THE RELATIONSHIP BETWEEN LIQUIDITY AND PROFITABILITY OF COMMERCIAL BANKS IN KENYA

BY

SAMUEL NJUGUNA MAINA

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DECLARATION

This research project is my original work and has not been submitted to any other college, institution or university

Signature…………………………………..   Date……………………………

Samuel Njuguna Maina

D61/76128/2012

This research project has been submitted for examination with my approval as the university supervisor

Signature…………………………………..   Date……………………………

Dr. Cyrus Iraya

Lecturer, Department of Finance and Accounting

School of Business

University of Nairobi

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I wish to express my sincere gratitude to God for the grace and strength bestowed upon me while writing my research thesis. I greatly feel honored to my supervisor Dr. Iraya my classmates and family.

DEDICATION

I dedicate this project to classmates, my friends and family who believed in education and kept on encouraging me to work hard and complete this project

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ABBREVIATIONS AND ACRONYMS

CBK   :   Central Bank of Kenya

NIM.   :   Net Interest Margin

NPA   :   Nonperforming Assets

ROA   :   Return on Assets

ROE   :   Return on Equity

ABSTRACT

Liquidity and profitability are key variables, which provide information concerning the performance and survival of many businesses. In order to obtain a long-term survival and healthy growth of any business venture, both profitability and liquidity should go hand in hand. The aim of this study was to determine the relationship between profitability and liquidity of commercial banks in Kenya. To accomplish the stated objective, a descriptive research design was adopted. Secondary data was obtained from published accounting reports of the 42 commercial banks for a period of 5 years from 2012 to 2016. Analysis of data was done through descriptive statistics, the Karl Pearson correlation, the granger causality test and the multiple linear regressions using STATA. The granger causality results established that there was no bidirectional relationship between liquidity and profitability of commercial banks in Kenya. The regression results revealed that the relationship between liquidity, capital adequacy and commercial banks profitability in Kenya was negative and insignificant. The findings further established that relation between assets quality and commercial banks in Kenya return on assets was significant and negative while the relation between bank size and return on assets was positive and significant. The findings also revealed that the relation between management quality and return on asset of Kenyan banks is positive and significant. The study concluded that there is no bidirectional relationship between profitability and liquidity in commercial banks in Kenya and liquidity had no significant effect on the profitability of Kenyan commercial banks. The study however recommended that commercial banks should maintain optimal liquidity levels in order to meet current obligations when they fall due.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Liquidity and profitability are key variables, which provide information concerning the performance and survival of many businesses. In order to obtain a long-term survival and healthy growth of any business venture, both profitability and liquidity should go hand in hand (Ahmad, 2016). The management of a firm's liquidity and its ability to make profits are very vital issues that contribute to both the growth and survival of a business entity and the capacity of managing a trade-off between these factors are of great concern to the financial managers of an entity (Kimondo, 2014). In protecting customer deposits during times of bankruptcy and liquidation, which could be resulted by illiquidity, liquidity management is of great importance in protecting those deposits (Odunayo & Oluwafeyisayo, 2015). The tool for sustainable growth and profitable operations as well as the sustenance of the depositor's confidence and for the banks in meeting their short term obligations is adequate liquidity (Ibe, 2013).

Several theories have theoretically explained the tradeoff between liquidity and profitability. An indicator to show the association between liquidity and profitability to be negative is the risk and return theory since profitability and liquidity are not in the same line (Irawan & Faturohman, 2015). The anticipated income theory explains that through proper an arrangement and structuring of all the loan commitments made by a bank to its customers, a bank can effectively manage its liquidity (Odunayo & Oluwafeyisayo, 2015). The shiftability theory posits that by holding assets that can be easily transferred or sold to other lenders or investors for cash, bank's liquidity could be

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well maintained. An assumption made by the commercial loan theory is that sufficient liquidity can be provided by the repayment from the self-liquidating assets of the bank.(Ibe, 2013).

Commercial banks; by continuously channeling funds from depositors to investors became very important in an economy as they function as financial intermediaries. Banks can perform so effectively, if only they make reasonable earnings enough to offset their operational costs incurred during the time of their operation, that is, in order for banks to intermediate appropriately, they need to be generating a reasonable amount of profits (Lukorito et al., 2014). The roles played by commercial banks in the growth and development of an economy make its operations become very important ant in the banking sector in the economy (Odunga, 2016). The liquid assets (cash) held by Commercial banks for its depositors helps in the stability and growth of the economy. A major contributory of higher economic growth is a proficient banking system (Miencha & Selvam, 2013). Therefore, in meeting the expected and contingent liquidity demands it is necessary that banks maintain adequate levels of prospective borrowing lines, liquid assets and cash

1.1.1 Liquidity of Commercial Banks

Liquidity refers to the ability of financial institutions (banks) to finance increase their assets and fulfills their financial obligations (Odunayo & Oluwafeyisayo, 2015). Liquidity proves that a bank is able to immediately meet cheques, cash, legitimate new loan demand and other withdrawals obligations and at the same time abiding by existing reserve requirements (Ibe, 2013). When a bank is not able to settle its obligations as they

arise, then it is regarded illiquid. In cases of illiquidity, the shareholders and possibly depositors' losses which are as a result of bank default (Odunayo & Oluwafeyisayo, 2015). Liquidity is a trait that shows the capacity of a firm to obey its financial obligations when required. Therefore, liquidity management entails the amount of investments which should be held as liquid assets so as to obey creditor's short-term maturing obligations that a firm may have entered into(Panigrahi, 2014).

Liquidity performs a vital role in the successful operation of a business entity and it is mostly important to make it known that banks are termed to be liquid when they possess the ability to settle obligations instantly when required (Odunayo & Oluwafeyisayo, 2015). Liquidity plays a very critical role since banks run extensively with the funds that are obtained from its depositors. The money borrowed takes the forms of demand and time deposits. (Ibe, 2013). In order for a bank to give the optimal return to its shareholders and ensure its survival, it has to maintain best balance between profitability and liquidity (Irawan & Faturohman, 2015).

Liquidity is a measure of cash availability and the rate at which current assets can be changed into cash so as to ensure ordinary and extra obligations are honored (Odunayo & Oluwafeyisayo, 2015)The continuity of a business entity can be reached through maintaining an optimal level of liquidity since it is much more than a corporate goal (Vieira, 2010). Liquidity can be measured using the liquid asset ratio, where assets are selected based on their liquidity levels. The computation of liquidity ratios is as a proportion of bank's current liabilities such as short-term interbank loans, deposit liabilities, net balances with foreign branches and free balances with central bank (Ibe, 2013). Liquidity ratio gives an insight and view of the ability of a firm in meeting its

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maturing current obligation and pay off creditors as the loan matures and is essential for firm' existence (Umobong, 2015).

1.1.2 Profitability of Commercial Banks

Profitability is the ability of a business to generate earnings as compared to its expenses and other relevant costs incurred for the period. For a firm to continue existing as a going concern, it will largely depend on its ability to generate profit or even attract equity capital and additional investors (Umobong, 2015). Profitability will mean ability to generate profit from all the business activities of an enterprise, firm, company or an organization. In banks, profitability is termed as the ability of generating revenue in excess of costs, in relation to the capital base. For stability of a good financial system, banking sector ought to be sound and profitable so as to be better able to sustain negative shocks that may be experienced in the economy.(Lartey, Antwi & Boadi 2013)

The amount of revenue that exceeds relevant expenses incurred by a firm for the period is known as profit. Investors are more concerned with profitability ratios since they are interested in the appreciation of market price of stocks and dividends (Niresh, 2012). Included in the major goals of a firm is profitability because it is difficult for businesses that do not make profits to grow and survive. The goal of shareholders of wealth maximization is closely related to profitability, and for an investment in current assets made there should be acceptable returns that are to be obtained (Ahmad, 2016). Profitability portrays the efficiency of the management in converting the firm's resources to profits. Profitability can be expressed either accounting profits or economic profits and it is the main goal of a business venture (Macharia, 2016).

