

**DETERMINANTS OF PROFITABILITY OF COMMERCIAL
BANKS IN KENYA**

BY

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DECLARATION

This research project is my own original work and has never been presented for a degree at any other university for examination.

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DEDICATION

I dedicate this work to my parents, Mr. Michael Macharia and Mrs. Beatrice Njeri Macharia, my brothers Edward Irungu and Eric Mwangi and friends for their support and input during my study for you encouraged me to strive on even during challenging times.

TABLE OF CONTENTS

| | |
|--|-------------|
| DECLARATION..... | ii |
| ACKNOWLEDGEMENTS | iii |
| DEDICATION..... | iv |
| LIST OF TABLES | viii |
| LIST OF FIGURES | ix |
| LIST OF ABBREVIATIONS | x |
| ABSTRACT..... | xi |
| CHAPTER ONE: INTRODUCTION..... | 1 |
| 1.1 Background of the Study..... | 1 |
| 1.1.1 Profitability..... | 2 |
| 1.1.2 Factors Influencing Profitability..... | 4 |
| 1.1.3 Commercial Banks in Kenya..... | 7 |
| 1.2 Research Problem..... | 8 |
| 1.3 Research Objective..... | 10 |
| 1.4 Value of the study | 10 |
| CHAPTER TWO: LITERATURE REVIEW | 12 |
| 2.1 Introduction..... | 12 |
| 2.2 Theoretical Literature Review..... | 12 |

| | |
|---|-----------|
| 2.2.1 Market Power Theory | 12 |
| 2.2.2 Efficiency Theory | 13 |
| 2.2.3 Agency Cost Theory | 15 |
| 2.2.4 Signaling Theory | 16 |
| 2.3 Empirical Literature Review | 17 |
| 2.4 Conceptual Framework | 21 |
| 2.5 Summary of the Literature Review | 22 |
| CHAPTER THREE: RESEARCH METHODOLOGY | 24 |
| 3.1 Introduction | 24 |
| 3.2 Research Design | 24 |
| 3.3 Population of the Study | 24 |
| 3.4 Data Collection | 25 |
| 3.5 Data Analysis | 25 |
| 3.5.1 Analytical Model | 25 |
| 3.5.2 Test of Significance | 26 |
| CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION | 27 |
| 4.1 Introduction | 27 |
| 4.2 Analysis of Data and Presentation of Findings | 27 |
| 4.2.1 Response Rate | 27 |
| 4.2.2 Descriptive Statistics | 27 |

| | |
|---|-----------|
| 4.2.3 Correlation Analysis | 32 |
| 4.2.4 Regression Analysis | 33 |
| 4.3 Interpretation of the Findings | 36 |
| CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS .. | 38 |
| 5.1 Introduction | 38 |
| 5.2 Summary | 38 |
| 5.3 Conclusion..... | 39 |
| 5.4 Recommendations | 40 |
| 5.5 Limitations | 41 |
| 5.6 Suggestions for Further Research | 41 |
| REFERENCES..... | 43 |
| APPENDICES | 52 |
| Appendix I: List of Commercial Banks in Kenya..... | 52 |
| Appendix II: Data Collection Sheet | 54 |

LIST OF TABLES

| | |
|--|----|
| Table 4.1 Summary Descriptive Statistics | 28 |
| Table 4.2 Correlations..... | 33 |
| Table 4.3 Model Summary | 34 |
| Table 4.4 ANOVA | 34 |
| Table 4.5 Regression Coefficients | 35 |

LIST OF FIGURES

| | |
|---------------------------------------|----|
| Figure 2.1 Conceptual Framework | 21 |
| Figure 4.1 RoA Trend..... | 29 |
| Figure 4.2 Size | 30 |
| Figure 4.3 Capital Adequacy | 30 |
| Figure 4.4 Liquidity | 31 |
| Figure 4.5 Liquidity | 32 |
| Figure 4.6 Operating Efficiency | 32 |

LIST OF ABBREVIATIONS

- CBK** - Central Bank of Kenya
- GDP** - Gross Domestic Product
- KBA** - Kenya Bankers Association
- LAR** - Loan to total assets ratio
- NPL** - Non Performing Loan
- ROA** - Return on Assets

ABSTRACT

Commercial banks are important to the financial segment, particularly in developing economies where capital markets are not well developed and strong. Commercial Banks' profitability is important because the soundness of an industry is closely connected to soundness of the whole economy. Profitability of the banking sector is also central as the well-being of the industry is closely associated with the wellness of the whole economy in general. Thus, a proficient and productive banking sector is able and better placed to endure negative economic shocks. This study investigated determinants of profitability of Kenyan commercial banks. The study explored effect of the bank size, adequacy of capital, liquidity, credit risk and operational efficiency on banks' profitability. The study adopted a descriptive design helped to establish the factors, which influence the Kenya's commercial banks profitability. The study used secondary data from 43 registered commercial banks as at 31/12/2015 from the years 2011 to 2015. The data collected was edited, sorted for completeness and then analyzed using ordinary least squares (OLS) and Pearson correlation using the statistical package for social studies and established a negative insignificant relation between bank size, operational efficiency and profitability and a significant negative relation between capital adequacy, credit risk and banks' profitability. The study concluded that capital plays a key role in determining commercial banks profitability and higher levels of capital adequacy increases profitability of commercial banks. The study also concluded that an increase in nonperforming loans increase credit risk which adversely affects profitability. The study finally concluded that high levels of liquidity provides adequate funds to lend which in turn increase interest income hence banks' profitability and that poor operational efficiency through poor management of expenses reduces the profitability of commercial banks. The study recommended that managers of banks to develop effected policies to to ensure they to reduce the level of nonperforming loans and that banks should effectively manage their operational expenses and costs to ensure that their banks are efficient and to maximize profits. The study also recommended that regulatory authorities like the central bank of Kenya should develop effective policies on capital adequacy, liquidity and credit risk management to ensure that banks are in a position where they can enhance their profitability.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Banking industry is one of significant sectors of the financial system in most countries (San & Heng, 2013). Banks plays a crucial role of promoting the growth of economy by mobilizing savings and using the mobilized savings in financing the most productive sectors of economic (Alkhazaleh & Almsafir, 2014). As such, commercial banks are important to the financial segment, particularly in developing economies where capital markets are not well developed and strong. In economies where the capital markets are still are developing, banking institutions serve as a vital source of finances for enterprises (Ntow & Laryea, 2012). Therefore, good performance of the bank is usually measured as per its profitability levels and has been essential to shareholders, customers as well as for banks continued survival and expansion (Nkegbe & Yazidu, 2015).

Profitability of banks is important since the soundness of an industry is closely connected to the soundness of the whole economy (Lipunga, 2014). The financial strength of a banking institution is unquestionably associated to its profitability, thus, the most important need of any bank's management and leadership is to make profits on a continuous basis since this will guarantee bank's continuous existence. As such, achieving profitability goal is vital to any bank (Adeusi, Kolapo & Aluko, 2014). The banking sector profitability is also central as the well-being of the industry is closely associated with the wellness of the whole economy in general (Alkhazaleh & Almsafir, 2014). Thus, a proficient and productive banking sector is able and better placed to endure negative economic shocks (Ally, 2014).

The Kenyan banking industry is vital to Kenyan economy and plays a crucial financial intermediary function. Banking institutions in Kenya play a crucial role in national growth and such roles are growing day-by-day (Wanjiru & Njeru, 2014). The Kenyan banking sector plays the function of financial intermediation between borrowers and savers that entails the mobilization of capital from individuals with surplus cash and channeling the funds to the deficit economic units (Kimutai & Jagongo, 2013). The sector has reported continuous growth in loans and profitability, assets and product offering. Moreover, banking sector's cumulative balance sheet recorded a 3.4% growth from KES.3.26tn in December 2014 to KES.3.37tn in March 2015 (Cytonn Investments, 2015).

1.1.1 Profitability

Profitability refers to money that a firm can produce with the resources it has. The goal of most organization is profit maximization (Niresh & Velnampy, 2014). Profitability involves the capacity to make benefits from all the business operations of an organization, firm or company (Muya & Gathogo, 2016). Profit usually acts as the entrepreneur's reward for his/her investment. As a matter of fact, profit is the main motivator of an entrepreneur for doing business. Profit is also used as an index for performance measuring of a business (Ogbadu, 2009). Profit is the difference between revenue received from sales and total costs which includes material costs, labor and so on (Stierwald, 2010).

Profitability can be expressed either accounting profits or economic profits and it is the main goal of a business venture (Anene, 2014). Profitability portrays the efficiency of the

management in converting the firm's resources to profits (Muya & Gathogo, 2016). Thus, firms are likely to gain a lot of benefits related increased profitability (Niresh & Velnampy, 2014). One important precondition for any long-term survival and success of a firm is profitability. It is profitability that attracts investors and the business is likely to survive for a long period of time (Farah & Nina, 2016). Many firms strive to improve their profitability and they do spend countless hours on meetings trying to come up with a way of reducing operating costs as well as on how to increase their sales (Schreibfeder, 2006).

In, accounting theory profitability shows the surplus of profit over expense for a specified duration that represent earning of commercial banks from the various activities they perform in a growing economy (Tariq et al., 2014). The profitability of a banking institution can thus be defined as net profit of the bank (San & Heng, 2013). A commercial bank is profitable if it has accrued more gains in financial perspective from invested capital. Thus, the bank's success is determined from the profits it has made in a given financial year (Adeusi, Kolapo & Aluko, 2014). Profitability also shows the association between the absolute amount of income that indicates the capability of the bank to advance loans to its customers and enhance its profit. In today's competitive environment, profitability is a key factor for smooth the running of the business and has a significant effect on performance of the bank and economic development as well (Tariq et al., 2014). Profitability is also crucial for a banking institution to maintain its ongoing activities and for shareholders to generate fair returns (Ponce, 2011).

Profitability is one of main aspects of financial reporting for many firms (Farah & Nina, 2016). Profitability is vital to the firm's manager as well as the owners and other

stakeholders that are involved or associated to the firm since profitability gives a clear indication of business performance. Profitability ratios are normally used to measure earnings generated by a firm for a certain period of time based on the firm's sales level, capital employed, assets and earnings per share (EPS). Profitability ratios are also used to measure the firm's earning capacity and considered as a firm's growth and success indicator (Majed, Said & Firas, 2012).

Profitability is generally measured using accounting ratios with the commonly used profitability ratio being ROA. ROA determines the amount of the profit earned per shilling of assets. This reflects the efficiency with which the bank's managers use bank's investment resources or assets in generation of income (Sehrish, Irshad & Khalid, 2010). ROA simply connotes the management efficiency and depicts how effective and efficiently the bank management operate as they employ the organization's assets into the earnings. A high ROA ratio is a clear indicator a good performance or profitability of a banking entity (Bentum, 2012).

