

**THE EFFECT OF ASSET QUALITY ON PROFITABILITY OF
COMMERCIAL BANKS IN KENYA**

BY

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DECLARATION

This research project is my original work and has not been submitted for examination to any other university.

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This research project has been submitted for examination with my approval as the University of Nairobi Supervisor

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DEDICATION

I dedicate this work to my brothers and sister for their strong commitment to higher education. To my wife and Son, thank you for your love and understanding during the entire period of my research.

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LIST OF ABBREVIATIONS

- ALLL**-Allowance for Loan and Lease Losses
- ANOVA**- Analysis of variance
- ATM** – Automated Teller Machines
- CAR** – Capital Assets Ratio
- CBK** - Central Bank of Kenya
- GDP** – Gross Domestic Product
- IMF** - International Monterey Fund
- LLP** – Loans Loss Provisions
- MFIs**- Micro Financial Institutions
- MKTCAP** – Market Capitalization
- MPT**- Modern Portfolio Theory
- MSG** – Money Supply Growth
- NIE** – Non-Interest Expenses
- NII** – Non-Interest Income
- NP** – Net Profit
- NPA** – Non-Performing Assets
- NPL** – Non-Performing loans
- PSB** – Public Sector Banks
- ROA** – Return on Assets
- ROE**—Return on Equity
- SOE** – State Owned Enterprises
- SPSS**- Statistical Package for the Social Sciences

ABSTRACT

Asset quality is an aspect of bank management that involves examination of the assets of a bank so as to establish the level and size of credit risk associated with its operation. This study aimed at determining the effect of asset quality on profitability of Commercial Banks in Kenya and was guided by the following theories; Capital asset pricing model, Modern portfolio theory and the Signaling theory. The study employed a descriptive research design which enabled the researcher to describe the characteristics of the research variables. There are 43 commercial banks in Kenya (CBK, 2014). The study focused on all the 43 commercial banks. Secondary data was collected from audited annual financial reports for individual banks found on the banks website and at the Central Bank of Kenya website and library. Annual audited financial reports were used in the study due to ease of availability and the fact that they are credible. The quantitative data generated were analyzed with the help of Statistical Package for Social Sciences (SPSS) version 20. The findings were presented using tables, frequencies and percentages. Descriptive statistics was used to quantitatively describe the important features of the variables using: frequency, mean, maximum, minimum and standard deviation. Multiple regressions were also used to measure the quantitative data which was analyzed using the SPSS. Regression was used in determining the effect of asset quality on profitability of banks. The study concluded that there is a great positive relationship between asset quality and profitability of Commercial Banks in Kenya. This is because when the ratio of Non-performing asset to net assets is lower, asset quality of Commercial Banks in Kenya it means that the trade-off between assets quality and profitability is positive. In addition, the research concludes that proper management of expenditure of Commercial Banks in Kenya contributes to increased profitability. On the other hand, the study concluded that there is a great positive relationship between capital adequacy and profitability of Commercial Banks in Kenya. Higher levels of equity would decrease the cost of capital, leading to a positive impact on profitability. Similarly, on liquidity management, the study concluded that there is a great positive influence of liquidity management on profitability of Commercial Banks in Kenya. This shows that adequate level of liquidity of Commercial Banks in Kenya is positively related to bank profitability. On the bank size the study concluded that there is a great positive influence of bank size on profitability of Commercial Banks in Kenya. The positive relationship between size and bank profitability means there are significant economies of scale. The study recommends that at the bank level, the improvement of the profitability of Kenyan commercial banks needs to be conducted by a reinforcement of the capitalization of banks through national regulation programs, because higher levels of equity would decrease the cost of capital, leading to a positive impact on profitability. The management of Commercial Banks in Kenya should adopt policies that will ensure that expenses management is well conducted thus higher profitability expected. The study findings were applicable to Commercial Banks in Kenya only. The findings can therefore not be generalized to other firms. The study focused on establishing the effect of asset quality on profitability of Commercial Banks in Kenya. The study proposed that similar study should be carried out on the influence of asset quality on profitability of Banks listed in Nairobi Securities Exchange. There is need for further studies to carry out similar study for a longer time period.

CHAPTER ONE

1.1 Background of the Study

The core function of banks is management of assets and liabilities unlike other forms of businesses which produce and stock tangible products. Banks trade on money which runs all the other forms of businesses. Therefore without banks, all other businesses may not run effectively. Banks primarily operate on three objectives; profitability, growth of assets and customer base.

Money is a very sensitive and risky asset to handle. These risks emanate from both the micro and macro environment. Some of these risks include market risk, credit risk, default risk, interest rate risk, risk from operational perspective and exchange rates (Musa and Aruwa, 2014).

Banks are very keen on asset quality, this is the assessment of any firms assets so as to analyse credit risk levels and size. Asset quality is a small but very sensitive factor that measures the soundness and profitability of commercial banks and basically focuses on the quality of loans (Abata, 2014). Therefore a bank needs to be careful when granting loans so as to maintain a sound asset quality because poor asset quality implies poor financial performance of the bank. .

The Profitability of commercial banks is measured on factors like Return on Assets (ROA) and Return on Equity (ROE).ROE, which is equity capital, acts as the crucial determinant of profitability as it reveals to shareholders the profit amount earned from the bank on book value basis of their invested capital. ROA, on the other hand, which is the total assets, show how effective the bank is in asset quality management (Bodla & Richa, 2010). RAO is very important to banking regulating bodies like rating agencies and Central Banks.RAO calculation uses the average number of assets for the year because the banking sector is very sensitive to different aspects throughout the year.

This study is anchored on the Capital Asset Pricing Model. According to this model, investors must hold a diverse portfolio which includes the market portfolio. According to (Fofack, 2009), investors who lack special investment knowledge are better advised to buy and hold diversified portfolios.

The Modern Portfolio theory which explains how investors that are risk-averse make portfolios so as to increase the expected returns with market risks as their main basis, emphasising that risks are part and parcel of higher returns.

The stock of gross Non Performing Loans (NPLs) of Kenyan commercial banks shot up from Ksh. 101.6 billion in June 2014 to Ksh. 123.9 billion in June 2015 an increase of 21.9 percent but the ratio of gross loans to gross NPLs in June 2015 was constant at 5.7 percent. Moreover, by June 30, 2015 profits from the banking sector before tax clocked Ksh. 76.7 billion. This was a significant rise of 8.0 percent from Ksh.71.0 billion that was registered within the same time frame ended June 30, 2014.Loans' and advances' interest of Ksh. 136.6 billion represented 60.4 percent of total income for the period ended June 2015.Interest on staff costs, deposits and other expenses constituted 27 percent, 36 percent and 22 percent increase consecutively (CBK, 2015).

1.1.1 Asset Quality

Evaluation of assets to measure their credit risk is asset quality. The asset quality of commercial banks affects their financial and operational as well as the national financial soundness. According to Yin (2009), reduction in the value of asset quality as a result of commercial banks not knowing loan quality is a serious cause of crisis. Michael (2010), on the other hand states that the most primary determinant of the quality of asset is the loan portfolio value and the banks credit management control. Loans and securities are forms of commercial banks assets but they carry the highest amount of risks. Furthermore, other assets such as real estate's, off balance sheet items and cash also affect asset quality of a commercial bank.

According to Levine (2008), asset strongly determines the performance of any commercial bank because it increases interest income and reduce the cost burden of bad debt management at the same time.by law, banks are expected to keep aside cash deductible as an expense so as to cushion the bank against bad debts and other loan defaults. The higher the NPS ratio to the gross/net asset, the lower the asset quality. This therefore implies a negative trade-off between asset quality and the bank's financial performance (Ombaba, 2013).

