4.6D: DOLS for NIM

	Coefficient	T-statistics	P Value
InLIQ	0.176494	0.971889	0.3329
InCAR	0.726963	2.292702	0.0235**
InSIZE	-1.467604	-5.054173	0.0000***
InDEBT	0.400769	0.816692	0.4156
InINFL	-0.228086	-0.890316	0.3750
R2	0.556605		
Long-runvariance	0.056459		
S.E regression	0.048983		

Table 4.6C highlighted the same outcome thus liquidity is 1% significant with NIM. This implies a negative association amid liquidity and bank returns (NIM), it has a co-efficient of -0.210889 which indicates that when a rise in LIQ, NIM will reduce nearly to 0.21%, vice-versa. 2nd proposition envisage an inverse association; therefore the null proposition is accepted while the substitutive postulate of an affirmative consequence is rejected. However, in table 4.6D DOLS reports a positive association amid the two variables but insignificant.

Capital Adequacy is significant at 1% and 2% level of significance from the FMOLS and DOLS respectively. The association is found to be positive when NIM is proxied as profitability measure. The regression analysis demonstrated that an upward movement on CAR augments return (NIM) to 0.72 %and 0.73 %. The 2nd hypothesisanticipates a positive association. Therefore outcome agrees with both the proposition and Berger (1995) who propounded that higher profit may result to a raise in capital and that banks that are well-capitalized are confronted with minimum uncertainties of insolvency, this diminishes capital expenses than otherwise.

Size is a considerable indicator of NIM, the outcome from the FMOLS and DOLS signifies a negative correlation amid size and NIM. A decline in size

escort to a positive movement on return and 1% upward shift the bank size, will cause earnings to drop by 1.12and 1.47%. 3rd hypothesis forecast a affirmative association, however the outcome affirms the survey of Amel et al. (2004) who elucidated that that “bank size has a positive association with size and returns but beyond a certain stage it can result to a decline due to the nature of the sample size and selected country”. The outcome further relent that the banks wereunable to exploit their asset in earning more returns.

Table 4.6C and 4.6D reports an inverse association amid return (NIM) and rate of inflation for these banks, however the association is not significant. This result disconfirmed the null proposition; subsequently we discard it accept the substitutive proposition. Its moreover validate the study of Sayilgan and Yildirim (2009) who postulated a negative liaisson amid bank returns and inflation.

Debt is an insignificant antecedent of bank returns (NIM) consequently it attains a p higher than 10% significance; conversely the findings from the FMOLS above highlighted a negative consequence on returns while the DOLS postulated a positive but insignificant association of debt on bank earnings. Hypothesis 4 postulated a negative association; therefore base on the findings debt ratio has a inconclusive liaison with NIM.

4.7 Random Effect Models

This study utilized 6 “banks in The Gambia”, thus the propensity for the “fixed effect and random effect” models’ estimation diverges considerably. “Hausman test” was accomplished and outcome demonstrated that the analysis from the Hausman > 5% level. This signifies the superiority of random effect to fixed effect in ROE and NIM model.

Table 4.7A: Random Effect-ROE as Dependent Variable

Variables	Coefficient	Probability values
InLIQ	-0.042507	0.2286
	{-1.209822}	
InCAR	-0.027567	0.5780
	{-0.557802}	
InSIZE	0.095710	0.3925
	{0.858086}	
InINFL	-0.032763	0.00473***
	{-2.003152}	
InROE(-1)	1.027354	0.0000***
	{18.88338}	
C	**-0.730729**	**0.3325**
R. Square	**0.974789**	
Adjusted R Square	**0.972788**	
F-Statistics	**487.1740**	**0.000000*** **
Durbin Watson	**2.324797**	**-**
		-
Hausman Test	**3.605668**	**0.6075**

Note: "ROA= Return on Assets, LIQ= Liquidity, CAR= Capital Adequacy Ratio, SIZE =Bank Size, DR= Debt Ratio, INFL= Inflation Rate and C= Constant. . While *, **, *** indicate significant at 10%, 5% and 1% respectively".

The static model of ROE postulated a negative association between liquidity and ROE, these results is in conformity with the FMOLS and DOLS analysis. However, the relationship is not significant. Furthermore, an insignificant inverse association is found amid InCAR and ROE, in contrast size has a positive but insignificant correlation with ROE. Moreover, InINFL has a negative significant correlation with ROE; this signifies that 1% increment in InINFL will cause a decline in ROE by 0.033%.

