EFFECT OF FINANCIAL SOUNDNESS ON FIRM VALUE OF LISTED COMMERCIAL BANKS IN KENYA

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DECLARATION

Declaration by the student

This research project is my original work and has not been presented for a degree in any other university. No part of this research may be reproduced without the prior permission of the author and/ KCA university.

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Declaration by the supervisor

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

Sign …..…… Date…….……..

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OPERATIONAL DEFINITION OF TERMS

Firm Value: Firm value also known simply as value of a firm is an economic concept that indicates how worth a business organization is valued (Strebulaev & Kurshev, 2016).

Financial Soundness: The ability of an organization to be regarded as a going-concern whereby it is able to continue its operations in the foreseeable future.

Tobin' Q: It refers to the ratio between firm's physical asset's market value and its replacement value.

Commercial Banks: Refers to type of financial institutions usually offers financial services especially deposit taking, giving out loans, withdrawal services as well as offering other basic investment products that is operated as a business for profit

LIST OF ABBREVIATIONS

BIS	Bank for International Settlements
CBK	Commercial Bank of Kenya
EBIT	Earnings Before Interest and Taxes
FDI	Foreign Direct Investment
GDP	Gross Domestic Products
IPO	Initial Public Offer
ROE	Return on Equity
UAE	United Arab Emirates
UK	United Kingdom
US	United State

ABSTRACT

In any given country, banking sector is a key element in boosting economic development. A stable and viable banking sector leads to effective performance and regulates flow of the money hence encouraging economic growth in any given country. In Kenya, the banking sector is prone to both internal as well as external risks and uncertainties that threatens its performance and sustainability. Over the last few years, commercial banks in the country have been recording poor performance especially in terms of their profitability. Based on this fact, the key aim of this research study was to examine the impact of financial soundness on firm value of listed commercial banks in Kenya. This is because, undertaking this study would provide commercial banks with significant and detailed information on how to sustain their financial stability based on the competitive environment in which they operate. Specifically, the current study was guided by the following objectives; to establish the effect of bank liquidity, capital adequacy, credit risk management and earnings on firm value of listed commercial banks in Kenya. A descriptive study design was adopted for the purpose of this study. The study population comprised of the eleven (11) publicly listed commercial banks at NSE using census. Secondary data obtained from the CBK as well as other published financial reports of the targeted 11 commercial banks were used. The period which the current study aimed to investigate was the last ten financial years from 2009 to 2018. Some of the preliminary tests that were conducted on the data included Shapiro Wilks tests of normality, and Hausman tests. Diagnostic post estimation tests included test for multicollinearity and heteroskedasticity tests. From the results of the fixed effects panel data, it was established that capital adequacy was the only variable that had a statistically significant influence on a firm value. Asset-quality had the highest positive regression coefficient of 23.8494. Yet another aspect of financial soundness that had a positive influence on value included earnings with a coefficient 0.6601, followed by bank liquidity with a coefficient of 0.5854. Capital adequacy yield and negative coefficient of - 0.1552, furthermore which was not statistically significant at 5% level. The findings of the study therefore provide crucial insights regarding various aspects of financial soundness and more importantly how the associate with the firm value of the selected organizations.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Banks play a very crucial role in the overall economic development of countries because they have significant control over the supply of money in circulation; hence, they are the key stimuli of economic progress. Therefore, banks are very important since they foster economic growth through capital facilitation. This means that, for banks to be in a position to facilitate sufficient capital to its customers, they must be financially stable, healthy and sound (Ifionu & Keremah, 2016). This is so because the financial sectors across the globe face various crisis on daily basis as institutions in this sector strives to undertake their daily activities.

For this reason, many countries have come up with sufficient measures intended to deal effectively with the ensuing challenges in order to make sure they are stable for the economic welfare of their economy (Ashraf & Tariq, 2016). In order to establish the vulnerability level of a given financial sector, a major quantifiable technique known as stress testing is employed. Specifically, stress testing is utilized in measuring the stress that is likely to be facing financial institutions (Barth, Dopico, Nolle, and Wilcox, 2014). This is normally done through adoption of micro-prudential analysis, which assesses and monitors the vulnerability of a financial system.

For any given economy, the banking sector tends to play a very essential role in determining its overall GDP. Based on this fact, majority of countries across the globe have come to establish the significance of their financial institutions and the essential role that they play in stabilizing their economies (World Bank Report, 2017). For instance, in the United Kingdom's the financial sector tends to play a very significant role in the country's overall GDP. For this reason, majority of economies within the European Union (EC) have been employing significant effort particularly those directed towards finalising and coming into force of the primary measures. The measures are required to implement Basel III, as well as at long lasting political agreement on the Recovery and Resolution Directive and the principal elements of the banking union proposals (Angeline, 2011). All this effort is intended to ensure that financial institutions are run and managed in such a way that ensures financial soundness is achieved within the sector.

Globally, commercial banks constitute significant part of the banking structure in majority of the countries. In Pakistan for instance, the overall economic development of the country depends entirely on the key role that commercial banks are embroiled in including mobilization of savings, projects financing, as well as enhancing both internal and external trade. In Palestine, the country's monetary authority has over the years worked hard to reform credit its accessibility amongst Palestine's. This in turn has allowed the Palestine's financial sector to stabilize largely a factor, which has greatly promoted the state economic growth as well as reducing the number of non-performing loans in the banking sector.

In France, the banking sector has experienced significant growth, stability and modernisation during the 20th century a fact that has allowed France financial sector to be among the most stable in the world (Fiordelisi and Marques-Ibanez, 2014). In Belgium, key innovative measures were adopted in financial firms in establishment of joint stock bank, which has positively affected the country economic development. Based on this, it is clear that the overall economic development and growth of any given state is greatly dependent on the stability and soundness of its banking sector. As Ashraf and Tariq, (2016) asserts that, a banking sector that is not efficient and well organized can result into delayed developments within a country as well as affecting the entire sector.

In Africa, the overall income level among citizens in developing states such as Nigeria is perceived to be extremely low; hence, people are able to make short-term investments even without requiring them to save for their long-term needs. In this case, financial intermediaries especially commercial banks play a very significant function in raising savings as well as investment to the necessary levels, which are very critical in ensuring that self-sustained growth is, achieved (Ifionu and Keremah, 2016). Therefore, commercial banks in Nigeria are playing a very critical role by increasing the country's economic wealth especially for capital goods, which are very for economic productivity. However, for emerging nations, the services of banking sector are solely required in order to achieve sectorial development, hence, they can be regarded to significantly influence the propensities of their members to save as well as availing other financial opportunities.

Availability of strong financial institutions boosted by existence of strong banking institutions is able to offer sufficient capital necessary for the attainment desirable

growth within an economy (Saastamoinen, 2015). The roles of financial institutions need to be customized to work in the similar manner to the government policies and procedures to achieve macro-economic development anticipated within any country. As, Onaolapo (2012) notes, the efficiency through which credit risk had being managed among commercial banks in Nigeria from 2009 to 2017 is a clear illustration as to why credit risk management is a significant determinant of enhancing banks profitability. In Ghana, credit risk is considered to have significant effects on the overall profitability of commercial banks particularly those situated in the rural areas as well as community banks (Akotey et al, 2012).

In East Africa region, Johnson and Jude, (2016) carried out a study in Uganda that examined the effect of financial distress on financial performance of commercial banks listed under Uganda Security Exchange. The researcher obtained secondary data from published financial statements of the banks and the Central bank of Uganda. The period under study was from 2010 to 2015. According to the study results obtained, it was found out that most of the banks under study had some financial unsoundness. In addition, it was found out that non-listed banks suffered more from financial unsoundness as compared to the listed banks. The study also showed that financial unsoundness had a significant effect on the banks financial performance where performance was negatively affected. The study concluded that Ugandan banks need to reduce financial unsoundness by ensuring financial stability in order to ensure shareholders confidence

In Kenya, CB are usually exposed to various risks both internally as well as externally. Financial risk facing Kenyan banks tend to affect their financial performance as well as their sustainability in the end. This means that Kenyan commercial banks need to employ appropriate measures of risk management in order to mitigate against these risks and improve their overall performance. This is so because the overall role of risk management amongst firms has significantly improved beyond risk identification to a more complex role involving econometric and financial models of uncertainty. As Ongori, (2013) notes, various scholars have extensively explored the topic of risk management in Kenya. Because of this, the CBK has been committed on year survey in regards to risk management among commercial banks. The surveys are necessitated by the need to adopt fully the Risk Based Supervision as

well as making sure that the sector adopts the international risk management best practices as detailed by Basel Core Principles for Effective Banking Supervision.

1.1.1 Financial Soundness

In assessing the efficiency and performance of a given organization, the term soundness is utilized to denote the ability of an organization to be regarded as a going-concern whereby it is able to continue its operations in the near future. Financial soundness for a bank is a condition in which the indicators characterizing the capital adequacy, asset quality and liquidity, as well as its effectiveness are within certain limits. Therefore, an organization that is deemed to be sound is regarded as being able to function normally in the long-term while at the same time being in a position to resist any internal or external vulnerabilities that may affects its operations (Barth, *et al.* 2014). Therefore, a financially sound organization is perceived to be able to effectively clear out any negative elements as soon as they are identified, thus, allowing the organization not to be impacted heavily in the future. Further, Kattel, (2015) notes that the overall concept of soundness does not factor in the essential aspect of increase, as it is normally based on ensuring long-term sustainability of an organization within its sector of operation.

The three Basel Accords i.e. Accord I, II and III which are stipulated by the Basel Committee on Banking Supervision and enforced by the Bank for International Settlements (BIS) are responsible for regulating the soundness in the banking sector. The Committee which was made up of the representatives particularly from central banks and other supervisory bodies from US, Japan, UK, Canada, Belgium, Netherlands, Italy, Sweden, France, Germany Switzerland and Luxembourg in 1988 come to an agreement by announcing Based agreement commonly referred to as Basel Accord (Basel 1). As Ashraf and Tariq (2016) notes, the new agreement required the member states to impose risk-based capital ratios on all banks with the intention of achieving two key goals i.e. To strengthen both the soundness as well as the stability of global banking system and also to minimize the competitive inequality amongst international banks which arises as a result of differences among various state bank-capital guidelines.

Despite the fact that the Basel Accord agreed upon in 1988 offers an effective context that ensures all banks across the globe are able to assess their capital adequacy which

is very important in ensuring their overall safety, the accord has some limitations as well. The first limitation is that it only provides an assessment for mitigating credit risk despite the fact that commercial banks are confronted by numerous risks given the nature of business they engage and also due to their post-balance sheet t activities (Olarewaju and Obalade, 2015). Another limitation is that the accord provides a fixed percentage of 8% in order to meet the required minimum capital which has never been changed despite the fact that the risk level keep on changing from time to time which causes banks to hold higher percentage in order to mitigate against the prevailing higher risk. However, the initial 1988Basel Accord was again amended in 1996 whereby market risk was incorporated as part of risk-based capital requirement, which in which case banks were, require to issue short-term subordinated debts at the discretion of the state in order to finance a segment of the risks associated with their market (Barth et al, 2014).

The new Based Capital Accord known simply as Basel 11 was developed in 2001 with the aim of expanding Basel 1, which only incorporated credit and market risks only. In the new accord, three key pillars are clearly setout, which are market discipline, supervisory review and capital requirements (Umoren, Nwosu and Akpan, 2016). Operational risk was included in the new accord with aim of calculating as well as assessing the minimum capital requirement. In this regard, the minimum capital ratio of a bank is computed as the sum of credit, market and operational risks of the bank. To significant documents were again drafted and published by Basel committee in response to the 2007-2008 financial crisis, which aimed to establish the overall effects the financial crisis had caused to the banking industry as well as the larger financial system (Uddin, Masud and Kaium, 2015).

The results as per Basel (2010) indicated that the 2007-2008 financial and economic crisis as well as weak capital ratios, which caused the banking, sector to fail in absorbing the extreme systematic risk and credit losses. In order to manage the failures that were caused by the crisis, BCBS introduced some significant reforms that come to be known as Basel III. The main aim of Basel III, is to stabilize banking capital, assessment of risk and liquidity risk through introduction of one advantage ratio and two more liquidity ratios (Basel committee, 2010). The three key areas of liquidity, bank capital and advantage ratios were greatly improved following the reforms that were introduced in Basel III.

To start with, the Basel committee (2010) focussed on reforms relating to bank capital whereby it was emphasized to raise quantity, quality as well as the transparency of the bank regulatory capital base as well as introducing other macro-prudent elements specifically designed to assist in absorbing any systematic risk that might arise (Tahtamouni and Al Qaisi, 2016). Additionally, Basel III also aimed to expand the liquidity agenda of the bank by introducing two liquidity ratios in order to make sure that banks possesses sufficient liquidity assets so as to meet both the short-term and long-term requirements (Uddin, Masud and Kaium, 2015). To achieve this, banks are required to hold short-term liquidity coverage ratio in which case high-liquid assets are required to be at least equal to the cash-outflows of the bank for around thirty days and the next ratio is net stable funding ratio which banks are required to hold so as to make sure that they have long-term and stable source of funding (Basel committee, 2010).