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.

1.1.2 Firm Profitability

The main goal of any business venture is making profit at the end of the financial year. Profit is determined by the balance between income and expenses measured of the business (Bruno (2010)). Income is money generated from business activities. Not all cash inflows in any business are income. Cash transactions such as borrowed money do not constitute income. Expenses on the other hand are all economic resources consumed in the creation of income.

According to Devinaga (2010), the profitability of any business is measured in using the ratios reported in the annual financial. The use of these ratios is unaffected by price levels but because it considers a number of analyses over time. Therefore the real value of a business' profit is not necessarily affected by the inflation rates in a certain financial period.

Return on Equity (ROE) and Return on Assets (ROA) are important basic influencers of any banks performance. ROA shows how effective the bank's management is in transforming assets into income. When the ROA ratio is higher, the better the firm performance. ROA is used to compare the profitability of banks. ROE on the other side measures the returns on shareholders' equity. It is the ratio between the overall equity capital and net income after tax. Total equity capitals are common stock and preferred stock, surplus, un-divided profits and capital reserves. Levine (2008); the best way to appropriate a bank's responsibility is ROA; this is because it cannot be interrupted with by the higher equity multiplier. However, ROA is lower for financial brokers since many banks make use of financial leverages to competitively increase their ROE.

1.1.3 Asset Quality and Profitability

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 determines the overall status of a bank and this is primarily affected by credit administration program and the loan's portfolio quality. Highest risks that banks faces are those linked to delinquent loans, therefore the recommended proxies for an assets quality in non-performing loan ratios (Dang 2011). Low non performing loans show that a bank's loan portfolio is healthy so most banks strive to keep the loans at the lowest level possible.

1.1.4 Commercial Banks in Kenya

Traditional banking in Kenya has been on a gradual decline over time due to increase of fee based activities of running the industry. This is a global trend as many banks are gradually increasing banking fees and commission based revenue (Aliyu & Tasmin, 2012).

The regulation and licensing of the Kenyan commercial banking sector is performed by the Kenyan Banking Act, which is a creation of the Parliament of Kenya and effected by the central Bank of Kenya in association with other legal agencies. Today, there are about 43 in number for commercial banks and just one mortgage company in Kenya of which 13 of these institutions are foreign. Of the local financial institutions, the government of Kenya has majority shares in 3 commercial banks. The Kenyan banking industry is greatly influenced by a number of big commercial banks which are mostly foreign but partially Kenyan owned (CBK annual report, 2010). Of all the major commercial banks, six of them are listed on NSE.

The profitability in the Kenyan banking sector has increased immensely over the years, this does not imply that profits are being made. For instance, small and medium financial organizations which comprise approximately 57% of the sector recorded a loss of kshs.0.09 billion before tax in the tear 2009 as in comparison to their profit before tax which stood at kshs.49.01 billion (CBK,2013). NPLs stock of in Kenyan

commercial hiked by 14.1% from kshs.61.6 billion by December the year 2012 to kshs.70.3 billion in March 2013 while the gross ratio of NPLs to loans gross hiked from 4.5% in December of 2012 to 5.0% in march of 2013. The hike was attributed to by spill over effects due to increased rates of interest between 2012 and 2011. Likewise the assets quality (measured as proportion in net of nonperforming loans) to gross loans reduced from 1.5% to 2.0% in the same duration (CBK, 2013). While under review 10 out of 11 areas recorded an increase in NPL of kshs.8.7 billion.

The huge profits enjoyed by the large banks as well as small and medium size financial institutions indicates that there are favourable industrial factors influencing the profitability of the entire banking sector. According to Flamini et al (2009), these factors are both bank-specific factors and industry specific factors.

1.2 Research Problem

Commercial banks use asset quality to determine the level of financial risks their assets are exposed to as well as determine the allowances for potential losses of their assets. Loan and advances are the most common bank's assets that are strictly used to determine asset quality. Increased loan quality increases the returns but at the same time reduce the possibility of failure at a manageable cost (Khalid, 2012).

Following the financial reform process in Kenya, there has been an increasing growth in the non-performing assets and this has significantly interfered with development in the financial area this has impacted negatively on the general national economy (Aliyu & Tasmin, 2012). Commercial banks management have the responsibility of ensuring that asset quality is well monitored so as maintain the soundness of the bank. This has proved to be a highly tasking a theoretical duty.

Adnan (2012) investigated the effects of management of assets quality on the value of shareholders and profitability. From this study, it was clear that a bank's assets quality indicates a collective positive impact on profitability and shareholders' value. This therefore implies the significance of a bank diversifying its investments so as to achieve a sustainable performance.

In another research by Bourke (2009), looked at the external and internal factors affecting profitability for banks in twelve countries ranging from Australia, Europe and north America, found out that commercial institutions with large market prowess have risk avoiding behaviours in their operations. According to this study, there exists a significant correlation business cycle and bank profitability.

Anjili (2014) examined the factors affecting management of asset and liability of commercial banks in Kenya related to financial performance. This study found out that a small reduction in operational efficiency can lead to high reduction in profits and that increased income diversification leads to increased financial performance, keeping other factors constant. In another similar study (Ongore, 2013), factors affecting the performance of finances of Kenyan commercial banks, it was found out that a bank's managerial decisions significantly contribute to its financial performance and that macro-factors have an insignificant contribution to this performance.

Finally, (Gatuhu, 2013) investigated factors associated with management of credit effects on finances performance on microfinance organizations in Kenya and discovered a strong positive correlation between credit risk control and collection, MFIs performance and client appraisal. He concluded financial performance in MFIs is significantly influenced by policy client appraisal, credit risk control and collection.

Despite all these quality and extensive research, little research has been accomplished on factors affecting asset quality profitability of CBK.

This study research hereby tries to answer the question; what are the effects of asset quality on profitability of commercial banks in Kenya?

1.3 Research Objective

To determine the effect of asset quality on profitability in the Kenyan Commercial Banks sector.

1.4 Value of the Study

This will be of value to the government in formulation and implementation of stronger regulatory legal frameworks as far as asset quality management by Kenyan commercial banks is concerned which will lead to better protection of depositors' funds while enhancing the commercial banks financial performance and stability.

The study will also be significant commercial banks managements in Kenya in regard to development of sound asset quality management strategies and help them remain financially sound in the industry as so achieve their objectives smoothly.

Finally, the study research adds value to the growing research knowledge on commercial banks assets quality management. It will therefore be useful in reconciling theory and reality and the findings will form basis for future research. Professionals and explores of credit field and the field of finance stand to benefit so much from this research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature related to effect of asset quality on profitability presented by different scholars, researchers, authors and analysts. This chapter will also discuss theories pertaining to the study.

2.2 Theoretical Foundation

This section discusses different theories that have been used to ground this study. Theories reviewed include; The Capital Asset Pricing Model Theory, Modern Portfolio Theory and The Signalling Theory.

2.1.1. Capital Asset Pricing Model Theory

The Capital Asset Pricing Model Theory was developed by Sharpe (1964) and refined by Linter (1965) and Black (1972). This model explains that investors must diversify their portfolios and that they must possess a given fraction of the bank's market portfolio. Investors without special investment knowledge are advised to hold diversified portfolios. This is called efficient markets hypothesis (Black, 1971).

All investors need high levels of assurance of expected returns so as to invest in highly risky ventures. However, it should be known that in the presence of informational asymmetries and contract enforcement problems, banks will not always commit their resources to businesses with high returns. Making of corrections on estimation errors can greatly improve investment performance; this statement is supported by empirical evidence based on simulation analysis, mean-variance portfolio selection and sample portfolio performance. According to this model, investors always try to avoid risks and they only look at the variance and mean on their return on investment during a single period when choosing portfolios (Fofack, 2009). Since portfolios reduce the variance of portfolio return, given expected profits, and increase expected returns, given variance; investors always choose mean-variance-efficient portfolios.