1.1.2 Factors Influencing Profitability

Factors that influence commercial bank's profitability are divided into internal and external. Internal factors are those factors which bank's managers can control whereas external factors are those outside or beyond bank's management control. External factors that influence profitability of commercial banks are related to legal and economic environment and comprises of factors like interest rates, inflation, recession, boom, regulations, market growth and market structure (Staikouras & Wood, 2011). The internal factors reflect the management policies of the banks and decisions made about the

sources of funds, expenses and liquidity management (Onuonga, 2014). Information on bank specific factors that influence commercial banks profitability can be obtained from financial statements hence study will emphasize on bank's size, capital adequacy, liquidity, credit risk and efficiency in the bank's operations.

Bank's size specifies that the size of a bank influence performance such that larger banks perform well compared to a small-sized banks through harnessing the economies of scale in their transactions such that big banks will enjoy high profits (Sehrish, Irshad & Khalid, 2010). Large banks are assumed to have more advantages as compared to their smaller rivals and have a stronger bargaining capability and making it easier for them to get benefits from specialization and from economies of scale and scope (Alkhazaleh & Almsafir, 2014). In addition, empirical evidence indicates that size of a bank directly affects profitability by reducing the cost of raising capital for big banks (Tariq et al., 2014). Size captures the economies or diseconomies of scale of an institution and normally the natural logarithm of bank's assets is normally used as a proxy of size (Cull et al., 2007).

Capital adequacy refers to a measurement of commercial bank's ability or strength in financial terms. It shows the bank's willingness and ability to tolerate with abnormal and operational losses. It indicates the firm's ability to undertake an additional business. It also measures the commercial banks' ability to effectively absorb risk and solvency. Therefore, the ratio is utilized in protecting the bank's fund depositors as well as promoting efficiency and stability of financial systems (Bizuayehu. 2015).

Liquidity on the other hand is defined as the bank's ability in meet its obligations, mainly those of depositors of funds to the bank (Ongore & Kusa, 2014). The availability of liquidity is influences profitability since it enhances the capacity of the bank to acquire cash, in order to fulfill present and essential needs. For the commercial banks to gain public assurance, they should have sufficient liquidity to meet the demands loan holders and depositors needs (Chinoda, 2014). Small liquidity level serves as ground reality of failure of a bank. Liquidity problems also lead to issues in generating funds and failure to fulfill current and unanticipated variations in the sources of financing (Tariq et al., 2014). Loan to assets ratio is normally used to calculate the liquidity position of a bank and the ratio indicates percentage of total assets used to provide loans.

Credit risk indicator can be represented by different measurements including loans loss provision to total loans ratio as well as growth in bank deposits. Higher provisions for loan losses could signals a possibility of future loss on loans, and could also be a sign of a timely recognition of bad loan by cautious banks (Munyambonera, 2011). A higher ratio of NPLs to total loans and an absolute deterioration of credit portfolio quality negatively affect commercial bank's profitability (Roman and Tomuleasa, 2013). In addition, raise in credit risk increases the marginal cost of loans, obligations, and equity leading to the enlargement of the cost of finance for the bank (Tariq et al., 2014).

Operating costs refer to the expenses incurred in the normal functioning of the bank besides cost of obtaining funds. Empirical evidence indicates that low operating costs leads to greater profitability of commercial banks. Other costs like the provisions made towards bad debts and doubtful debts influence performance and are likely to lead to probable annual loss on assets (Chinoda, 2014). Expenses are normally the operational

cost of banks and they specifies a fraction of banks earnings and have an inverse relationship with bank profit, and indicates the proficiency of the bank administration and its dealings during operations (Tariq et al., 2014). Operational efficiency indicator also referred to as expenses by management is given as cost to income ratio. The higher the ratio, the less the efficient and the bank could be adversely affected in return on assets, depending on the extent of competition in the industry (Munyambonera, 2011).

1.1.3 Commercial Banks in Kenya

According, CBK's directory there is forty-three commercial banks in the country some of which are internationally based. The headquarters of these banks are in Nairobi and they serve both retail and corporate customers. The banks in the country perform the following function: creation of money, community savings, ensure smooth support of payment mechanisms, ensure smooth flow of international transactions, storage of valuable goods and provision of credit services. The Central Banks of Kenya falls under Treasury docket, is accountable for the formulation and execution of monetary policy and foster of liquidity and proper operations of Kenyan commercial banks. This policy formulation and implementation also include commercial banks financial risk management and financial performance (Central bank of Kenya, 2015).

The Kenyan banking sector has undergone many regulatory and financial reforms in the past. Such reforms have brought in so important changes to the banking sector as well as inspiring foreign banks to enter the Kenyan market (Irungu, 2013). The banking sector is governed by the Banking Act and so on including Prudential Guidelines.

Commercial banks in Kenya are required by CBK to submit audited annual reports, which include their financial performance and in addition disclose various financial risks in the reports including liquidity risk, credit risk and so on, as well as management of credit risk. Effective management of credit risk practices involve reporting, reviewing to ensure credit risks well identified, assessed, controlled and informed responses are well in place by commercial banks. When the loan is issued after being approved by the bank's officials, the loan is usually monitored on a continuous basis so as to keep track on all the compliance issues/terms of credit by the borrower (CBK, 2015).

1.2 Research Problem

The modalities of banking system have really changed in recent times compared to how they used to be some years back (Sehrish, Irshad & Khalid, 2010). Banking industry especially in the developing countries has witnessed momentous changes over the past few years (Al-Jarrah, Ziadat & El-Rimawi, 2010). However, compared to other sectors the banking sector has experienced weighty changes mostly due to technological innovations and the unstoppable forces of globalization have continued to create expansion opportunities as well as challenges to bank's managers to ensure their bank remain profitable and competitive (Scott & Arias, 2011). As such, banks face more high degree of risks compared to other business. Such risks are capable of adversely affecting the bank's profitability (Adeusi, Kolapo & Aluko, 2014).

Financial sector is highly dominated by banks in Kenya compared to other players like SACCOs and microfinance's. However, despite good overall performance in financial perspective, of most commercial banks, there are some banks recording losses (Ongore &

Kusa, 2014). For instance, the National Bank of Kenya reported a loss for the financial year 2014/2015 while the Cooperative bank of Kenya had reported a drop in their profits in 2014 resulting to restructuring. In spite of strong regulatory and legal framework enforce by the Central Bank, the Kenyan banking system has experienced banking problems since 1986, which has led to the collapse of more than 40 commercial banks (Gitonga, 2014) with the recent ones in 2015 and 2016 being Imperial and Chase banks respectively. Further, based on the annual CBK Supervision Reports, the pace of growth of commercial banks in Kenya has been on a decline and as such, the growth in profitability has been on the declined (Sawe, 2011).

Several studies have also been done on determinants of banks' profitability locally and across the globe. Globally, a study by Athanasoglou and Delis (2005) evaluated impact of industry-specific, bank-specific and macro-economic determinants of commercial banks profitability and established that all bank-specific determinants, apart from size, influence banks profitability. In addition, Roman and Tomuleasa (2013) evaluated the effect of specific internal and external factors on profitability of the banks in the new European Union member states and established that both bank specific factors like capital adequacy, NPL, income and external factors, like GDP growth rate and inflation affect commercial banks profitability. However, majority of the available international studies combine both the bank specific factors with the industry and other macro-economic factors.

In Kenya, a study by Ongore and Kusa (2014) studied the moderating impact of the ownership structure on bank performance and established that moderating impact of ownership identity on bank's performance in financial perspective was not significant but

the study focused more on the influence of ownership structure. Tsuma and Gichinga (2016) also analyzed the factors that influence the bank's performance in financial perspective with focus on National Bank of Kenya and found that capital adequacy, credit risk, inflation and interest rates influenced financial performance but the study focused on a single commercial bank, which may not be representative of the whole Kenyan banking industry. Most of the available literatures on the factors that affect commercial banks profitability combine both macro, industry and micro determinants with few of them focusing on internal factors, which influence profitability. Thus, the aim of the study, which intends to investigate: which are the determinants of profitability in banking industry in Kenya?

1.3 Research Objective

To establish determinants of profitability of commercial banks in Kenya.

1.4 Value of the study

The study will benefit the bank's managers as they will use study findings to identify various factors that influence profitability of banking industry in Kenya. In addition, the managers may also adopt the study recommendations to improve performance and profitability where possible. The findings will also be of value to other firms in the banking industry in Kenya like microfinance organizations, saving and cooperative societies, insurance firms and pension fund firms who operate similarly to commercial banks to identify factors, which may influence their profitability.

The study findings will also be of value to various policy making institutions in Kenya including the Central Bank of Kenya, the Kenya Bankers Association and other

regulatory authorities to generate policies, which will help to enhance the profitability of banking industry in Kenya as well as to ensure they attain their commercial objectives.

The findings will also be of importance to literature, as it will add on to the existing literature on profitability and financial performance of banking industry. Finally, future scholars and researchers may also use these findings as a basis for additional research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section outlines accessible literature on profitability by different scholars across the globe and in Kenya. The chapter describes the theoretical literature review, which explores various theories on profitability. The chapter also reviews the empirical literature review and summary of reviewed literature.

2.2 Theoretical Literature Review

This part reviews the market power theory, efficiency theory, the agency cost theory and signaling theory as the underlying theories to explain the profitability concept

2.2.1 Market Power Theory

Market power theory emanated from Bain (1951). This theory stresses that an increase in market power results to a monopoly, profits (Athanasoglou, Brissimis & Delis, 2005). The theory is based on the premise that concentration of the market is a best measure for market power since more concentrated markets exhibit superior market imperfections facilitating various entities to set prices for their products and services at levels which is less favourable to their clients or customers (Punt and Rooij, 2001). The theory also affirms that companies with a large market share and sound differentiated products and services can easily earn monopolistic profits and succeed or win against their competitors (Nkegbe & Yazidu, 2015).

The market power theory assumes that extra profits results from a higher market concentration which allows commercial banks to collude and earn supernormal profits

which arise due to the firms portfolio of differentiated products that also increases the market share and market power in determining prices for products (Mirzaei, 2012). The market-power theory also affirms that market power is the major variables which make profitability to change and concentrated markets frequently involve market imperfections which arise from collusion, made possible by market concentration, and by various legislative barriers to entry or exit (Punt and Rooij, 2001).

Market power theory is applied in a banking industry, to explain bank's profitability and how it is affected by its market share. The theory explains the positive relation between bank's size and financial performance. Market power theory suggests that banks' profitability is as a result of the industries market structure (Onuonga, 2014). In addition, this theory posits that market structure of banking industry influences banks' profitability (Ntow & Laryea, 2012). According to Obumuyi (2013), this theory assumes that banks' profitability is a function of external market factors and the theory also assumes that the industry structure which is measured using market concentration in term of the market share ratio effects the profitability of commercial banks (Fisseha, 2015).