Table 4.7B: Random Effect-NIM as dependent Variable

Variables	Coefficient	Probability values
InLIQ	-0.267510	0.0882*
	{-1.711781}	
InCAR	0.856695	0.0045***
	{2.866320}	
InSIZE	-0.689409	0.0000***
	{-4.720244}	
InDR	-0.157200	0.5916
	{-0.537171}	
InINFL	0.063733	0.7017
	{0.033504}	
C	**5.278836**	
R. Square	**0.100360**	**-**
Adjusted R Square	**0.081695**	**-**
F-Statistics	**5.376997**	**0.000105*** **
Durbin Watson	**2.285635**	**-**
Hausman Test	**5.009927**	**0.3147**

Note: "ROE= Return on Equity, LIQ= Liquidity, CAR= Capital Adequacy Ratio, SIZE =Bank Size, DR= Debt Ratio, INFL= Inflation Rate and C= Constant. While *, **, *** indicate significant at at 10%, 5% and 1% respectively".

Liquidity is significant and negatively liaised to bank performance (NIM) at 10%, with a co-efficient of -0.267510 which highlights that a 1% raise in InLIQ is probable cause InNIM to diminish by 0.27%. This robustness test (random effect analysis) in table 4.7B confirmed the outcomes from the long-run estimation of FMOLS and DOLS. Therefore it also confirmed the first hypothesis. Furthermore, the static model also suggested a positive and significant association amid InCAR and NIM at 1% significance. Similar the analysis further confirmed a negative consequence of size on NIM, with a coefficient of -0.689409 and 1% significance level. Debt has a negative association with NIM but insignificant, inflation is also found to have an insignificant positive relationship.

4.8 Dumistrescus and Hurlin Causality

The results demonstrated that there exist a unidirectional causal association moving from ROE to capital adequacy, size and inflation (ROE→CAR, SIZE INFL), however a unidirectional causation moving from liquidity to ROE. The outcome from model 2 explained a neutral causal association amid NIM and liquidity, moreover there is a unidirectional association flowing from capital adequacy and size to NIM. The analysis further establishes a unidirectional causation moving from NIM to debt ratio while a feedback association is confirmed amid NIM and inflation.

Table 4.8: Dumistrescus and Hurlin Causality - ROE as Dependent

H0: absence of causality	Z bar Statistics	P Values
InLIQ→InROE	1.99253	0.0463
	-0.01556	0.9876
InROE→InCAR	3.58089	0.0003
	-0.28290	0.7772
InROE→InSIZE	2.70482	0.0068
	0.62863	0.5296
InROE→InINFL	3.20158	0.0014
	1.13481	0.2565
InNIM as Dependent		
InLIQ≠InNIM	1.57622	0.1150
	0.04468	0.9644
InCAR→InNIM	4.79205	2.E-0.6
	-0.59492	0.5519
InSIZE→NIM	3.22339	0.0013
	0.31071	0.7560
InNIM→InDR	4.66776	3.E-0.6
	1.61005	0.1074
InINFL⇆InNIM	-1.68112	0.0927
	-2.08005	0.0375

CHAPTER 5

SUMMARY OF STUDY

6.1 Introduction

This component highlights the scrutiny of the data which have serene and develop in retort to the statement of problem elucidated in the first section of the research. The findings, interpretation and conclusion of the research are highlighted in this section.The implication of the thesis is to discover the antecedents profitability of banks .

5.2 Summary of Analysis

The outcome in table 4.6A and 4.6B shows R^2 of 90% and 96.9% respectively which means that 90% and 97% of the difference in the representation is caused by regressors while the 10% and 3% of the distinction is due to the peripheral factors outside regression. This highlighted that preferred “independent variables” are the key antecedent of earnings in The Gambia. Furthermore, table 4.6C and 4.6D highlights R^2 of 12% and 55% respectively, indicating that the 12% and 55% difference in these duo models occurs due to the “independent variables”, while 88% and 45% of the variant is consequence by indicators peripheral of the model. This evidenced that the selected variables have a greater consequence on ROE than NIM.

- Liquidity:is establish to be a considerable antecedent of profit in the Gambia; thus the tables up-hold the outcome that liquidity have a shock on both ROE and NIM. Furthermore, it has a negative association on both ROE and NIM, demonstrating that an increase in liquidity will consequently cause bank ROE and NIM to decline drastically. This is the case because high liquidity indicates that banks has less investment opportunities to magnify their returns hence this idle cash could have been invested in high paying projects.