This model further assumes that the qualities of assets or loans are key items in any given banks portfolio since a bank's portfolio comprises of both assets and liabilities. It therefore is the prerogative of bank management bodies to come up with portfolios

that will give the highest returns a reduced risks and costs. This model is relevant to this study because it is used in estimating of cost of capital for banks and in evaluation of performance appraisals of financial instrument portfolios. The theory reveals the relationship between yields and risks

2.2.2 Modern Portfolio Theory (Harry Markowitz (1952))

This theory states that investors who are risk averse tend to construct portfolios to maximize on returns based on the existing market risks. The theory emphasizes risks are inseparable from high rewards. An investor therefore stands to benefit from this diversification and reduction of the riskiness of the portfolio. The theory further states that only “unsystematic risks” which are specific to certain types of stock can also be diversified as the number of portfolios increase.

Modern Portfolio Theory proposes that an efficient frontier of optimal portfolio can be constructed to give the highest possible returns at lowest risks. According to Songor & Curtis (2005), someone who invests in different stocks is more likely to enjoy the benefits of portfolio diversification as a result of reduced risks of the portfolio. The risk of investing in different individual stocks is less than the risk inherent in holding many similar stocks (provided that the risks of the various stocks are not directly related). (Baral, 2008). A portfolio comprising of both assets must always pay off regardless of the season because adding one risky asset to another has the ability to dilute the overall risk of an all weather portfolio.

This theory is relevant to this study because it is applied by banks in diversifying their loan portfolios so as to optimize unsystematic credit risk. The possibility of sudden decline in credit portfolio in a certain industry or geographical area cannot be ignored because shocks may arise at any time without giving the banks enough time to cushion themselves (Caprio & Klingebiel, 2002). Therefore banks work out to ensure that the concentration of a portfolio is not too high across industries, geographically or within specific firms.

2.2.3 Signalling Theory (Michael Spence, 1973)

According to this theory, markets are never fully efficient. The signals sent out by the management communicate about the future of the firm and this may lead to company faces. The management signals what they are doing with the aim of maximizing their firm's value in the market (Van Horne & Wachowicz, 2005). The market is in constant need of information and often reacts to communication from management and as well as performance results. For instance, the market reacts on dividends because if the firm increases the dividends, then the shareholders react positively and vice versa. Again if the management indicates that the firm has trust in its future and moves from formulation of policies to implementation, the market reacts positively (Brealey, Myers & Allen, 2006).

In addition, this theory explains why firms reports accounting information voluntarily. If creditors have proper information about the financial stability of the company then the company is likely to acquire high capital. Accounting information sends signals to creditors to lower the cost of capital. Firms that report on accrual based accounting generally cheap capital (Alle and Yohan 2009). The cost of capital is cheaper for audited companies. Cost of capital can be influenced by the amount of information and accuracy of financial reports published. If a company didn't relay their accounting information, this would signal poor performance and so scare away the creditors and investors. This is the reason companies submit their accounting information even if they have performed badly.

David (2007), a critic of this theory, argues that the offered wage to employees is the expected marginal product. Therefore signals may be gotten by sustaining signaling costs; both monetary and non monetary. The greatest assumption here is that the cost of signaling are negatively correlated with productivity. If all investors put their money in exactly the same signal then there won't be discriminations in the use of that signal. This is called feedback loop. The employer, upon receipt of new market information updates his beliefs and the wage schedule and the applicants react by signalling that the company is recruiting

According to the signaling theory, higher capital sends positive signals to the market on the value of the bank. A positive signal provides private information to the bank so as to enable it to enhance its capital based on its future prospects. This theory is relevant to this research because the management sends out signals which influence the expectations of potential and current investors (Allee & Yohn, 2009). If the management and accounting information given sends out strong signals, then the reactions of investors communicates this confidence. If the signals are interpreted as the bank has a strong confidence in its future, then the banks price level automatically increases.

2.3 Determinants of Profitability.

The significance of a bank's profitability can be evaluated both at micro and macro levels of the economy. Profitability of the banking sector simply implies that it is stable and this is very important for a stable capital structure. The 2008 global financial crisis proved that if the banking sector has profitability and capital structure problems, the whole economy is affected negatively (Sufian & Chong, 2009). As a result, the banking sector will not be in a position to generate credit for the economy.

2.3.1 Management Efficiency

Efficiency in management is an important determinant of any banks profitability. Management efficiency can be measured by different ratios such as loans growth rate, earnings growth rate and total asset growth. One of the greatest contributors of low profitability is poor management of expenditure (Sufian & Chong, 2009). According to Mathuva (2009), Cost Income Ratio (CIR) of local commercial banks in Kenya is high as compared to other countries. This calls for a reduction in operational costs so that these local banks can be competitive globally.

Mihail (2009) on the other hand studied the different factors that contribute to high interests spread in Kenya and he found out that among other factors, overhead costs are one of the key contributors to high interest spread in Kenyan banks. A more detailed analysis of the overhead costs revealed that staff wage costs largely contributed to the high overhead costs, Staff wage costs in Kenya were found to be higher as compared to other banks in SSA countries.

Expenditure and profits have a directly proportional relationship. However this may not always be the case because profitability is affected by other factors apart from expenditures. Likewise, high expenses may be due to high volume of banking activities and so leads to high revenue. In markets where competition is not stiff and banks enjoy market privileges and power, overhead costs are indirectly passed onto the customers resulting in a positive relationship between profitability and overheads (Flamimi et. al., 2009). According to research conducted by Mihail (2009), there is a significantly positive impact of overheads on profitability and this implies that such costs are carried by the depositors and borrowers in terms of lower deposits rates or higher lending rates.

2.3.2 Capital Adequacy

This is the percentage ratio of the primary capital to assets of a financial institution which is used as an indicator of stability and strength (Vong 2009). The main reason for strict regulation of the capital structure of banks is because capital is an important component in averting losses depositors are likely to suffer in the event that the bank fails. Highly leveraged firms are most likely to take excessive risks to optimize shareholders values at the cost of financiers (Kamau, 2009). Dang (2011) suggests that the sufficiency of capital is determined based on capital adequacy ratio (CAR) shows how the bank is strong internally to withstand losses during crisis. CAR is directly proportional to the resilience of the bank to crisis situations and it also directly affects the profitability of the bank by determining its expansion to risky but profitable ventures.

To reduce the moral risks, statutory capital requirements are very necessary. However, the question of how much is enough capital cannot have a standard answer. To reduce possibilities of bank failures and losses, regulators want higher minimum requirements but on the other hand the financial institutions hold that it's very expensive and difficult to have to access additional equity and that these higher requirements set by the regulators constrain their competitiveness.

Vong (2009) writes that high capital associated with low profits because banks with high capital ratios tend to avoid risks. They ignore potentially profitable but quite risky business ventures and as a result investors demand lower returns on their capital

because of the low risks. However, (Gavila et al., 2009) states that banks with high capital face little possibilities of bankruptcy, need low external funding especially in emerging economies where external borrowing is difficult.

2.3.3 Liquidity management

Banks are often rated with consideration to their capability of meeting cash and collateral requirements or their liquidity without heavy costs in the process, this according to Bodla and Richa (2010). Liquidity management is therefore a very crucial that bank managers have to take very carefully. The importance of liquidity is not limited to the bank alone but also influences the entire banking sector. According to Dang (2011), some banks have high liquidity so as to the forgone cost of some investment capable of fetching high returns.