Further, Basel III also introduced leverage ratio of Tier one to total assets as opposed to risk weighted assets that must be at least three percent i.e. Equity capital needs to be at least three percent of the total assets of the bank. In this regard, a bank financial soundness is considered in terms of various indicators particularly asset quality, bank liquidity, capital adequacy, and effectiveness of its credit repayment period. According to Olarewaju and Obalade, (2015), a bank that fails to exhibit these indicators can thus be regarded as being financially unsound. Therefore, when assessing the financial soundness of a bank, it is critical to determine the exact limit of the above elements at each stage of the assessment. This is because, financial indicators tend to differ constantly because of both macro and micro-economic factors affecting upon the business. (Uddin, Masud, and Kaium, 2015)). In regards to this, the extent at which all these elements tend to influence the financial soundness of a banking sector must be approached differently in each country the assessment is done.

Therefore, the financial soundness of a bank needs to be evaluated in regards to economic stability, bank ability to withstand both internal and external factors, the guaranteed safety of the amount deposited by customers both individual and corporates, safeguarding of the stakeholders interests and ability of the bank to meet its obligation on timely basis whenever they fall due (Kattel, 2015). Therefore, while assessing the strength and the weaknesses of a financial sector, it is worthy to note that appropriate tools are required.

Barth et al. (2014) did a survey on existing connection between bank soundness, bank safety and the adopted supervisory structure of the bank. Study data was gathered from seventy industrialized, developing and transition economies and was used to estimate the statistical relationship that existed between bank performances, bank supervision structure, bank activities that are permissible, legal environment, structure of the bank market, macroeconomic factors. The results from the study indicated that countries, which have, more than one banking authorizing bodies had less bank capital ratios, which equates to higher liquidity risk. The study concluded that a strong focused bank regulating bodies other than just a central bank significantly strengthens the manner in which banks are controlled and monitored.

1.1.2 Firm Value

Firm value also known simply as value of a firm is an economic concept that indicates how worth a business organization is valued (Strebulaev and Kurshev, 2016). In this regard, firm value is considered as the sum of all claims from both secured and unsecured creditors as well as from the business shareholders both preferred and preference (Ehrhard and Bringham, 2013). In addition, value of a firm can be considered in terms of the sum of business total assets and its interest tax shield less any outstanding debt that might significantly affect the organization's capital structure (Leland and Toft, 2014). However, the applicability of the term firm value can be considered in various terms such as different portfolios analysis, business valuation, financial models adopted as well as the accounting technique adopted by a firm. This means that, to arrive at the firm value, firm's capital, debts due, preference stocks are summed, and then cash value as indicated in the firm's balance sheet is deducted (Bringham and Ehrhard, 2013).

Long-term debts as well as firm's capital forms a significant portion of a firm value. Firm's capital is considered as the sum of full paid-up capital, share premiums, reserves as well as the retained profit for a given financial year. Paid-up capital in this case is regarded as the number of shares for which shareholders have fully paid for (Igben, 2014). On the other hand, reserves are regarded as the amount set aside from the organization post-tax profit and which is not held for either any contingency purposes, meeting the business liabilities and other commitments or even as an additional asset to the organization. Directors of a firm may create reserves voluntarily though in some cases it is a requirement of the law for a firm to set a

particular amount aside as reserves. Additionally, share premium is the amount that a firm obtains when they have issued their shares at a higher price than the existing market price of such shares (Strebulaev and Kurshev, 2016). More so, retained profit is regarded as the amount of post-tax profit that is ploughed back into the business in order to enhance the overall firm value. Further, long-term debt refers to either long-term loans, debentures and bonds that have been acquired or issued by a firm in order to boost its overall growth.

Therefore, firm value can be regarded as simply the sum of the firm's capital and debts. However, the firm value is normally obtained because of income that is obtained from optimal utilization of the firm's assets (Modigliani, 2013). In some cases, the firm equity value is regarded in terms of shareholders discounted earnings which is normally the net profit generated from a business. It is also considered in terms of net profit divided by the equity capitalization rate or return on capital employed. To obtain the net profit value, debt interest is deducted from the net profit. Lastly, the value of debts is obtained as a result of discounting the interest value (Jiao, 2015). The key objective why firms enter the market is to maximize the wealth of their stakeholders. Wealth creation is regarded as the overall increase in stakeholders' monetary value. Therefore, the value of stakeholders can be assessed in terms of proportion of stocks value in the market to the stock book value as detailed in a firm financial statement (Oladele, 2013).

For a firm to be regarded as being able to create value, it must be able to produce more profit for their stakeholders as opposed to what they would have been able to produce for themselves. Therefore, a firm must be able to choose and categorize the manner in which they choose, recognize, and even divide their target market so as to be regarded as being able to create value (Oladele, 2013). Different measures can be utilized in order to obtain the value of a firm, though each measure is likely to provide varying value from the other. Accounting net worth or the book value of a firm is one of the mostly utilized measure of value of a firm. Market value of a firm shares is also another key measure which is normally computed using Tobin's Q. This is usually obtained by dividing stock value in the market with the total replacement value of the existing firms' assets. However, irrespective of this being the mostly used valuation of the value of the firm, an efficient real market hypothesis for the firm's shares is normally required (Ashraf, Tariq, 2016).

1.1.3 Financial Soundness and Firm Value

The firm value is generated by its financial soundness in two key ways. First, firms are aided from financial distress, which is normally because of existing direct and indirect costs. Additionally, financial soundness helps firms to be able to always possess the key resources to invest and generate more profit (Fiordelisi and Marques-Ibanez, 2014). Assisting a firm in avoiding the foregone cost of financial distress is an additional source of establishing firm's value since the firm will always have necessary resources to carryout investments. The direct costs that are related to financial distress are the ones, which corresponds to bankruptcy, which is the most extreme situation that can happen to a firm. This is because, a firm which is in financial distress normally files for bankruptcy a situation which requires external experts such as advocates, auctioneers, accountants as well as appraisers to be hired, hence, requiring to be paid (Berk and DeMarzo, 2014).

Outsourcing the services of such external experts normally leads to high costs in terms of payments. However, for indirect costs of financial distress, it is extremely difficult to measure them, though they are normally larger compared to direct costs. Some of these costs include loss of clients, loss of key suppliers, high employee's turnover, and loss of debtors as well as sale of key assets to meet the financial needs of the firm. Opportunity cost is the other notable type of financial distress and they are regarded as the most difficult to measure when compared to indirect costs (Ifionu and Keremah, 2016). In this regard, foregone costs are considered to be those costs relating to the inability of a firm to invest in meaningful investments opportunities. Therefore, financial soundness allows a firm to be able to dodge all these costs. Additionally, the value of the firm is protected as well as helping firms to invest in opportunities that are more promising. Therefore, the concept of financial soundness helps in creating value for companies. Therefore, the ability of a business to grow, be productive, and invest more are considered to be hindered by lack of financial soundness on the side of a firm as well as its inability to settle its various debts as and when they fall due.

The reason why the banking sector in the country is faced with all these challenges is inefficiency in the operations of the banks as well as poor corporate resources allocation by the banks management. Over the years, there has been a decreasing performance among commercial banks in the country which can simply be observed

with their reported profitability. This therefore means that the aspect of financial soundness is very essential among commercial banks in the country as this will improve their efficiency, as well as their survival, hence, being able to continue offering their services to members of the public (Olarewaju, 2016). However, for this to be achieved banks in the country need to adopt significant changes in regards to their operations so as to establish banks which are financially sound and ones which are based on the core aspects of standards, measurement, principles and sound intermediation roles (Fiordelisi et al., 2014).

1.1.4 Commercial Banks in Kenya

According to the 2018 CBK annual report, there are a total of 42 commercial banks currently operating in Kenya of which twenty eight are owned by Kenyans and fourteen are foreign owned. However, out of twenty eight owned by Kenyans, it is only twelve that are publicly owned and listed under NSE. Therefore, to ensure permanency and sustainability of commercial banks, a positive net income is the key. The commercial banks in the country's occupies the largest portion in the sector a fact that causes a closer attention to be given to them in order to ensure that they are always complying with the laid down laws and regulations. In the recent past, significant financial and other regulatory reforms have been introduced to guide the functioning of the commercial banks in the country. With such reforms, significant changes have been introduced thus streamlining the operations of these commercial banks (Irungu, 2013).

The provision of the Kenyan Banking Act is responsible for the overall regulation as well as licensing of commercial banks. Being the key dominant of the Kenyan financial sector, the Kenyan banking sector is therefore among the main pillars towards the achievement of Vision 2030 as a result of higher customer savings, encouraging FDI, keeping the economy in constant check against external shocks as well as playing a significant role in ensuring that the country becomes the leading financial centre in Eastern African region.

In order to ensure smooth and effective operations of the banking sector, it is very essential to evaluate its overall financial soundness. This assessment is undertaken in order to detect and get rid of any vulnerabilities likely to be encountered (Ifionu & Keremah, 2016). Banking sector is a very essential sector in any given country since it

is the one responsible for providing a suitable platform for economic transactions. This therefore means that ineffectiveness of the sector is ultimately going to have significant impact on creditors, depositors as well as the entire economy. Thus, it is very essential to ensure that the banking sector is functioning effectively which can be simply measured by determining its overall soundness so as to make sure any problem is corrected on a timely manner so as to protect it against adverse exposure.

Additionally, a banking survey conducted by KPMG Africa in 2018 established that new regulations are the key challenges that the Kenyan banking sector faces since commercial banks were required to hold a set minimum capital of KES 3.5 billion (USD 35 million) by December 2018. However, if this proposal is implemented, it is likely to pose a great to smaller banks in the country a factor which will cause the element of competition to be lost in the Kenyan banking sector.

1.2 Statement of the Problem

Various extreme challenges have over the years characterized majority of the banking sectors across the globe which has been attributed to high risk associated with the services they provide. Therefore, reforms in the sector are regarded as very essential in order to ensure overall efficiency of the banking sector (Adjei-Frimpong, 2013). For instance, in Kenya, numerous and extreme challenges have been witnessed in the banking sector in the last few years such as liquidity/credit crisis, failure of some banks, bail-out schemes among banks, banks recapitalization as well as serious issues in their overall management as was the cases with Chase and Imperial banks (Ifionu and Keremah, 2016). With collapse of these two banks, many investors lost their investments in the banks given that the banks were not in a stable position to repay them since their financial soundness had been eroded with their collapse. With the existing challenges in the Kenyan banking sector, it is therefore worthy to indicate that there is a problem of financial unsoundness among commercial banks in the country. This therefore means that the aspect of financial soundness is very essential among commercial banks in the country as this will improve their efficiency, as well as their survival, hence, being able to continue offering their services to members of the public (Olarewaju, 2016).

There are many studies that have been undertaken in the country concerning commercial banks. For instance, Kariuki (2013) examined the influence of financial

distress on the financial performance of commercial bank in Kenya. *Oyier* (2016) investigated the relationship between core capital and financial performance of commercial banks in the country. Another similar study by Githinji (2016) examined determinants of financial stability among commercial banks in Kenya. Based on this, it was clear that there is no any study which has been undertaken on the effect of financial soundness on firm value of listed commercial banks in Kenya. Therefore, this study aimed to bridge this research gap by examining the effect of financial performance on firm value of listed commercial banks in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

To establish the effect of financial soundness on firm value of commercial banks in Kenya

1.3.2 Specific Objectives

i). To establish the effect of bank liquidity on firm value of listed commercial banks in Kenya

ii). To assess the effect of capital adequacy on firm value of listed commercial banks in Kenya

iii). To evaluate the effect of asset quality on firm value of listed commercial banks in Kenya

iv). To establish the effect of earnings on firm value of listed commercial banks in Kenya

1.4 Research Questions

i). What is the effect of bank liquidity on firm value of listed commercial banks in Kenya?

ii). What is the effect of capital adequacy on firm value of listed commercial banks in Kenya?

iii). What is the effect of asset quality on firm value of listed commercial banks in Kenya?

iv). What is the effect of earnings on firm value of listed commercial banks in Kenya?

1.5. Significance of the Study

1.5.1 The government: Since the government is the one tasked with ensuring that all the banks operating in the country are financially sound, the results from this study will be very helpful as it will enable the government to establish the significance of banks remaining financially sound as these are key players in the attainment of significant economic growth in the country. Therefore, the government may utilize the study results to formulate significant policies and regulations that will be key in enhancing the aspect of financial soundness among banks in the country.