- Capital Adequacy: The discovery illustrated that lnCAR is positive allied to bank earnings that are NIM and ROE, meaning a boost in CAR will bring about an improved bank performance. High CAR signifies that banks has enough to finance both their short and long-term financial needs, this reduces the risk of bankruptcy thereby reduce the cost of debt financing.

- Bank Size:The outcome of the FMOLS and DOLS regression evidenced a positive association amid size and ROE. This implies that a raise in bank asset will increase ROE. However, bank size is found to be negative associated with NIM as suggested by the FMOLS, DOLS and Random Effect analysis; meaning a decline in total asset will increase NIM. This findings suggested that has both negative and positive consequences on performance depending which proxy of profitability is used. Therefore inconclusive association amid size and profit.

- Financial Leverage: The conclusion highlighted that leverage have a negative association with NIM in the FMOLS, but positive in the DOLS and Random Effect analysis however these associations are insignificant. This signifies that debt ratio is an insignificant determinant of bank return in the elected sample of banks.
- Inflation:has been establish as a significant antecedent of bank returns in the Gambia, thus the tables demonstrated that a positive

association amid inflation and ROE. However, a negative association is establish when NIM is employed as a dependent variable but this association is insignificant. Therefore inflation as a positive association with bank returns.

- The F-Statistics from the models institute an extremely 1% significant, this signifies that jointly the regressors can elucidate the difference in the model and they jointly antecedents of bank earnings.

5.3 Conclusion

The study highlights the “determinants of bank profitability” of six (6) trustworthy banks in The Gambia during 2008Q1-2018Q4. The motive is to conduit the fissure in literature hence studies were not performed in this parameter in The Gambia, using FMOLS, DOLS, Random Effect and DH-Causality analysis. The outcomes of the study suggest that liquidity has a negative association with profitability while Capital adequacy has a positive significant association with profitability. Consequently, size has a positive significant association on ROE but significantly negative on NIM. However, financial leverage (debt ratio) has both negative and positive consequences performance but insignificant. However, inflation as a macro-economic factor has a positive association with profitability. Finally, the DH-Causality analysis establish a unidirectional causal association moving from ROE to capital adequacy, size and inflation (ROE→CAR, SIZE INFL), however a unidirectional causation moving from liquidity to ROE. The outcome from model 2 explained a neutral causal association amid NIM and liquidity, moreover there is a unidirectional association flowing from capital adequacy and size to NIM. The analysis further establishes a unidirectional causation moving from NIM to debt ratio while a feedback association is confirmed amid NIM and inflation.

5.4 Recommendations

The suggestions below are provided by the researcher to the diverse stakeholders of the banking fraternity in The Gambia:

- Banks ought to attempt to competently and successfully exploit their entire property (assets) to improve their financial capacity.
- Managers in charge of liquidity of the bank ought to concentrate demand and supply of cash to help them apportion extra funds for investing; thus the scrutiny above establish that level of liquidity has negative consequences on returns.
- Banks ought to recruit “assets and liability management” system so to augment their level of spread.
- In their undertaking to amplify earnings via debt funding, banks ought to prudently supervise their leverage and only invest on lucrative different portfolios.

5.5 Future Researchable Areas

The investigation has elucidated on variety of topics that when undertaken it can be of great benefit to stakeholders. Additional research ought to be perform on the consequences of “global financial crises” on banks earnings in The Gambia, to verify whether comparable conclusions will be establish with surveys performed in various parts of the globe.

The indicators of financial performance ought to be performed in different sector in the Gambia to establish if the same variables that influence bank earnings are relevant to distinct sectors.

Furthermore, similar research should be carried out in the sub-region in order to establish the liaison among the indicators in this research and their consequences on the banking performance. Prominently, common grounds can be established among nations from the various studies conducted.

REFERENCES

Athanasoglou P., Delis M. and C. Staikouras (2006). “Determinants of Banking Profitability in the South Eastern European Region,” Bank of Greece Working Paper 06/47.

Bain, J.S., (1950), “Workable competition in oligopoly”. American Economic Review,40(2).

Bain, J.S., (1951), “The relation of profit rate to industry concentration : American Manufacturing, 1936-1940”. Quarterly Journal of Economics (65(3).