Profitability of banks is driven by its ability to generate sufficient earnings as well as reduce the operational costs. Ratios like the net interest margin (NIM), return on equity (ROE) and returns on asset (ROA) are used in summarizing large quantities of financial data and aid in making qualitative judgment about a firm's ability to generate profits (Lukorito et al., 2014). The commonly used profitability ratio is ROA and it determines the amount of the profit earned per shilling of assets (Macharia, 2016). The net amount in which a firm's resources have contributed to the profits is expressed using the Return on Assets (ROA) ratio

1.1.3 Relationship between Liquidity and Profitability

Liquidity is necessary in obtaining financial performance, maintaining and improving the market share of an entity (Bordeleau & Graham, 2010). By increasing profitability, there is probability of reducing a firms' liquidity and as concluded by (Panigrahi, 2014), an extensive interest on liquidity would tend to have an effect on the profitability. A firm will not be able to fulfill its immediate obligations when it is making low profits due to the high liquidity that it gains. This will mean that funds are held in non-liquid assets and could not be used for productive activities, hence lowering the profitability. Marozva (2015) posits that a dilemma in liquidity management is finding a balance between liquidity and profitability since these two are inversely associated, and thus profits diminishes with increase in liquidity vice versa.

Bordheleau and Graham (2010) established that holding of liquid assets could improve a banks' profitability since this has an effect on banks' profitability. Vintilă and Nenu (2016) made an analysis of liquidity and profitability on the companies listed in Romania

and concluded that corporate financial performance and liquidity are negatively related. In Sri Lanka, Shafana (2015) examined the behavior of liquidity determinants on the profitability of financial institutions (banks) and critically observed that profitability was negatively but significantly related to liquidity.

1.1.4 Commercial Banks in Kenya

One of the roles of commercial banks in Kenya is to act as intermediaries between savers and borrowers, provide investment opportunities for savers and provide savers with experts in financial management. Banks mostly denominate the financial sector in Kenya and are heavily relied in the financial intermediation process. (Lukorito et al., 2014). Most sectors including the manufacturing and agricultural sectors nearly depend heavily on the banking sector for their very survival and growth (Odunga, 2016).

All financial institutions are licensed and regulated in pursuant of what is provided in the Banking Act. The Central Bank of Kenya (CBK) provides other financial institutions with prudential guidelines and regulations as mandated under the Banking Act in the Kenyan constitution. The role of formulating and implementing monetary and fiscal policies is delegated to the CBK, which is the banker to all other banks and the lender of last resort in Kenya (Andele, 2013).

Most of the financial reforms show that over the past years, banking systems in Kenya have undergone relative improvements that include financial innovations, enhanced competition and interest rate liberalization (Odunga, 2016). In 2016, the banking sector demonstrated continued resilience both in its domestic and regional operations, with the industry's total asset base growing by approximately 5.8 percent to KShs 3.7 trillion from

KShs 3.5 trillion in 2015. The average liquidity ratio as at December 2016 stood at 40.3 percent as compared to 38.1 percent registered in December 2015. Total liquid assets grew by 12.1 percent while total short-term liabilities grew by 5.7 percent (CBK, 2017). Liquidity is one of the important financial stability indicators used by the central bank of Kenya since liquidity shortfall in one bank can cause systemic calamity in the banking sector since they have interconnected operations (CBK, 2017).

1.2 Research Problem

So as to maintain a sufficient capacity of honoring firms' current obligations with no instances of losses and interruptions, the management should put emphasis on liquidity decisions as is one of the financial decisions (Shafana, 2015). The most important issues in the corporate finance are liquidity and profitability with profit maximization being the major goal in most firms. There should not be too much attention on profitability since it may render a firm diluting the liquidity position of the organization (Niresh, 2012). The extent to which profitability and liquidity influence the growth and performance of the firm has been controversial and no consensus has yet been empirically and theoretically met.

Commercial banks in Kenya play a significant function as a financial institution when serving their clients in order to achieve its targets (Tesfai, 2015). The commercial bank's sector has relatively observed percentage increase in the number of staff and of deposit account holders, pretax earnings and the total assets (Odunga, 2016). Over the past decade, the banking sector in Kenya has greatly improved its overall profitability. However, after a critical analysis was conducted, it indicated that generally not all banks

are profitable despite the above overall good picture of banks (Olweny & Shipho 2011). A number of commercial banks in the country are facing alarmingly low capital base, high and growing nonperforming assets and low profitability. The overall business and financial performance of most of the Kenyan banks has also been not encouraging (Miencha & Selvam, 2013).

Comprehensive studies and analysis of the association between liquidity and profitability have been done in finance context. Using the granger causality test, Odunayo and Oluwafeyisayo (2015) the existence and direction of causality between liquidity and profitability of banks in Nigeria was investigated. The findings of the study showed that there was no casual association both unidirectional and bidirectional relationship between liquidity and profitability. South Africa, Marozva (2015) conducted an investigation to explain the connection between liquidity and bank performance and showed a negative significant deterministic association between profitability and liquidity risk. Based on the two studies most studies provide conflicting results on whether liquidity affects profitability of firms.

Kimondo (2014) studied the association between liquidity and profitability of nonfinancial companies that are listed in the NSE. The context established a significant weak positive association between profitability and liquidity but the study context was non-financial companies and not commercial banks. In Kenya, Nyongesa (2016) investigated the association between financial performance and liquidity risk of commercial banks in the country. The paper concluded that liquidity risk significantly influences the financial performance of banks countrywide but the study dwelled on liquidity risk. The available literature on liquidity indicate that liquidity affects

profitability of firms but most of the studies focus on non financial firms whose profitability measures are different from those in the banking sector. Additionally, with exclusion of Odunayo & Oluwafeyisayo (2015) in Nigeria, most studies concentrate on determining whether there exists a relationship between liquidity and profitability and not whether there exists a causal relationship between the variables. This study therefore seeks to find out whether there is a casual association between the variables for commercial banks in Kenya.

1.3 Research objective

To determine the relationship between profitability and liquidity of commercial banks in Kenya

1.4 Value of the Study

The results and conclusions of this research will be useful in finance literature, to practicing sector and the policy making sector. In practice, the study will be significant to managers and the personnel who are in charge of commercial banks. Managers can use the study finding to determine the amount of liquidity, which will maximize their banks profitability and shareholders wealth maximization.

In the policy sector, institutions like the capital market authority, which provides additional oversight to listed commercial banks and the central bank, which regulates the operations of commercial bank in Kenya mostly the liquidity and capital requirements. The policy-making institutions can use the findings for strategy and policy formulation on liquidity management and profitability enhancing mechanisms

In finance literature, the study will provide more knowledge on liquidity, liquidity management, liquidity risk and profitability. The study will form a basis for future studies and recommend area, which may require additional investigation. Academic and non-academic researchers can also use the study as part of empirical and theoretical literature.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This part covers the theoretical context, factors that influence the profitability of commercial banks, a review of empirical literature, the conceptual framework and a summary literature review.

2.2 Theoretical Review

2.2.1 Anticipated Income Theory

Prochnow (1949) formulated this theory and it presupposes that the greatest guarantee for ensuring adequate liquidity is by laying more emphases on the credit worthiness and the earning potential of a borrower (Odunayo & Oluwafeyisayo, 2015). The theory presupposes that the expected earnings of a borrower can be used to manage the bank's liquidity. This enables banks to give out loans because the settlement of those loans are linked to the borrowers expected income and are to be paid periodically and with regular premiums and that will allow the bank to offer a relatively high liquidity when cash inflows are standard and can be anticipated (Koranteng, 2015). Additionally, the anticipated income theory presumes that liquidity can be ensured if planned loan payments are made on prospect income of the borrower. The theory relates loan repayment to income than rely on collateral (Botoe, 2012).

The theory also equates intrinsic soundness of term loans, with the growing significance of suitable settlement schedules adapted to the predictable earning of the borrower (Botoe, 2012). The theory asserts that a bank can also manage its liquidity through

suitable directing of the issued loans, collect them when they are due and reduce any possibility of delays in repayments. The theory recognizes that certain types of loans have more liquidity than others (Botoe, 2012). This theory has encouraged and helped many deposit money banks to adopt an advanced collection of investment (Odunayo & Oluwafeyisayo, 2015). This theory holds that management of liquidity could be enhanced by adequately phasing and structuring of the loan commitments to customers (Tamunosiki, Giami, & Obari, 2017). The theory also depicts that a banks liability can be influenced by the maturity pattern of loans and investment portfolios (Botoe, 2012).