1.5.2 Commercial Banks: The findings from this research survey will also be very helpful to commercial banks as they will be able to understand the importance of remaining financially sound and their overall value.

1.5.3 Scholars: The results from this study may also be very important to future scholars who might be interested to conduct a further study on the topic as they will be able to use the study as their basis of reference particularly in empirical review.

1.6 Scope of the Study

The general objective of this research study was to assess the effect of financial soundness on firm value of listed commercial banks in Kenya. The study utilized published secondary data of all 12 listed commercial banks in Kenya. The study was expected to be undertaken between April and August 2019 so as to draw a suitable conclusion and also provide indisputable recommendations thereafter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a thorough research in regards to overall empirical review of various studies undertaken by other scholars relating to the effect of financial soundness on the firm value of financial institutions. Additionally, the chapter detailed three key theories i.e. Liquidity preference theory, pecking order theory and buffer theory of capital adequacy that were used to guide this study.

2.2 Theoretical framework

A theory is usually considered as a thoughtful generalizing thinking that links one variable to another. Therefore, for the purpose of this research, the discussed theories provide an in-depth insight into the generalized explanations in relation to the study objectives.

2.2.1 Pecking Order Theory

Donaldson first advanced Pecking Order Theory (POR) in 1961. The early proponent of this theory argued based on information asymmetry. Myers and Majluf later expounded this dimension of information asymmetry in 1984 when they discussed about the pecking order hypothesis. The theory provides that, the availability of asymmetric information causes the overall financing cost to increase. This is because; firms tend to obtaining financing from three key sources that are equity financing, debt financing and utilization of internal funds. Based on this, the theory assumes that the individuals who extend finances to a firm possesses more information than other outsiders do. This is because, a firm makes priorities when deciding on the most appropriate source of financing with internal sources being the most preferred, followed by debt and lastly equity (Serrasqueiro, and Caetano, 2015). The reason why internal financing is considered first is that it is free as opposed to debt and equity, hence, a firm utilizes it until it is depleted before deciding on other financing option (Adair, and Adaskou, 2015).

Within an organization, managers are the ones responsible with overall control of share value of their firm while acting on behalf of shareholders interest. In this regard, managers are not allowed to expose the exact value of their company shares unless in

the event where there is a new shareholder. This information regarding the exact value of company shares is normally withheld in order to increase the growth opportunity of a firm. With such information being withheld, managers in most cases issue shares at a higher price than at their prevailing market value. This fact makes shareholders to have the perception that the value of their company shares is overpriced hence overvalued. Since majority of firms tend to utilize external sources of financing in most cases, they end up overvaluing their shares to make sure that they are in a position to easily repay their external debts and at the same time make reasonable profit from it.

Company managers have adequate knowledge regarding the performance of a company, the risks and future performance than debt holders and the stakeholders. To compensate for inadequate knowledge, the external users require compensation for the risks taken. Finance external sources compensate for the asymmetry of information by demanding higher rate of return for risk compensation. Therefore, according to the pecking order theory, internal financing emanates from the organization and reduces asymmetry of information. Internal financing is the cheapest and most convenient compared to external financing.

On the other hand, by financing investment opportunities through financing externally, demand for higher returns is present as creditors and investors have few information than the managers. In reference to external financing, personell in managerial positions seek to raise debt to equity. Signalling debts undervalues stock and board confidence in terms of investment profitability. Equity issuance negatively signals stock overvaluation and efforts by management to generate finances through share dilution.

Since external sources of financing are normally expensive to exploit, majority of firms tend to prefer using internal financing (Myers and Majluf, 1984). Therefore, the theory postulates that firms that don't make higher profit tend to prefer internal financing options while more profitable firms normally prefer external financing and hence are able to generate higher earnings in turn. In the event where the management of a firm perceive the available internal financing as not enough, they are forced to seek debt financing as a way of safeguarding the already existing shareholders, thus, being able to minimize dilution of company ownership.

The pecking order theory identifies with an organization's capital structure in that it discloses why organizations like to fund venture ventures with inner financing first, obligation second, and value last. The pecking request hypothesis emerges from data asymmetry and clarifies that value financing is the costliest and ought to be utilized if all else fails to get financing.

This theory was related to this study since it encourages companies to prioritize its financing options by first utilizing all internal funds before going to other external financing options a fact which allows such firms to generate sustainable profit and avoid diluting effect. Therefore, financing needs to exist within an organization given the fact that debts are meant to boost the internal finances that a firm already has. Therefore, this theory encourages a firm to opt for internal, followed by debt financing and lastly equity financing a fact that allows a firm to retain more value and stability due to utilization of internal finances. In this regard, Pecking Order Theory informed the study variable of capital adequacy.

2.2.2 Liquidity Preference Theory

Keynes an economist from United Kingdom is credited with development of Liquidity Preference Theory (LPT) in 1935. In this theory, Keynes postulates that majority of individual tend to prefer holding liquid assets particularly cash as opposed to being in possession of other non-liquid assets such as stocks, bonds among others. The theory further argues that the two key control concepts i.e. Finances and economics are the major reason that drives demand for money. Therefore, demand for money is what causes central banks to come up with various regulatory policies in order to control interest rate. Keynes further argue that, people hold money for three key motives that are speculative, precautionary and transaction motives (Bibow, 2014).

The theory expresses that interest for liquidity holds theoretical power, speculations that are increasingly fluid are simpler to trade out for full worth. Money is ordinarily acknowledged as the most fluid resource. As per the liquidity preference theory, loan costs on momentary protections are lower since speculators are not relinquishing liquidity for more prominent periods than medium or longer-term protections. Liquidity preference theory recommends that financial specialists request logically

higher premiums on medium and long haul protections rather than transient protections.

To start with, the exchanges thought process expresses that people lean toward liquidity so as to ensure having adequate money available for fundamental everyday needs. At the end of the day, partners have a popularity for liquidity to cover their momentary commitments, for example, purchasing staple goods, paying rent as well as the home loan. Greater expenses of living mean a more popularity for money/liquidity to meet those everyday needs. Second, the prudent rationale identifies with a person's inclination for extra liquidity if a surprising issue or cost emerges that requires a significant expense of money. These occasions incorporate unanticipated costs like house or vehicle fixes. Third, partners may likewise have a theoretical thought process. At the point when loan fees are low, interest for money is high and they may want to hold resources until financing costs rise. The theoretical thought process alludes to a speculator's hesitance to tying up venture capital inspired by a paranoid fear of passing up a superior open door later on.

At the point when higher financing costs are offered, speculators surrender liquidity in return for higher rates. For instance, if financing costs are rising and security costs are falling, a speculator may sell their low paying securities and purchase more lucrative securities or clutch the money and hang tight for a shockingly better rate of return.

The theory was of importance in regards to this study due to its emphasis on holding money that is one of the key functions that commercial banks are involved in. It is stated clearly under this theory that efficiency of an organization cannot be simply improved by its liquidity alone. This can be assessed form the fact that numerous commercial banks such as Imperial and Chase banks are faced with significant issues and higher liquidity but they were not financially sound. Therefore, the Liquidity Preference Theory informs the variable of bank liquidity for the purpose of this study.

2.2.3 Buffer theory of Capital Adequacy

Calem and Rob advocated this theory in 1996. The theory illustrates that bank struggling to acquire the minimum capital ratio need to have incentives that enhances their capital and minimise risk by avoiding regulatory expenses. To achieve this, Calem and Rob asserts that banks tend to provoke the breach of capital requirements. In case the banks suspect they might experience risk in the market, they tend to adopt

buffer capital to reduce the chances of being operating illegally under the approved capital requirement by the governing authorities. Poorly capitalized banks may be persuaded into taking additional risk in the hope that higher expected returns will help to increase the capital.

As indicated by Milne and Whalley (2002) a few reasons are associated with banks holding overabundance capital. To begin with, the cradle as protection, when buffer money with poor capitalization becomes in circumstance of losing open certainty and notoriety this support might be utilized as protection against cost of sudden advance misfortunes (because of simply arbitrary stuns or uneven data between the loan specialist and the borrower) and that of raising new extra capital. Then again, such banks might be urged to go for broke planning to help their notorieties through expected higher expected rate of return generally investors may falter issue new funding to banks which may utilize the new cash-flow to set leasers commitments thus the normal return might be their salvage according to capital suppliers. Second, in light of the fact that having cushion capital is associated with the banks' advantages hazard profile the support capital in overabundance of the administrative least vigorously directs bank's hazard taking conduct. On controllers, extra buffer money with a moderately hazardous portfolio would want to hold a generally elevated level of overabundance capital over least necessities than a lower level else they are more probable record capital proportions beneath the base capital proportion. Third, as holding a cradle capital is considered by banks as the challenge impact a bank may utilize abundance money to mean its budgetary wellbeing thus likelihood of non-failure. In this way, buffer capital might be utilized as a system of safeguarding banks from disappointment due to challenge for unbound stores and currency market subsidizing. This is the reason most banks are cautious about the size of their own capital cradle comparative with those of their rivals. Banks may hold abundance capital in order to have the option to investigate startling speculation openings.

In some instances, firms prefer holding cash to themselves so that they don’t fall victim of minimum capital requirement which might cause significant financial distress particularly where it has been established that they are operating with volatile capital ratio commonly known as ‘buffer’ (Ikpefan, 2013). Capital requirement is a key instrument utilized in Kenya to supervise the overall performance of commercial banks. This instrument requires that commercial banks hold a minimum capital that is

dependable and reliable for their long-term operations. This ensures that commercial banks won't erode their capital base since with minimum capital requirement they will be in a position to marshal sufficient deposits.

This theory was significant to this study since it is based on encouraging firms particularly commercial banks to hold sufficient liquid reserves which they can be able to utilize in the event where they are faced with financial distress. This with minimum capital requirement, a commercial bank will be in position to remain in a stable position despite it experiencing low liquidity. This is because, lack of buffer capital might simply cause a commercial bank to experience financial distress. Buffer capital tend to increase the survival rate of a firm as well as increasing its market share especially in times when crises are experienced as well as during normal times (Berger and Bouwman, 2013). In this regard, the performance of commercial banks is normally enhanced particularly in times of financial crisis such as the one that was experienced in 2008-2009.

2.3 Empirical Literature

This section reviewed previous literatures undertaken by other scholars and which isrelated to the effect of financial soundness on firm value.

2.3.1 Bank Liquidity and Firm Value

Various studies have been undertaken on bank liquidity and firm value. Odunga et al (2013) did a study in Kenya that investigated the efficiency of forty commercial banks that operated in Kenya between 2005 and 2011 by specifically focusing on their liquidity and capital adequacy. The study also aimed to assess whether strategies that banks adopts were in line with their objectives in terms of their operational efficiency and financial performance. The results from the study established that banks with sufficient assets and more cash flow creates more confidence to its customers compared to banks experiencing cash flows problems since they are able to settle their obligation with ease. The study recommended that commercial banks need to fully comply with various requirements imposed by the CBK especially in regards to capital adequacy requirement.

While it is commonly concurred that there is a negative connection among liquidity and bank productivity there is counter proof which demonstrates the need to consider the exchange off between versatility to liquidity stuns and cost of holding less

beneficial fluid resources. The later is accepted to affect on the bank's capacity to make the most of chances emerging in the market which may bring about increment in income, capital or capacity to expand capital credit (Bordeleau and Graham 2010). Counts on the advantage side hold low yielding protections, for example, treasury bills and exceptionally evaluated momentary corporate securities so as to limit a scramble for liquidity when credit use increments in time when cash is contracted. In this way fundamentally a fluid budgetary organization has a littler part of its benefits in long haul credits. A more noteworthy extent exists of its advantages in transient protections that can be immediately sold into money that would then be able to be lent out, anyway a profoundly fluid bank may mean absence of beneficial undertakings to contribute the cash. Given that fluid resource has a low liquidity premium and, consequently, a lower return comparative with illiquid resources holding them forces an open door cost on a bank. Liquidity the executives turns into a significant part in budgetary administration choices, where firms that deal with an exchange off among liquidity and productivity (Bhunia and Khan 2011) could accomplish the liquidity the board proficiency. The effect of bank resource liquidity on benefit has recently pulled in light of a legitimate concern for scholarly research, monetary market experts, bank the board and bank screens. Brunnermeier, Krishnamurthy, and Gorton (2013) noticed that it isn't the degree of outfitting that is significant, but instead the extent of obligation that is contained transient demandable stores. Brunnermeier et al. (2013) contend that if banks hold illiquid resources that are financed by transient obligation in periods when banks run conduct develops, this may bring about expanded fundamental hazard.