Baker, J.V., (1978), “Why you need a formal Asset / Liability Management Policy”. Journal of Banking, pp 33-43.13

Berger, A.N., (1995), “The relationship in Banking-Tests of Market power and Efficient market Hypotheses”. Journal of Money, Credit and Banking, (65 (3).

Bouke, P. , (1989), “Concentration and other Determinants of Bank Profitability in Europe”. Journal of Banking and Finance, pp65-80.

Berger, A. (1995a). “The Profit-Structure Relationship in Banking: Test of MarketPower and Efficient-Structure Hypotheses,” Journal of Money, Credit and Banking 27, 404-431.

Berger, A. (1995b). “The Relationship Between Capital and Earnings in Banking,” Journal of Money, Credit and Banking 27, 432-456.

Berger, A., Hanweck, G. and D. Humphrey (1987). “Competitive Viability in Banking: Scale, Scope and Product Mix Economies,” Journal of Monetary Economics 20, 501-520.

Berkering(1996),”Singapore Financing Asia‟s growth” ISBN 185564 4746.

Bourke, P. (1989). “Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia,” Journal of Banking and Finance 13, 65-79.

Boyd, J.H. and D.E. Runkle (1993). “Size and Performance of Banking Firms. Testing the Predictions of Theory,” Journal of Monetary Economics 31, 47-67.

Bryan, William R (1972),” The Determinants of Bank profits- A study of Medium Sized banks”,American Bankers Association, Department of Research and Planning ,research paper no.8 Washington DC.Testing the Predictions of Theory,” Journal of Monetary Economics 31, 47-67.

Bryan, William R (1972),” The Determinants of Bank profits- A study of Medium Sized banks”,American Bankers Association, Department of Research and Planning ,research paper no.8 Washington DC.

Burke, J., and S. Rhoades. "Profits, Potential Competition and 'Contestability' in Highly Concentrated Banking Markets," unpublished manuscript, Board of Governors of the Federal Reserve System, 1985.

Clark, J.A., (1986), “Single Equation, Multiple Regression Methodology : Is it an appropriate Methodology of the Structure Performance Relationship in Banking”. Journal of Monetary Economics, 18(3).

Clark, J. (1988), “Economies of Scale and Scope at Depository Financial Institutions:A Review of the Literature,” Federal Reserve Bank of Kansas City Economic Review 73, 16-33.

Demsetz, Harold.(1974), "Two Systems of Belief About Monopoly," in H. Goldschmid, H. Michael Mann and J. Fred Weston, eds., Industrial Concentration: The New Learning, Boston: Little, Brown and Co., pp. 164-84.

Edwards, Franklin R.(1977), "Managerial Objectives in Regulated Industries: Expense-Preference Behavior in Banking," Journal of Political Economy, vol. 85.

Evanoff, D.D. and Fortier, D.L., (1988), “Re-evaluation of the Structure conduct Performance Paradigm in Banking”. Journal of Financial Services Research 1 (3).

Emery. John T (1971),”Risk, Return and the Morphology of Commercial Banking Chp 8. 4th edition. Prentice hall International. Inc.

Flannery , mark J (1981), “Market Interest Rates and Commercial Bank Profitability”: An Empirical Investigation, Journal of Finance, vol.36,No, 61085-1101.

Gibson, H.D. (2005). “Developments in the Profitability of Greek Banks,” Bank of Greece Economic Bulletin 24, 7-28.

Gilbert, R. "Bank Market Structure and Competition," Journal of Money, Credit and Banking, vol. XVI, no. 4, pt. 2 (November 1984).

Goddard, J., Molyneux, P. and J.O.S. Wilson (2004). “Dynamics of Growth and Profitability in Banking,” Journal of Money, Credit and Banking 36, 1069-1090.

Hannan, Timothy. "Limit Pricing and the Banking Industry," Journal of Money,

Credit and Banking, vol XI, no. 4 (November 1979), pp. 438-46.Heggestad, Arnold J.(1977) "Market Structure, Risk and Profitability in Commercial Banking," Journal of Finance, vol. 32, no. 4 (September 1977), pp. 1207-16.

Goddard, J., Molyneux, P. and J.O.S. Wilson (2004). “Dynamics of Growth and Profitability in Banking,” Journal of Money, Credit and Banking 36, 1069-1090.

Hannan, Timothy. "Limit Pricing and the Banking Industry," Journal of Money, Credit and Banking, vol XI, no. 4 (November 1979), pp. 438-46.