2.2.2 Efficiency Theory

The efficiency theory was formulated by Demsetz (1973) as an alternative to the market power theory. The efficiency theory presupposes that better management and scale efficiency results to higher concentration thus greater and higher profits. Accordingly, the theory posits that management efficiency not only increases profits, but also results to larger market share gains and improved market concentration (Athanasoglou, Brissimis & Delis, 2005). The efficiency theory also states that a positive concentration–

profitability relation may be a sign of a positive connection relating to efficiency and size. The theory postulates that positive association between the concentration and profit arise from a lower cost which is mainly achieved through production efficient practices and increased managerial process (Birhanu, 2012).

The efficiency theory supports that the most favorable production can be attained through economies of scale. Thus, maximum operational efficiency in the short run is achieved at a level of output where all economies of scale available are being employed in an efficient manner (Odunga et al., 2013). Additionally, the efficiency theory explains that attaining higher profit margins arises from efficiency which allows banks to obtain both good financial performance and market shares (Mirzaei, 2012). According to Fisseha (2015), the efficiency theory presupposes that profitability and high concentration results from efficient cost reduction practices and better management strategies across the organization. Thus, efficient firms in the market lead to an increase in their market share and the size of their firm because of aggressive production and management techniques (Birhanu, 2012).

In the banking industry, the efficient theory advocates that large commercial banks which have better and experienced management and up to date production technologies are able to reduce their operational costs, therefore earned higher returns on investment in comparison to smaller banks (Soana, 2011). Basically, the theory is based on the premise that banks attain profits if they operate efficient than their competitors which lowers operating costs leading to good profits (Onuonga, 2014). The efficiency theory also assumes that internal efficiencies influence profitability of commercial banks (Obumuyi, 2013). Further, the theory explains that banks which operates efficiently in comparison to

their competitors increase their profits due from low operating costs. The efficiency hypothesis prevails when a positive significant correlation between profitability and the market share is signaled (Mensi & Zouari, 2010).

2.2.3 Agency Cost Theory

The agency cost theory arose from the seminal contributions of Jensen & Meckling (1976). Agency cost theory assumes that firm's financing structure can be used as a mechanism or vehicle by managers and investors solve the free cash flow problem. Agency theory explains that corporate form of organizations is illustrated by professional managers who have little ownership but are running business on behalf of shareholders (owners) who are extensively dispersed characterizes an archetypal principal-agent problem (Gedajlovic & Shapiro, 2002). Agency costs arises from separation of ownership and control, whereby managers maximize their own benefits or employ the firm's resources for personal gains instead of maximizing value of firm or the shareholders wealth (Mian, Haris & Muhammad, 2012).

Jensen & Meckling (1976) classified agency cost into costs arising from monitoring of managers by shareholders, cost of bonding and residual loss. Agency cost includes agency cost arising from conflict of interest between firm's managers and shareholders and agency cost arising out form conflict debt holders and of interest of shareholders (Mian, Haris & Muhammad, 2012). According to the theory, agency costs appear because of the differences of interests and actions from managers and Principals, which is likely to affect in due course the principals' benefits and the firm value and profitability (Alfadhl & Alabdullah, 2013).

2.2.4 Signaling Theory

The signaling theory emanated from Arrow (1972) and Spence (1973). Signaling theory presupposes that best performing or profitable firms supply the market with positive and better information (Bini, Dainelli & Giunta, 2011). In addition, the signaling theory is one of the theories, which have a clarification for the association between profitability and capital structure (Alkhazaleh & Almsafir, 2014). This theory presupposes that a superior capital structure is an optimistic signal to market worth of the organization (Adeusi, Kolapo & Aluko, 2014). The signaling theory further postulates that majority of the profitable firms signal their competitive power through communicating new and important information to market. Thus, information is disclosed by means of specific indicators or ratios which, very often, measure specific conditions on which to enter into or renew the agency contract (Bini, Dainelli & Giunta, 2011).

According to the signaling theory, the management of bank signals good future expectation by increasing of capital. This indicates that less debt ratio necessarily mean those banks perform better than their identical (Alkhazaleh & Almsafir, 2014). In addition, the theory argues that managers who strongly believe that their bank can outperform other banks in the industry will want to relay such information to various stakeholders in order to attract additional investments. Thus, the signaling theory affirms that when a bank's performance is excellent, directors will signal the banks performance to its stakeholders and market by making various disclosures which poor performing firms cannot make. By enhancing more disclosure most managers will wish to receive high benefits and a good reputation which may increase the value of the firm and profitability (Muzahem, 2011).

2.3 Empirical Literature Review

A study by Maigua and Mouni (2016) investigated the effect of interest rate determinants on banks' performance. A sample size of 26 banks was used in the study and multiple regression analysis to analyze data. The study results found that inflation rates, discount rates and exchange rates positively affected the banks' performance whereas reserve requirement ratio negatively influenced the banks' performance. It was concluded that exchange rates, inflation rates and high discount rates lead to banks' higher performance whereas high levels of reserve requirement lowered the banks' performance.

Alemu (2015) examined determinants of commercial banks profitability of eight banks in Ethiopia from for 10 years from 2002 - 2013. The study used multiple linear regressions and the fixed effect regression model to analyze data. The study established that size of banks; capital adequacy and gross domestic product have a positive and statistically significant relationship with profitability of banks. The findings of the study also revealed that liquidity risk, operational efficiency, funding cost and banking sector development have a negative and statistically significant relation with profitability of banks. Finally, the study found that the relationship between efficiency of management, efficiency of employee, inflation and foreign exchange rate was statistically insignificant.

Abebe (2014) assessed the internal and external determinants of financial performance Ethiopia's banks using panel data of banks for a period between the year 2002 and the year 2013. The study employed the fixed effect regression model. The regression results established that capital structure, income diversification, operating cost had a significant negative relationship with performance while bank size had a positive significant

relationship with profitability measured using ROA. The study also established that various macroeconomic variables had insignificant effect on financial performance of Ethiopians commercial banks save for tax rate, which had a negative and significant relationship with profitability.

Anwar (2014) evaluated the factors that improve the profitability of Islamic banks with keen focus on the Gulf African bank in Kenya. The study employed a survey research and used questionnaires to collect data for the study and then employed the Chi-square test to establish the association between the study variables. The findings of the research established a positive relation between Islamic banking products, Shari'ah Compliance, customer satisfaction and profitability of Islamic banks in Kenya. It was concluded that Islamic banking products, Shari'ah compliance and customer satisfaction were the major factors which affected Islamic banks' profitability.

Chinoda (2014) explored the internal factors that influence bank profitability in Zimbabwe. The study sampled five commercial banks, which were randomly selected and used secondary data from the banks financial reports. Using the general linear regression model the study found that size of the bank; liquidity, gross domestic product and inflation had a positive correlation with profitability (ROA) while operating expenses had a negative association with profitability of commercial banks in Zimbabwe. The study recommended that inflation control policies should be given priority to foster financial intermediation.

Lipunga (2014) evaluated the determinants of profitability of listed banks in Malawi for a period of 5 years from 2009 and 2012 using external (market) and internal measures of

profitability. The study employed multivariate regression and correlation analysis where Earning Yield (EY) and return on assets (ROA) were used to determine the internal and external determinants of profitability. Regression analysis results established that size of the bank, management efficiency and liquidity had a statistically significant effect on return on assets whereas capital adequacy had insignificant impact. Additionally, the research established that earnings yield significantly influences by size of the banks, management efficiency and capital adequacy while liquidity had an insignificant impact on earnings yield.

Mbugua and Rotich (2014) explored the impact of intellectual capital on profitability of commercial banks quoted at the NSE with focus on relational capital, innovation capital, human capital and structural capital, and. The study employed a descriptive research design and secondary data for 5 years from 2009-2013. The research found that structural capital and innovation capital affects listed commercial banks of Kenya profitability. The study recommended that listed banks in bank should enhance strong control over structural and innovation capital, more allocations for intellectual capital investment should be made to the two elements of intellectual capital for more growth in profitability.

Rono, Wachilonga and Simiyu, (2014) assessed the relationship of interest rate spread on performance of Kenyan quoted banks. The study employed a descriptive design and secondary from published annual reports from the year 2007 to 2012. Using the Pearson product moment correlation the study found that commercial banks adopt different interest rate spreads to cover their costs and earn profit. The research findings also found that there was a significance correlation between interest rate spread and ROA, interest

spread and ROE, while the study found an insignificant correlation between interest rate spread and non-performing loan expense.

Kyalo (2013) examined the factors influencing profitability of banks in Kenya for a 3 years period from 2010 – 2012. Secondary data collected from the 44 banks in Kenya was used in the study. Using the regression model the study established that capital invested has a significant influence on ROE while operational efficiency, GDP and inflation have insignificant effect on ROE on equity. The study recommended that commercial banks in Kenya should put more focus both the bank specific factors and the external environment together to come up with effective strategies to enhance their financial performance.

Sawe (2011) assessed external and internal determinants of commercial bank profitability in Kenya. The research used a panel data approach. The research revealed that the coefficients of capital, bank size, liquidity, expense management, inflation, market share, and loan loss provisions were the significant factors that influenced banks profitability. The research also established that coefficients for exchange rates interest rate, GDP per capita and market concentration had the least influence on banks' profitability.

Kosmidou and Pasiouras (2008) examined effect of macroeconomic conditions, bank-specific features and market structure in financial perspective on banks' profits in United Kingdom from the year 1995 to 2002. The research findings established that banks capital strength had a positive and dominant effect on their profitability. The study established that efficiency in expenses management and bank size significantly affected the profitability of commercial banks.

Kosmidou (2008) using unbalanced pooled time series data studied the factors that influence the performance of banks in Greece from the year 1990 to 2002. The research established that more return on average assets was connected to highly capitalized commercial banks and low cost to income ratios. The research revealed that size of the bank had a positive but statistically significant in combination with financial structure and macroeconomic variables. The research established that growth of gross domestic product significantly and positively influenced profitability whereas inflation has a negative and statistically significant negative effect on banks' profitability.

2.4 Conceptual Framework

A conceptual framework depicts a relation that exists between study variables. The study seeks to identify determinants of banks profitability hence independent variables will include bank's size, capital adequacy, liquidity, credit risk and operating costs. The dependent variable will be profitability.