Uzhegova (2010) noted that a bank's profitability is closely related to the adequate level of liquidity, which for most banks is showed using the customer deposit to total assets ratio and customer deposits to total loan ratio.

Indication of experience in trade-off between liquidity and return risk are by arise in a banks returns through the shifting of short term securities to long term loans, which also causes an increase in a bank's risk in liquidity. Inverse of this relationship is also true. Therefore bans with high liquidity ratios have less risks and low profits. The management is therefore at dilemma between liquidity and profitability (Uzhegova, 2010).

2.3.4 Bank Size

A bank's size matters especially on its routine operations (Davis, 2012). The size of the bank, keeping all other factors constant determines the level of risks its partners are exposed to.

A big bank has more assets to keep it going even in times of industrial crisis and this means that loans by larger banks are most likely to be repaid compared to small bank loans. Smirlock (2010) concludes there exists a direct relation between size of a bank and profits from it. Therefore, big banks are highly profitable because they reduce the cost of raising capital. Black, 2001 adds that there is negative relation between returns and size of banks when using scale and product mix. Davis, 2012 found about the

inverse relationship between net return and size of a bank on small business lending. This suggests that smaller banks take all types of loans. A bank with many branches easily networks with the clients due to the proximity and so high deposits. However the cost of operating such networks may have negative impact on financial performance when economies of scale are not well monitored (Smirlock, 2010). Larger banks have more competitive advantage than small banks and therefore they have a higher economies of scale have superior access to resources and large market.

Large size also allows banks to diversify their business activities and this reduces the risks; allowing banks to operate at low capital and at less-stable funding which can enhance a banks market activities. Large banks have ability to do business in a very different market sector than other small banks, enabling a comparative advantage in market activities that may warrant incurring quite significant fixed costs but with an assurance that the bank will experience economies of scale. (Davis, 2012) states that activities that are market-based can cause unstable funding and increased leverage because the securities can be collateral in repos.

2.4 Empirical Literature and Research Gap

Adeolu, (2014) carried out a study on asset quality and performance of banks in Nigeria using the Pearson correlation coefficient and SPSS regression to analyze the data.

The study found out that there was a strong relationship between the two. The research also found no relationship between bank loans and profitability although this contradicts Khalid (2012) which concluded a negative relationship exists between profitability and asset quality.

While investigating the effects of management of assets quality on shareholder's value and profitability- Jordanian listed commercial banks case from 2001 to 2012, he found out that the asset quality impacts a bank's profitability positively. This clearly states that commercial banks management should prioritize diversification of its activities so as to achieve sustainable performance, (Adnan, 2012).

Anjili (2014) study found out that a small decrease in the operational efficiency may lead to high reduction in the profitability of the bank and this is not proportional compared to other determinants. The study further found out that diversifying of income and capital adequacy may lead to improved financial performance.

In another research by Bourke (2009) that studied internal and external factors of profitability of banks in North America, Australia and Europe, found that banks having high market command are risk averse. This study also noted a very significant correlation between business cycle and bank profitability.

(Gatuhu, 2013) investigating the impact on financial performance by credit management on microfinance organizations in Kenya discovered a strong correlation between credit risk control and collection policy, financial performance of MFIs and customer appraisal. Concluding financial performance of MFI are influenced by collection policy, credit risk control and client appraisal.

Khalid, 2012 studies the effects of asset quality to profitability of private banks found in India using Return on Asset as profitability variable for the period 2006 – 2011. The research used various models of regression to analyze correlation between banks asset quality and operating performance. The research found out that a negative relationship exists between banking operating performance after control of impacts on operating scale and bad asset ratio, idle fund ratio and traditional banking business concentration.

Another researcher investigating impacts on profitability of commercial banks concentrating on Equity Bank Limited in Kenya caused by macroeconomic factors (Kiganda, 2013) realized that financial performance on most commercial banks are affected by the management's and the board's decision. . However, the findings from various researches have not adequately concluded the effects of diverse determinants of commercial banks` performance in Kenya.

Locally, there has been little research work on impacts on profitability caused by asset quality; this study therefore aims at filling the gap by examining this.

Internal factor analysis was done on six top commercial banks in Kenya by Moraa, 2014. From this study, it was found out that capital strength, operations expenses,

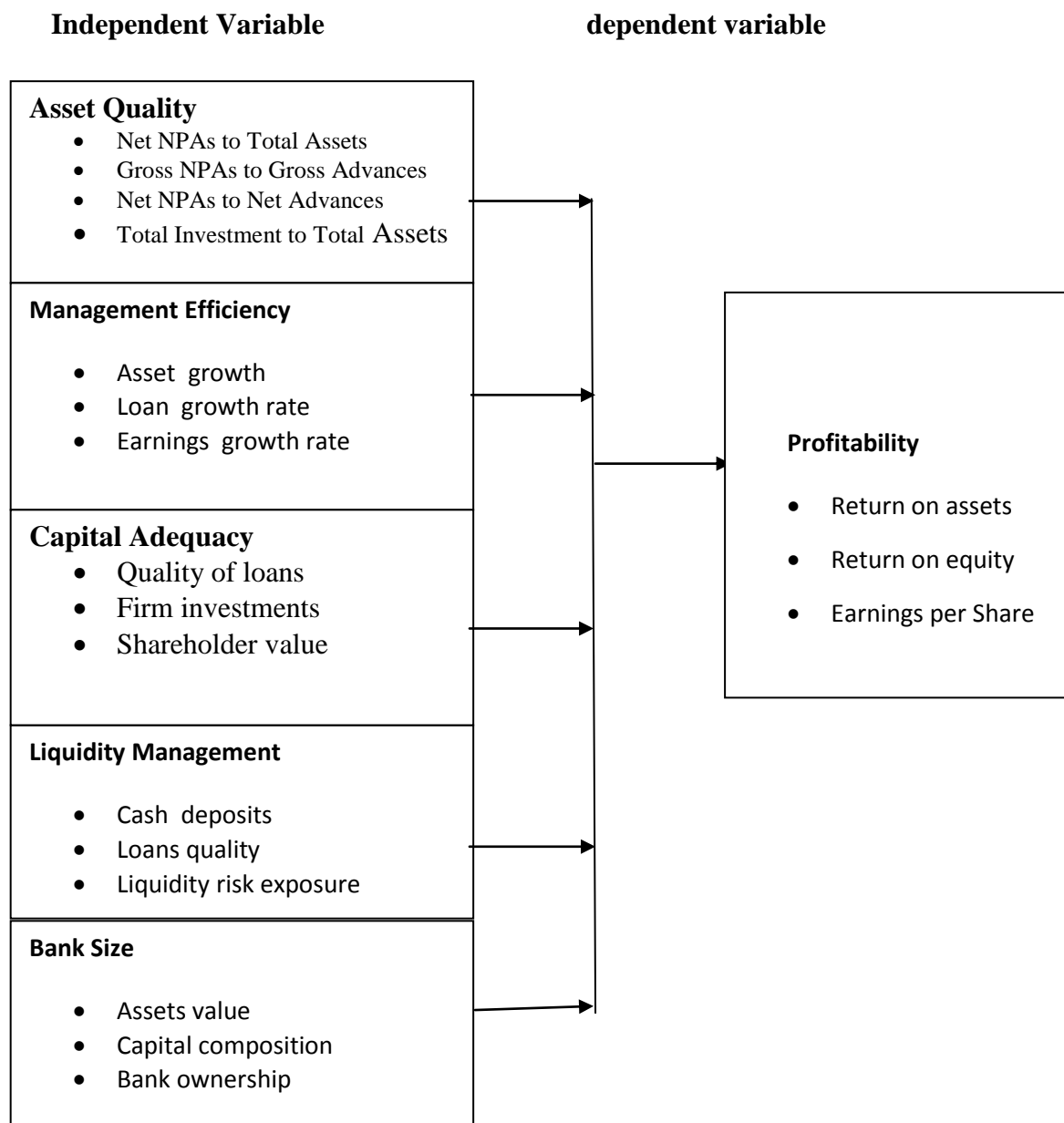
size of the bank, ownership and diversification have a significant influence profitability of the top six banks. This suggests that the government should implement policies which will encourage banks to enhance their assets and capital to promote performance of the entire banking sector.