Heggestad, Arnold J.(1977) "Market Structure, Risk and Profitability in Commercial Banking," Journal of Finance, vol. 32, no. 4 (September 1977), pp. 1207-16.

Humphrey, D. (1990). “Why Do Estimates of Bank Scale Economies Differ?” Federal Reserve Bank of Richmond Economic Review 76, 38-50.

Gilbert, R.A., (1984), “Bank Market Structure and Competition: A Survey”. Journal of Money, Credit and Banking, 16 (4).

Maudos, J., (1998), “Market Structure and Performance in Spanish Banking using a Direct Measure of Efficiency”. Applied Financial Economics, 8.

Mitchell, K., (1984), “Capital Adequacy at Commercial Banks”. Economic Review of Federal Reserve Bank of Kansas City, September / October, pp17-30.

Molyneux, P. Lioyd-Williams, D.M. and Thornton J.,(1994), “Market Structure andPerformance in Spanish Banking”. Journal of Banking and Finance, 18.

Molyneux P. and Fobers, W., (1995), “Market Structure and Performance in European Banking”. Applied Economics, 27 (1).

Moulyneux, P. and J. Thornton (1992). “Determinants of European Bank Profitability: A Note,” Journal of Banking and Finance 16, 1173-1178.

Peltzman, S., (1997), “The Gains and Losses from Industrial Concentration”. Journal of Law and Economics, 20 (3).

Rhoades, S.A. and Rutz, R.D., (1982), “Market Power and Firm Risk: a Test for “Quite Life” Hypothesis”. Journal of Monetary Economics, 9 (1).

Rhoades, Stephen A. "Structure-Performance Studies in Banking: An Updated Summary and Evaluation," Staff Study No. 119, Board of Governors of the Federal Reserve System, Washington, D.C., August 1982.

Saunders, A. and L. Schumacher (2000). “The Determinants of Bank Interest Rate Margins: An International Study,” Journal of International Money and Finance 19, 813-832

Schweiger, I. And Mcgee, J.S., (1961), “The Structure and Performance of Banks and Related Financial Institutions in Chicago and Other Areas”. Journal of Business, 34 (2).

Sinkey, J.F. Jr., (1975), “A Multivariate Statistical Analysis of the Characteristics of Problem Banks”. Journal of Finance.

Sinkey, J.F. Jr., (1975), “A Multivariate Statistical Analysis of the Characteristics of Problem Banks”. Journal of Finance.Smirlock, Michael, and David Brown. "Collusion, Efficiency and Pricing Behavior: Evidence From the Banking Industry," Economic Inquiry, vol. XXIV, no. 1 (January 1986), pp.85-96.

Smirlock, Michael. "Evidence on the Non)Relationship Between Concentration and Profitability in Banking," Journal of Money, Credit and Banking, vol. XVII, no. 1(February 1985).

Smirlock, Michael, Thomas Gilligan, and William Marshall., The StructurePerformance Relationship," American Economic Review, December 1984, pp. 1051-60.

Whalen, Gary. "Competition and Bank Profitability: Recent Evidence," Economic Commentary , Federal Reserve Bank of Cleveland, November 1,1986.

1.1 Appendix for ROE FMOLS

Dependent Variable: LOGROE
Method: Panel Fully Modified Least Squares (FMOLS)
Date: 06/11/19 Time: 18:45
Sample (adjusted): 2008Q2 2014Q3
Periods included: 26
Cross-sections included: 6
Total panel (unbalanced) observations: 138
Panel method: Pooled estimation
Cointegrating equation deterministics: C
Coefficient covariance computed using default method
Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGLIQ	-0.344905	0.082529	-4.179199	0.0001
LOGA	1.685801	0.224416	7.511949	0.0000
LOGINFL	0.140040	0.041157	3.402552	0.0009
LOGCAR	-0.085108	0.129800	-0.655686	0.5132

R-squared	0.902462	Mean dependent var	7.680010
Adjusted R-squared	0.895603	S.D. dependent var	0.246323
S.E. of regression	0.079588	Sum squared resid	0.810788
Long-run variance	0.010623		

Appendix 1.2 for NIM FMOLS

Dependent Variable: LOGNIM

Method: Panel Fully Modified Least Squares (FMOLS)