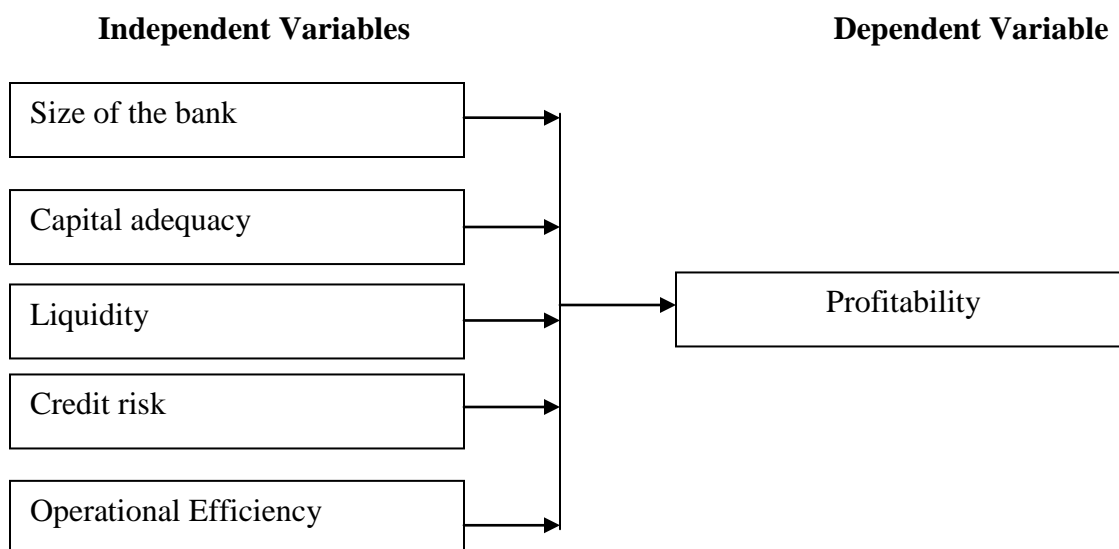


Figure 2.1 Conceptual Framework

2.5 Summary of the Literature Review

The study explored market power theory by Bain (1951) which postulates that improved external market forces lead to increased profit and the efficiency theory by Demsetz (1973) which presupposes that managerial and production efficiency causes both high market share and a high profitability of individual banks. The study also explored the agency cost theory by Jensen and Meckling (1976) which presupposes that shareholders incur certain agency costs to make sure that interests of the firm's managers are aligned to shareholders' interests. The study also explored signaling theory by Spence (1973) which states that banks can signal certain information to enhance better reputation, which may increase profitability and the value of the firms. However, the reviewed theories emphasize on how firms can enhance their profitability and not the various factors that affect profitability.

In addition, various studies by several authors around the globe and in Kenya on determinants of profitability have been explored. For instance, international studies by Al-Jarrah, Ziadat and El-Rimawi (2010), Alper and Anbar (2011), Kosmidou, Tanna and Pasiouras (2008) and Kosmidou (2008) explored the various determinants of profitability in their respective countries but all of the studies combined both micro and macro factors that influence profitability. Regional studies by Chinoda (2014), Alemu (2015) and Abebe (2014) also explored the various factors that influence profitability but the studies also combined the internal and external determinants. Locally, Anwar (2014) examined the factors which affect Islamic banks' profitability. Additionally, studies by Kyalo (2013) & Sawe (2011) explored both the bank specific and micro specific factors which influence the banks' profitability. Thus, most of global, regional and local studies have

combined both the bank specific and other macro-economic variables that influence their profitability hence there is no conclusive evidence on the effect of bank specific factors on their profitability.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Chapter three focuses on the study research design, study population, the sample design, data collection techniques and techniques of analysis.

3.2 Research Design

The study sought to examine determinants of banks' profitability. The study employed a descriptive research. A descriptive study defines a subject by constructing a profile of people, groups or events through tabulation and the collection of data on the frequencies on study variables (Cooper & Schindler, 2007). A descriptive explore design also ensures absolute explanation of the state of affairs and makes sure that there is no bias in data collection, and enables data collection from a significant target population at a cost effective manner. Therefore, a descriptive design helped to establish the factors that influence the Kenya's commercial banks profitability.

3.3 Population of the Study

Population refers to all people or items with the similar characteristics that one wishes to study (Zikmund et al., 2011). Population is a set of people or items with similar characteristics that a researcher intends to study and to draw statistical inferences or conclusions (Gall et al., 2006). Population of this study comprised of all the 43 Kenyan registered commercial banks as at 31/12/2015 (See Appendix I). This population had the potential to provide the relevant information on determinants of banks' profitability.

3.4 Data Collection

Secondary data from annual published financial statements of all banks as at 31/12/2015 was used in the study. The data was for a period of 5 years from the year 2011 to 2015. Data from financial statements was considered reliable since financial statements are prepared based on standardized accounting principles in every industry.

3.5 Data Analysis

Data analysis entails examining the data collected and making deductions and inferences. The data collected was edited, sorted for completeness and then analyzed using ordinary least squares (OLS) and Pearson correlation using the statistical package for social studies.

3.5.1 Analytical Model

In establishment of the relationship between study variable comprising of independent variables including size of the bank, capital adequacy, liquidity, credit risk, operating efficiency and the dependent variable (Return on Assets) the study used the regression model. The regression model was as follows

$$ROA = \beta_0 + \beta_1 (BS) + \beta_2(EA) + \beta_3(LAR) + \beta_4(CR) + \beta_5(OE) + \varepsilon$$

Where

$$ROA = \text{Return on Assets} = ROA = \frac{\text{Net income}}{\text{Total assets}}$$

$$BS = \text{Size of the bank natural log total assets}$$

$$EA = \text{Capital Adequacy} = EA = \frac{\text{Equity}}{\text{Total assets}}$$

$$\text{LAR} = \text{Loan to Asset Ratio (Liquidity)} = \text{LAR} = \frac{\text{Total loans}}{\text{Total Assets}}$$

$$\text{CR} = \text{Credit Risk} = \text{CR} = \frac{\text{NPL}}{\text{Total loans}}$$

$$\text{OE} = \text{Operation Efficiency Ratio} = \text{OE} = \frac{\text{Operating Expenses}}{\text{Loan portfolio}}$$

$$\beta_0 = \text{Constant}$$

$$\beta_1 - \beta_5 = \text{Coefficients of the regression equation}$$

$$\varepsilon = \text{Probable error}$$

3.5.2 Test of Significance

At 95% confidence level, the t and F-test were used in determination of statistical significance of this research. Significance of regression coefficients was tested by t – test whereas determination of significance of regression equation was tested by F-test.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

Chapter 4 presents results of analyzed data using tables. The chapter contains the response rate, descriptive statistics and correlation analysis. The chapter also presents results of the regression model and an interpretation of the research findings.

4.2 Analysis of Data and Presentation of Findings

4.2.1 Response Rate

The study targeted all the 43 commercial banks in Kenya but complete data was obtained from 39 commercial, which were fully operating for the period between 2011 -2015. The four banks in which data was not collected from where receivership and under statutory managements and had no complete published financial statements. The 39 commercial banks made up a response rate of 90.78%, which was considered representative of all the commercial banks.

4.2.2 Descriptive Statistics

4.2.2.1 Summary Descriptive Statistics

Descriptive statistics was utilized to summarize collected data in terms of mean, standard deviation, maximum values and minimum values. Table 4.1 shows the results

Table 4.1 Summary Descriptive Statistics

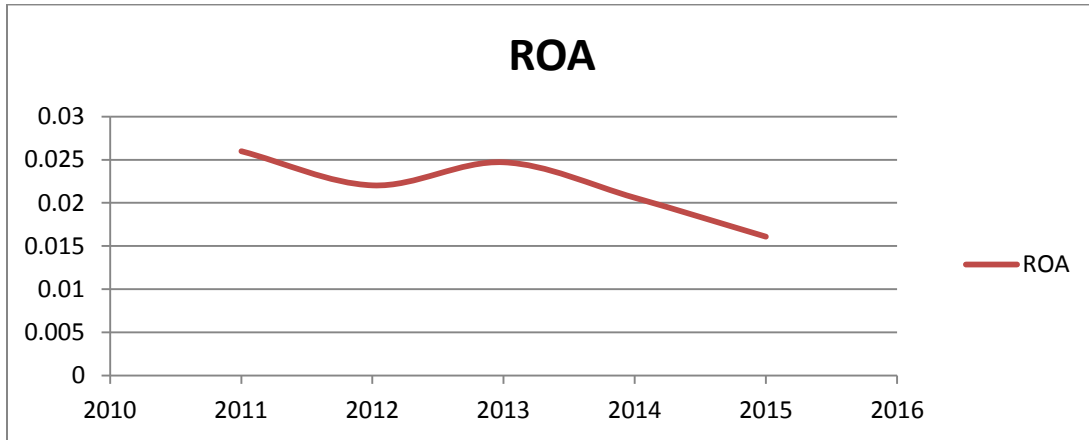
| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|-----|---------|---------|-----------|----------------|
| ROA (Ratio) | 195 | -.0342 | .1168 | .021871 | .0194654 |
| Size (Natural log) | 195 | 12.0259 | 22.7838 | 17.118738 | 2.0861805 |
| EA (Ratio) | 195 | .0011 | .6430 | .069095 | .0797536 |
| LAR (Ratio) | 195 | .2001 | .7655 | .543061 | .1098630 |
| CR (Ratio) | 195 | .0000 | .3974 | .061035 | .0695568 |
| OE (Ratio) | 195 | .0013 | .8459 | .056699 | .0873597 |

Source: Research Findings

Results of table 4.1 show average profitability proxied by ROA ratio of the commercial banks in Kenya is 0.0218 with maximum and minimum ROA being 0.1168 and -0.0342 respectively. The findings indicate that the average size of commercial banks determined using the natural log is 17.12 with minimum and maximum values of 12.02 and 22.78 respectively. Results indicate that that the average capital adequacy (EA) ratio for the banks is 0.6430 with minimum value of 0.0011 and 0.6430. The average loan to asset ratio (LAR) 0.5431 with minimum and maximum ratio of 0.2001 and 7655 respectively, which indicates all commercial banks, adhere to the 20% liquidity requirement. The average credit risk (CR) ratio for the commercial banks is 0.06956 with minimum and maximum ratio of 0.00 and 0.3974. The Minimum value of 0.00 indicates that some commercial banks completely write off the value of their non-performing loans. Finally, the average operating efficiency (OE) ratio is 0.567 with minimum and maximum ratio of 0.0013 and 0.8459 respectively. The 0.567 ratio is low hence an indication of good operational efficiency among the commercial banks in Kenya.

4.2.2.2 Trend Analysis

4.2.2.2.1 ROA

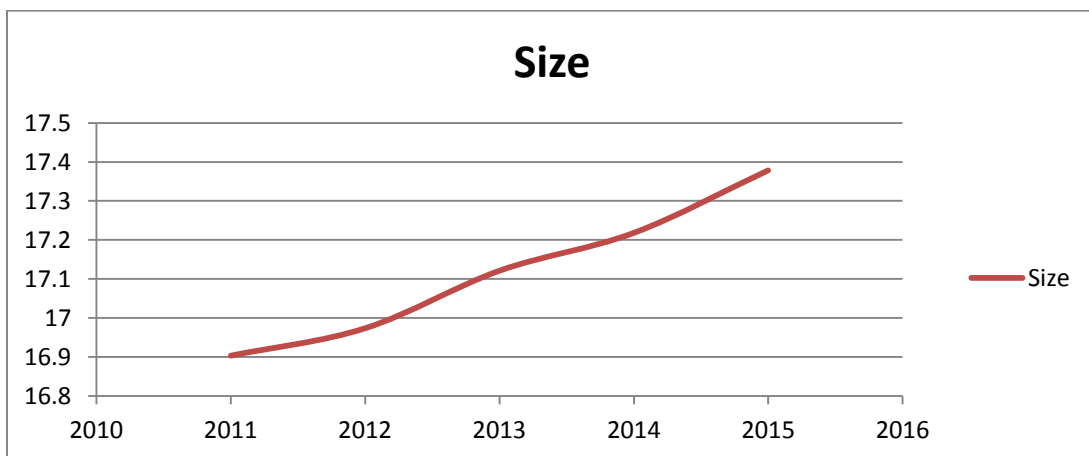


Source: Research findings

Figure 4.1 RoA Trend

Figure 4.1 shows the ROA trend. The figure shows that the average profitability of commercial banks in Kenya from 2011 to 2015 had been falling though in 2013 the profitability had increased but began falling again in 2014.