Vighneswara (2015) examining the India's profitability through uses of data panel techniques (1997-2009) and bank asset quality determinants, found out priority sector credit was not enough to have an effect on non-performing. This was the opposite of general opinion and similar is the case with local branches stating aversion of rural credit is a false opinion. Performance of the whole banking sector rather than a specific bank is tied to bad debts. Additionally, capital adequacy and investment activity have a significant effect on profitability of banks, unlike assets size which has no effect.

2.5 Conceptual framework

This is a diagram representing the various variables used in the study, illustrating interrelationships between independent variables such as asset quality, management efficiency, capital adequacy, liquidity management and bank size and dependent variable is the profitability.

Figure 2.1; Conceptual framework



2.6 Summary of Literature Review

Many studies have indicated the relevance of asset quality and profitability of commercial banks, from literature work on bank’s performance, operational efficiency expenses assesses the efficiency of the management. Cost Income Ratio (CIR) of domestic commercial banks in Kenya is high compared to other countries this calls for local banks to reduce their interest so that they are able to compete globally (Mathuva, 2009).

Mihail (2009) studied the determinants that cause high interest rates among banks in Kenya and concluded overheads significantly influence high interest rates. Dang (2011) in another research finds that capital adequacy is stimulated by Capital Adequacy Ratio (CAR) which also indicates a bank's internal strength during crisis and losses. Bodla and Richa (2010) states bank evaluation is determined by their liquidity or ability to meet collateral and cash obligations without experiencing huge losses. Bank managers are very careful with liquidity management.

In the Capital Asset Pricing Model (Fofack, 2009), investors ought to have diversified portfolios and that investors must always hold some fraction of the market portfolio at any given time. According to the Modern portfolio theory, banks can create optimal portfolios that are efficient frontier in offering high returns expected for a given level of risk. It further explains it's not satisfactory to consider the expected return and risk of a particular stock only hence need for diversification. The signaling theory explains that audited firms voluntarily report their financial information even if they are not performing well so as to send good signals to creditors which lowers the cost of capital. Lack of this accounting information increases the cost of capital.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology used in the research, focusing on the research design, methods of data collection and the conclusion with the method of data presentation and data analysis used in this study.

3.2 Research Design

Kothari (2004) states that; good research design must result to maximum information which provides opportunities in consideration to various aspects of the problem under research. This study adopted a descriptive method of research design.

The descriptive method of design gave way for the researcher to fully focus and discuss the characteristics of the variables which are of interest without any form of distortion. With all matters put into contention this matter is therefore the justified and most relevant for this study. Surveys, on the other hand come in handy when explaining or describing the population characteristics especially when the population is large. When all subjects are presented with a standardised stimulus high reliability is obtained easily. This ensures that any subjectivity that the observer may encounter is eliminated (Mugenda and Mugenda, 2003).

3.3 Target Population

According to Orodho (2009), the entire group of people, events or things of interest that a researcher wishes to investigate is the ultimate definition of a population. In a research the population applies to a collection of measurements, objects or possible individuals of interest .In Kenya there are 43 commercial banks; so the study captured all the 43 Kenyan commercial banks (CBK, 2014).

3.4 Data Collection

From audited individual banks annual reports and websites secondary data was collected, more so from CBK website and library. Annual audited financial reports were used in the study because they are reliable and readily available. All commercial banks are required by law to file all their financial reports with the Registrar of Companies at Attorney General Chambers and the Central Bank of Kenya. They are also required to publish all these annual financial reports by or before 31st, March, of every year.

3.5 Data Analysis

The quantitative data generated was analysed with the help of Statistical Package for Social Sciences (SPSS) version 20. In form of percentages, frequencies and tables the findings were adequately presented. The description of important variables was quantitatively described using descriptive statistics: frequency, mean, maximum, minimum and standard deviation.

3.5.1 Analytical Model

Multiple regressions were used to measure the quantitative data analyzed using SPSS. Regression was used in determining the effect of asset quality on the banks profitability. The following regression model was applied

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

Where Y = Profitability (measured by net profit after tax/total asset)

X₁ = Asset Quality (net NPAs to total assets)

X₂ = Management Efficiency (measured by total asset growth)

X₃ = Capital Adequacy (measured by ratio of capital to assets)

X₄ = Liquidity Management (measured by ratio of deposit to total asset and total loan)

X₅ = Bank Size (measured by total assets value)

B₁– β₄ are the regression co-efficient or change introduced in Y by each independent variable

e is the random error term accounting for all other variables that affect profitability but not captured in the model.

3.5.2 Test of Significance

The level of significance of the independent variables on the dependent variable at 95% level of significance was tested using a one-way ANOVA. The one-way ANOVA tested if there exist notable differences between the variable and the study.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

Presentation of data analysis and findings from the research will be done in this chapter. The main aim of the research is to establish the influence asset quality has on profitability in Commercial Banks in Kenya

4.2 Descriptive Statistics

4.2.1 Asset Quality

Table 4. 1: Descriptive Statistics on Asset Quality

Year	Median	Minimum	Maximum	Mean	Std deviation
2011	2.52	2.53	2.61	2.56	0.47
2012	2.90	2.80	2.91	2.89	0.25
2013	3.28	3.01	3.24	3.14	0.18
2014	3.62	3.61	3.89	3.84	0.24
2015	4.61	4.61	5.01	4.98	0.21

Source; Research findings, 2015

From the summary above, the lowest value for asset quality was recorded in 2011 at 2.56 while 2015 recorded the highest value for asset quality at 4.98. Additionally, standard deviation values depict variability as compared to asset quality values for the five year period ,with the lowest deviation at 0.146 in the year 2011 and the highest at 0.0782 in the year 2014. These outcomes show an increase in asset quality within the five-year period.

4.2.2 Management Efficiency

Table 4.2: Descriptive Statistics on Management Efficiency

Year	Median	Minimum	Maximum	Mean	Std deviation
2011	0.029	0.030	0.034	0.032	0.40
2012	0.032	0.034	0.040	0.038	0.22
2013	0.044	0.039	0.043	0.042	0.30
2014	0.041	0.043	0.046	0.045	0.26
2015	0.048	0.045	0.048	0.047	0.33

Source; Research findings, 2015

From the findings, the year 2015 recorded the highest value for bank management efficiency which had a mean value of 0.047 while the year 2011 recorded the lowest value for bank management efficiency as depicted by 0.032 mean. The findings show bank efficiency at its low in 2011 because of the tough economic crises and high inflation.

4.2.3 Capital Adequacy

Table 4.3: Capital Adequacy

Year	Median	Minimum	Maximum	Mean	Std deviation
2011	7.31	7.28	7.32	7.30	0.23
2012	7.46	7.39	7.43	7.41	0.30
2013	7.40	7.42	7.52	7.50	0.45
2014	7.89	7.72	7.78	7.79	0.28
2015	8.02	7.98	8.04	8.03	0.21

Source; Research findings, 2015

From the findings, it can be noted that the year 2015 recorded the highest value for bank capital adequacy shown by a mean value of 8.03 while the year 2011 recorded the lowest value for bank management efficiency as depicted by the 7.30 mean. The results show bank management efficiency was low in 2011 because of the tough economic crises and high inflation.