Also, Loutskina, (2015) carried out an empirical review that assessed how commercial banks securitize and liquidate their short-term assets in Kenya. From the study results, the researcher found out that banks use their internal funds when the interest rate is hiked rather than seeking for external loans and paying the same with interest. The study results also found out that commercial banks that had securitized and had internal funds to use rather than to borrow risked their financial stability. Based on this fact, the researcher concluded that banks need to consider both their profitability and liquidity in their bid to monitor their overall performance.

Kibuchi, (2015) in his study investigated how liquidity risk affect the financial performance of commercial banks in Kenya. This study used four years data between

2010-2014. The study results revealed that bank's profitability was determined by their liquidity risk. In event that the customers are not provided with the information on time, pertaining their funds they lose confidence and this may affect the banks reputation which may eventually affects the firm's performance.

Adler (2012) states that the absence of settled upon definition radiates from the way that the idea of liquidity emerges from various monetary points of view. Liquidity can be characterized with regards to how simple a security can be exchanged and with regards to how simple one can get subsidizing to exchange a security, the previous being called showcase liquidity and the last being financing liquidity. The focal point of this exploration will be on both financing and market liquidity. Preferably, market and subsidizing liquidity are integral since the simpler it is to exchange security implies the simpler it is to get assets to exchange protections. This writing audit will endeavor to condense the effect of liquidity on bank execution, consequently the need to take a gander at liquidity as an expense, and as a hazard and their effect on net premium edge, return on value (ROE), return on resources (ROA) and financial worth included (EVA). That is, financial specialists should be compensated for holding illiquid resources and for the affectability of the security to liquidity stuns.

Njeru (2016) conducted a survey on liquidity management and its influence on financial performance of the DTM. Descriptive research design was used in this study. It was found out that effective liquidity management was only attainable if the financial sector is well regulated whereas decision on liquidity was established to be statistically significant, hence, could be utilized in explaining how DTM perform financially.

Bourke (1989) in his investigation on execution of banks in twelve nations in Europe, North America and Australia discovered proof that there is a positive connection between fluid resources and bank productivity. These outcomes appear to be irrational, as it is normal that illiquid resources have a higher liquidity premium and subsequently better yield. Kosmidou, Tanna, and Pasiouras (2005) understood that the proportion of fluid advantages for client and momentary subsidizing is decidedly identified with ROA and factually noteworthy. Additionally, they found a noteworthy positive connection among liquidity and bank benefits.

Kosmidou (2008) analyzed the determinants of execution of Greek banks during the time of EU money related mix (1990-2002) utilizing an uneven pooled time arrangement informational collection of 23 banks and found that less fluid banks have lower ROA. This is reliable with their past discoveries like Bourke (1989) who discovered that there is a positive connection between liquidity hazard and bank gainfulness. As of late, Olagunju, David and Samuel (2012) discovered that there is a positive critical connection among liquidity and gainfulness. They reasoned that there is a bi-directional connection among liquidity and productivity where the gainfulness in business banks is altogether impacted by liquidity and the other way around.

Further, Cheluget, Gekara, Orwa, and Keraro, (2014) carried out a study in Kenya to assess whether liquidity is a major determinant of financial distress among insurance firms. The study adopted a survey study design with sample size being determined using a stratified random sampling technique. The targeted study population consisted of forty-five insurance firms which were already under the registration of IRA as at the end of the year 2012. Primary data was gathered from the targeted population using open-ended questionnaires. From the study results, the researcher concluded that there exists a significant relationship between the firm's liquidity and their financial distress, hence, it is a potential determinant of the insurance firm's financial distress in Kenya. However, the study was undertaken in insurance sector as opposed to the banking sector, hence, it didn't clearly illustrate clearly the extent to which liquidity of the firms is a significant determinant of the financial distress, hence, impacting the financial performance of commercial banks in the country.

2.3.2 Capital adequacy and Firm Value

In Germany, Elsas, Flannery and Garfinkel, (2014) did a study on the firms that undertook major investments within the period of 1989 – 1999 to 977 firms. The study aimed to analyse how mode of financing such as internal and external financing affects financial performance of the firm in long-run abnormal stocks returns. The study achieved this by identifying the main source of financing in each investment firm and separating the valuations with the decisions based on the investment. The study revealed that long term financing, short term financing and equity financing were the main external sources of funding whereas cash flow from productions were the internal source of financing.

Capital adequacy by definition is viewed as a quantum of reserve, which a money related establishment ought to have a plan to keep up so as to direct its business in a reasonable way. Bank's capital hence relies upon various factors, for example, the bank's size, the degree of hazard engaged with its tasks, the market powers, the loaning approach, its administration capacities, its portfolio (resources and money). Capital ampleness can likewise observed as a rate proportion of a bank's essential funding to its (advance and speculations), utilized as a proportion of its money related quality and soundness (Amahalu, Abiahu, Okika and Obi, 2016). As per the capital sufficiency standard set by global settlements (BIS) banks must have an essential capital base equivalent at any rate to eight percent (8%) of their benefits.

Capital adequacy and budgetary misery are exceptionally connected by different analysts. A firm should be enough promoted for it to be monetarily supportable. Capital sufficiency proportions are keys to foreseeing budgetary trouble. Center funding to add up to stores and center cash-flow to add up to hazard weighted resources have a positive association with money related trouble while all out cash-flow to add up to hazard weighted resources had a negative association with budgetary trouble expectation. In the forecast of money related pain, capital sufficiency proportions are the most significant class of proportions that can be successfully used to anticipate monetary trouble in business banks. Indeed, yearly monetary execution information and administrator's recognition point to the way that capital sufficiency proportions are basic in the expectation of budgetary misery in business banks.

In Australia, a study conducted by Forsaith and McMahon (2015) to identify the how equity finance enhances growth of the manufacturing SMES within five years period between 2012-2016. Internal equity was measured using retained earnings to total assets ratio while issued share capital was measured using total capital, which represented external equity. Firm growth level was determined by evaluating firm turn-over. The firm size was controlled, and it was confirmed that there was relationship between internal equity variables while external equity gave a mixed result indicating both negative and positive result at 10% significance interval level. The result obtained indicated that internal equity boosted firm’s growth rate while external equity was not supporting growth of firm at all. This finding conforms to

Cosh and Hughes (2014) in a study that was conducted in UK to 217 firm for a period of 2004-2008. The study pointed that internal equity resulted to firm's profitability.

Gudmundsson, Ngoka and Odongo, (2013) also conducted a survey in Kenya whose objective was to examine the role played by capital adequacy in determining competition and stability of thirty-six commercial banks in Kenya for the period between 2001 to 2011. Lerner Index and Panzer and Rosse H-statistics were utilized in the study to establish the existing competition among the selected commercial banks. From the approximations results obtained using the statistical measures, it was found out that competition amongst commercial banks in Kenya has over the years reduced significantly. A linear regression model was utilized during the study to establish the overall effects of capital adequacy as a determinant of competition and stability among banks operating in Kenya. It was also established that as core capital increased, it resulted into less competition up to a given point from which competition increases. However, the results of the ROE established that a positive relationship between capital adequacy and competition existed indicating that capital adequacy has a positive improvement towards the overall banks performance and the corresponding financial stability.

Ikpefan (2013), "Capital inadequacy has influenced the monetary wellbeing of banks. He clarified that an investigation of bank capitalization uncovered that as toward the finish of 1992, practically all banks (120) working in Nigeria required extra capital totaling N0.6billion to help their volume of exchanging. This sum was the change between the sum stipulated by the money related experts for prudential least capital and the total capital expense. By 1993, this fluctuation further crumbled to N9.1 billion". The exploration recognized the objectives for bank recapitalization in Nigeria to incorporate an excessive number of manages an account with sizes being too little to even think about supporting any stable financial business. Hindered development of the genuine area emerging from inability of bank capital proportion and size to support modern improvement; high loaning rate and absence of enthusiasm for the genuine division, and amateurish and exploitative practices by investors. Others incorporate the need to advance open trust in the financial part; abridgement of unnecessary hazard taking by banks; decrease in the rate of bankruptcy and trouble and the need to weaken proprietorship structure offering ascend to demonstrable skill. All value firms are portrayed by more prominent liquidity positions than turned firms.

Bank utilize a blend of obligation however a greater amount of value in their financing. It indicated that the best performing banks are the individuals who have kept up a significant level of store accounts comparative with their benefits. Expanding the proportion of all out stores to add up to resources means expanding the assets accessible to use by the bank in various gainful ways, for example, speculations and loaning exercises. A large group of variables some of which are macroeconomic, institutional, administrative and legitimate impacts the exhibition of business banks.

Yahaya, Mansor and Okazaki (2016) in their survey indicated that capital adequacy is a key indicator that helps firm more so banks to assess their risk mitigation strategies that firms can adopt in order to improve their performance in a given economy. The study found out that in any country the capital adequacy determines the performance of firms though they are closely related. On the other hand, Olalekan and Adeyinka (2013) in their research survey found out that capital adequacy is an essential part of financial institutions and it can be determined by percentage ratio of financial institution's primary capital to its assets there by indicating the financial soundness of the firm.

2.3.3 Asset quality and Firm Value

Huang, Wen and Yu (2012) conducted a study in Taiwan on influences of financial factors on banks performance within a period of 2005-2007 (pre-crisis) and 2008-2010 (post crisis). The result indicated that there was a correlation between ROA and CAMEL ratios. Further, the study found that in asset quality, there was high risk management to external uncertainties during post and pre-crisis.

Assessment of advantages for measure their credit risk is resource quality. The benefit nature of business banks influences their money related and operational just as the national monetary sufficiency. As per Yin (2009), decrease in the estimation of benefit quality because of commercial banks not knowing loan quality is a genuine motivation of emergency. Michael (2010), then again expresses that the most essential determinant of the nature of advantage is the advance portfolio esteem and the banks credit the executives control. Advances and protections are types of commercial banks resources however they convey the most noteworthy measure of dangers. Moreover, different resources, for example, genuine estate's, reeling sheet things and money likewise influence resource nature of a commercial bank.

Suehiro (2012) did an investigation on bank rebuilding with the goal of improving the asset quality and financial performance of the banking sector in Thailand. The fundamental focal point of this exploration on was improvement of proportion of non-performing loans (NPLs). The discoveries of this investigation showed that there was a lessening in NPLs from 42.9% in 1998, to 10.5% in 2001. These discoveries showed that rebuilding NPLs improved the nature of bank assets.

A bank‘s assets are critical variable which determines profitability, they include; fixed assets, credit portfolio and other investments like real estates among other current assets. The older the bank the larger the size of its assets. More often, a bank‘s loans generates more share income among the entire bank‘s assets. Therefore commercial banks generate more income from loans than other assets (Dang, 2011).

Sangmi and Nazir (2010) states that decides the general status of a bank and this is principally influenced by credit organization program and the loans portfolio quality. Most elevated dangers that banks appearances are those connected to reprobate loans, along these lines the suggested intermediaries for an assets quality in non-performing loan ratios (Dang 2011). Low non-performing loans show that a bank's advance portfolio is sound so most banks endeavor to keep the loans at the least level possible.

Anjili (2014) inspected the components influencing the asset management and risk of commercial banks in Kenya identified with financial performance. This investigation discovered that a little decrease in operational proficiency can prompt high decrease in profits and that increased income expansion prompts expanded financial performance keeping other components consistent.

As per Levine (2008), assets firmly determines the commercial bank's performance since it expands interests and diminish the cost weight of bad debts the board at the equivalent time.by law, banks are required to keep aside money deductible as a cost in order to pad the bank against terrible obligations and other loans defaults. The higher the NPS proportion to the gross/net resource, the lower the asset quality. This hence suggests a negative trade off between asset quality and the bank's financial performance (Ombaba, 2013).

Mburu (2017) did an examination on impact of asset quality on financial performance among commercial banks in Kenya. The investigation depended on descriptive research design. The targeted group for this examination included all the 42 licensed

commercial banks in Kenya which were in activity inside the time of ten years that ran from 2007 and 2016 from which secondary data was gathered. descriptive statistics was utilized in data analysis. The Pearson's correlation coefficient uncovered that only liquidity and capital adequacy had critical relationship towards financial performance of commercial banks in Kenya while asset quality had an inconsequential affiliation. When regressed alone, it was uncovered that asset quality was altogether identified with financial performance of banks. In any inclusion of liquidity and capital adequacy as control variables in the relationship between asset quality and financial performance, it was discovered that liquidity and capital adequacy were the main variables that were seen as statistically significant on financial performance within commercial banks operating in Kenya. The examination reasoned that asset quality is significantly important in estimating the financial performance of financial institutions.