4.2.2.2.2 Size

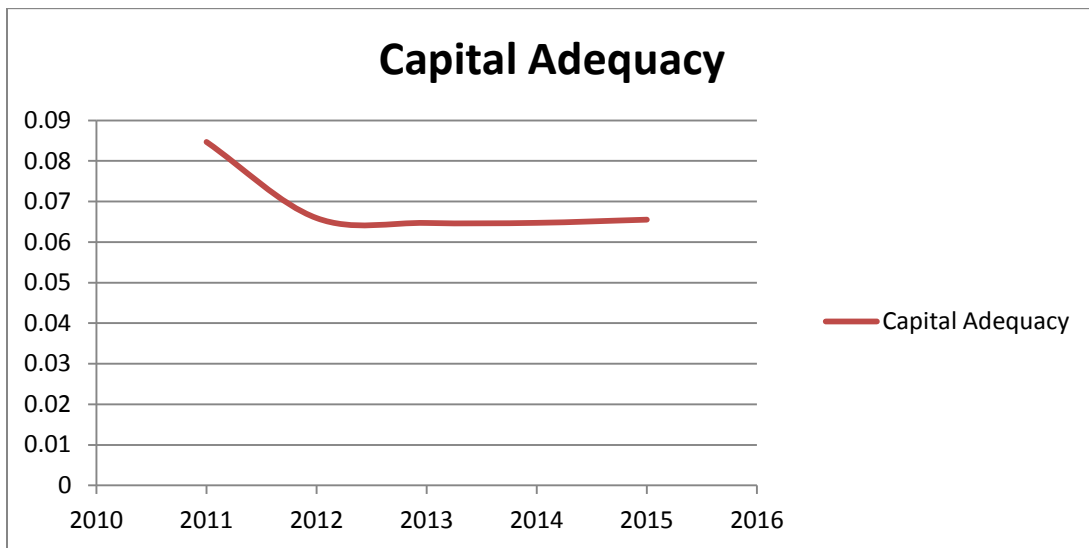


Source: Research findings

Figure 4.2 Size

Figure 4.2 illustrated the size trend. The figure indicates that the average size of commercial banks in Kenya had been increasing over the period from 2011 to 2015. This indicates that commercial bank in Kenya have been growing in terms of size

4.2.2.2.3 Capital Adequacy

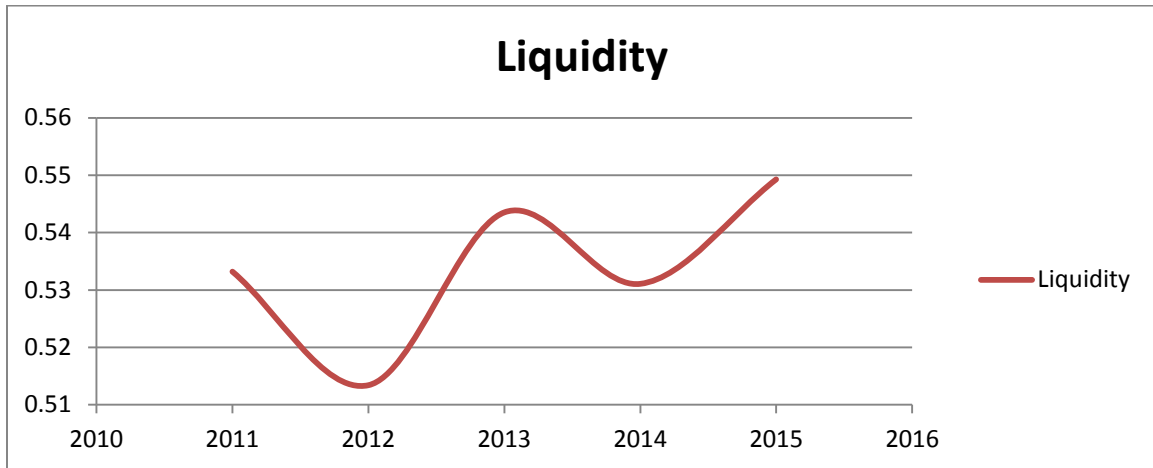


Source: Research findings

Figure 4.3 Capital Adequacy

Figure 4.3 illustrates the average capital adequacy for the commercial banks in Kenya. The figure indicate that the average capital adequacy level had decline from 2011 to 2011 but the capital adequacy level have remained constant over from 2013 to 2015.

4.2.2.2.4 Liquidity

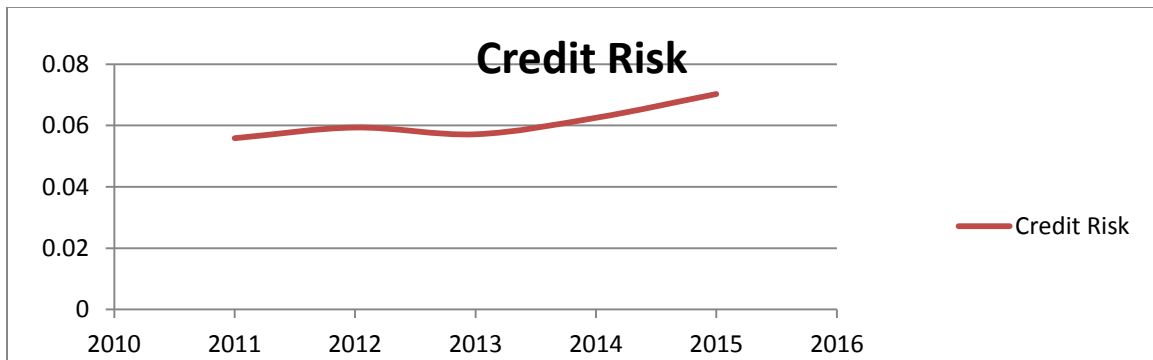


Source: Research findings

Figure 4.4 Liquidity

Figure 4.4 illustrates the average liquidity of the commercial banks in Kenya. The figure indicates that liquidity levels have been fluctuating up and down through the period with a sharp decline in 2012 and 2014 but in 2015 liquidity, levels have been rising. On average the average liquidity level are above the recommended level of 20%

4.2.2.2.5 Credit Risk

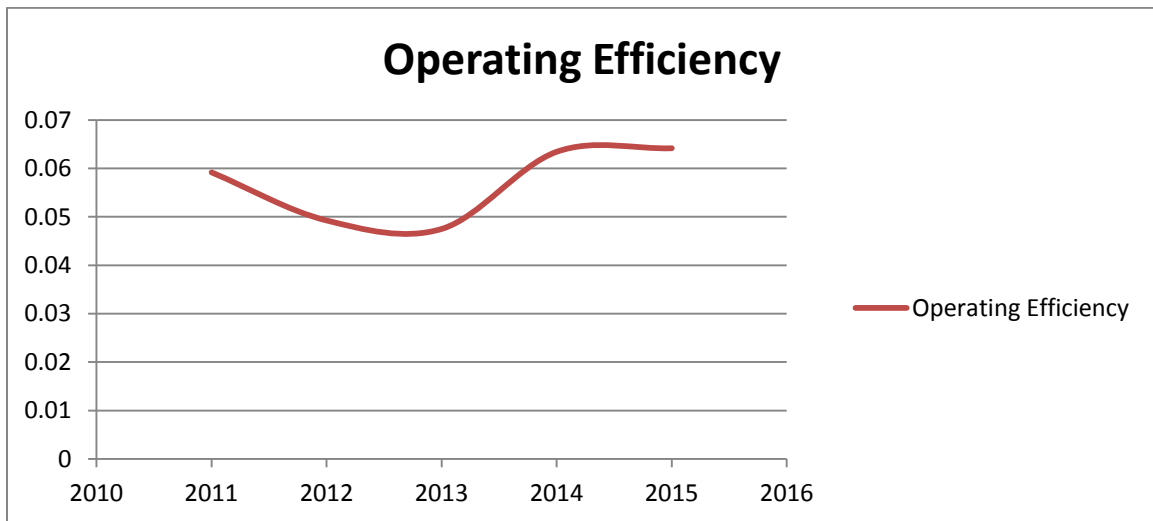


Source: Research findings

Figure 4.5 Liquidity

Figure 4.5 indicates the average credit risk level for the commercial banks. The figure indicates that credit risk has been increasing over the period but at a slow pace. However, the levels remain low over the period.

4.2.2.2.6 Operating Efficiency



Source: Research findings

Figure 4.6 Operating Efficiency

Figure 4.6 illustrates the average operating efficiency level for the Kenyan commercial banks. The figure indicates that operating efficiency levels had been fluctuating over the study period with a decline in 2013 but the trend changed from 2014.

4.2.3 Correlation Analysis

The correlation analysis are shown by table 4.2

Table 4.2 Correlations

| | ROA | Size | EA | LAR | CR | OE |
|------|---------|---------|--------|-------|-------|----|
| ROA | 1 | | | | | |
| Size | -.009 | 1 | | | | |
| EA | -.089 | -.345** | 1 | | | |
| LAR | .041 | -.095 | .125 | 1 | | |
| CR | -.225** | -.242** | .114 | -.001 | 1 | |
| OE | .034 | -.210** | .417** | .179* | .164* | 1 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Research Findings

The finding on table 4.2 indicates a negative correlation between size of the bank, capital adequacy (EA) and credit risk (CR) and banks’ profitability. Results also indicate a positive correlation between the loan to asset ratio (LAR), operational efficiency (OE) and banks’ profitability. This finding shows a weak negative correlation between bank size, capital adequacy (EA) and credit risk (CR) and profitability and a weak positive correlation between loan to asset ratio (LAR), operating efficiency (OE) and banks’ profitability.

4.2.4 Regression Analysis

Regression analysis consists of the model summary, the ANOVA and the results of the regression coefficients.

4.2.4.1 Model Summary

Table 4.3 Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .469 ^a | .220 | .199 | .0174208 |

a. Predictors: (Constant), OE, Size, EA, CR, LAR

Source: Research Findings

Table 4.3 show that the R-square value is 0.220, which indicates that, independent variables explain 22% of the variation in the dependent variable. Hence, 78% of the variation is explained by the other variables not considered by regression model.

4.2.4.2 ANOVA

Table 4.4 shows the Analysis of Variance (ANOVA) results.