4.2.4 Liquidity Management

Table 4.4: Liquidity Management

Year	Median	Minimum	Maximum	Mean	Std deviation
2011	0.042	0.040	0.044	0.042	0.41
2012	0.048	0.044	0.049	0.047	0.22
2013	0.046	0.046	0.048	0.048	0.28
2014	0.055	0.050	0.052	0.051	0.24
2015	0.051	0.052	0.055	0.054	0.23

Source; Research findings, 2015

From the findings, it can be noted that the year 2015 recorded the highest value for bank liquidity management as shown by a mean value of 0.054 while the year 2011 recorded the lowest value for bank liquidity management as depicted by the 0.042 mean. The results show bank liquidity management was low in 2011 because of the tough economic crises and high inflation.

4.2.5 Bank Size

Table 4.5 Bank size

Year	Median	Minimum	Maximum	Mean	Std deviation
2011	.2276	.2265	.2279	.2271	0.21
2012	.2109	.2121	.2145	.2117	0.22
2013	.2694	.2697	.2701	.2693	0.36
2014	.2778	.2758	.2791	.2784	0.20
2015	.2964	.2954	.2989	.2966	0.25

Source; Research findings, 2015

From the findings, it can be noted that the year 2015 recorded the highest value for bank size as shown by a mean value of 0.2966 while the year 2012 recorded the lowest value for bank size as depicted by the 0.2117 mean. The results show bank size was low in 2012 because of the tough economic crises and high inflation.

4.3 Bank Profitability

Table 4.6: Descriptive Statistics on Bank Profitability

Year	Median	Minimum	Maximum	Mean	Std deviation
2011	.7850	.7821	.7879	.7855	0.36
2012	.5278	.5273	.5298	.5287	0.23
2013	.7887	.7879	.7901	.7895	0.29
2014	.8437	.8420	.8442	.8436	0.24
2015	.9275	.9268	.9284	.9273	0.20

Source; Research findings, 2015

From the findings, it can be noted that the year 2015 recorded the highest value for bank profitability shown by a mean value of 0.9273 while the year 2011 recorded the lowest value for bank profitability as depicted by the 0.5287 mean. The findings show bank profitability at its low in 2011 because of the tough economic crises and high inflation.

4.4 Regression Analysis

The application of a multiple regression model was put in place so as to establish the effect of asset quality on Kenyan Commercial Banks. The following regression equation was used to find the relationship between variables $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$

where Y = Profitability, β_0 = the constant of regression, $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 = are the regression coefficients/weights of the following respective independent variables; x_1 = Asset Quality, x_2 = Management Efficiency, x_3 = Capital Adequacy, x_4 = Liquidity Management, X_5 = Bank Size and e = error term. Using the feedback from each variable got from respondents, the five independent variables were measured. The findings are discussed below.

Table 4.1 Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.918 ^a	0.843	0.741	0.02

The studied five variables explain 84.3% of asset quality affecting profitability as depicted by R Squared (Coefficient of determinant). Consequently the remaining other factors not included in the study contribute to 15.7% in influencing profitability. The results of this study concur with Bruno (2010), when profitability is lacking the business cannot continue to survive eventually. This means the projection of future profitability and measurement of both present and past profitability is vital. Bruno (2010) also advocates for the use of income and expenses to measure profitability. Money generated from the business activities is income.

Table 4.2 ANOVA of Asset Quality Influence on Profitability

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	392.05	5	78.410	30.05	.001 ^a
Residual	96.533	37	2.609		
Total	488.583	42			

In order to figure out the importance of the regression model ANOVA was used, an f-significance value of p less than 0.05 was established ($p=0.001 < 0.05$). Statistically speaking the model proves vital in predicting how capital adequacy, liquidity management, management efficiency asset quality and bank size affect profitability. From the above findings it means that the regression model has a likelihood (probability) of less than 0.05 of providing a wrong prediction. Consequently the regression model has more than 95% confidence level which provides a high reliability of the outcome. This implies that the regression model is statistically significant since $30.05 > 2.45$.

Table 4.3 Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.188	.135	.174	1.39	.001
Asset Quality (X ₁)	.557	.106	.423	5.255	.002
Management Efficiency (X ₂)	.543	.163	.262	3.331	.003
Capital Adequacy (X ₃)	.598	.021	.218	28.476	.004
Liquidity Management (X ₄)	.591	.109	.123	5.422	.003
Bank Size (X ₅)	.536	.111	.109	4.828	.001

- a) Predictors: (Constant), asset quality, management efficiency, capital adequacy, liquidity management and bank size.
- b) Dependent Variable: Profitability.

The established regression equation was

$$Y = 0.188 + 0.557X_1 + 0.543X_2 + 0.598X_3 + 0.591X_4 + 0.536X_5 + \varepsilon$$

The above regression indicates that asset quality, management efficiency, capital adequacy, liquidity management and bank size constant, other factors influencing Profitability will be 0.188 ($p = 0.001 < 0.05$). Also that holding all of the other variables at zero, an increase in management efficiency will cause a 0.543 ($p = 0.002 < 0.05$) increase in the Profitability, capital adequacy of 0.598 ($p = 0.003 < 0.05$) increase in the profitability, liquidity management by 0.591 ($p = 0.003 < 0.05$) increase in the Profitability and that taking all other independent variables at zero, a unit increase in Bank Size by 0.536 ($p = 0.004 < 0.05$) increase in the Profitability.

4.5 Discussion of the Findings

The findings of this study show that keeping all other factors constant an increase of asset quality leads to 0.557 increase of Kenyan commercial banks profitability. This agrees with Yin (2009) who states; a bank's asset quality affects both the individual banks financial and operation performance well as soundness of the national financial system.

This study also revealed the administration of the credit program and the quality of the loan portfolio are the primary determinant of asset quality of any commercial bank in Kenya. Loans constitute the largest percentage of assets and bear the biggest capital risk. Assets quality is a strong determinant of the financial performance because it influences the interest incomes while and the same time reduces the cost burden of bad debts management as per the law requirements.

The findings of the study also showed holding all other independent variables constant an increase in management efficiency will cause 0.543 profitability increases. These findings confirm argument by (Sufian and Chong, 2009) stating the main cause of poor profitability is poor expenditure management. High expenses results to low profits and vice versa which may always not be case, this is because high expenses can be connected to high banking activities resulting to large amounts of revenue. The study further revealed that overheads are caused by staff salaries which are high for most banks.

This study's findings also discovered that holding all other independent variables constant an increase of capital adequacy causes 0.598 increase of profitability. These findings are in line with Dang, 2011 that states capital adequacy ratio is directly proportional to the resilient nature of banks to crisis which also directly has an impact on bank's profitability through expansion risks but of profitable nature. The study further established a positive correlation between capital and profitability. Large capital banks are able to achieve diversification of their operations through enhancing their risk assumption and attraction of funds at low costs enhancing liquidity position. This study further found that what is essential to banks is a strong capital structure because it strengthens the banks finances and improves depositors' safety during macroeconomic shocks. Also revealed low capital bank ratio causes high risk and leverage which leads to increased costs of borrowing making the level of profitability high.