2.2.2 Shiftability Theory

This theory was formulated by Moulton (1915) and it contends that an excellent source of liquidity can be obtained from the highly marketable securities that a bank holds. This theory assumes that bank's liquidity is a function of their capacity to acquire assets that are convertible or marketable to other lenders or investors should there be imminent need for cash (Tamunosiki, Giami, & Obari, 2017). The shiftability theory holds that banks could well protect themselves when there is a ready market for the instruments they hold. Instruments included in liquidity reserve may comprise of commercial papers, treasury bills and bankers' acceptances. Normally, these instruments are marketable and, and since they mature quickly, certainty of capital is guaranteed (Botoe, 2012).

The shiftability theory is either based on the proposal that assets that a bank holds are to be sold to other lenders or investors or shifted to central bank, which stands ready to purchase the assets offered for sale (Tamunosiki, Giami, & Obari, 2017). The theory also contends that access to central bank could be had only if the loans satisfy eligibility rules

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such as self-liquidating commercial loans. Therefore, banks should hold highly marketable government securities to meet liquidity needs. The shiftability approach allows banks to efficiently run with small amount of reserves or by making long term investments on assets. Banks can attempt to prevent liquidity crisis by always selling their securities at good prices as presumed by the shiftability theory. That is, banks hold assets that are marketable and their convertibility will not be at a discount. The theory ensures banks are liquid by assisting in the shiftability of assets (Koranteng, 2015).

2.2.3 Liability Management Theory

This theory is associated with Dodds (1982) and focused on the liability side of bank's statement of financial performance. The contentment of the theory is that liabilities of a bank could be used to derive extra liquidity. In accordance to this theory, the ability of banks to procure all the funds that they require provides no essence of storing excess of liquid assets. (Ibe, 2013). Laying more emphasis in maintaining liquid assets as well as liquid investments by banks is of no essence, but banks have to focus on liabilities side of its balance sheet. By borrowing cash (liquid asset) in the capital and money markets, banks can effectively solve their liquidity problems. Banks should consider both sides of its balance sheet to be a source of liquidity as contributed in this theory. (Koranteng, 2015).

Liquidity management theory entails all those activities involved in obtaining cash from the depositors and other creditors (from the market especially) and also determining the suitable mix of funds for a particular bank (Ibe, 2013). The theory posits that, since banks can borrow and obtain funds from depositors and other creditors, they need not to hold

liquid assets. That is, the liquidity needs are catered for by the borrowed funds (Koranteng, 2015). The liability management theory depicts that in meeting liquidity requirements, banks can bid for extra funds to enable them meet their deposit withdrawal as well as the loan demands. Liquidity needs of a bank can be met by issuing liabilities. Old norms of maintaining liquidity need not to be followed as depicted by this theory. (Botoe, 2012).

2.3.4 Liquidity Transformation Theory

Bryant (1980) and Diamond and Dybvig (1983) asserted that transformation of liquidity which is the formation of liquid claims that are backed by illiquid assets and is a key function of many commercial banks. (Chernenko & Sunderam, 2016). Accorded by this theory, banks financially support illiquid loans in creating liquidity with liquid demand deposits. Banks normally create liquidity by transforming less liquid assets into more liquid liabilities (Odunga, 2016). This theory states the transformation of liquid liabilities (deposits) into illiquid claims (loans) by the banks. According to liquidity transformation theory the basic intermediation role of financial institutions (banks) relies on a maturity disparity between the deposits and loans that it makes, making it difficult to finance liquidity risk that may accrue (Bonfim & Kim, 2014).

In accordance to this theory, banks that are less risky and even more liquid efficient are those that produce more liquidity than others. The theory states that it is the banks which should provide investors with more highly liquid demand deposits(liabilities) while they finance illiquid even during tough times (Bonfim & Kim, 2014). The theory supports liquidity transformation as it also plays a vital role in shadow banking system which is

the functioning of the system of market-based intermediaries (Chernenko & Sunderam, 2016).

2.3 Determinants of Profitability of Commercial Banks

2.3.1 Liquidity

Liquidity ratio is a measure of the banks' ability to honor its current financial obligations. Liquidity solvency is essential to have sound banking operations that a bank needs to have. Banks are faced with liquidity crisis at times when they are not able satisfy their short-term obligations (Misra & Aspal, 2013). A thing that should be of greatest concern to banks is liquidity crisis. The most liquid assets that can be held by a bank are cash and investments. By converting banks assets into more liquid assets or by obtaining deposits; which are best ways of obtaining adequate funds, banks can effectively achieve an adequate liquidity position (Ahsan, 2016).

For the commercial banks to gain public assurance, they ought to have adequate liquidity that is sufficient to meet the demands of loan holders as well as those of depositors. Therefore, to reduce the noncompliance of assets and liabilities, commercial banks should have effective and efficient asset and liability management system (Chinoda, 2014). For a bank to be able to provide adequate liquidity, it requires the existence of a liquid and a readily transferable supply of fiscal assets. A situation where firms can acquire sufficient liquid funds is known as adequate liquidity position. Liquid funds can be obtained either by converting the assets held by a bank quickly into cash at reasonable costs or by increasing its liabilities (deposits) (Misra & Aspal, 2013).

2.3.2 Capital Adequacy

Capital adequacy is normally used to evaluate a bank's capital strength and to determine the bank's ability to endure and recover from external shocks that banks may experience. An organization having more of capital needs less of external financial support and when it needs to acquire funds then it will do so at a lower cost as compared to those who have less capital.(Growe et al., 2014). The adequacy of capital is a clear indication of the inner strength of a bank, and it makes banks stand firm even during tough times. High regulations are put on the bank's capital structure. The grounds for this high regulations is that; the role played by capital in reducing the number of bank failures and losses to depositors when a bank fails is very vital since most firms are likely to take extreme risk so as to capitalize on shareholder's value at the cost of money supplied by depositors (Olwen & Shipho, 2011.).

The determination of bank's ability to effectively achieve an efficient intermediation process, provide preferred levels of specific banks products and services and even be able to make reasonable profits is aided by capital thus making capital adequacy contribute enormously to the profitability of a firm (Misra & Aspal, 2013). A key indicator of creditworthiness is a large share of capital thus banks with higher capitalization ratio able to lower their funding costs and make themselves able to engage in discreet lending (Chinoda, 2014). Capital adequacy dimensions are important factors in helping banks understand the shock attractive capability during times of risk. Equity to total assets ratio is the measure of capital adequacy a firm may own (Ahsan, 2016).

2.3.3 Asset Quality

Quality of assets determines the soundness and stability of financial institutions against the assets' loss of value. Banks can well understand debtors exposure risk can by putting into consideration the dimensions of asset quality because it is an essential factor and it is of so much importance to them. This parameter benefits the bank in understanding the amount of total funds reserved by banks during times of poor investments (Ahsan, 2016).

Among the main risks faced by banks regularly is the asset quality ratios, this is because of an increasing number of non-performing loans which shows worsening of the asset quality since loans have the highest default risk. The normally used indicator of asset quality is the nonperforming assets (NPA) ratio. The nonperforming assets (Growle, et al., 2014) usually provide a reduced interest revenue and risk of failure of returning the loan principal.

2.3.4 Bank Size

Size of a firm refers to the quantity and diversity of services a firm can avail concurrently to its clients or the array of production ability and the potential possessed by a firm. The size of the firm significantly enhances its performance. 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 (Macharia, 2016). Initially, bank's profitability will increase with size since it enjoys the economics of scale but when a threshold level is exceeded, then the profits starts to decline. Performance inefficiency can be brought

about by bureaucratic managerial techniques and even the exhaustion of the scale of economy (Growe et al., 2014).