Date: 06/11/19 Time: 19:43

Sample (adjusted): 2008Q2 2018Q4

Periods included: 43

Cross-sections included: 6

Total panel (unbalanced) observations: 241

Panel method: Pooled estimation

Cointegrating equation deterministics: C

Coefficient covariance computed using default method

Long-run covariance estimates (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGLIQ	-0.210889	0.087640	-2.406299	0.0169
LOGCAR	0.720304	0.153294	4.698839	0.0000
LOGA	-1.123163	0.135465	-8.291181	0.0000
LOGINFL	-0.107238	0.077657	-1.380914	0.1686
LOGDR	-0.120340	0.213112	-0.564683	0.5728

R-squared	0.120062	Mean dependent var	0.597722
Adjusted R-squared	0.081804	S.D. dependent var	0.545309
S.E. of regression	0.052253	Sum squared resid	62.79840
Long-run variance	0.050767		

Appendix1.3 for ROE DOLS

Dependent Variable: LOGROE

Method: Panel Dynamic Least Squares (DOLS)

Date: 06/11/19 Time: 19:07

Sample (adjusted): 2008Q3 2014Q3

Periods included: 25

Cross-sections included: 6

Total panel (unbalanced) observations: 132

Panel method: Weighted estimation

Cointegrating equation deterministics: C

Fixed leads and lags specification (lead=1, lag=1)

Long-run variance weights (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGLIQ	-0.184315	0.094877	-1.942672	0.0577
LOGA	1.827390	0.385115	4.745054	0.0000
LOGINFL	0.309003	0.068827	4.489556	0.0000
LOGCAR	-0.073032	0.190137	-0.384102	0.7025

R-squared	0.969844	Mean dependent var	7.673837
Adjusted R-squared	0.920990	S.D. dependent var	0.246509
S.E. of regression	0.069290	Sum squared resid	0.240057
Long-run variance	0.003051		

Appendix 1.4 for NIM DOLS

Dependent Variable: LOGNIM

Method: Panel Dynamic Least Squares (DOLS)

Date: 06/11/19 Time: 19:45

Sample (adjusted): 2008Q3 2018Q3

Periods included: 41

Cross-sections included: 6

Total panel (unbalanced) observations: 229

Panel method: Pooled estimation

Cointegrating equation deterministics: C

Fixed leads and lags specification (lead=1, lag=1)

Coefficient covariance computed using default method

Long-run variance (Bartlett kernel, Newey-West fixed bandwidth) used for coefficient covariances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGLIQ	0.176494	0.181599	0.971889	0.3329
LOGCAR	0.726963	0.317077	2.292702	0.0235
LOGA	-1.467604	0.290375	-5.054173	0.0000
LOGINFL	-0.228086	0.256185	-0.890316	0.3750
LOGDR	0.400769	0.490723	0.816692	0.4156

R-squared	0.556605	Mean dependent var	0.584300
Adjusted R-squared	0.210203	S.D. dependent var	0.551232
S.E. of regression	0.048988	Sum squared resid	30.71815
Long-run variance	0.056459		

Appendix 1.5 for ROE Hausman TEST

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.605668	5	0.6075

Appendix 1.6 for NIM Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.009927	5	0.4147

Appendix 1.7 for ROE Random Effect

Dependent Variable: LOGROE

Method: Panel Least Squares

Date: 06/03/19 Time: 18:03

Sample (adjusted): 2008Q2 2014Q3

Periods included: 26

Cross-sections included: 6

Total panel (unbalanced) observations: 137

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGROE(-1)	1.027354	0.054405	18.88338	0.0000
LOGLIQ	-0.042507	0.035135	-1.209822	0.2286
LOGCAR	-0.027567	0.049421	-0.557802	0.5780
LOGINFL	-0.032763	0.016356	-2.003152	0.0473
LOGA	0.095710	0.111539	0.858086	0.3925
C	-0.730729	0.751209	-0.972738	0.3325

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.974789	Mean dependent var	7.684175
Adjusted R-squared	0.972788	S.D. dependent var	0.242300
S.E. of regression	0.039970	Akaike info criterion	-3.524482
Sum squared resid	0.201299	Schwarz criterion	-3.290031
Log likelihood	252.4270	Hannan-Quinn criter.	-3.429207
F-statistic	487.1740	Durbin-Watson stat	2.324797
Prob(F-statistic)	0.000000		

Appendix 1.8 for NIM Random Effect

Dependent Variable: LOGNIM

Method: Panel EGLS (Cross-section random effects)