Table 4.4 ANOVA

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression | .016 | 5 | .003 | 10.642 | .000 ^b |
| | Residual | .057 | 189 | .000 | | |
| | Total | .074 | 194 | | | |

a. Dependent Variable: ROA

b. Predictors: (Constant), OE, Size, EA, CR, LAR

Source: Research Findings

Table 4.4 shows that the regression model is significant to explain determinants of banks' profitability since P- value (0.00) is less that significance level value (0.05).

4.2.4.3 Regression Coefficients

Table 4.5 Regression Coefficients

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | .041 | .011 | | 3.727 | .000 |
| Size | -.001 | .001 | -.128 | -1.855 | .065 |
| EA | -.051 | .014 | -.269 | -3.643 | .000 |
| LAR | .021 | .005 | .787 | 4.289 | .000 |
| CR | -.075 | .014 | -.603 | -5.357 | .000 |
| OE | -.034 | .043 | -.155 | -.791 | .425 |

a. Dependent Variable: ROA

Source: research Findings

Results on table 4.5 generates the following equation

$$Y = 0.041 - 0.001(X_1) - 0.051(X_2) + 0.021(X_3) - 0.075(X_4) - 0.034(X_5) + \varepsilon$$

Table 4.5 indicates results of regression coefficients. Results indicate an existence of a negative but insignificant relation between size of the bank, operational efficiency (OE) and banks' profitability as shown by the beta values (-0.001 and -0.34) and significance values (0.065 & 0.425 > 0.05) respectively. The results on the table also indicate an existence of a significant negative relation between capital adequacy (EA), credit risk (CR) and banks' profitability as indicate by beta values (-0.051 & 0.075) and p- values

(0.000 & 0.000 <0.05). The results also show an existence of a positive significant relation between liquidity (LAR) and commercial banks' profitability as indicated by beta value (0.021) and p value (0.000<0.05).

4.3 Interpretation of the Findings

The study found that bank size negatively influences the profitability though the effect is insignificant. This indicates that there is a negative affect between bank size and the banks' profitability hence the smaller the bank the lower the profitability and vice versa. Similarly, Lipunga (2014) also established that size of the bank, management efficiency and liquidity had an impact on ROA. According to Alkhazaleh and Almsafir, (2014) large banks are assumed to have more advantages as compared to their smaller rivals and have a stronger bargaining capability and making it easier for them to get benefits from specialization and from economies of scale and scope.

The study found that management efficiency negatively influences the profitability though the effect is insignificant. This means that the poor management of expenses leads to the reduction of commercial banks profitability. Similarly, Chinoda (2014) established that management of expenses had a negative association with Zimbabwean banks' profitability. Addition, low operating costs leads to greater profitability of commercial banks. Other costs like the provisions made towards bad debts and doubtful debts influence performance and are likely to lead to probable annual loss on assets (Chinoda, 2014).

The study also found that credit risk significantly influences banks' profitability. This means that any increase in credit risk level will lead to a decrease in commercial banks

profitability. Tariq et al. (2014) also supports that raise in credit risk increases the marginal cost of loans, obligations, and equity leading to the enlargement of the cost of finance for the bank. According to Roman and Tomuleasa (2013), a higher ratio of NPLs to total loans and an absolute deterioration of credit portfolio quality negatively affect commercial bank's profitability.

The study also found that capital adequacy significantly influences banks' profitability. This finding indicates that a decrease in capital adequacy ratio reduces banks profitability. According to Roman and Tomuleasa (2013) capital adequacy aims at determining the ability of the banking sector to absorb any losses generated by risks and occurrence of uncertain macroeconomic events. According to Bizuayehu (2015), the capital adequacy ratio is utilized in protecting the bank's fund depositors as well as promoting efficiency and stability of financial systems. Kyalo (2013) established that capital invested has a significant influence on profitability.

The study found that liquidity significantly and positively influences banks' profitability. This means that high level of liquidity in the banking sector directly influence banks' profits. In agreement with this finding, Alemu (2015) established that liquidity risk had a statistically significant relationship with banks' profitability. According to Chinoda (2014), the availability of liquidity is influences profitability since it enhances the capacity of the bank to acquire cash, in order to fulfill present and essential needs. Therefore, for commercial banks to gain public assurance, they should have sufficient liquidity to meet the demands loan holders and depositors needs.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings of this research, conclusions, recommendations, limitations of the study and suggestion of areas, which may require further consideration as far as future research, is concerned.

5.2 Summary

This study aimed at establishment of determinants of banks' profitability. Independent variables included bank's size, capital adequacy, liquidity, credit risk and efficiency in the bank's operations and dependent variable was profitability measure using return on assets. The study reviewed the market power theory, efficiency theory, agency cost theory and signaling theory to explore profitability. The study targeted all the 43 commercial banks in Kenya but complete data was obtained from 39 commercial, which were fully functioning hence a response rate of 90.78%, which was considered representative of all the commercial banks in Kenya.

The descriptive statistics results established that mean profitability proxied by ROA of the commercial banks in Kenya was 0.0218 and the average size of commercial banks is 17.12. The study also revealed that the average capital adequacy (EA) for the banks was 0.6430 and the average loan to asset ratio (LAR) 0.5431 which indicated all the commercial banks, adhered to the 20% liquidity requirement. The average credit risk (CR) for the commercial banks is 0.06956 and the average operating efficiency (OE) ratio

is 0.567 an indication of good operational efficiency among the commercial banks in Kenya. Correlation results established a weak negative correlation between bank size, capital adequacy and credit risk (CR) and profitability and a weak positive correlation between loan to asset ratio operating efficiency and profitability among commercial banks in Kenya.

The regression model results established that the independent variables explained 22% of variation in dependent variable. The findings found that regression model was significant since the P-value ($0.00 < 0.05$) at 95% confidence level. The study further revealed a negative but insignificant relation between size of the bank, operational efficiency and profitability and a significant negative relation between credit risk, capital adequacy and profitability. Finally, the study established a significant positive relation between liquidity and banks' profitability.

5.3 Conclusion

The study found that capital adequacy negatively and significantly affects the commercial banks' profitability. This means that high capital adequacy shows willingness and ability to tolerate with abnormal and operational losses. Based on this finding, the study concludes that capital plays a key role in determining commercial banks profitability and higher levels of capital adequacy increase profitability of commercial banks.

The study found that credit risk negatively and significantly affects commercial banks' profitability. This indicates that a higher ratio of non-performing loans lead to the deterioration of credit portfolio quality which negatively affects commercial bank's

profitability. Based on this observation, the study concludes that an increase in nonperforming loans increase credit risk which adversely affects profitability.

The findings of the study established that liquidity significantly influences profitability of commercial bank. This indicates that an increase in commercial banks liquidity provides adequate funds for lending which in turn increases interest income and profitability. The study thus concludes that high levels of liquidity provides adequate funds to lend which in turn increase interest income hence banks' profitability.

The findings of the study revealed that size of the bank and operational efficiency negatively influences banks' profitability. Though, the relationship is statistically insignificant the study concludes that bank size adversely affects banks' profitability. The study also concludes that failed operational efficiency through poor management of expenses reduces the profitability of commercial banks.

5.4 Recommendations

The study concluded that an increase in nonperforming loans increase credit risk which adversely affects the profitability of commercial banks in Kenya. Based on the conclusion this study recommends that managers of banks to develop effected policies to ensure they to reduce the level of nonperforming loans. Such policies would help to control and mitigate credit risks hence increase the bank's profitability.

The study also concluded that capital adequacy and credit risk significantly affects the profitability of commercial banks in Kenya. Therefore, the study recommends that regulatory authorities like the central bank of Kenya should develop effective policies on

capital adequacy, liquidity and credit risk management to ensure that banks are in a position where they can enhance their profitability as well as to handle negative shocks.

The study also concluded that failed operational efficiency through poor management of expenses reduces the profitability of commercial banks. Therefore, the study recommends that banks should effectively manage their operational expenses and costs to ensure that their banks are efficient and to maximize profits in the long runs and growth the banks.

5.5 Limitations

This study focused on bank's size, capital adequacy, liquidity, credit risk and efficiency in the bank's operations as the determinants of banks' profitability. Hence, the scope of the study is commercial banks in Kenya and not other organizations in Kenya since the profitability of different organizations is influence by other factors separate from the one used in this study and the ones in the banking sector.

The study also examined the quantitative factors, which influence banks' profitability using data obtained from financial statements and measured using financial ratios. However, accounting data is prepared on standardized procedures, which may leave out qualitative aspects. In addition, accounting ratios may not represent the current situation of the profitability of the banking sector.

5.6 Suggestions for Further Research

As per study findings, the hypothesized variables only explain 22% of the variation in profitability of commercial banks in Kenya. This means there are other bank specific

variables, which influence profitability of commercial banks hence a study, may be required on those other factors apart from the one considered under this research.

Secondly, additional research can be carried on the effect of industry specific factors like competition, market size on profitability of commercial banks. This study used Return on Assets (ROA) to measure profitability however; there are measures like net interest margin, net profit margin and Return on Equity, which can be applied, in the banking industry to establish the effect of bank specific factors on profitability.

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APPENDICES

Appendix I: List of Commercial Banks in Kenya

1. Victoria Commercial Bank Ltd.
2. UBA Kenya Bank Limited.
3. Trans-National Bank Ltd.
4. Standard Chartered Bank Kenya Ltd.
5. Prime Bank Ltd.
6. Paramount Universal Bank Ltd.
7. Oriental Commercial Bank Ltd.
8. NIC Bank Ltd.
9. National Bank of Kenya Ltd.
10. Middle East Bank (K) Ltd.
11. K-Rep Bank Ltd.
12. Kenya Commercial Bank Ltd.
13. Jamii Bora Bank Limited.
14. Imperial Bank Ltd.
15. I & M Bank Ltd.
16. Habib Bank Ltd.
17. Habib Bank A.G Zurich.
18. Gulf African Bank Limited.
19. Guardian Bank Ltd.
20. Giro Commercial Bank Ltd.
21. First community Bank Limited.
22. Fina Bank Ltd.
23. Fidelity Commercial Bank Ltd.
24. Family Bank Limited.
25. Equity Bank Ltd.
26. Equatorial Commercial Bank Ltd.
27. Ecobank Kenya Ltd.
28. Dubai Bank Kenya Ltd.
29. Diamond Trust Bank Kenya Ltd.
30. Development Bank of Kenya Ltd.
31. Credit Bank Ltd.
32. Co-operative Bank of Kenya Ltd.
33. Consolidated Bank of Kenya Ltd.
34. Commercial Bank of Africa Ltd.
35. Citibank N.A Kenya.
36. Chase Bank (K) Ltd.
37. Charterhouse Bank Ltd
38. CFC Stanbic Bank Ltd.
39. Barclays Bank of Kenya Ltd.
40. Bank of India.
41. Bank of Baroda (K) Ltd.
42. Bank of Africa Kenya Ltd.
43. African Banking Corporation Ltd.