2.3.5 Management Efficiency

This is the adherence with the set norms, the ability of planning and responding efficiently to the changing environment, leadership and administrative capability of a bank (Misra & Aspal, 2013). One of the key factors behind financial institutions' performance is that of sound management. Excellent and skillful management needed to smoothly and decently run the bank is provided by the management and whenever the bank costs are controlled and productivity increases, there is ultimate likelihood of achieving higher profits. Here, this parameter is measured by total cost to total income ratio (Ahsan, 2016).

2.4 Empirical Review

Vieira (2010) investigated the effect of liquidity on profitability among several companies among them the major airline carriers across the globe for the period from 2008 and 2004. The author collected secondary from the published financial statements of the sampled companies. Several statistical analysis techniques were employed to determine the existing relationship. The results of data analysis revealed that liquidity positively and significantly affected profitability in the short run. The results also established that on the average, liquidity had a positive effect on profitability of the studied firms.

In their research, Lartey, Antwi and Boadi (2013) explored the liquidity effects on profitability of quoted commercial banks on Ghana Securities Exchange. As such, the

authors sampled nine listed banks and adopted a descriptive research. Secondary data was retrieved and covered five years between 2005 and 2010 and a regression equation was developed to carry out data analysis. The study findings established that profitability of the sampled banks had been on the decline of the study period. Additionally, the authors established that liquidity had a weak and positive influence of the quoted banks profitability.

Madhushani and Wellappuli (2016) studied the liquidity effects on the profitability of Sri Lankan banking institutions. Secondary data was gathered from 10 banking institutions in Sri Lanka from 2011 - 2015. Linear regression and ANOVA techniques were employed by the authors to analyze the data collected. The study established that profitability was significantly and positively influenced by the liquidity of the sampled banks. However, an insignificant and positive effect existed between return on equity and liquidity among the sampled banks.

Umombong (2015) assessed the effect of profitability ratios on liquidity and the growth of profits in Pharmaceutical firms of Nigeria. The study used the acid test, current ratio, net working capital to measure liquidity. The study used the fixed effect model. The findings established that the studied liquidity measures had significant contributions to the growth of profits of the pharmaceutical firms. This implied that improvement in the levels of liquidity and profitability ratios enhance maximizes profitability of the sample pharmaceutical companies in Nigeria.

In Nigeria, Ibe (2013) studied liquidity management practices and their effect on profitability of commercial banks. The paper sampled three banks and liquidity was

measured using the bank balances, short term cash balances, treasury certificates and bills. A regression equation was employed to test the hypothesized relationships. The findings revealed that the management of liquidity was a major concern among commercial banks in Nigeria. As recommended in the study, banking institutions should employ qualified and competent employees, make sure that the correct management decisions regarding optimal liquidity levels, and at the same time make maximum profits.

Lukorito et al (2014) investigated the influence of internal factors specifically liquidity and profitability in the Kenyan banking industry. The paper used descriptive research design and obtained secondary data from 43 banking institutions in the country as from 2009 to 2013. The obtained results indicated that all liquidity measures positively and significantly influenced profitability of banking institutions in Kenya. The authors made the recommendation that commercial banks should heavily invest in liquid assets for them to achieve positive gains, and also hold optimal liquidity levels in so that they can maximize profits which they can use to make investments.

A paper by Ouma (2015) explored the association between liquidity risk management and profitability of Kenyan banking institutions. The authors used a descriptive design and collected the research data from the banks financial reports. Analysis of data was using the correlation and multiple regression models. The obtained results revealed that the average current ratio value was relatively high as compared to other variables. The paper concluded that a unit increase in liquidity ratio, current ratio and deposits would lead to improvement on net interest income. The study recommended that managers should take into account the liquidity risk to improve banks' return on capital and its assets as measured by net interest income and hence the banks' performance.

Macharia (2013) studied how liquidity affects the profitability of banking institutions in Kenya. The paper sampled 44 commercial banks in Kenya and collected secondary data using a data collection form. The retrieved data for the research was analyzed through correlation and regression. The regression results showed a positive association between liquidity and commercial banks profitability but the positive relationship was insignificant. The paper made a recommendation that commercial banks finance managers should ensure that there is an optimal balance between long term assets and the current assets levels in order to strengthen the conflicting goals of ensuring sufficient levels of liquidity plus sustainable profits.

In Kenya, Andele (2013) studied the shock of financial deepening on the profitability of commercial banking institutions. The author used an explanatory study design and secondary sources of data. The study findings established that financial deepening affects bank profitability positively. The concluded that the presence of a strong argument that increasing financial deepening as a key stimulator of greater banking profitability. The study recommended that policy oriented measures in Kenya should take to thought the positive causality between financial deepening and banking profitability.

Another study by Olweny and Shipho (2011) evaluated the effect of bank specific variables on the performance of banks. The paper employed an explanatory design and used the panel methodology and secondary data obtained from annual published accounts of 38 commercial banks in the country and a period of five years between 2002 and 2008. Using multiple linear regressions equation, the results revealed that liquidity, asset quality, diversification of income sources, capital strength, and efficient operational cost management significantly influence the profitability of commercial banks.

2.5 Conceptual Framework

The conceptual model for this research paper will comprise the independent variable (liquidity), the dependent variable (profitability) and the control variables, which include capital adequacy, assets quality, bank size and management efficiency. The conceptual

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┌─────────────────────────────┐          ┌─────────────────────────────┐
│ Independent variable        │          │ Dependent variable          │
│   • Liquidity               │─────────▶│   • Profitability           │
└─────────────────────────────┘      ↗   └─────────────────────────────┘
┌─────────────────────────────┐   ╱
│ Control variables           │  ╱
│   • Capital adequacy        │ ╱
│   • Assets quality          │
│   • Bank size               │
│   • Management efficiency   │
└─────────────────────────────┘
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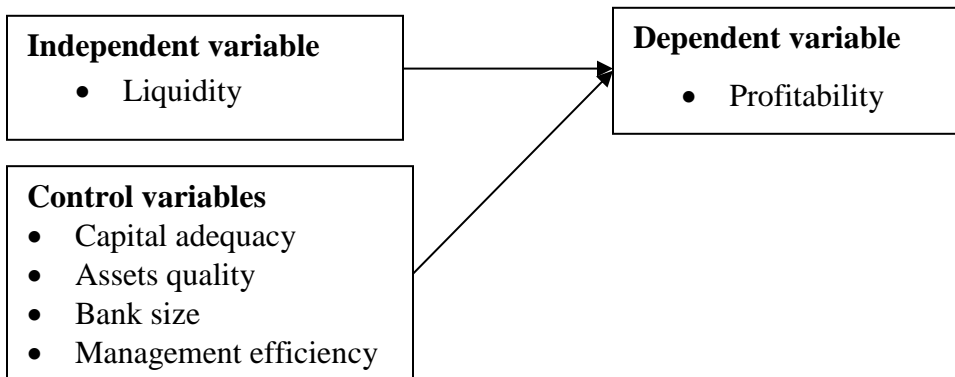
Figure 2.1 Conceptual Framework

The control variables were included in the regression equation and analysed together with the independent variable of the study. The variables also formed part of the final regression analysis results where the significant and insignificant ones were identified.

2.6 Summary of Literature Review

Under the chapter, a number of studies were reviewed. The study by Vieira (2010) found that liquidity positively influences profitability on the medium term. Lartey, Antwi and

Boadi (2013) revealed a positive but weak correlation between liquidity and firm profitability. Madhushani and Wellappuli (2016) however found a significant and positive connection between liquidity and ROA but liquidity an insignificant and positive relationship with ROE. Ouma (2015) & Olweny and Shipho (2011) concluded that an increase in liquidity increases performance but Macharia (2013) found that profitability was not significantly affected by liquidity. As per the reviewed studies, it is clear the impact of liquidity on profitability mostly in the banking industry is not clear and requires further investigation.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section on the research methodology presents the research design, the study population, the method of data collection and analysis.

3.2 Research Design

The objective of this research was to assess the relationship between liquidity and profitability of commercial banks in Kenya. To accomplish the stated objective, a descriptive research design was adopted. A descriptive design provides the general idea and gives some valuable pointers as to what variables are worth testing quantitatively. Additionally, a descriptive design allows the researcher to explain the determination of measurements extensively or scores using a variety of statistical techniques (Cooper & Schindler, 2009).