Date: 04/12/19 Time: 00:32

Sample: 2008Q1 2018Q4

Periods included: 44

Cross-sections included: 6

Total panel (unbalanced) observations: 247

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGLIQ	-0.267510	0.156276	-1.711781	0.0882
LOGCAR	0.856695	0.298883	2.866320	0.0045
LOGA	-0.689409	0.146054	-4.720244	0.0000
LOGDR	-0.157200	0.292644	-0.537171	0.5916
LOGINFL	0.063733	0.166186	0.383504	0.7017
C	5.278836	1.779835	2.965913	0.0033

Effects Specification

	S.D.	Rho
Cross-section random	0.000000	0.0000
Idiosyncratic random	0.519280	1.0000

Weighted Statistics

R-squared	0.100360	Mean dependent var	0.606746
Adjusted R-squared	0.081695	S.D. dependent var	0.541897
S.E. of regression	0.519290	Sum squared resid	64.98868
F-statistic	5.376997	Durbin-Watson stat	2.285635
Prob(F-statistic)	0.000105		

Unweighted Statistics

R-squared	0.100360	Mean dependent var	0.606746
Sum squared resid	64.98868	Durbin-Watson stat	2.285635

Appendix 1.9 for ROE DH Causality

Pairwise Dumitrescu Hurlin Panel Causality Tests
Date: 06/11/19 Time: 23:02
Sample: 2008Q1 2018Q4
Lags: 2

Null Hypothesis:	W-Stat.	Zbar-Stat.	Prob.
LOGLIQ does not homogeneously cause LOGROE	4.40224	1.99253	0.0463
LOGROE does not homogeneously cause LOGLIQ	2.25764	-0.01556	0.9876
LOGCAR does not homogeneously cause LOGROE	1.97211	-0.28290	0.7772
LOGROE does not homogeneously cause LOGCAR	6.09858	3.58089	0.0003
LOGA does not homogeneously cause LOGROE	2.94562	0.62863	0.5296
LOGROE does not homogeneously cause LOGA	5.16296	2.70482	0.0068
LOGDR does not homogeneously cause LOGROE	3.13969	0.81035	0.4177
LOGROE does not homogeneously cause LOGDR	3.42463	1.07715	0.2814
LOGINFL does not homogeneously cause LOGROE	5.69349	3.20158	0.0014
LOGROE does not homogeneously cause LOGINFL	3.48621	1.13481	0.2565
LOGCAR does not homogeneously cause LOGLIQ	2.80761	0.75859	0.4481
LOGLIQ does not homogeneously cause LOGCAR	4.40028	2.50117	0.0124
LOGA does not homogeneously cause LOGLIQ	3.99354	2.05615	0.0398
LOGLIQ does not homogeneously cause LOGA	8.26268	6.72713	2.E-11
LOGDR does not homogeneously cause LOGLIQ	1.99326	-0.14239	0.8868
LOGLIQ does not homogeneously cause LOGDR	3.74342	1.75304	0.0796
LOGINFL does not homogeneously cause LOGLIQ	1.11480	-1.09356	0.2741
LOGLIQ does not homogeneously cause LOGINFL	2.55383	0.48091	0.6306
LOGA does not homogeneously cause LOGCAR	2.63090	0.56524	0.5719
LOGCAR does not homogeneously cause LOGA	6.34811	4.63235	4.E-06
LOGDR does not homogeneously cause LOGCAR	2.95139	0.89527	0.3706
LOGCAR does not homogeneously cause LOGDR	1.95506	-0.18377	0.8542
LOGINFL does not homogeneously cause LOGCAR	1.55598	-0.61086	0.5413
LOGCAR does not homogeneously cause LOGINFL	10.2989	8.95499	0.0000
LOGDR does not homogeneously cause LOGA	1.13660	-1.07015	0.2846
LOGA does not homogeneously cause LOGDR	5.48694	3.64128	0.0003

LOGINFL does not homogeneously cause LOGA	3.82839	1.87545	0.0607
LOGA does not homogeneously cause LOGINFL	5.32248	3.51017	0.0004
LOGINFL does not homogeneously cause LOGDR	1.39911	-0.78586	0.4320
LOGDR does not homogeneously cause LOGINFL	3.06670	1.02015	0.3077

Appendix 1. 10 for NIM DH Causality

Pairwise Dumitrescu Hurlin Panel Causality Tests
Date: 06/11/19 Time: 23:03
Sample: 2008Q1 2018Q4
Lags: 2