The quality of current and potential credit risks reflects the asset quality ratings indicate the quality and this is highly intertwined with the loan investment portfolios, real estates and off-balance sheet transactions. This also reflects the bank‘s ability to identify and manage credit risks. According to (Abata, 2014), asset quality evaluation should be emphasised on how adequate the Allowance for Loan and Lease Losses (ALLL) are, the intensity of exposure to counter-party, the issuer or borrower default under actual or implied contractual agreements. However there are other factors and risks to consider which actually stand to affect the bank‘s assets value or marketability, including, but not limited to, operating, market, reputation, strategic or compliance risks, should be considered.

Cheruiyot (2016) directed a study in Kenya to assess how asset quality influences profitability of commercial banks. The examination uncovered that asset quality was essentially identified with the profitability of Commercial Banks in Kenya in a positive way since the proportion of non-performing assets to net assets was seen as low. Non-performing loans results to wastage of time, effort and resources. It results to an indirect cost to the bank because of the low asset quality. The bank in this way will not earn interests on the loans and ultimately, it contrarily influences the profitability of the bank.

2.3.4 Earnings and Firm Value

Earnings management is a procedure of intentionally making strides in the region of acknowledged accounting to convey reported earnings to expected profit. Different studies have been attempted on earnings management that inspects how managers control certain financial statements, for example, accruals and, or real economic activities for their own benefit (Cohen and Zarowin, 2010). Earnings is a component of the income statement that can be altered.

A study attempted by Ronen and Yaari (2016) placed earnings management into value enhancing earnings management and opportunistic earnings management and further characterized each as worth improving earnings management as a way for managers to set up great relationships with owners by flagging value significant information without diving into such a large number of cumbersome details. Good will recognition from owners is important. The other types of opportunistic earnings management shrewd profit the executives is likely a result of the irreconcilable situation among investors and the executives and on the grounds that, when all is said in done, those having private information makes it simpler to utilize it to the upside of its holder to the detriment of others.

Petroni, (2012) found that bendings in financial reports happen when there is a misalignment of motivating forces among executives and investors. This could drive the executives to rehearse the versatility of accumulations bookkeeping to adjust profit deftly. Along these lines, accumulated earnings management is used in this investigation, and is seen as the sharp management conduct. Hassan and Ahmed (2012) contended that accumulations are the most generally perceived activities of earnings management that are performed by the executives to either improve or deduct uncovered earnings. This shows the demonstration of accumulations based earnings management has oppositely affected the financial performance of an organization.

Fernandes and Ferreira (2007) pronounced that accumulations based earnings management might adversely influence investors' exact access to the certifiable financial performance of an organization. Subsequently, this may affect the long haul performance of the association's response to shocks. For this circumstance, accumulations based earnings management is depended with respect to have a

negative association with the financial performance of an organization. Regarding, the estimation of genuine financial performance is deprived of the effect of spearheading earnings management practices by the management, which is depended upon to show the real estimation of the organization's earnings

Management plays when managers decide to use judgment and verdicts in financial reporting and to influence contractual outcomes that depend on reported accounting numbers or to mislead some stakeholders about the underlying economic performance of the company (Healy and Wahlen, 1999). Earnings may also be coped through real operating decisions by managers and administrators. Accounting researcher extensively investigated the Earnings management through.

Jones figures the estimation of discretionary accruals with the modified model. The model uses the total accruals, which is classified into discretionary and non-discretionary components complete accumulation, which is grouped into optional and nondiscretionary segments. Institutional ownership is estimated through the quantity of share possession by the establishment, for example, insurance agencies, banks, speculation organizations, resource the board and responsibility for foundations. Indicators used to gauge institutional ownership are the level of offers, claimed by the establishment.

Managerial ownership is estimated through the quantity of share in ownership. The ownership in this investigation is put as a dummy variable. The autonomous commissioner is estimated dependent on some of the leading body of officials who are not associated with the executives, free from any business or different connections that can influence their capacity to act autonomously or acting exclusively in light of a legitimate concern for the organization. The arrangement of free commissioners is determined dependent on the all-out number of autonomous managers in the leading group of officials separated by the all-out number of officials.

The nature of evaluating is a precise survey process, in light of certain quality gauges and is directed by an expert evaluator. The review quality is estimated by ordering the review directed by an open accountant. Control factors are the influence and the size of the organization. The influence is estimated by the proportion of all out obligation to add up to resources, while the size is estimated by utilizing a characteristic logarithm of all out resources.

Earnings management plays when managers decide to use judgment and verdicts in financial reporting and to influence contractual outcomes that depend on reported accounting numbers or to mislead some stakeholders about the underlying economic performance of the company (Healy and Wahlen, 1999). Earnings may also be coped through real operating decisions by managers and administrators. Accounting researcher extensively investigated the Earnings management through

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2.4 Conceptual Framework

It is defined as a diagrammatic representation of the relationship that exists between study independent and dependent variables. For the purpose of this study, dependent variable was presented by firm's value whereas independent variables were bank liquidity, core capital adequacy, asset quality and earnings.

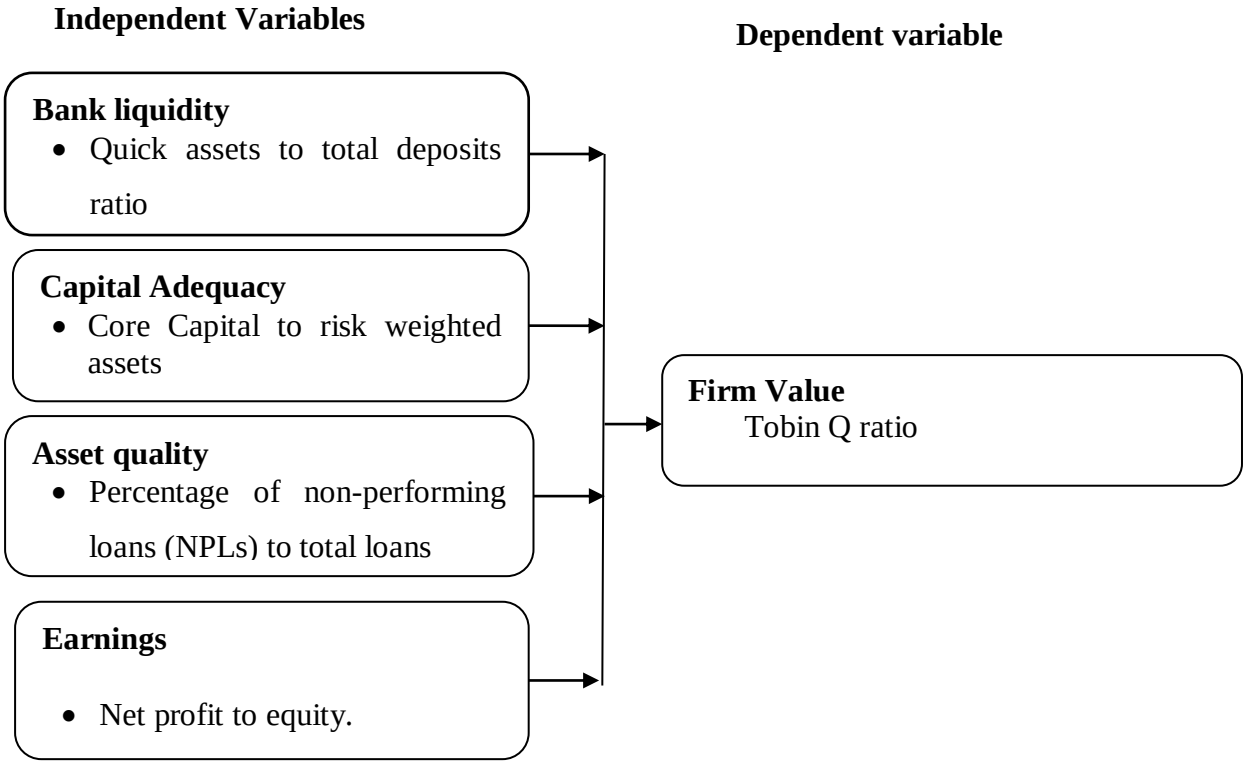


Figure 2.1: Conceptual Framework

2.4.1 Bank Liquidity.

When applied in regards to the banking sector, bank liquidity entails the possibility of a bank converting its assets into cash. Liquid assets in this case refers to those assets which can easily be sold and converted to cash in the event where a need to do so arises. The most notable liquid assets within the banking sector are cash, central bank reserves, and government debt. For this reason, commercial banks are required to be in possession of sufficient liquid assets in order to meet their near-term obligations in particular withdrawals by depositors in order to remain viable. For the purpose of this study, bank liquidity was measured by quick assets to total deposits ratio.

2.4.2 Capital Adequacy

Capital adequacy refers to the minimum statutory reserves of capital which all commercial banks as well as other financial institutions are required to have. For this reason, capital adequacy is considered in terms of the bank's primary capital to its assets i.e. Loans and other investments. Capital adequacy is therefore utilized as the ultimate measure of the stability and financial strength of a commercial bank. Therefore, the standard requirement by Bank for International Settlements requires that all commercial banks to have a capital adequacy will be measured capital to risk weighted assets. For the purpose of this study, capital adequacy was measured using capital to risk weighted assets.

2.4.3 Asset Quality

Asset quality covers an institutional loan's quality, which reflects the earnings of the institution. Assessing asset quality involves rating investment risk factors that the company may face and comparing them to the company's capital earnings. This shows the stability of the company when faced with particular risks. Examiners also check how companies are affected by fair market value of investments when mirrored with the company's book value of investments. Lastly, asset quality is reflected by the efficiency of an institution's investment policies and practices. For the purpose of this study, asset quality was measured using percentage of non-performing loans (NPLs) to total loans.

2.4.4 Earnings

Earnings refers to the commercial bank net benefits from its overall operations. Additionally, earning is considered as the amount to which corporate tax is charged.

For an analysis of specific aspects of commercial banks operations, other specific terms such as earnings before interest and taxes. For the purpose of this study, earnings was measured using net profit to equity ratio.

2.4.5 Firm value

Financial soundness of a company is the primary consideration by investors in making investment decisions. Improved financial performance is expected to increase the firm value, so that the higher financial performance, the higher the firm value. The firm value for investors and creditors is very important and they are increasingly selective in investing or providing credit to the company. For investors, financial performance measurement becomes a fundamental aspect to invest because it can describe the real condition of the company. Every company will always maintain its good firm value even increased. Andri and Hanung (2007) states that the higher the financial performance that proxied by financial ratios then the higher firm value. For the purpose of this study, firm value was measured using Tobin Q ratio.

2.5 Operationalization of Conceptual Framework

Table 2.1: Operationalization of Conceptual Framework

Variable Type	**Variable**	**Measurement**	**Measurement Scale**
Independent	Bank liquidity	Quick assets to total deposits ratio	Ratio
Independent	Capital Adequacy	Capital to risk weighted assets	Ratio
Independent	Asset quality	Percentage of non-performing loans (NPLs) to total loans	Ratio
Independent	Earnings	Net profit to equity	Ratio
Dependent	Firm Value	Equity market value to equity book value	Ratio

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section provides a detailed analysis of the study methodology in regards to the study objective. The research methodology that was used while undertaking this study was critically expounded on. The section therefore commenced by providing an explanation on the study research. Other sections that were covered under this chapter were issues related to research design, the population, the type of data to be collected, sampling frame, sample and sampling techniques, data collection instrument, data collection procedure, validity and reliability of the instrument, and the data analysis and presentation were discussed.

3.2 Research Design

Lewis, (2015) asserts that a research design is a structural plan, which is utilized to provide a suitable answer regarding the research question as well as control of various study variables. According to Sekaran (2010) a good research design has a clearly defined purpose, and has consistency between the research questions and the proposed research method. Based on this, the current study will adopt a descriptive research design in assessing the objectives of the study. As Creswell and Creswell (2017) purports, a descriptive research design is very useful while undertaking a study because it allows an in-depth assessment to be conducted of all the study variables. Therefore, descriptive research design was very useful for the purpose of this survey as it allowed the researcher full description of the existing situation in regards to the study objective, hence, ensuring that fewer errors were encountered in the course of data collection (Burns and Grove, 2014).

3.3 Target Population.

Pernecky (2016) defines population as a larger collection of all subjects from where a sample is drawn. The unit of analysis as defined by Cooper and Schindler (2010) is the individual participant or the object on which the measurement is taken. Therefore, for the purpose of this study, the target population was commercial banks listed in NSE. According to NSE (2018) there were 11 banks listed under NSE. All

commercial banks listed in NSE, were involved in this study. Appendix (III) shows the list of the Commercial banks that were used in the study.

3.4 Sample Size and Sampling Procedure

The sampling plan describes the sampling unit, sampling frame, sampling procedures and the sample size for the study. The sampling frame describes the list of all population units from which the sample was collected. Since the target population of the study was small and manageable (11 commercial banks listed under NSE), the study adopted census where all elleven commercial banks listed under NSE were examined for the purpose of this study. Therefore, data used for the purpose of this study was gathered from all the 11 commercial banks listed under NSE.