3.3 Population of the study

This research targets a population of all the commercial banks in Kenya. Based on the Kenyan banking sector annual supervision report (2016) there are 42 commercial banks available Kenya as at 31 December 2016. Data was obtained from published accounting reports of the 42 commercial banks as indicated in appendix I

3.4 Data Collection

A data collection sheet was employed to obtain secondary data from the commercial banks published financial reports. The annual reports were obtained from the individual

commercial bank website and from the Capital Market Authority in the case of listed commercial banks. The data that was retrieved from the annual reports included the liquidity ratio, capital adequacy ratio, net nonperforming loans and total loan, the amount of assets, income and total cost. The study considered data for a time-period of 5 years from 2012 to 2016.

3.5 Data Analysis

Analysis of data was done through descriptive statistics, the Karl Pearson correlation, the granger causality test and the multiple linear regressions using STATA. Descriptive statistics was used to summarize the data using mean, minimum values, maximum values and the standard deviation. The Karl Pearson correlation was adopted to determine the degree of association among the research variables.

3.5.1 Analytical Models

The study adopted the granger causality and the multiple regression models.

3.5.1.1 Granger Causality Test

The granger causality test was used establish whether a casual relationship between liquidity and profitability exists while regression analysis was employed to identify the relation between the response and the predictor variables.

3.5.1.2 Regression Model

The regression model will be generated in the following way

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where

Y = Profitability determined through the return on assets (ROA) ratio which is the ratio of net income to total assets

β_0 = Intercept of the equation

β_1 to β_5 = the regression coefficients

X_1 = Liquidity measured using the ratio of total loans to total assets

X_2 = Capital adequacy measured using the ratio of total capital to total risk weighted assets

X_3 = Assets quality measured using the ratio of nonperforming loans to total loans

X_4 = Bank size determined through the natural log of assets

X_5 = Management efficiency measured using the cost to income ratio

ε = Regression error term

3.5.2 Test of Significance

The F - test statistic and the t - test statistic were employed to establish the significance of the whole equation and of the study variables respectively. The test was carried out at the 95% confidence level.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

Chapter four presents the results of the analyzed data and the findings discussions. The chapter contains the response rate, descriptive statistics and correlation results. The section further outlines the regression results and discussion of the findings.

4.2 Response Rate

The study targeted the 42 commercial banks available Kenya as at 31 December 2016. Compete data was obtained from 35 commercial banks therefore achieving a response rate of 83.3%.

4.3 Descriptive Statistics

Table 4.1 Summary Statistics

	ROA	Liquidity	Capital adequacy	Assets quality	Bank size	Management quality
N	175	175	175	175	175	175
Mean	0.01654	0.40795	0.23163	0.09909	7.46751	2.18043
Median	0.01900	0.37400	0.20500	0.07200	7.39300	1.94500
Std. Deviation	0.022828	0.155770	0.104711	0.098256	.720564	3.383679
C.V.	1.3804	0.38184	0.45205	0.99163	0.09649	1.5518
Skewness	-1.507	1.739	1.356	1.132	-0.844	-0.586

Kurtosis	1.151	1.581	1.739	1.534	1.523	1.842
Minimum	-0.098	0.017	0.069	0.000	4.794	-9.704
Maximum	0.073	1.128	0.836	0.616	8.690	9.865

Source: Research findings

The summary statistics findings indicate that the average ROA is 0.01654, which indicates that the average return on assets of the commercial banks is 1.65%. The table indicates that the average liquidity is 0.40795, which indicate that the average liquidity of the commercial banks is 40.79%. The results on the table indicate that the average capital adequacy is 0.23163, whereas the average value of assets quality is 0.09909 respectively. The results further show that bank size had an average value of 7.46751 while management quality had an average value of 2.18043 respectively. The kurtosis and skewness values indicate that the data is normally distributed since all the values are less than the recommended value of two.

4.4 Correlation Analysis

Table 4.2 Correlations

Correlation Coefficients, using the observations 1 - 175

5% critical value (two-tailed) = 0.1484 for n = 175

	ROA	Liquidity	Capital adequacy	Assets quality	Bank size	Management quality
ROA	1.000					
Liquidity	-0.078	1.000				
Capital adequacy	-0.0136	0.502	1.000			
Assets quality	-0.337	-0.271	-0.101	1.000		
Bank size	0.256	-0.008	-0.226	-0.188	1.000	
Management quality	0.226	-0.093	-0.012	-0.037	-0.040	1.000

Source: Research findings

The correlations ion table 4.2 indicates that the correlations between liquidity, capital adequacy, assets quality and return on assets are weak and negative. Further, the results indicate that the correlations between bank size, management quality and the return on assets of the commercial banks are weak and positive. The generated correlation values are less that the cut point of 0.7, which indicates that there is no multicollinearity among the study variables.

4.5 Granger Causality Test

The granger causality test was employed to test whether there was a bidirectional relationship between liquidity and profitability. Table 4.3 shows the study results.

Table 4.3 Granger Causality Test

Null hypothesis	F-statistic	Prob.	Casual inference
Liquidity does not granger cause profitability	2.8532	0.0930	No Causality
Profitability does not granger cause liquidity	0.034897	0.8520	No Causality

Source: Research findings

The Granger causality results on table 4.3 shows that the F statistic values is 2.8532 and the p value is 0.0930 which is greater than the significance value of 0.05. This indicates that liquidity does not granger cause commercial banks in Kenya profitability. The results further show that profitability does not granger cause liquidity. This indicates that there is no bidirectional relationship between liquidity and profitability of commercial banks in Kenya.

4.6 Regression Analysis

Table 4.4 Regression Analysis

Model 1: OLS, using observations 1-175

Dependent variable: ROA

HAC standard errors, bandwidth 4 (Bartlett kernel)

	Coefficient	Std. Error	t	p-value

Const	−0.0126237	0.0169594	−0.7443	0.4567
Liquidity	−0.0165271	0.0195987	−0.8433	0.3991
Capital adequacy	−0.0150371	0.0254727	−0.5903	0.5550
Assets quality	−0.0771996	0.0151025	−5.112	0.0001
Bank size	0.00588409	0.00218713	2.690	0.0071
Management quality	0.00141989	0.000482225	2.944	0.0032

Mean dependent var	0.016537	S.D. dependent var	0.022828
Sum squared resid	0.070221	S.E. of regression	0.020384
R-squared	0.225550	Adjusted R-squared	0.202637
F(5, 169)	10.84193	P-value(F)	4.66e-09
Log-likelihood	436.0145	Akaike criterion	−860.0290
Schwarz criterion	−841.0403	Hannan-Quinn	−852.3266
Rho	−0.015876	Durbin-Watson	2.025210

Source: Research findings

The regression results on table 4.4 indicate that the coefficient of determination statistics (R square) is 0.225550, which indicates that the independent variables explain 22.55% of the variation in the dependent variable. The table further shows that the F statistics value is 10.84193 and the p value is 4.66e-09 thus less than 0.05 which means that the regression equation is significant and can be used to predict the relationship between the dependent and independent variables.

The table further indicates that the relationship between liquidity and commercial banks in Kenya return on assets is negative and insignificant. The results also indicate that the relationship between capital adequacy and the return on assets of the Kenyan commercial banks is negative and insignificant. The findings indicate that the relation between assets quality and commercial banks in Kenya return on assets is significant and negative while the relation between bank size and return on assets is positive and significant. Finally, the findings show that the relation between management quality and return on asset of Kenyan banks is positive and significant.

4.6.1 Multicollinearity Test

Table 4.5 Multicollinearity Test

	Tolerance	VIF
Liquidity	.687	1.455
Capital adequacy	.698	1.432
Assets quality	.886	1.129
Bank size	.897	1.114
Management quality	.983	1.017

a. Dependent Variable: ROA

Source: Research findings

The multicollinearity results on table 4.5 shows that the tolerance values are 0.687, 0.698, 0.886, 0.897 and 0.983 and there are greater than 0.2 while the Variance inflation factors

are 1.455, 1.432, 1.129, 1.114 and 1.017 and there are all less than 10 which indicates that there is no multicollinearity between the ROA and independent variables.