Null Hypothesis:	W-Stat.	Zbar-Stat.	Prob.
LOGLIQ does not homogeneously cause LOGNIM	3.55491	1.57622	0.1150
LOGNIM does not homogeneously cause LOGLIQ	2.15512	0.04468	0.9644
LOGCAR does not homogeneously cause LOGNIM	6.49408	4.79205	2.E-06
LOGNIM does not homogeneously cause LOGCAR	1.57055	-0.59492	0.5519
LOGA does not homogeneously cause LOGNIM	5.06037	3.22339	0.0013
LOGNIM does not homogeneously cause LOGA	2.39827	0.31071	0.7560
LOGDR does not homogeneously cause LOGNIM	3.61139	1.61005	0.1074
LOGNIM does not homogeneously cause LOGDR	6.43475	4.66776	3.E-06
LOGINFL does not homogeneously cause LOGNIM	0.57779	-1.68112	0.0927
LOGNIM does not homogeneously cause LOGINFL	0.21318	-2.08005	0.0375
LOGCAR does not homogeneously cause LOGLIQ	2.80761	0.75859	0.4481
LOGLIQ does not homogeneously cause LOGCAR	4.40028	2.50117	0.0124
LOGA does not homogeneously cause LOGLIQ	3.99354	2.05615	0.0398
LOGLIQ does not homogeneously cause LOGA	8.26268	6.72713	2.E-11
LOGDR does not homogeneously cause LOGLIQ	1.99326	-0.14239	0.8868
LOGLIQ does not homogeneously cause LOGDR	3.74342	1.75304	0.0796
LOGINFL does not homogeneously cause LOGLIQ	1.11480	-1.09356	0.2741
LOGLIQ does not homogeneously cause LOGINFL	2.55383	0.48091	0.6306
LOGA does not homogeneously cause LOGCAR	2.63090	0.56524	0.5719
LOGCAR does not homogeneously cause LOGA	6.34811	4.63235	4.E-06
LOGDR does not homogeneously cause LOGCAR	2.95139	0.89527	0.3706
LOGCAR does not homogeneously cause LOGDR	1.95506	-0.18377	0.8542

LOGINFL does not homogeneously cause LOGCAR	1.55598	-0.61086	0.5413
LOGCAR does not homogeneously cause LOGINFL	10.2989	8.95499	0.0000
LOGDR does not homogeneously cause LOGA	1.13660	-1.07015	0.2846
LOGA does not homogeneously cause LOGDR	5.48694	3.64128	0.0003
LOGINFL does not homogeneously cause LOGA	3.82839	1.87545	0.0607
LOGA does not homogeneously cause LOGINFL	5.32248	3.51017	0.0004
LOGINFL does not homogeneously cause LOGDR	1.39911	-0.78586	0.4320
LOGDR does not homogeneously cause LOGINFL	3.06670	1.02015	0.3077

PLAGIARISM REPORT

Foday Joof-DETERMINANTS OF BANK PERFORMANCE EVIDENCE FROM THE GAMBIA

ORIGINALITY REPORT

10%	4%	1%	9%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Yakın Doğu Üniversitesi Student Paper	3%
2	Submitted to National Cheng Kung University Student Paper	1%
3	Submitted to Multimedia University Student Paper	1%
4	docs.neu.edu.tr Internet Source	<1%
5	Submitted to Midlands State University Student Paper	<1%
6	Submitted to University of Bahrain Student Paper	<1%
7	ir.canterbury.ac.nz Internet Source	<1%
8	www.irti.org Internet Source	<1%
9	Submitted to University of Birmingham Student Paper	<1%

ETHICS COMMITEE APRROVAL

YAKIN DOĞU ÜNİVERSİTESİ

BİLİMSEL ARAŞTIRMALAR ETİK KURULU

07.06.2019

Dear Foday Joof

Your project **"Determinants of Bank Performance Evidence From The Gambia"** has been evaluated. Since only secondary data will be used the project it does not need to go through the ethics committee. You can start your research on the condition that you will use only secondary data.

Assoc. Prof. Dr. Direnç Kanol

Rapporteur of the Scientific Research Ethics Committee

Direnc Kanol

Note: If you need to provide an official letter to an institution with the signature of the Head of NEU Scientific Research Ethics Committee, please apply to the secretariat of the ethics committee by showing this document.