Appendix II: Data Collection Sheet

| Bank | Year | Net income | Total assets | Equity/capital | Total loans | Total NPL | Operating expenses |
|-------------|-------------|-------------------|---------------------|-----------------------|--------------------|------------------|---------------------------|
| Bank 1 | 2015 | 182655 | 22617744 | 1050000 | 15292071 | 2694737 | 1446405 |
| | 2014 | 145493 | 22073123 | 1050000 | 13679881 | 900218 | 1575987 |
| | 2013 | 442163 | 19639370 | 1050000 | 11491145 | 687130 | 1124685 |
| | 2012 | 380643 | 19070779 | 1050000 | 10133792 | 238138 | 844017 |
| | 2011 | 369966 | 12566087 | 1050000 | 6586964.8 | 1317392.96 | 714014 |
| Bank 2 | 2015 | -1023361 | 69280267 | 6404949 | 37798691 | 2202666 | 2911646 |
| | 2014 | 144111 | 62211641 | 5275991 | 38463876 | 1767371 | 2639073 |
| | 2013 | 436028 | 52683299 | 4167663 | 37938349 | 1231274 | 3383769 |
| | 2012 | 634187 | 62659045 | 3400000 | 37587836 | 388574 | 2817342 |
| | 2011 | 577069 | 55287650 | 3400000 | 29982267 | 317586 | 2290856 |
| Bank 3 | 2015 | 2026117 | 68177548 | 989717 | 31018373 | 2363810 | 1562120 |
| | 2014 | 2216911 | 61944649 | 989717 | 28388852 | 1064626 | 937427 |
| | 2013 | 2039696 | 52021524 | 989717 | 23578559 | 598364 | 3319953 |
| | 2012 | 1376100 | 46137777 | 989717 | 21922597 | 583766 | 2467136 |
| | 2011 | 1363881 | 36700797 | 989717 | 19144038 | 3828807.6 | 579759 |
| Bank 4 | 2015 | 1107937 | 44162947 | 450000 | 17857613 | 363819 | 565939 |
| | 2014 | 1034293 | 34370422 | 450000 | 12375611 | 71069 | 418707 |
| | 2013 | 1023458 | 30721440 | 450000 | 10672752 | 107418 | 367123 |
| | 2012 | 685440 | 24876824 | 450000 | 10014941 | 157993 | 359066 |
| | 2011 | 765862 | 21352157 | 450000 | 7229142 | 169433 | 313046 |
| Bank 5 | 2015 | 8401 | 241152 | 2716 | 145379 | 5233.644 | 15622 |
| | 2014 | 8387 | 226116 | 2716 | 125423 | 6136.942 | 14590 |
| | 2013 | 7623 | 206739 | 2716 | 118362 | 4879.045 | 15565 |
| | 2012 | 8741 | 184826 | 2716 | 104204 | 3771.579 | 14260 |
| | 2011 | 8113 | 167029 | 2716 | 99072 | 5482.31 | 13539 |
| Bank 6 | 2015 | 4905734 | 208451915 | 1976608 | 104981566 | 3023730 | 265695 |
| | 2014 | 5686661 | 180998985 | 1976608 | 88347387 | 1784847 | 321584 |
| | 2013 | 512756 | 180511797 | 1976608 | 103847691 | 1048363 | 8212476 |
| | 2012 | 3009891 | 143212155 | 1976608 | 78483828 | 861523 | 8868827 |

| | | | | | | | |
|---------|------|------------|-------------|---------|-----------|------------|-----------|
| | 2011 | 1838992 | 150171015 | 1976608 | 64256754 | 1887696 | 4442947 |
| Bank 7 | 2015 | 1588521 | 115826138 | 4582973 | 23180714 | 1010458 | 1347894 |
| | 2014 | 2443063 | 79397808 | 4582973 | 24012130 | 881135 | 3241930 |
| | 2013 | 2998586 | 71242659 | 4582973 | 24337983 | 436969 | 2593307 |
| | 2012 | 2248939.5 | 53431994.25 | 3437229 | 18253487 | 327726.75 | 1944980.3 |
| | 2011 | 1686704.63 | 40073995.69 | 2577922 | 13690115 | 245795.062 | 1458735.2 |
| Bank 8 | 2015 | 3592324 | 215625182 | 5755468 | 112925594 | 7614397 | 9583748 |
| | 2014 | 3478580 | 197463704 | 5300923 | 99674489 | 6387098 | 8504473 |
| | 2013 | 3740700 | 145998378 | 4915402 | 70759781 | 1768994.55 | 5583847 |
| | 2012 | 3123257 | 118300651 | 4915402 | 53120504 | 10624100.8 | 4485458 |
| | 2011 | 1671824 | 94771471 | 4915402 | 47364854 | 9030485.68 | 3826142 |
| Bank 9 | 2015 | 44422 | 14135528 | 1619530 | 9221256 | 2330985 | 1377562 |
| | 2014 | -281632 | 15077051 | 1119530 | 9212581 | 1382349 | 1207539 |
| | 2013 | -109108 | 16778631 | 1119530 | 10855492 | 1149632 | 1254943 |
| | 2012 | 139249 | 18064213 | 1119530 | 10077068 | 813243 | 1179315 |
| | 2011 | 149824 | 15318148 | 1119530 | 9197024 | 732918 | 1159305 |
| Bank 10 | 2015 | 11706 | 342500 | 49303 | 215745 | 6472.35 | 19783 |
| | 2014 | 8015 | 285396 | 42877 | 183942 | 7357.68 | 19135 |
| | 2013 | 9108 | 231215 | 36584 | 141608 | 5664.32 | 15869 |
| | 2012 | 7724 | 200588 | 29367 | 123824 | 4952.96 | 13581 |
| | 2011 | 5366 | 168312 | 20951 | 114101 | 4564.04 | 11885 |
| Bank 11 | 2015 | 3219.6 | 9764534 | 1150000 | 6725640 | 455550 | 664411.33 |
| | 2014 | -91715 | 8864537 | 1150000 | 5527640 | 249298 | 657833 |
| | 2013 | 52796 | 7308855 | 1150000 | 4328080 | 344829 | 531401 |
| | 2012 | 69669 | 6407485 | 1000000 | 3112099 | 387277 | 452969 |
| | 2011 | 47074 | 5394064 | 831063 | 2883261 | 47074 | 457162 |
| Bank 12 | 2015 | 121620 | 16942552 | 1042500 | 8043938 | 1869831 | 359892 |
| | 2014 | 220592 | 16944142 | 347500 | 8527632 | 1322265 | 390941 |
| | 2013 | 189433 | 15574646 | 347500 | 8108467 | 1189931 | 377115 |
| | 2012 | 73779 | 13411458 | 347500 | 6931620 | 1132396 | 279647 |
| | 2011 | 109168 | 11517988 | 347500 | 5901794 | 1145246 | 297393 |
| Bank 13 | 2015 | 6599806 | 271608597 | 968440 | 110017481 | 4914257 | 8171223 |
| | 2014 | 5708430 | 211539412 | 968440 | 113701450 | 1803042 | 7196517 |

| | | | | | | | |
|---------|------|----------|------------|----------|------------|------------|-----------|
| | 2013 | 4756635 | 166520351 | 20950855 | 110945439 | 880400 | 6222779 |
| | 2012 | 3627766 | 135461412 | 16522162 | 87707243 | 880400 | 5188686 |
| | 2011 | 2656797 | 107765064 | 11593302 | 71297721 | 882400 | 4410383.1 |
| Bank 14 | 2015 | 90373 | 52426513 | 12194050 | 29621166 | 2444338 | 2931244 |
| | 2014 | 320212 | 45934458 | 12194050 | 22982094 | 2460719 | 2669724 |
| | 2013 | -881892 | 36907136 | 7869050 | 18459837 | 2193226 | 2863730 |
| | 2012 | -1055754 | 31771339 | 5748050 | 13968266 | 1895267 | 2413527 |
| | 2011 | 950179 | 28594205.1 | 5173245 | 12571439.4 | 1705740.3 | 2172174.3 |
| Bank 15 | 2015 | -486382 | 14469562 | 3820315 | 8321620 | 3387828 | 1450620 |
| | 2014 | -323017 | 16589359 | 2420035 | 10006792 | 3027971 | 1855179 |
| | 2013 | 55650 | 15562476 | 1371482 | 9029000 | 5562476 | 879163 |
| | 2012 | -481940 | 14108996 | 722314 | 7538422 | 4108996 | 1017983 |
| | 2011 | 72341 | 12926902 | 173238 | 6635194 | 2926902 | 664632 |
| Bank 16 | 2015 | 17303438 | 428062514 | 1886837 | 269892942 | 9078750 | 32104935 |
| | 2014 | 17151365 | 344571646 | 1851388 | 214170424 | 9343596 | 26348483 |
| | 2013 | 13277796 | 277728818 | 1851388 | 171363429 | 9246423 | 22710866 |
| | 2012 | 12080255 | 243170458 | 1851388 | 135692125 | 4312567 | 19578805 |
| | 2011 | 10325157 | 196293896 | 1851388 | 113823792 | 3250727 | 15990902 |
| Bank 17 | 2015 | 1982946 | 81281366 | 1245186 | 55853882 | 3514571 | 6207955 |
| | 2014 | 1809785 | 61834403 | 1245186 | 37925476 | 2847219 | 4957467 |
| | 2013 | 1245385 | 43513903 | 1111046 | 27943360 | 2013706 | 4196140 |
| | 2012 | 561459 | 30989337 | 556995 | 17868745 | 2445891 | 3215656 |
| | 2011 | 354604 | 26001753 | 484185 | 16332359 | 1824592 | 2906303 |
| Bank 18 | 2015 | 145425 | 4089082 | 264486 | 1489843 | 1117382.25 | 298551 |
| | 2014 | 83382 | 3135003 | 264486 | 1661004 | 1245753 | 191730 |
| | 2013 | 43868 | 1691611 | 83073 | 827177 | 620382.75 | 117680 |
| | 2012 | 27454 | 1349922 | 83073 | 653724 | 490293 | 87020 |
| | 2011 | 9956496 | 1030836833 | 11994903 | 409578026 | 81915605.2 | 54583678 |
| Bank 19 | 2015 | 99436881 | 2524593709 | 14715590 | 1371925547 | 1238556 | 54937146 |
| | 2014 | 94434092 | 2355876526 | 14715590 | 1275681135 | 1069775 | 53930947 |
| | 2013 | 90023977 | 2102846415 | 14715590 | 1002370638 | 329810 | 25273207 |
| | 2012 | 87295957 | 1734877860 | 14715590 | 779050018 | 450666 | 22252034 |
| | 2011 | 4988624 | 1611879579 | 14715590 | 715944065 | 1619268 | 70645177 |