4.7 Interpretation of the Findings

The findings established that there is an insignificant negative relation between ROA and liquidity of commercial banks in Kenya. This finding indicates that there is no significant relationship between the profitability and liquidity commercial banks in Kenya. As such, Madhushani and Wellappuli (2016) found that an insignificant effect existed between return on equity and liquidity in Sri Lankan banking institutions. Vieira (2010) however established that liquidity had a positive effect on profitability. Lartey, Antwi and Boadi (2013) established that liquidity had a weak and positive influence of banks profitability.

The granger causality test revealed that there was no bidirectional relationship between liquidity and profitability of commercial banks in Kenya. Odunayo and Oluwafeyisayo (2015) found a similar finding that there was no casual association both unidirectional and bidirectional relationship between liquidity and profitability of banks in Nigeria.

The results revealed that there is an insignificant negative relation between ROA and capital adequacy of commercial banks in Kenya. This result indicates that there is no significant relationship between the profitability and capital adequacy of commercial banks in Kenya. Ahsan (2016) however observed that capital adequacy dimensions are important factors in helping banks understand the shock attractive capability during times of risk. Equity to total assets ratio is the measure of capital adequacy a firm may own.

The findings also found that there is a significant negative relation between ROA and assets quality of commercial banks in Kenya. This finding indicates that there is an

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inverse and significant relationship between the profitability and commercial banks in Kenya assets quality. Ahsan (2016) supports that banks can well understand debtor's exposure risk can by putting into consideration the dimensions of asset quality because it is an essential factor and it is of so much importance to them.

In addition, the findings establish that there is significant positive relation between ROA and size of the commercial banks in Kenya. This observation indicates that there is a direct and significant relationship between the profitability and size of the commercial banks in Kenya. Macharia (2016) concluded that the size of the firm significantly enhances its performance. 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 findings establish that there is a significant positive relation between ROA and management quality of commercial banks in Kenya. This finding indicates that there is a direct and significant relationship between the profitability and management quality of the commercial banks in Kenya. According to Misra and Aspal (2013) excellent and skillful management needed to smoothly and decently run the management provides the bank and whenever the bank costs are controlled and productivity increases, there is ultimate likelihood of achieving higher profits.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Chapter five provides a summary of the research findings, conclusions and study recommendations as per the obtained results. The chapter further outlines the research limitations and new areas, which may need further investigation.

5.2 Summary

This study sought to answer the question whether there was a casual relationship between the financial performance and liquidity of commercial banks in Kenya. The independent variable was liquidity, the dependent variable was profitability and the control variables included capital adequacy, assets quality, bank size and management efficiency. The study based on the Kenyan banking sector annual supervision report (2016) targeted the 42 commercial banks available Kenya as at 31 December 2016. Compete data was obtained from 35 commercial banks therefore achieving a response rate of 83.3% thus considered adequate to complete the research

The results of the summary statistics established that the average ROA was 0.01654, while the average liquidity was 0.40795 respectively. The results revealed that the average capital adequacy was 0.23163, whereas the average value of assets quality was 0.09909 respectively. The findings also revealed that bank size had an average value of 7.46751 while management quality had an average value of 2.18043 respectively.

The results on correlation revealed that the correlations between liquidity, capital adequacy, assets quality and return on assets are weak and negative but the correlations between bank size, management quality and the return on assets of the commercial banks are weak and positive. The Granger causality results established that the F statistic values was2.8532 and the p value was 0.0930 which was greater than the significance value of 0.05 hence an indication that liquidity does not granger cause commercial banks in Kenya profitability and profitability does not granger cause liquidity.

The regression finding established that the independent variables explained 22.55% of the variation in the dependent variable and that the regression equation was significant and a good predictor the relationship between the dependent and independent variables. The coefficient results revealed that the relationship between liquidity and commercial banks in Kenya return on assets was negative and insignificant. The results also found that the relationship between capital adequacy and the return on assets of the Kenyan commercial banks was negative and insignificant. The findings further established that relation between assets quality and commercial banks in Kenya return on assets is significant and negative while the relation between bank size and return on assets was positive and significant. Finally, the findings revealed that the relation between management quality and return on asset of Kenyan banks is positive and significant.

5.3 Conclusions

Using the granger causality tests, the study revealed that there was no bidirectional relationship between liquidity and profitability of commercial banks in Kenya. Based on the Granger causality the study concludes that is no bidirectional relationship between

liquidity and profitability of commercial banks in Kenya. The results further revealed that there was an insignificant negative relation between ROA and liquidity of commercial banks in Kenya. Based on this finding the study concludes that there is no significant relationship between the profitability and liquidity commercial banks in Kenya.

The research findings further revealed that there was an insignificant negative relation between ROA and capital adequacy of commercial banks in Kenya. Based on this finding the study concludes that there is no significant relationship between the profitability and capital adequacy of commercial banks in Kenya. In addition, the findings found that there was a significant negative relation between ROA and assets quality of commercial banks in Kenya. Based on this finding the study concludes that there is an inverse and significant relationship between the profitability and commercial banks in Kenya assets quality.

Additionally, the study findings established that there was a significant positive relation between ROA and size of the commercial banks in Kenya. Based on this finding the study concludes that there is a direct and significant relationship between the profitability and size of the commercial banks in Kenya. Finally, the findings of the research revealed that there is a significant positive relation between ROA and management quality of commercial banks in Kenya. Based on this finding the study concludes that there is a direct and significant relationship between the profitability and management quality of the commercial banks in Kenya.

5.4 Recommendations

The study concluded that there is no bidirectional relationship between liquidity and profitability of commercial banks in Kenya. In addition, the study made the conclusion that that there is no significant relationship between the profitability and liquidity commercial banks in Kenya. This study nevertheless recommends that commercial banks should ensure they have adequate liquidity to meet their current obligation and to make short-term investments

The study findings concluded that there is no significant relationship between the profitability and capital adequacy of commercial banks in Kenya. The study nevertheless recommends that commercial banks should ensure that they have adequate capital since capital indicates bank's ability to endure and recover from external shocks that banks may experience.

The research concluded that that there is an inverse and significant relationship between the profitability and commercial banks in Kenya assets quality. The study recommends that commercial banks should put in place in place effective credit risk management techniques to reduce default risk and to enhance their assets quality since assets quality enhance commercial banks profitability.

Finally, the findings of the study led to the conclusion that there is a direct and significant relationship between the profitability and size of the commercial banks in Kenya. As per this conclusion, this study recommends that commercial banks should invest in more assets to enhance their size and benefit from economies of large scale associated with big organizations.

The findings of the research made the conclusion that there is a direct and significant relationship between the profitability and management quality of the commercial banks in Kenya. Based on this conclusion, this study recommends that commercial banks should ensure they efficiently manage their costs to ensure that they maximize profits in both the short and long run.

5.5 Limitations of the Study

This study was carried out among commercial banks in Kenya thus the findings of this research are applicable to Kenyan commercial banks and not other financial institution like micro finances banks and savings and credit cooperatives societies which are also required to maintain specific levels of liquidity.

The study collected data for a period of 5 years from the year 2012 to 2015 therefore the findings are specific to the considered study period. In addition, the study use ratios, which are historical in nature and data was collected from financial statement, which are prepared based on specified accounting standards and on annual basis.

The study also managed to collect data from 35 banks in Kenya. The study therefore did not obtain a 100% response rate though the collected data was adequate for the study. The study also focused only on liquidity, capital adequacy, asset quality, bank size and management efficiency and their effects on financial performance.

5.6 Suggestion for Further Research

The study suggests a similar study on the relationship between liquidity and profitability in other financial institutions like microfinance banks and savings and credit cooperatives societies since they also maintain certain liquidity levels.

Additionally, the study recommends a similar study a longer period or primary data to obtain the views of chief finance officers in each of the commercial bank in Kenya to establish whether liquidity affects profitability or banks.