On liquidity management, the study established that holding all other independent variables constant an increase in management of liquidity results to 0.591 profitability increase. This confirms Bodla and Richa (2010), findings that there is a positive relation between liquidity and bank profitability. Liquidity management is a decisive decision that commercial bank managers make in accordance to their needs as related to the process of deposits and loans. Liquidity importance surpasses the interest of individual banks as its shortfall at individual bank level results to a broader systematic failure or repercussions. The research also established that banks do retain high liquidity at the opportunity cost of an investment to eventually get higher returns. In most cases financial strengths are related to high liquidity. A revelation also manifested as more funds are invested in current assets, profitability kind of reduces and at this time the working capital strategy seems less risky. This leads to a situation in which there are lower returns if a case of great financial slack manifests itself, in comparison to a less liquid working capital structure. The study further established if all other independent variables are taken at zero a unit increase in bank size causes a 0.536 increase in the profitability. These findings concur with Smirlock (2010), a big bank means more assets to hold if any problems arise, it therefore becomes logic that a loan to big banks is likely to be repaid as compared to a small bank. Smirlock also managed to find a connection between profitability and bank size as big banks tend to

have high profitability. The study further found that big banks have high profitability since they reduce rising capital costs. In cases of large banks having broad branch networks, there is provision of proximity convenience to clients and this may lead to a positive outcome of higher deposits but operation costs may negatively impact on the banks financial performance. Further study also shows that big banks due to ready access to resources have a stronger competitive ability as compared to smaller banks; this is also accompanied with more market power and greater economies of scale and scope. Large bank size creates the need for diversification which creates lower risks therefore giving room for low capital operation with less-stable funding. Facilitation of bank-based activities also becomes possible. These findings are also in line with Adnan (2012), the impact created by bank size is positive in terms of total assets on profitability for the large size commercial banks, whereas, for medium sized banks the impact of bank size in terms of total assets on profitability is positive but insignificant.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study findings, its conclusions and recommendations, presented in consideration to the study objectives used to analyze the impact of asset quality on profitability of Kenyan commercial banks

5.2 Findings Summary

This study discovered a positive relationship between asset quality and commercial banks profitability in Kenya. This implies that the lower the NPA to gross/net assets ratio, the higher the asset quality and therefore positive trade-off between asset quality and financial performance. The study also found out that the basic factors affecting asset quality of a loan portfolio is the loan quality and credit administration program of the commercial bank. Loans from a larger percentage of assets owned by commercial banks and are of high risk to their capital. These findings concur with Michael (2010) who states that a bank's asset quality, other than affecting the performance of operating and financial operations of the bank which has an impact the health of the national financial system.

This study found out profitability of most commercial banks is affected by management efficiency. This means that poor profitability is greatly caused by poor expenditure management. The study also found out that overheads are one of the most significant causes of high interest rate spread. These overheads are driven by relatively high staff wages.

The study discovered there is a positive correlation between profitability of Kenyan commercial banks and capital adequacy. These findings agree with Dang (2011), argument about the correlation between capital adequacy ratio and resilience of a bank during financial crisis is directly. This implies that profitability increase with increase in capital causing positive effect of high equity levels. Furthermore, increase in capital can cause an increase in expected earnings through insolvency distress.

Concluding that a stable capital structure is very key because it supplements the strength of a commercial bank during crisis and so acts as a cushion to depositors industrial crisis.

On liquidity, the study revealed strong correlation between proper management of liquidity and profitability of Kenyan commercial banks. Therefore adequate liquidity management is directly proportional to Kenyan commercial banks. This is confirmed by Bodla and Richa (2010), who states that the importance of liquidity affects both the individual bank and the entire banking industry. Banks that hold high liquidity intend to invest in high returns business ventures.

This study also established a positive correlation between profitability of a bank and its size. The finding is in agreement with Smirlock (2010) who states that large banks have high profitability.

Large banks enjoy large economies of scale and so high profitability. The bigger the bank the higher the profitability. Large banks basically capture economies of scale in the banking sector. Large banks also have high profitability because they reduce the cost of raising capital.

5.3 Conclusion

This research has comprehensively reviewed Kenyan commercial banks profitability and asset quality. This research's findings conclude there is a positive relationship between Kenyan commercial banks profitability and asset quality. When non performing asset to net assets ratio is lower, asset quality of Commercial Banks in Kenya is high and this implies a positive trade-off between assets quality and profitability. This research also concludes that Kenyan commercial banks profitability rises with increase in proper management of expenditures and also that a positive relationship between Kenyan commercial banks profitability and capital adequacy exists. A positive effect on profitability is caused by a reduction of capital cost due to higher equity levels.

Likewise concluding of a positive correlation between liquidity management and Kenyan commercial banks, therefore implying that adequate level of liquidity supports this theory.

Finally, on the bank size the study concluded there is a big positive correlation between size and performance of commercial banks which indicates the significance of economies of scale in this relationship.

5.4 Recommendations

This study recommends reinforcement of capitalization policies by the regulators of the banking industry so Kenyan commercial banks are capable of improving their profitability brought about by reduction in capital cost due to high levels of equity.

Also recommended is the adoption of policies and strategies that will ensure proper management of expenditures so as ensure high profitability. Expense management is a key duty for the board and management of commercial banks and so the lower the expenses the higher the efficiency and hence improved profitability.

5.5 Limitations of the study

The study's findings were only applicable to Commercial Banks in Kenya only and so cannot be generalized to other financial institutions.

The variables of this research are dynamic based on business cycle and market demand. These findings therefore may not show the real impact of the variables of commercial bank's profitability for considered duration.

5.6 Suggestions for further studies

The focus of this study was on the impacts of asset quality on Kenyan commercial bank's profitability. Researcher proposed that similar studies should be done about the affect of asset quality on bank's profitability that are listed in the Nairobi Securities Exchange. There is need for further studies to carry out similar study for a longer time period

REFERENCES

- Abata, M. A., (2014). Assets quality and bank performance: A Study of Commercial Banks in Nigeria, *Research Journal of Finance and Accounting*, 5 (18), 39 – 44
- Adeolu M.A. (2014). Asset Quality and Bank Performance: A Study of Commercial Banks in Nigeria. Lagos State University.
- Adnan, T. (2012).The impact of assets quality management on profitability and shareholders' value - the Case of Jordanian Listed Commercial Banks (2001 - 2012)
- Aliyu, A. A., & Tasmin, R.B. (2012). The impact of information and communication technology on banks' performance and customer service delivery in the banking industry, *International Journal of Latest Trends in Finance & Economic Science Vol-2 No. 1 March 2012*
- Allee, K.D. & Yohn, T.L. (2009). The Demand for Financial Statements in an Unregulated Environment: An Examination of the Production and Use of Financial Statements by Privately Held Small Businesses. *Accounting Review*. 84(1), 1-25.
- Anjili, J. (2014). The effects of asset and liability management on the financial performance of Commercial Banks in Kenya
- Aruwa, H.W., & Musa, A.L., (2014). Money supply and aggregate stock prices in Nigeria: An analysis of Cointegration and Causality Tests: *Research journal's Journal of Finance*, 2(10), 1 – 24
- Baral, K. J. (2008). Health Check-up of Commercial Banks in the Framework of CAMEL: A Case Study of Joint Venture Banks in Nepal. *The Journal of Nepalese Business Studies* 8, 211-298
- Black, B. (2001). The corporate governance behavior and market value of Russian firms, *Emerging Markets Review*, 2, 89-108
- Black, F. (1971). Implications of the random walk hypothesis for portfolio management. *Financial Analysts Journal* 27:16–22.