| | | | | | | | |
|---------|------|-----------|------------|-----------|------------|------------|-----------|
| Bank 20 | 2015 | -12114 | 15646310 | 364300 | 10940003 | 2776851 | 1323481 |
| | 2014 | 50437 | 15280260 | 390800 | 9765509 | 1517851 | 1205688 |
| | 2013 | 1320202 | 11305398 | 300000 | 7211504 | 542620 | 1111920 |
| | 2012 | 293761 | 9958767 | 300000 | 5452627 | 749199 | 1147505 |
| | 2011 | 249696.85 | 8464951.95 | 255000 | 4634732.95 | 636819.15 | 975379.25 |
| Bank 21 | 2015 | 452439 | 15810061 | 1150000 | 9327951 | 1865590.2 | 473210 |
| | 2014 | 395589 | 15082199 | 1150000 | 7716949 | 1543389.8 | 451949 |
| | 2013 | 378048 | 13623296 | 803010 | 6908548 | 1381709.6 | 442949 |
| | 2012 | 226360 | 12279809 | 754000 | 5519203 | 1103840.6 | 405067 |
| | 2011 | 301096 | 11846372 | 745000 | 6360245 | 1272049 | 392269 |
| Bank 22 | 2015 | 256125 | 15388571 | 450375 | 9629648 | 801234 | 157372 |
| | 2014 | 261251 | 14572873 | 450375 | 9434741 | 786808 | 194696 |
| | 2013 | 275335 | 12834687 | 450375 | 8346785 | 460664 | 203298 |
| | 2012 | 153610 | 11745363 | 450375 | 7005445 | 1401089 | 143165 |
| | 2011 | 115207.5 | 8809022.25 | 337781.25 | 5254083.75 | 1050816.75 | 107373.75 |
| Bank 23 | 2015 | 39002 | 5437716 | 304813 | 3633591 | 106000 | 60239 |
| | 2014 | 35460 | 5330878 | 290298 | 3583103 | 126000 | 55999 |
| | 2013 | 32160 | 5064759 | 276474 | 3361234 | 241000 | 57517 |
| | 2012 | 30887 | 4397417 | 263309 | 3322494 | 376000 | 58226 |
| | 2011 | 30620 | 4355636 | 250770 | 3334087 | 300800 | 51536 |
| Bank 24 | 2015 | 39000000 | 543800000 | 15000000 | 392600000 | 106002000 | 6000000 |
| | 2014 | 163000000 | 533100000 | 15000000 | 382200000 | 1452360000 | 5600000 |
| | 2013 | 36264000 | 7774159000 | 15000000 | 2579303603 | 515860720 | 173775000 |
| | 2012 | 40379000 | 7850422000 | 15000000 | 2351321183 | 470264236 | 159912000 |
| | 2011 | 20630000 | 4785895000 | 250770000 | 3334087000 | 205947000 | 51536000 |
| Bank 25 | 2015 | 335126 | 21180018 | 140046 | 6047132 | 1209426.4 | 167450 |
| | 2014 | 300576 | 17802177 | 140046 | 5683497 | 1136699.4 | 164240 |
| | 2013 | 218630 | 16285573 | 126609 | 5352033 | 1070406.6 | 163000 |
| | 2012 | 216394 | 15290582 | 115099 | 4745500 | 949100 | 152000 |
| | 2011 | 248295 | 12669356 | 122526 | 5084931 | 1016986.2 | 119000 |
| Bank 26 | 2015 | 6032643 | 164822609 | 2880245 | 114927247 | 1407884 | 5023727 |
| | 2014 | 5234548 | 154060579 | 2880245 | 101610562 | 704900 | 3960066 |
| | 2013 | 4981392 | 141364225 | 2880245 | 91882665 | 490761 | 4663710 |

| | | | | | | | |
|---------|------|------------|-------------|---------|-------------|-----------|-----------|
| | 2012 | 4119559 | 119276046 | 2880245 | 71012961 | 684015 | 3576550 |
| | 2011 | 3472725 | 108063713 | 2880245 | 66365870 | 861349 | 2755605 |
| Bank 27 | 2015 | 20384 | 16781124 | 1190893 | 10155694 | 777949 | 1102441 |
| | 2014 | 19686 | 13117892 | 1190893 | 6189800 | 289970 | 728211 |
| | 2013 | 93887 | 7010323 | 1701380 | 3809603 | 244988 | 468754 |
| | 2012 | 61026.55 | 6219906 | 1701380 | 3452899 | 261741 | 304690.1 |
| | 2011 | 39667.2575 | 5030090 | 1701380 | 2798853 | 249666 | 198048.57 |
| Bank 28 | 2015 | 19623071 | 558094154 | 3025213 | 345968686 | 23477475 | 36078896 |
| | 2014 | 16848863 | 490338324 | 3025213 | 283732205 | 18404132 | 34162425 |
| | 2013 | 14341382 | 390851579 | 2984228 | 227721781 | 23662455 | 10593856 |
| | 2012 | 12203531 | 367379285 | 2970340 | 211664226 | 14750335 | 29048975 |
| | 2011 | 10981046 | 330716159 | 2968746 | 198724919 | 12228264 | 24778437 |
| Bank 29 | 2015 | 372320 | 19106557 | 1469138 | 12519387 | 1607630 | 1782571 |
| | 2014 | 514043 | 15801431 | 1139613 | 10453714 | 776423 | 1591719 |
| | 2013 | 355060.5 | 12673740.5 | 1139613 | 8704248.5 | 882041.5 | 1497006 |
| | 2012 | 196078 | 9546050 | 1139613 | 6954783 | 987660 | 1402293 |
| | 2011 | 173366 | 9318715 | 1139613 | 6754243 | 900874 | 1358932 |
| Bank 30 | 2015 | 34835 | 5677553 | 506831 | 3731155 | 746231 | 285255 |
| | 2014 | 68627 | 5936601 | 506831 | 3466021 | 693204.2 | 283504 |
| | 2013 | 408168 | 5580917 | 400000 | 2575223 | 515044.6 | 90050 |
| | 2012 | 265309.2 | 3627596.05 | 260000 | 1673894.95 | 334778.99 | 58532.5 |
| | 2011 | 172450.98 | 2357937.433 | 169000 | 1088031.718 | 217606.34 | 38046.125 |
| Bank 31 | 2015 | -1153477 | 125440316 | 7214976 | 67803990 | 11762498 | 7473950 |
| | 2014 | 870702 | 123091996 | 7075000 | 65641491 | 7236648 | 6977202 |
| | 2013 | 1112803 | 92555717 | 7075000 | 39566678 | 4212274 | 6395344 |
| | 2012 | 736366 | 67178607 | 7075000 | 28346668 | 2247477 | 5751508 |
| | 2011 | 1546113 | 68664516 | 7075000 | 28068218 | 1196826 | 4658866 |
| Bank 32 | 2015 | 4485125 | 165788238 | 3199728 | 114657644 | 11762498 | 5648417 |
| | 2014 | 4116674 | 145780505 | 3199728 | 100575330 | 7236684 | 4946475 |
| | 2013 | 3237301 | 121062739 | 2714921 | 83493313 | 6597413 | 4320742 |
| | 2012 | 3036794 | 108348593 | 2714921 | 71541092 | 3209075 | 3500673 |
| | 2011 | 2707137 | 78984005 | 1974488 | 56624621 | 2721451 | 2997786 |
| Bank 33 | 2015 | 42902 | 8496350 | 2052673 | 5245063 | 289970 | 206548 |

| | | | | | | | |
|---------|------|----------|------------|---------|------------|-----------|----------|
| | 2014 | 71947 | 7857515 | 1645513 | 4627523 | 244988 | 174560 |
| | 2013 | 139969 | 7006528 | 1645513 | 4035281 | 261741 | 155244 |
| | 2012 | 94467 | 6219906 | 1643896 | 3452899 | 249666 | 123443 |
| | 2011 | 152004 | 5030090 | 1643896 | 2798853 | 167256 | 99122 |
| Bank 34 | 2015 | 158025 | 10525709 | 1000000 | 5871717 | 946834 | 331051 |
| | 2014 | 147846 | 10402316 | 1000000 | 4447615 | 1062852 | 286729 |
| | 2013 | 94658 | 8028876 | 1000000 | 3272190 | 946834 | 228673 |
| | 2012 | 110248 | 7254561 | 1000000 | 2739613 | 804295 | 217170 |
| | 2011 | 71661.2 | 4715464.65 | 650000 | 1780748.45 | 522791.75 | 141160.5 |
| Bank 35 | 2015 | 2023189 | 65001313 | 3000000 | 41047741 | 461601 | 1918350 |
| | 2014 | 1736019 | 54917674 | 5000000 | 34418269 | 499434 | 1647688 |
| | 2013 | 1440772 | 49460889 | 3000000 | 26751542 | 704349 | 1509344 |
| | 2012 | 954719 | 43462888 | 2500000 | 21150662 | 775955 | 1307494 |
| | 2011 | 834424 | 35184677 | 2000000 | 18393706 | 779113 | 1206754 |
| Bank 36 | 2015 | 6342427 | 233965447 | 1825798 | 115125427 | 14697920 | 11062775 |
| | 2014 | 10436180 | 222495824 | 1825798 | 122749233 | 10752493 | 10193605 |
| | 2013 | 962921 | 220391180 | 1825798 | 129672004 | 3448116 | 9279429 |
| | 2012 | 8069533 | 195352756 | 1825798 | 112694523 | 2180974 | 8398595 |
| | 2011 | 5836821 | 164046624 | 1715386 | 96097823 | 1030827 | 7245637 |
| Bank 37 | 2015 | 168030 | 10452691 | 1000000 | 6649506 | 1329901.2 | 758476 |
| | 2014 | 125712 | 10239922 | 1000000 | 6009427 | 1201885.4 | 680573 |
| | 2013 | 158118 | 9657867 | 1000000 | 5144709 | 1028941.8 | 601545 |
| | 2012 | 213393 | 8801382 | 614432 | 4238908 | 847781.6 | 593953 |
| | 2011 | 202580 | 7286906 | 614432 | 3308068 | 661613.6 | 482302 |
| Bank 38 | 2015 | 59654 | 2752622 | 18140 | 1036637 | 698865 | 71212 |
| | 2014 | 47907 | 2762573 | 16491 | 1071859 | 187935 | 68489 |
| | 2013 | 46601 | 2642296 | 16491 | 937620 | 13439 | 51027 |
| | 2012 | 54766 | 2217417 | 16491 | 658922 | 16936 | 48252 |
| | 2011 | -9647 | 1942793 | 16168 | 689625 | 33963 | 107716 |
| Bank 39 | 2015 | 713800 | 20020072 | 607501 | 13124420 | 0 | 553537 |
| | 2014 | 464345 | 17244092 | 588721 | 10979238 | 0 | 410858 |
| | 2013 | 431903 | 13644242 | 588721 | 8363452 | 0 | 366781 |
| | 2012 | 350532 | 10322819 | 588721 | 5291220 | 0 | 231081 |

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|--|------|--------|---------|--------|---------|---|--------|
| | 2011 | 230250 | 7645235 | 588721 | 4110436 | 0 | 264956 |
|--|------|--------|---------|--------|---------|---|--------|