The study found that the study variables explain 22.56% of the variation in the commercial banks financial performance. This indicates that other factors that affect banks performance. The study recommends that an investigation on the other factors that might influence the performance of the banks.

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APPENDICES

Appendix I: Data Collection Sheet

Year	2016	2015	2014	2013	2012
Net income					
Total assets					
Liquidity ratio					
Capital adequacy ratio					
Nonperforming loans					
Total loans					
Total costs					

Appendix II: Research Data

Bank	Year	Net income	Total assets	Liquidity	Capital adequacy	NPL	Total loans	Operating Costs
ABC	2016	160278	22864968	0.27	0.16	2,840,000	15,022,000	1,505,149
	2015	279562	22617744	0.21	0.16	2,694,737	15,292,071	1,446,405
	2014	277432	22073123	0.31	0.17	900,218	13,679,881	1,575,987
	2013	410737	20643733	0.38	0.15	687,130	11,491,145	1,173,627
	2012	380643	19697835	0.43	0.14	238,138	10,133,792	844,017
BOA	2016	1047000	55995671	0.42	0.16	1,079,400	37,480,000	3,783,075
	2015	-1023361	69280267	0.42	0.16	974,400	37,480,000	5,054,491
	2014	184836	77075795	0.28	0.16	1,767,371	38,463,876	4,716,032
	2013	436028	66537981	0.35	0.13	1,231,274	37,938,349	3,954,311
	2012	761548	62659045	0.26	0.13	388,574	37,587,836	2,817,342
Baroda	2016	2946759	82907475	0.67	0.31	3,392,000	38,089,000	1,158,003
	2015	2026117	68177548	0.62	0.27	2,363,810	31,018,373	1,562,120
	2014	204000	62212000	0.61	0.24	1,064,626	28,388,852	937,427
	2013	2039696	52021524	0.61	0.22	598,364	23,578,559	3,319,953
	2012	1376100	46137777	0.56	0.21	583,766	21,922,597	2,467,136
BOI	2016	1640905	47815075	0.61	0.46	272,000	19,354,000	565,992
	2015	1107937	42162947	0.57	0.42	363,819	17,857,613	565,939
	2014	1021293	34370422	0.74	0.39	71,069	12,375,611	418,707
	2013	1009458	30721440	0.75	0.42	107,418	10,672,752	367,123
	2012	568440	24876824				10,014,941	

				0.66	0.41	157,993		359,066
Barclays	2016	7399	259718	0.28	0.18	11,472	176,349	20,832
	2015	8401	240877	0.34	0.18	5,234	145,379	17,388
	2014	8387	225841	0.42	0.18	6,137	125,423	15,995
	2013	7623	206739	0.42	0.16	4,879	118,362	16,001
	2012	8741	184826	0.47	0.26	3,772	104,204	16,001
CFC	2016	4418589	214682729	0.55	0.18	7,013	118,483	10,953,497
	2015	4905734	208451915	0.74	0.19	3,023,730	104,981,566	8,677,556
	2014	5686661	180998985	0.41	0.21	1,784,847	88,347,387	8,321,584
	2013	5127156	180511797	0.68	0.21	1,048,363	103,847,691	8,212,476
	2012	3009891	143212155	0.46	0.26	861,523	78,483,828	8,868,827
Citibank	2016	3432189	103323540	0.95	0.26	805	28,242	2,950,201
	2015	3400960	88147287	0.76	0.28	1,010,458	23,180,714	3,130,710
	2014	2443063	79397808	0.80	0.27	881,135	24,012,130	8,504,473
	2013	2998585	71242659	0.63	0.35	436,969	24,337,983	6,071,850
	2012	4428587	69579795	0.82	0.42	327,727	18,253,487	2,267,565
CBA	2016	6715806	226534551	0.45	0.18	7,450	105,082	12,441,780
	2015	3592324	215625182	0.39	0.18	7,614,397	112,925,594	9,583,748
	2014	3384221	175808828	0.34	0.18	6,387,098	99,674,489	8,504,473
	2013	3740700	145998378	0.41	0.13	1,768,995	70,759,781	5,583,847
	2012	3355386	118300651	0.48	0.16	10,624,101	53,120,504	4,658,724
Consolidated	2016	-211360	13917895	0.26	0.08	2,038	10,317	1,714,589
	2015	44422	14135528	0.33	0.09	2,330,985	9,221,256	196,625

	2014	-109108	15077051	0.36	0.11	1,382,349	9,212,581	165,531
	2013	-281632	16778631	0.28	0.11	1,149,632	10,855,492	1,661,746
	2012	139249	18064213	0.47	0.15	813,243	10,077,068	1,346,914
Co-op	2016	12676210	351828577	0.33	0.23	11,273	241,395	24,641,207
	2015	11705559	342499809	0.32	0.21	6,472	215,745	21,389,770
	2014	8014997	285396067	0.34	0.22	7,358	183,942	20,098,019
	2013	9108186	231215358	0.33	0.21	5,664	141,608	17,382,727
	2012	7329433	199662956	0.36	0.24	4,953	123,824	14,171,860
Credit	2016	109605	12237889	0.33	0.23	676	8,361	1,081,253
	2015	-59282	10297513	0.17	0.15	455,550	6,725,640	904,506
	2014	-91715	8864537	0.32	0.17	249,298	5,527,640	776,930
	2013	52796	7308855	0.37	0.27	344,829	4,328,080	577,850
	2012	69669	6407485	0.49	0.31	387,277	3,112,099	452,969
Development	2016	61715	16411435	0.02	0.25	2,594	10,083	512,709
	2015	121620	16942552	0.43	0.27	1,869,831	8,043,938	359,892
	2014	220592	16944142	0.34	0.30	1,322,265	8,527,632	390,941
	2013	189433	15574646	0.39	0.24	1,189,931	8,108,467	377,115
	2012	71953	13417095	0.46	0.25	1,132,396	6,931,620	279,647
DTB	2016	7173939	328044501	0.50	0.19	5,520	141,702	13,464,806
	2015	5912082	271608597	0.39	0.18	4,914,257	110,017,481	10,349,398
	2014	5083519	211539412	0.36	0.19	1,803,042	113,701,450	8,067,606
	2013	4756635	166520351	0.33	0.21	880,400	110,945,439	7,149,353
	2012	3627766	135461412	0.32	0.20	880,400	87,707,243	6,214,595

Eco bank	2016	-2023883	47123839	0.34	0.19	5,359	27,393	4,176,082
	2015	90373	52426513	0.40	0.25	2,444,338	29,621,166	3,175,793
	2014	-320212	45934458	0.40	0.33	2,460,719	22,982,094	2,669,724
	2013	-881892	36907136	0.32	0.31	2,193,226	18,459,837	2,863,730
	2012	-1055754	31771339	0.40	0.33	1,895,267	13,968,266	2,413,527
Spire(ECB)	2016	-751623	13802498	0.23	0.16	1,322	8,319	1,810,072
	2015	-486382	14469562	0.28	0.17	3,387,828	8,321,620	1,450,620
	2014	-326431	16589359	0.28	0.07	3,027,971	10,006,792	1,855,179
	2013	55650	15562476	0.35	0.10	5,562,476	9,029,000	879,163
	2012	12926902	141089960	0.36	0.09	4,108,996	7,538,422	1,190,537
Equity	2016	16545794	473713133	0.48	0.20	15,457	221,039	39,105,794
	2015	17303438	428062514	0.32	0.20	9,078,750	269,892,942	32,104,935
	2014	17151000	344572000	0.32	0.17	9,343,596	214,170,424	26,348,483
	2013	13278000	277728818	0.34	0.24	9,246,423	171,363,429	22,710,866
	2012	12080255	243170458	0.46	0.30	4,312,567	135,692,125	19,578,805
Family	2016	1982946	69491684	0.31	0.21	7,015	53,485	8,461,320
	2015	352279	81281366	0.14	0.19	3,514,571	55,853,882	6,419,830
	2014	1809785	61834403	0.41	0.20	2,847,219	37,925,476	4,957,467
	2013	1245386	43513903	0.37	0.19	2,013,706	27,943,360	4,196,140
	2012	561459	30989337	0.39	0.23	2,445,891	17,868,745	3,215,656
FINA(GTB)	2016	434403	40242307	0.54	0.26	994	13,418	3,140,306
	2015	388936	40964878	0.57	0.27	570	12,826	1,557,487
	2014	446645	45554406	0.49	0.26	1,069,775	############	2,625,448