- Bodla, B.S., & Richa, V., (2010). Determinants of Profitability of Banks in India: A Multivariate Analysis. *Journal of Services Research*, 6 (2)
- Bourke, P. (2009). Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia, *Journal of Banking and Finance*, 13, 65-79.
- Brealey, R. A; Myers, S. C. & Allen, F. (2006). *Principles of Corporate Finance*. 8th edition. New York: McGraw Hill/Irwin cop
- Bruno, P. (2010). Bayesian and CAPM estimators of the means: Implications for portfolio selection. *Journal of Banking and Finance* 15:717–727.
- C songor D. and Curtis D, (2005) “Banks loans portfolio diversification”. (Master’s and Bachelor’s thesis), University of Gothenburg
- Caprio, G. & Klingebiel, L.R., (2002). Bank regulation and Supervision: What works best? *Journal of Financial Intermediaries*, 13, 205-248
- Central Bank of Kenya, (2013) Bank supervision annual report 2013. Accessed from http://www.centralbank.go.ke/downloads/acts_regulations/banking_Act.pdf
Accessed on 03/7/2015
- Cooper, S. & Schindler, T. (2007). *Business Research Methods*, 8th Ed. Irwin/McGraw-Hill, 1998.
- Dang, U. (2011). The CAMEL Rating System in Banking Supervision: a Case Study of Arcada University of Applied Sciences, *International Business*
- Dang, U. (2011). The CAMEL Rating System in Banking Supervision: a Case Study of Arcada University of Applied Sciences, *International Business*.
- David, A. (2007). Mega mergers in banking and the use of cost efficiency as an antitrust defence", *Antitrust Bulletin* 37, 541-600, 1992
- Davis, S.M. (2012), "Leading corporate governance indicators", in Low, C.K. (Eds), *Corporate Governance: An Asia-Pacific Critique*, Sweet & Maxwell, London, pp.57-73

- Devinaga, A. A. (2010). The emerging Ghanaian banking environment, published by BIS on the 26-June-2006; available at: [www. Bis.org/review](http://www.Bis.org/review) (date visited 25-06-2012)
- Flamini, V., McDonald, C. & Schumacher, L. (2009). The Determinants of Commercial Bank Profitability in Sub-Saharan Africa. WP/09/15. [Online]. January 2009. Available from: www.imf.org/external/pubs/ft/wp/2009/wp0915.pdf. [Accessed: 26 May 2010]
- Fofack, H., (2009). Nonperforming loans in Sub-Saharan Africa: causal analysis and macroeconomic implications. World Bank Policy Research Working Paper (3769).
- Gatuhu, N. (2013).the effect of credit management on the financial performance of microfinance institutions in Kenya
- Gavila, S. & Santa Barbara, D. (2009). What Explains the low Profitability in Chinese Banks.W/P30.
- Kamau, A.W. (2009). Efficiency in the Banking Sector: An Empirical Investigation of Commercial Banks in Kenya. A thesis submitted in partial fulfilment of the Requirements of Nairobi University for the Degree of Doctor of Philosophy. Nairobi: University of Nairobi.
- Kiganda, P. (2014). The effects of macroeconomic factors on commercial banks` profitability in Kenya, bank: Equity Bank Limited, *Research Journal of Finance and Accounting*, 5 (18), 39 – 44
- Kothari, C. R. (2004). Research Methodology: Methods and Techniques 2nd ed. Washira Prakshan
- Levine, R. (2008). The legal environment, banks, and long run economic growth. *Journal of Money, Credit and Banking*. 3(1), 91-100
- Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in Stock portfolios and capital budgets. *Review of Economics and Statistics*47:1347

- Markowitz, H.M. (1952). "Portfolio Selection". *The Journal of Finance* 7 (1): 77–91.
doi:10.2307/2975974. JSTOR 2975974
- Mathuva, D. (2009). Capital Adequacy, Cost Income Ratio and the Performance of Commercial Banks: The Kenyan Scenario. *International journal of Applied Economics and Finance* 4(12), 82-93
- Michael Spence (1973). "Job Market Signaling". *Quarterly Journal of Economics* 87 (3): 355–374. doi:10.2307/1882010. JSTOR 1882010
- Michael, JN.(2010). Effect of Non-Performing Assets on Operational Efficiency of Central-Cooperative Banks, *Indian Economic Panorama*, 16(3),33-39
- Mihail , I.C. (2009). Effects of Asset liability management in Banks: An Empirical study of Banks in Europe Faculty of Finance, Cesta NaAmfiteature 21 June.
- Moraa, S.O. (2014). An analysis of profitability of Kenya’s top six commercial banks: internal factor analysis, *American International Journal of Social Science* Vol. 3, No. 5; October 2014
- Mugenda, O. & Mugenda, A. (2003).Research Methods: Quantitative and Qualitative Approaches; Act Press: Nairobi
- Nazir, M. (2010). Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model, *Pakistan Journal Commercial Social Sciences*
- Ombaba, K.B (2013). Assessing the Factors Contributing to Non – Performance Loans in Kenyan Banks, *European Journal of Business and Management* 5 (32), 2013
- Ongore, O. (2013), studied the determinants of financial performance of Commercial Banks in Kenya, *International Journal of Economics and Financial Issues*, No. 1, 2013, pp.237-252ISSN: 2146-4138www.econjournals.com
- Orodho, A. J. (2009). Techniques of Data Analysis Using Statistical Package for Social Sciences (SPSS) Computer Package. Maseno, Kenya: Kanezja Publishers.
- Sharpe, W.F.(1964): ‘Capital asset prices: A theory of market equilibrium under conditions of risk.’ *Journal of Finance* 19:425–442

- Smirlock, M. (2010). Evidence on the (none) relationship between concentration and profitability in banking, *Journal of Money, Credit and Banking*, 17(1), 69-83
- Sufian, F. & Chong, R. R. (2009). Determinants of Bank Profitability in a Developing Economy: Empirical Evidence from Philippines. *Asian Academy of Management Journal of Accounting and Finance*. 9(5), 14-20.
- Uzhegova, O. (2010). The Relative Importance of Bank-specific Factors for Bank Profitability in Developing Economies.
- Van Horne, J. C. & Wachowicz, J. M. (2005). *Fundamentals of Financial Management*. 12th edition. Harlow: Pearson Education Ltd
- Vighneswara, S., (2015). Determinants of Assets Quality and Profitability: An empirical assessment. Available in www.ibsindia.org
- Yin, N. P. (2009). Look at Taiwan's Banking Problems from Asia Financial Crisis, *Banking Finance*.1.

APPENDIX I: LIST OF COMMERCIAL BANKS IN KENYA

Classification	Description	Commercial Banks
Tier I	Comprises of banks with a balance sheet of more than Kenya Shillings 40 billion	<ol style="list-style-type: none">1. Citibank2. Equity Bank3. Standard Chartered Bank4. Barclays Bank of Kenya5. NIC Bank6. Kenya Commercial Bank7. National Bank of Kenya8. Diamond Trust Bank9. Co-operative Bank of Kenya10. CFC Stanbic Bank
Tier II	Comprises of banks with a balance sheet of less than Kenya Shillings 40 billion but more than Kenya Shillings 10 billion	<ol style="list-style-type: none">11. I&M Bank12. Bank of India13. Bank of Baroda14. Family Bank15. Prime Bank16. Commercial Bank of Africa17. Bank of Africa18. Consolidated Bank19. Chase Bank20. Fina Bank21. EcoBank22. HFCK

Tier III	Comprises of banks with a balance sheet of less than Kenya Shillings 10 billion	<ul style="list-style-type: none"> 23. Habib A.G. Zurich 24. Victoria Commercial Bank 25. Credit Bank 26. Habib Bank (K) Ltd 27. Oriental Commercial Bank 28. K-Rep Bank 29. ABC Bank 30. Development Bank of Kenya 31. Middle East Bank 32. Equatorial Commercial Bank 33. Trans-National Bank 34. Dubai Bank 35. Fidelity Commercial Bank 36. City Finance Bank 37. Paramount Universal Bank 38. Giro Commercial Bank 39. Imperial Bank 40. Guardian Bank 41. Southern Credit Bank 42. Gulf African Bank 43. First Community Bank
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Source: The Banking Survey by CBK 2015