3.5 Data Collection

Data collection refers to the means by which information is obtained from the selected subjects for the purpose of undertaking an investigation. Therefore, for the purpose of this study, the researcher utilized secondary data for all publicly listed commercial banks in Kenya. Kiecolt and Nathan (2014) asserts that secondary data is utilization of information, which can easily be accessed from other, studies undertaken and can be accessed from different publications or sites. Using this information is very important as it made the research to be undertaken with ease and it reduced research costs since it used another scholar's information to achieve present objective. Data was obtained from published bank's annual audited reports, from banks websites as well as internet for the period between 2009 and 2018 which were equivalent to ten years. The reason for choosing 2009 to 2018 period was because most of the banks experienced financial crisis during 2007-2008, hence, it was reasonable to examine value of commercial banks during the ten years post-financial crisis period.

3.6 Diagnostic Tests

3.6.1 Multicollinearity Test

This test was performed to detect multicollinearity problem where if not controlled would result to unstable parameter estimator which made it very difficult to assess and interpret the effect of independent variables on the dependent variable (firm value). Variance inflation factor (VIF) was used in SPSS software to detect multicollinearity problem in the model from the study variables. Variables whose VIF values was greater than 10 indicated the presence of multicollinearity problem, which

needed to be corrected. In many cases, this problem arose because of using too many independent variables to measure the same dependent variable. If this problem existed then, it was corrected by dropping the variable with high VIF in order to convert the other variables from non-significant to significant.

3.6.2 Autocorrelation Test

In order for a model to produce desirable results, it should not have serial correlation or autocorrelation. In panel data, the above was tested using Wooldridge method. If the probability value was greater than 5%, it indicated absence of data correlation between residual of the estimated equations and the dependent variable. The model that was established to be suffering from serial correlation or autocorrelation was not desirable. Autocorrelation inflates the variance of the coefficient estimates. It also impacts negatively on the standard errors. To solve the problem, a fixed effects regression with AR(1) disturbances was run. The act of accounting the AR (1) disturbances in the model helps to remove the effect of serial correlation of the first order and thus stabilizing the variance of the coefficients.

3.6.3 Heteroscedasticity Test

If errors in all the data observations had a constant variance, it indicated the presence of homoscedasticity. On the other hand, heteroscedasticity is referred as the absence of homoscedasticity. The main cause of heteroscedasticity in the model is the presence of omitted variables because the effect of omitted variable is not included in explanatory variable but may be absorbed by error term thus giving wrong results (Saastamoinen, 2015). Panel data was used in this study and likelihood-ratio test for heteroscedasticity was tested. Null hypothesis was no heteroscedasticity in data if the probability was greater than 5%. The presence of heteroskedasticity leads to the bias of the standard errors of the model. The problem of heteroskedasticity was solved by calculating the robust standard errors. The assumption of normality of residuals was tested using the Jarque-bera test. The results of the Jarque-bera test indicate that the

errors are not normally distributed . The problem of non-normality of the residuals was solved by transforming the data using the logarithms.

3.6.5 Hausman Test

A Hausman test is done to assist in a decision a decision on whether to use the random or the fixed effects. Moreover, Durbin– Wu– Hausman test also the Hausman specification test assesses how consistent is an estimator compared to an alternative's less efficient estimator, which is already known to be consistent. It assists in assessing whether a statistical model relates to the statistics. A Hausman statistic is a crutial since that it is created as a part of the variance concerning the two appraiser. Furthermore, the test group of the Hausman statistic is a primary determinant of how significant a difference is as well as determining whether it is too big to be compatible with the null hypothesis of correct specification. It is thereby conducted by a Hausman test carried out by comparing the Hausman statistic to the critical value obtained from its sampling distribution and by rejecting of the null hypothesis of the correct specification if the Hausman statistic exceeds its critical value. If the p-value is greater than 0.05, use a random effects model.

3.7 Data Analysis

Panel data was used to ensure that enough data was available for the purpose of this study because it contained both time series and cross-sectional dimensions thus, minimal biasness in parameter estimators (Baltagi, 2015). Data was collected for a period of ten (10) years for the elleven (11) banks listed in NSE. Multiple regression was used to analyse data collected from the population which helped the researcher to gain more knowledge on the relationship between several independent variables (predictor) and dependent variable (Garson, 2014), thus being a good method of data analysis.

Regression results were generated using STATA version 18, which gave results that are more detailed. The main aim of regression analysis was to summarize survey data

thus, allowing for ease establishment of the connection that exists between the variables that were being studied. After regression, results were presented in form of frequency tables, and figures. The following regression equation was developed for the purpose of analysis of this study.

$$\mathbf{Y_{it} = \beta_0 + \beta_1 X_{it} + \ldots\ldots + \beta_n X_{it} + \varepsilon}$$

The econometrics model was extracted from the above equation as follows:

$$\mathbf{Y_{it} = \beta_0 + \beta_1 CA_{it} + \beta_2 BL_{it} + \beta_3 Aq_{it} + E_{it} + \varepsilon\ it}$$

Y_{it} =ROE= Firm Value

β_0 = level of firm value

β_1, β_2, β_3= Regression coefficients

CA_{it} = Capital Adequacy

BT_{it} = Bank Liquidity

Aq_{it} = asset quality

E_{it} =Earnings

ε_{it} = Error i=

Name of Bank (1….11)

T= Time (2009—2018)

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND CONCLUSIONS

4.1 Introduction

The analysis of the study findings was carried out in line with the study of objectives, which sought to establish how bank liquidity, capital adequacy, asset quality as well as earnings influenced firm value of listed commercial banks in Kenya. Firstly, descriptive analysis using mean and standard deviation was carried out in order to establish both the central tendency of the data as well as the variations associated with the scores for the variables. Pearson correlation analysis was also conducted to measure the association that exist between the variables and finally fixed effect panel data analysis was used to model the relationship between the independent and dependent variables of the study.

4.2 Descriptive Analysis

Descriptive analysis so as to establish the value of both arithmetic mean and standard deviation in order to establish the relevant measures of central tendency and dispersion for all the variables used in the study. In addition, the minimum and maximum values of the observations were also captured and summarised as well as the total number of observations for the panel units all which were summarised in terms of the overall, the between measures as well as within measures.

From the descriptive analysis for bank liquidity revealed that the overall main was 0.0054, while the between the standard division was 0.21 which was lower than the within the standard deviation of 0.491 indicating that there were higher variations within compared to between for bank liquidity.

On the other hand, descriptive analysis for capital adequacy yielded an overall arithmetic meaning of 1.965 and between variations of 3.77 and which was far lower than within variations of 6.20 indicating that there are more variations or less consistency for within variations for capital adequacy. Descriptive analysis for asset quality revealed that the overall arithmetic mean was 0.0938, while the between variation was 0.022 which was slightly higher than within variation with the value of 0.01378.

For earnings, the overall arithmetic mean was 0.2547 while between variation was 0.1739 which was far lower than within variation with 0.5102 indicating more consistency as far as between variations for earnings was concerned. Lastly, TQ how did the overall mean of 4.8576 with between variations of 0.4382 which was far lower than within variations of 2.2527 indicating that there was more consistency for between variations compared to within variations for firm value.

Table 4.1: Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
LM	Overall	0.500482	0.531761	0.02	4.071	N = 110
Bank Liquidity	Between		0.211272	0.349	1.0886	n = 11
	Within		0.491752	-0.31812	3.482882	T = 10
CA	Overall	1.96538	7.180738	0.07	36.92	N = 110
Capital Adequacy	Between		3.779519	0.17658	10.03535	n = 11
	Within		6.201428	-7.99997	28.85003	T = 10
AQ	Overall	0.093805	0.025671	0.0538	0.1495	N = 110
Asset Quality	Between		0.022606	0.05565	0.13517	n = 11
	Within		0.013789	0.064685	0.140355	T = 10
ROE	Overall	0.2547	0.536812	-0.104	5.378	N = 110
Earnings	Between		0.173962	0.1062	0.7247	n = 11
	Within		0.510297	-0.289	4.908	T = 10
TQ	Overall	4.857648	2.29221	0.1	7.309	N = 108
Firm Value	Between		0.43826	4.1179	5.5043	n = 11
	Within		2.252782	0.103348	6.868548	T = 9.81818

Source: Study (201

4.3 Exploratory Data Analysis

4.3.1 Trend plots

Trend plots were captured in order to indicate the general increase or decrease in the values of TQ overtime. From the analysis, it was clear that banks started with the small values of TQ increasing over time hence indicating that there as a general increase in the values of Tobin's Q for the selected time period. Except for bank ID 8, which does not seem to have a sharp increase in the values of TQ, all the other banks had a sharp increase as indicated in the figure 4.1. The reason behind the slump in the first years can be attributed to underperformance in the prior years however performance over the years improved.

Trend plots

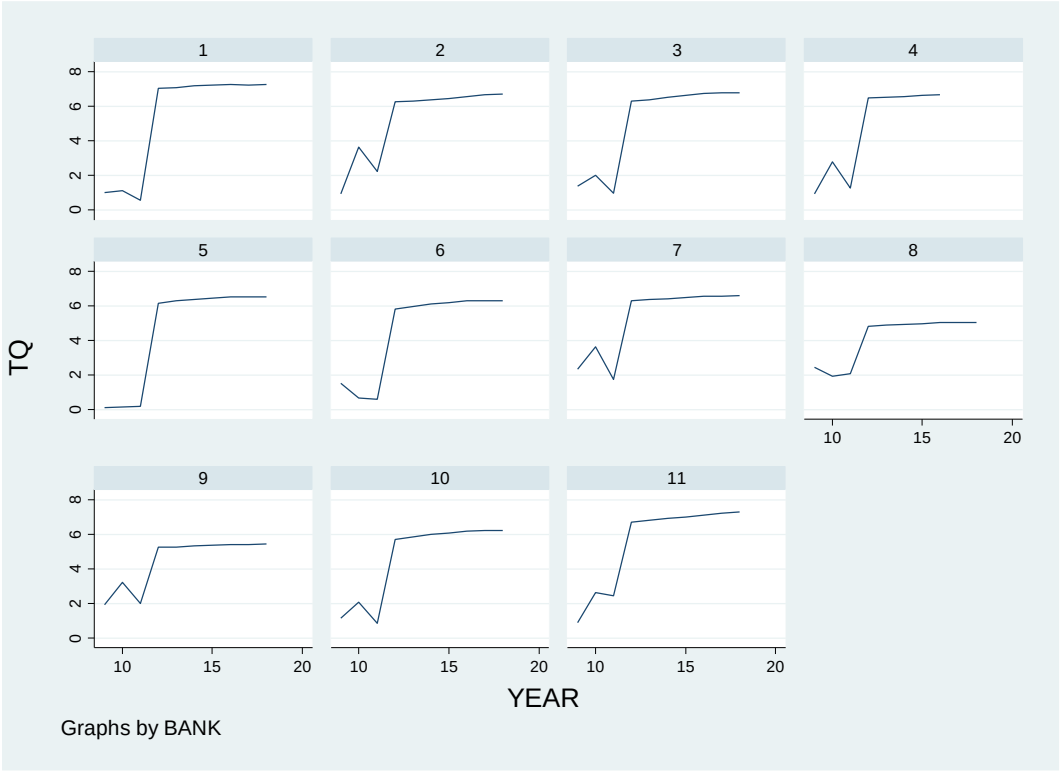
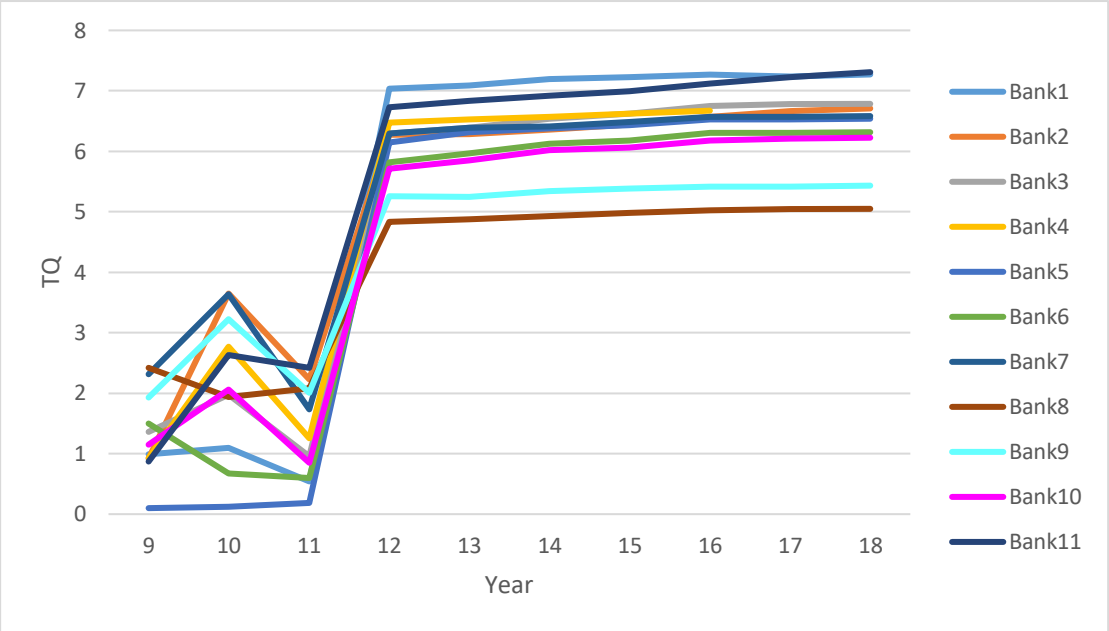


Figure 4.1: Trend Plots

Figure 4.2 Overlay Graph



4.3.3 Test of Normality

Shapiro Wilk test carried out in order to establish whether data met the conditions of normality prior to conducting the main analysis. The null hypotheses for Shapiro Wilk test was data was not normally distributed against an alternative hypothesis that data was normally distributed. From the study findings summarised in table 4.2, it can be observed that the table and can be seen that all the p-values in the last column are less than 0.05 level of significance, therefore leading to rejection of the related null hypothesis. This therefore lead to the conclusion that data was normally distributed.