	2013	205400	36609606	0.65	0.34	329,810	############	2,564,200
	2012	283438	17149892	0.44	0.17	450,666	779,050,018	1,854,916
FCB	2016	-10580	14962089	0.24	0.14	3,853	11,926	149,306
	2015	-55734	14612851	0.22	0.15	2,776,851	10,940,003	1,323,481
	2014	50374	15278026	0.30	0.11	1,517,851	9,765,509	1,205,688
	2013	132202	11305399	0.29	0.15	542,620	7,211,504	1,111,920
	2012	241305	9958767	0.40	0.16	749,199	5,452,627	1,147,505
Guardian	2016	230127	14705350	0.41	0.20	787	9,604	931,158
	2015	229330	14609492	0.37	0.18	801,234	9,629,648	851,032
	2014	261251	14572873	0.34	0.17	786,808	9,434,741	490,385
	2013	275335	12834687	0.33	0.18	460,664	8,346,785	453,279
	2012	153610	11745364	0.39	0.17	1,401,089	7,005,445	363,590
Gulf	2016	494730	27149679	0.41	0.19	1,617	16,686	1,703,404
	2015	728619	24706595	0.36	0.16	1,398	15,864	1,764,729
	2014	402196	19749862	0.29	0.14	126,000	3,583,103	1,264,962
	2013	285477	16053971	0.34	0.18	241,000	3,361,234	1,117,900
	2012	242221	13561818	0.29	0.15	376,000	3,322,494	958,226
I&M	2016	6581281	182157482	0.37	0.18	5,072	104,302	8,550,652
	2015	6032643	164822609	0.34	0.19	1,407,884	114,927,247	5,023,727
	2014	987848	114972436	0.31	0.19	704,900	101,610,562	3,960,066
	2013	4974956	141364216	0.34	0.19	490,761	91,882,665	4,663,710
	2012	4119558	144725072	0.35	0.16	684,015	71,012,961	3,576,550
Jamii bora	2016	-167704	15779873	0.20	0.20	2,141	10,497	1,789,623

	2015	20384	16781124	0.23	0.15	777,949	10,155,694	1,102,441
	2014	19688	13117893	0.49	0.26	289,970	6,189,800	728,211
	2013	93887	7010323	0.42	0.26	244,988	3,809,603	468,754
	2012	52331	3479656	0.33	0.84	261,741	3,452,899	304,690
KCB	2016	19723000	595240000	0.38	0.20	28,333,000	373,031,000	40,385,525
	2015	19623000	558094000	0.48	0.17	23,477,475	345,968,686	36,078,896
	2014	15878978	490338324	0.31	0.21	18,404,132	283,732,205	34,162,425
	2013	12426674	390851579	0.33	0.15	23,662,455	227,721,781	10,593,856
	2012	12426674	367379285	0.36	0.23	14,750,335	211,664,226	29,048,975
Sidian(K-rep)	2016	28048	20875499	0.26	0.23	2,459,000	14,488,000	243,518
	2015	372320	19106556	0.32	0.25	1,607,630	12,519,387	1,782,571
	2014	514043	15801439	0.37	0.21	776,423	10,453,714	1,591,719
	2013	410127	12673745	0.31	0.21	882,042	8,704,249	1,497,006
	2012	306211	9546050	0.28	0.22	987,660	6,954,783	1,402,293
Middle East	2016	-100989	5233522	0.31	0.32	1,193,000	4,015,000	434,586
	2015	42617	5677553	0.33	0.33	746,231	3,731,155	327,959
	2014	68627	5936601	0.21	0.41	693,204	3,466,021	283,504
	2013	408168	5580917	0.23	0.47	515,045	2,575,223	90,050
	2012	265309	3627596	0.41	0.40	334,779	1,673,895	58,533
NBK	2016	162190	115292392	0.30	0.12	29,987,000	68,616,000	1,085,192
	2015	-1153477	125440316	0.31	0.14	11,762,498	67,803,990	11,193,078
	2014	870702	123091996	0.32	0.14	7,236,648	65,641,491	7,502,509
	2013	1112803	92555717	0.42	0.18	4,212,274	39,566,678	6,477,134

	2012	736366	67178607	0.30	0.20	2,247,477	28,346,668	6,477,134
NIC	2016	4309885	169458985	0.39	0.22	1,265,000	112,509,000	10,021,207
	2015	4477355	165788268	0.29	0.21	11,762,498	114,657,644	7,377,418
	2014	4116674	145780505	0.33	0.21	7,236,684	100,575,330	4,946,475
	2013	3237301	121062739	0.29	0.16	6,597,413	83,493,313	4,320,742
	2012	3036794	108348593	0.32	0.16	3,209,075	71,541,092	3,862,431
Oriental	2016	33686	9920247	0.39	0.39	856,000	7,109,000	255,353
	2015	42902	8496350	0.43	0.31	289,970	5,245,063	206,548
	2014	71947	7857515	0.43	0.29	244,988	4,627,523	174,560
	2013	139970	7006528	0.44	0.31	261,741	4,035,281	155,244
	2012	94467	6219906	0.45	0.30	249,666	3,452,899	123,443
Paramount	2016	106439	9427841	0.43	0.27	778,000	6,243,000	376,387
	2015	157555	10527408	0.42	0.23	946,834	5,871,717	345,827
	2014	123805	10402326	0.34	0.26	1,062,852	4,447,615	297,016
	2013	87949	8028877	0.43	0.42	946,834	3,272,190	229,390
	2012	67360	7254561	0.34	0.48	804,295	2,739,613	219,914
Prime	2016	1904706	65338211	0.40	0.22	1,855,000	40,170,000	2,207,942
	2015	2023189	65001652	0.37	0.17	461,601	41,047,741	1,918,350
	2014	1736019	54917674	0.38	0.17	499,434	34,418,269	1,647,688
	2013	1440770	49460889	0.42	0.18	704,349	26,751,542	1,509,344
	2012	954719	43462888	0.48	0.17	775,955	21,150,662	1,307,494
Stanchart	2016	9049307	250482000	0.57	0.21	150,380	132,497,000	14,696,970
	2015	6342427	233965447	0.54	0.21	14,697,920	115,125,427	16,205,517

	2014	10436180	222495824	0.46	0.20	10,752,493	122,749,233	11,728,697
	2013	9262921	220391180	0.38	0.21	3,448,116	129,672,004	10,472,412
	2012	8069533	195352756	0.39	0.18	2,180,974	112,694,523	9,457,767
Transnational	2016	109130	10372441	0.37	0.21	891,000	7,026,000	920,561
	2015	168030	10452691	0.34	0.22	1,329,901	6,649,506	834,975
	2014	125712	10239922	0.40	0.21	1,201,885	6,009,427	771,341
	2013	158118	9657867	0.50	0.31	1,028,942	5,144,709	688,971
	2012	213393	8801382	0.60	0.40	847,782	4,238,908	593,953
UBA_kenya	2016	24298	5601281	0.34	0.39	69,000	3,127,000	539,147
	2015	-262653	7781236	0.52	0.24	58,000	2,790,000	652,876
	2014	-272090	3709628	0.99	0.59	187,935	1,071,859	331,400
	2013	-282040	4755787	0.97	0.47	13,439	937,620	524,089
	2012	-287389	2923811	1.13	0.73	16,936	658,922	542,566
Victoria	2016	592395	22403481	0.31	0.26	0.00	152,930	619,603
	2015	713800	20020072	0.27	0.19	0.00	13,124,420	589,042
	2014	464345	17244092	0.33	0.19	0.00	10,979,238	410,858
	2013	431903	13644242	0.31	0.20	0.00	8,363,452	366,781
	2012	350532	10322819	0.38	0.25	0.00	5,291,220	231,081