Table 4.2: Shapiro Wilk test of Normality

Variable	Obs	W	V	z	Prob>z
TQ	108	0.81486	16.303	6.218	0.00000
AQ	110	0.95345	4.163	3.18	0.00074
LM	110	0.36107	57.136	9.021	0.00000
EBIT	110	0.22622	69.195	9.448	0.00000
CA	110	0.26032	66.145	9.347	0.00000

4.4 Diagnostic Tests

Several preliminary and post estimation tests were carried out in order to ensure that all the conditions were met before using the model. These tests included Hausman tests and Shapiro Wilk tests for normality and augmented Dickey Fuller test for stationarity. Post estimation diagnostic tests were also carried out in order to check the goodness of fit of the model, and the tests comprised of Wooldridge test for autocorrelation and Breusch-Pagan test for heteroskedasticity.

4.4.1 Testing for random effects

The study used Breusch and Pagan Multiplier to determine whether panel or simple OLS methold was to be used. The null hypothesis in this test was that is there is were significant difference across units since the variances across entities is zero.

Based on the findings of this study, the study found out that p value is > 0.05 hence we fail to the null hypotheses. We therefore conclude that we can run simple OLS regression but not a panel model.

Table 4.3: Breusch and pagan multiplier

```
Breusch and Pagan Lagrangian multiplier test for random effects

        TQ[BANK,t] = Xb + u[BANK] + e[BANK,t]

        Estimated results:
                         |       Var     sd = sqrt(Var)
                ---------+------------------------------
                      TQ |   5.254225        2.29221
                       e |   4.218329       2.053857
                       u |          0              0

        Test:   Var(u) = 0
                                 chibar2(01) =     0.00
                              Prob > chibar2 =   1.0000
```

4.4.2 **Testing for Heteroscedasticity**

The tests of heteroskedasticity were carried out so as to establish whether there was constant variance (homoscedasticity) in the residuals of the model. This was carried out by use of likelihood ratio test for heteroskedasticity and from the findings summarized in table 4.3, it can be observed that the p-value was far less than 0.05 level of significance therefore indicating that the residuals of the fitted model had a constant variance.

Table 4.4: Heteroskedasticity

```
. lrtest hetero ., df(9)

Likelihood-ratio test                                 LR chi2(9)  =    212.51
(Assumption: . nested in hetero)                      Prob > chi2 =    0.0000
```

Source: Study (2019)

4.4.3 Testing for Time-Fixed Effects

From the results of the Hausman, the p-value was less than 0.05 level of significance, therefore leading to the choice of fixed effects model. In the Stata statistical software that was used, Testparm test command was executed in order to establish whether fixed effects were needed when running the fixed effect model. from the results it was established that (P<.05), which therefore lead to the rejection of the null hypothesis and hence concluded that the fixed effects were needed in the model. it is also important to point out the fact that the model Incorporated dummy variables for the years, as shown in table 4.4:

Table 4.5: Time fixed effects

```
( 1)  10.YEAR = 0
( 2)  11.YEAR = 0
( 3)  12.YEAR = 0
( 4)  13.YEAR = 0
( 5)  14.YEAR = 0
( 6)  15.YEAR = 0
( 7)  16.YEAR = 0
( 8)  17.YEAR = 0
( 9)  18.YEAR = 0

      F(  9,    84) =  119.65
           Prob > F =    0.0000
```

4.4.4 Hausman Tests

Hausman tests were carried out in order to make a choice between fixed effects and random effects panel data models, and which were conducted under the assumption of null hypothesis that The preferred model is random effects. From the findings summarized in the Table 4.5, it can be shown that the p-value was far less than 0.05 level of significance this therefore lead to choice of the fixed effects model.

Table 4.6: Coefficients of Hausman Tests

Variable	**(B) Fixed**	**(B) Random**	**(b-B) Difference**	**sqrt (diag (V_b-V_B)) S. E.**
LM	.5853971	.5416444	.0437526	.1501767
CA	-.1552029	-.103613	-.05159	.0205756

AQ	23.84936	22.31551	1.533853	13.63285
EBIT	.6601335	.548677	.1114565	.3084741

Source: Study (2019)

B = consistent under Ho and Ha

B = inconsistent under Ha, efficient under Ho

Test: Ho: difference in coefficients not systematic

Chi2(4) = (b-B) '[(V_b-V_B) ^ (-1)] (b-B) = 13.75

Prob>chi2 = 0.008

4.5.5 Testing for Autocorrelation

The autocorrelation test was carried out in order to establish whether there was statistically significant serial correlation among the residuals of the model. This was accomplished by use of Wooldridge test for autocorrelation and from the test results summarised in table 4.6, it was clear that the p-value was greater than 0.05, the level of significance, therefore leading acceptance of the null hypothesis. This therefore meant that there was no serial correlation in the residuals of the fitted model.

Table 4.7: Wooldridge Test for Autocorrelation in Panel Data

F statistic	P value
22.471	0.082

4.5.6 Testing for Stationarity

This is yet another important preliminary test that was carried out to test for unit roots under the null hypothesis that data had unit roots (not stationary). From the results summarized in the table 4.7 it can be observed that stationary was achieved after carrying out second order differencing for Bank liquidity, Capital adequacy, asset quality and earnings while Tobin's Q was differenced using first order in order to achieve stationarity. This was arrived at by checking the values of McKinnon's p value which was less than 0.05 level of significance.

Table 4.8: Augmented Dickey Fuller(ADF) Test for Unit Roots

	Test Statistic	MacKinnon P value	Comment	Stationarity
Bank Liquidity	-5.198	0.0000	Differenced of order 2	Stationary
Capital Adequacy	-3.264	0.0166	Differenced of order 2	Stationary
Asset Quality	-3.427	0.0101	Differenced of order 2	Stationary
Earnings	-3.479	0.0085		Stationary
TQ	-3.437	0.0098	Differenced of order 1	Stationary

Source: Study 2019

4.5 Correlation Analysis

In linear regression, it is a requirement that there should be no two variables with strong correlation. In table 4.8, most correlations were positive whereas there was one negative correlation.. For instance, the correlation between bank liquidity and firm value as mearsured by Tobin Q has a weak positive correlation(correlation coefficient 0.3424) this implies that an unit increase in liquidity is associated with increase in firm value. The correlation between capital adequacy and firm value has a strong negative correlation (correlation coefficient -0.9824) this implies that increase in capital adequacy is associated with decrease in firm value. This is so because the requirements put by the government to put up buffer capital can affect the operation of a bank hence they are unable to venture in other areas to improve firm value in the long-run. The correlation between asset quality and firm value is a strong positive

correlation (correlation co-effcient 0.5713). This implies that an unit increase in asset quality is associated with increase in firm value. The correlation coefficient between earnings and Tobin Q has a weak positive correlation (correlation coefficient 0.2832), this implies that an unit increase earnings leads to a unit increase in firm value as measured by tobin Q. The findings of correlation analysis were there for summarised in table 4.8:

Table 4.9: Pearson Correlation Coefficients

	LM	**CA**	**AQ**	**EBIT**	**TQ**
LM	1.0000				
CA	-0.2814	1.0000			
	0.4309				
AQ	0.6727	-0.5131	1.0000		
	0.0331	0.1293			
EBIT	0.3621	-0.2772	0.1288	1.0000	
	0.3038	0.4381	0.7228		
TQ	0.3424	-0.9824	0.5713	0.2832	1.0000
	0.3329	0.0000	0.0845	0.4279	

Source: Research (2019)

4.6 Regression analysis

Table 4.10 Fixed Effect Regression Results

```
Fixed-effects (within) regression               Number of obs      =       108
Group variable: BANK                            Number of groups   =        11

R-sq:                                           Obs per group:
     within  = 0.9477                                         min =         8
     between = 0.0003                                         avg =       9.8
     overall = 0.9087                                         max =        10

                                                F(13,84)           =    117.14
corr(u_i, Xb)  = -0.0330                        Prob > F           =    0.0000
```

TQ	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
CA	-.03747	.0107935	-3.47	0.001	-.0589341	-.0160059
EBIT	.3356171	.3065303	1.09	0.277	-.2739521	.9451862
LM	-.1444124	.1409379	-1.02	0.308	-.424683	.1358581
AQ	4.027231	5.28394	0.76	0.448	-6.480463	14.53492
YEAR						
10	.8353108	.2486399	3.36	0.001	.3408632	1.329759
11	-.024157	.2490358	-0.10	0.923	-.519392	.471078
12	4.505161	.2559452	17.60	0.000	3.996186	5.014136
13	4.544734	.2675688	16.99	0.000	4.012644	5.076824
14	4.693224	.2559562	18.34	0.000	4.184227	5.20222
15	4.74418	.254937	18.61	0.000	4.23721	5.25115
16	4.775331	.2610632	18.29	0.000	4.256178	5.294484
17	4.928776	.2828695	17.42	0.000	4.366259	5.491293
18	4.948057	.2912024	16.99	0.000	4.36897	5.527145
_cons	1.189879	.5416583	2.20	0.031	.1127318	2.267026
sigma_u	.47995529					
sigma_e	.58134025					
rho	.40533448	(fraction of variance due to u_i)				

The general objective of the study was to find out effects of bank characteristics on the firm value of commercial banks. The results in Table 4.9 revealed that the R-

squared value for the test was 0.9087. This therefore was an indication that 90.87% of the variance in the firm value was explained by the independent variables captured in the model while only 0.03% of the variations were not explained by the independent variables. The panel regression results show that the F statistic was 0.000 which implies that the model above was statistically significant.

The first objective of the study was to establish the effect of bank liquidity on firm value of listed commercial banks in Kenya. The study findings show that the coefficient for bank liquidity was -0.144, with a p-value of 0.308. This therefore implied a negative statistically insignificant relationship between bank liquidity and firm value since the P value is more than 0.05. This can be explained by the fact that most banks listed at the Nse are Tier 1 and 2 banks whereby there is a more focus on Basel accords and regulator requirement hence most are liquid thereby high levels of liquidity don't matter most to investors. However, the findings of the study that contradict what was observed earlier by Kibuchi, (2015) who after carrying out an empirical survey of Kenyan Commercial Banks established that various aspects of financial performance of the banks was affected by the liquidity of the banks. Similarly, the study findings on the aspect of bank liquidity failed to corroborate what was observed by Njeru (2016) who was able to establish that effective management of liquidity plays a critical role in ensuring improved financial performance of the firm.

The second objective of the study was to establish the effect of capital adequacy on firm value of listed commercial banks in Kenya. Furthermore, the findings summarised in the model so that the regression coefficient for capital adequacy was -0.03747 with a p-value = 0.001. It was there for apparent from this question that there was a negative relationship between a capital adequacy and the value. Based on the value it was inside that the relationship was statistically significant at 5% level (p-

value < 0.05) since the co effient was less than the accepted 0.05. This implies that a unit increase in capital adequacy results to a decrease in firm value by 0.03747 units. The reason behind this is because most commercial banks operate within the required level of core capital to risk weighted aseets. However, increase of this capital above the buffer would make them struggle to do business. Accordingly, having been able to observe a statistically significant influence of capital adequacy on firm value, the findings of the study to a large extent agree with what was observed in a study conducted in the UK by Cosh and Hughes (2014) where it was established that internal equity of the company plays an important role in ensuring improved profitability. Similarly, this kind of relationship was also affirmed in a study carried out in Australian Small and Medium Enterprises (SMEs) by Forsaith and McMahon (2015) where it was established that internal equity especially in terms of retained earnings to total assets ratio played an important role in ensuring improvement in the profitability of the company.

The third objective of the study was to establish the effect of asset quality on firm value of listed commercial banks in Kenya The regression coefficient for asset quality was 4.027 and a p-value of 0.448. This results are inconclusive because the p value is more than 0.05 This relationship contradicts with what was observed earlier by Suehiro (2012) who after conducting a survey in Thailand on improvement of ratio of non-performing loans found out that there was a statistically significant positive influence of asset quality on financial performance of the selected companies. Furthermore, this was also in contradiction with what was observed in a study conducted on 47 Commercial Banks in Kenya by Mburu (2017) who was able to establish that asset quality is one of the important determinants of improvement in performance of financial institutions.

Lastly, The fourth objective of the study was to establish the effect of earnings on firm value of listed commercial banks in Kenya. It can be observed from the study findings summarised in the table that earnings had a regression coefficient of 0.335, and a p-value of 0.277 implying that this results are inconclusive since the P value was more tha 0.05%. This relationship between earnings and firm value contradict with what was observed in a study conducted by Fernandes and Ferreira (2007) who were able to establish a positive linkage between earnings and performance of financial organizations. Furthermore, this relationship was also affirmed by Petroni (2012) who made an observation that there can always be an improvement in financial performance which always result from the earnings in the firm.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section provides a summary conclusion as well as recommendations of the study findings in line with the study objectives.

5.2 Summary of Finding

This section focuses on a brief summary of this study findings especially in order in line with the fixed effects panel data analytical model that was used, and this was done in line with the four study objectives as follows:

5.2.1 Bank Liquidity and Firm Value

The first objective of the study focused on establishing the influence of bank liquidity on firm value. From the results of the fixed effects panel data analysis regression analysis the coefficient for bank liquidity was 0.5854, with a p-value = 0.155. This therefore indicated that the relationship between bank liquidity and firm value was not statistically significant. The results were inconclusive.

5.2.2 Capital Adequacy on Firm Value

The second objective of the study sought to assess the effect of capital adequacy on firm value. From the result of the panel data analysis it was found out that the coefficient for capital adequacy was -.03747, with a p-value = 0.001, indicating that the relationship was statistically significant. The reason behind this is because most commercial banks operate within the required level of core capital to risk weighted assets. However, increase of this capital above the buffer would make them struggle to do business.

5.2.3 Asset Quality and Firm Value

The third objective of the study sought to evaluate the effect of asset quality on firm value. From the results of the analytical model chosen, it was established that asset quality it was established that the regression coefficient for the variable was 23.8494, with a p-value = 0.134 therefore indicating that the relationship between asset quality and firm value was not statistically significant. The results were inconclusive.

5.2.4 Earnings and Firm Value

The fourth objective of the study focused on establishing the effects of earnings on firm value. From the results of fixed effects panel data analysis, it was established that the regression coefficient for earnings was 0.6601, with a p-value = 0.507, therefore indicating that the relationship between earnings and firm value was not statistically significant. The results were inconclusive.

5.3 Conclusion

The study found out that there was no significant effect of bank liquidity on firm value of commercial banks listed at the Nse. The study further found out that there was a significant negative relationship between capital adequacy and firm value The findings revealed that asset quality had a positive effect on firm value however it was not significant. Lastly the study revealed that there was a strong positive relationship between earnings and firm value. However the results were not statistically significant.

5.4 Recommendation

From the study findings capital adequacy has an effect on firm value. The study recommends that commercial banks operate within the capital standards in order to optimally maximize on the firm value. The study also recommends a similar study to be conducted using a different set of institutions in order to compare the results. Furthermore, a different methodological approach can be used so as to measure various aspects of financial soundness and how they influence firm value.

5.5 Recommendations for Further Research

Since the study examined the effect of financial soundness on firm value of commercial banks in Kenya using selected using the selected variables. Thus, future researchers who may be interested in validating the consistency of the result and provide supplementary results for this study could include other variables like bank ownership, macro-economic variables like Exchange rate and other corporate governance variables like board independence and government regulation.

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APPENDICES

Appendix 1: List of Commercial Bank in Kenya

1. Barclays Bank Ltd
2. Stanbic Holdings
3. I&M Holdings Ltd
4. Diamond Trust Bank Kenya Ltd
5. HF Group Ltd
6. KCB Group Ltd
7. National Bank of Kenya Ltd
8. NIC Group PLC
9. Standard Chartered Bank Ltd
10. Equity Group Holdings
11. The Co-operative Bank of Kenya Ltd

Appendix II: Data Collection Sheet

NBK						
CA	**ROE**	**LM**	**BC**	**TQ**	**Y**	**AQ**
33.1	0.185	.35	0	0.986	09	.0889
36.92	0.204	0.41	0	1.100	10	.0902
29.18	0.148	0.34	0	0.542	11	.0952
0.2842	0.148	0.3	0	7.041	12	0.0971
0.2414	0.094	0.42	0	7.093	13	0.0977
0.1393	0.071	0.315	0	7.19	14	0.0989
0.1399	-0.104	0.307	0	7.23	15	0.0994
0.1187	1	0.297	0	7.269	16	0.1495
.07	0.057	1.57	0	7.241	17	0.1001
.16	0.001	1.61	0	7.271	18	0.1125
STANCHART						
CA	ROE	LM	BC	TQ	Y	AQ
.141	0.173	.49	2222	0.92	09	0.1151
.1432	0.264	0.55	2222	3.643	10	0.1153
.1403	0.284	0.34	2222	2.233	11	0.1150
0.1803	0.262	0.39	2222	6.276	12	0.1155
0.208	0.256	0.38	2222	6.286	13	0.1157
0.1981	0.257	0.46	2222	6.361	14	0.1169
0.2115	0.154	0.5374	2222	6.442	15	0.1182
0.2091	0.203	0.5693	2222	6.574	16	0.1204
.16	0.151	1.01	2222	6.661	17	0.1231
.19	0.174	1.07	2222	6.709	18	0.1273

NIC						
CA	ROE	LM	BC	TQ	Y	AQ
.1499	0.160	.291	3333	1.365	09	0.1302
.1551	0.223	0.3	3333	1.977	10	0.1307
.1589	0.257	0.27	3333	0.957	11	0.1310
0.3204	0.177	0.3538	3333	6.298	12	0.1313
0.1562	0.188	0.2854	3333	6.393	13	0.1331
0.2086	0.18	0.3308	3333	6.534	14	0.1358
0.2047	0.173	0.298	3333	6.627	15	0.1375
0.2162	0.145	0.3852	3333	6.754	16	0.1398
0.17	0.121	.77	3333	6.780	17	0.1401
0.184	0.119	.601	3333	6.785	18	0.1422
KCB						
CA	ROE	LM	BC	TQ	Y	AQ
0.2007	0.181	0.30	4444	0.93	09	0.0891
0.2161	0.183	0.31	4444	2.773	10	0.0894
0.1928	0.248	0.31	4444	1.255	11	0.0889
0.2272	0.204	0.355	4444	6.475	12	0.0899
0.2245	0.196	0.333	4444	6.524	13	0.0906
0.2101	0.22	0.313	4444	6.574	14	0.0912
0.1536	0.204	0.3	4444	6.623	15	0.0918
0.1988	0.204	0.303	4444	6.672	16	0.0925
0.88	5.378	.682	4444		17	0.0931
0.91	0.229	.702	4444		18	0.0939
I&M						

CA	ROE	LM	BC	TQ	Y	AQ
.1988	0.241	0.41	5555	0.100	09	0.0844
.1992	0.182	0.44	5555	0.120	10	0.0846
.2062	0.229	0.38	5555	0.188	11	0.0853
0.1734	0.248	0.3546	5555	6.150	12	0.0859
0.1902	2.088	0.3402	5555	6.314	13	0.0879
0.1885	0.251	0.31	5555	6.379	14	0.088777
0.192	0.23	0.335	5555	6.434	15	0.08947
0.1815	0.21	0.3726	5555	6.526	16	0.0906
.19	0.153	.55	5555	6.531	17	0.0899
.196	0.161	0.58	5555	6.539	18	0.0912
HFB						
CA	ROE	LM	BC	TQ	Y	AQ
.4721	0.057	0.54	6666	1.496	09	0.079
.4873	0.089	0.55	6666	0.668	10	0.086
.3403	0.132	0.34	6666	0.598	11	0.080
0.2952	0.162	0.368	6666	5.823	12	0.082
0.2158	0.17	0.3312	6666	5.962	13	0.079
0.151	0.149	0.3076	6666	6.130	14	0.084
0.1812	0.113	0.2804	6666	6.177	15	0.0857
0.1768	0.119	0.2105	6666	6.308	16	0.086
.17	0.028	.46	6666	6.310	17	0.088
.1777	0.12	.49	6666	6.316	18	0.091
EQUITY						
CA	ROE	LM	BC	TQ	Y	AQ

.2691	0.185	0.38	7777	2.319	09	0.107
.2788	0.262	0.4	7777	3.641	10	0.110
.2167	0.301	0.37	7777	1.733	11	0.097
0.3009	0.281	0.46	7777	6.299	12	0.112
0.2356	0.258	0.34	7777	6.390	13	0.114
0.1733	0.269	0.304	7777	6.409	14	0.114
0.9952	0.24	0.291	7777	6.483	15	0.115
0.9386	0.203	0.477	7777	6.566	16	0.117
1.8	0.088	.02	7777	6.571	17	0.117
1.813	0.112	.448	7777	6.583	18	0.119
DIAMOND						
CA	ROE	LM	BC	TQ	Y	AQ
.1799	0.179	.32	8888	2.425	09	0.0543
.1843	0.278	0.36	8888	1.937	10	0.0541
.1679	0.258	0.36	8888	2.083	11	0.0538
0.1983	0.246	0.38	8888	4.831	12	0.0549
0.2052	0.25	0.326	8888	4.879	13	0.0554
0.1894	0.197	0.356	8888	4.929	14	0.0558
0.1768	0.172	0.39	8888	4.978	15	0.0563
0.185	0.129	0.502	8888	5.027	16	0.0568
.13	0.168	.44	8888	5.041	17	0.0572
.149	0.132	.53	8888	5.049	18	0.0579
CO-OP						
CA	ROE	LM	BC	TQ	Y	AQ
.1441	0.183	.38	9999	1.929	09	0.092

.1451	0.224	0.39	9999	3.222	10	0.098
.1454	0.257	0.27	9999	2.007	11	0.101
0.2379	0.264	0.358	9999	5.255	12	0.105
0.2105	0.26	0.326	9999	5.244	13	0.060
0.2164	0.192	0.338	9999	5.346	14	0.061
0.2125	0.233	0.361	9999	5.387	15	0.061
0.2276	0.207	0.332	9999	5.418	16	0.061
.18	0.165	4.06	9999	5.421	17	.063
.191	0.183	4.071	9999	5.433	18	.063
CFC						
CA	ROE	LM	BC	TQ	Y	AQ
.177	0.001	0.35	1010	1.151	09	.062
.162	0.072	0.37	1010	2.059	10	.062
.1904	0.095	0.38	1010	0.850	11	.061
0.255	0.11	0.389	1010	5.710	12	0.063
0.2053	0.158	0.679	1010	5.848	13	0.064
0.2108	0.154	0.414	1010	6.016	14	0.066
0.187	0.12	0.737	1010	6.063	15	0.066
0.1812	0.111	0.546	1010	6.180	16	0.085
.17	0.1	.58	1010	6.213	17	0.091
.191	0.141	.585	1010	6.225	18	0.099
BARCLAYS						
CA	ROE	LM	BC	TQ	Y	AQ
31.26	0.175	0.51	1111	0.87	09	0.0672
31.15	0.337	0.54	1111	2.633	10	0.0679

27.81	0.276	0.42	1111	2.425	11	0.0680
0.2576	0.48	0.468	1111	6.725	12	0.0682
0.1589	0.403	0.42	1111	6.832	13	0.0691
0.1595	0.219	0.442	1111	6.918	14	0.0699
0.184	0.212	0.341	1111	6.991	15	0.1359
0.1786	0.175	0.283	1111	7.116	16	0.1381
.16	0.18	.39	1111	7.224	17	0.1392
.19	0.018	.41	1111	7.309	18	0.1397

Bank Code	**Bank**
0	National bank
2222	STANCHART
3333	NIC
4444	KCB
5555	I & M
6666	HFB
7777	EQUITY
8888	DIAMOND
9999	CO-OP
1010	CFC
1111	Barclays