

**AN EMPIRICAL STUDY OF FACTORS INFLUENCING FINANCIAL  
PERFORMANCE OF ISLAMIC VERSUS CONVENTIONAL BANKS IN KENYA**

**BY**

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## DECLARATION

I declare that this is my original work and to the best of my knowledge it has not been submitted for a degree award in any University or Institution of higher learning.

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

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## **DEDICATION**

This research project is dedicated to my lovely children

## ABSTRACT

Today's international and domestic environments in which commercial banks operates in are getting more challenging due to structural reforms of early 1980's resulting to globalization and deregulation of financial markets among others. All these changes led to stiff competition among banks both at domestic and international market for customer's funds mobilization and utilization. The determinants of bank performance have long been a major focus of banking research world over. The literature divides the determinants into internal and external factors. This study examines empirically the factors influencing the financial performance of Islamic versus conventional banks in Kenya (2009 – 2012). The specific objectives of this study was to analyze how bank's specific; industry characteristics and macroeconomic variables affects the performance commercial banks in the country and also to establish whether Islamic banks as new concept are as profitable as conventional banks. The study employed causal comparative research design as the main approach to guide the study. A simple random sampling technique was used to select sample of two Islamic and eight conventional banks from a stratified groups, based on CBK weighted composite index of small and large banks. Data was analyzed using correlation and regression analysis and the results presented in graphs and tables. The study findings showed that bank characteristic variables such as interest spread, capital adequacy, size, and liquidity have positive and strong influence in the performance of commercial banks, while management efficiency and asset quality recorded strong and negative association to profitability. Furthermore, costs and profits have inverse relationship. On the impacts of the industry specific factors, the results was mixed; whereas the banking sector development variable proxy as credit to private sector have a positive and insignificant influence on bank performance, the stock market capitalization indicator recorded negative and insignificant influence on banks profitability. More importantly, the study found that the macroeconomic determinants such as real GDP growth rate showed positive and strong association to banks profitability, while Inflation have negative and insignificant impacts on profitability. Overall the study revealed that banks specific factors plays significant roles in performance of the banks as they accounted for 80.6 percent of changes in bank profitability. Additionally, on the matter of whether Islamic bank is as profitable as large and small size conventional banks, the study concluded that large banks are far much profitable than other banks categories, followed by small size conventional; while Islamic banks was found to be the least profitable banks in the groups. This confirms the assumption of relative market power theory. The reasons for significant differences in the performance between bank types are due several advantages accruing to conventional banks over Islamic banks. These include; strong capital base and economies of scale that conventional banks specifically large banks enjoys compared to Islamic banks, which is still young and evolving model. The study concluded that Islamic banks though barely six years old in the country, are very promising as they are catching up with small size conventional banks, if the performance trend exhibited in table 4.1 would be sustained in future.

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## LIST OF ABBREVIATIONS

|        |   |
|--------|---|
| ATM:   | Automatic Teller Machine  |
| CAMEL: | Acronyms for Capital Adequacy, Asset Quality, Management Quality,<br>Earnings & Liquidity |
| CBK:   | Central Bank of Kenya   |
| CRB:   | Credit Reference Bureaus  |
| GDP:   | Gross Domestic Product  |
| KNBS:  | Kenya National Bureau Statistics  |
| MP:    | Market Power  |
| PLS:   | Profit and Loss Sharing   |
| ROA:   | Return on Assets  |
| ROE:   | Return on Equity  |
| RMP:   | Relative Market Power   |
| SCP:   | Structure Conduct Performance   |
| SD:    | Standard Deviation  |

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Today's international and domestic environments in which commercial banks operate are getting more challenging. Due to effects of structural reforms of the late 1980s that led to globalization, deregulation, innovation, technological advancement and information's revolution, it has become indispensable for local banks to remain focused in redesigning its processes and products offering to customers in order to match with unremitting financial innovations in the market that is driven by strong competition from both domestic and foreign financial institutions (Shaher, Kasawneh and Salem, 2011). Thus, the external environments in which banks compete for funds, customers, and financial services, have impacts on bank performance. However, the nature of uneven competition if not properly monitored, can have a negative impact on banks' profitability, as it reduces the interest spread earned by banks. Understandably, though, a healthy and sustainable profitability is vital in maintaining the stability of the banking system (Gischer and Guttner, 2002).

Similarly, Samad and Hassan (2000) noted that in a highly competitive financial markets bank performance measures provides signal to depositor-investor, whether to make the decision to invest or withdrawal from that bank. It is highly important for managers to determine and evaluates financial position of their institution relative to peer competitor and industry benchmarks. More importantly, the bank regulators, being responsible for safety and soundness of banking system and preserving of public confidence, should monitor bank's performance in order to identify banks that

are experiencing adverse performance reporting. Therefore, persistent monitoring of performance is essential to identify early enough, cases that may trigger any unexpected contagion effects and financial crisis.

Berger, Hunter and Timme (1993), argued that if banks are efficient there would be an improved profitability, greater amount of funds intermediation, better pricing and quality services for customers leading to a sustainable economic growth that benefits the whole society. More importantly, it can result into greater safety and soundness; if the efficiency savings realized are applied to build-up capital buffer to mitigate against any risk. However, the converse applies in case of inefficient intermediaries leading to a contagion effects.

The financial sector, especially, banks is regarded as the prerequisite for economic progress. They are the provider of the major sources of funding for modern trade and commerce. They are the engine of good financial system which enables investors to get a better return. The sector experienced a rapid expansion of institutions in terms volume and sizes over the past four decades; this unprecedented growth of banks also resulted to an increased proliferation of financial crisis and bank's non-performance (Zubair, 2005). The differences in bank profitability levels can be attributed to business orientation, bank features, industry characteristics, and external factors driven. Thus, empirical researches on determinants of bank profitability usually contain bank's specific variables, industry and macroeconomic indicators. Against this back drop, it is interesting to examine and evaluates the comparative analysis of factors affecting the performance of these banking models in Kenya.

### **1.1.1 Factors that Determines Performance of Commercial Banks**

The determinants of bank performance have long been a major focus of banking research world over. The performance of commercial banks can be affected either positively or negatively by the internal and external factors (Al-Tamimi, 2010; Haron, 2004). The internal factors are bank specific characteristics, further categories in to financial statement variables and non-financial statement variables. The financial statement variables relate to the decisions which directly involve items in the balance sheet and income statement, while non-financial statement variables are outside the financial statement. The financial statement indicators include; bank size, capital ratios, liquidity, asset quality, deposits, operational efficiency, risk management etc. The non-financial variables include; number of branches, employees, ATM, customers, age of the bank, ownership etc. The internal factors are generally believed to be within the control and influence of the management. Prudency dictates that through the best practice in policies, strategies, and decision objectives; the management and the board can influence the banks performance results positively (Haron, 2004).

The external factors are sector wide or country wide factors which are considered to be beyond the control and influence of the management and board but reflect on the sound macroeconomic development and stability of financial industry as a whole. Among the widely discussed external variables are competition, regulation, concentration, market share, exchange rate, scarcity of capital, money supply, inflation and GDP. The linkages between banks profitability, the internal and external factors have been investigated empirically by means of cross-country regression, time series analysis, panel studies or a country case study (Srairi, 2009).

### 1.1.2 Islamic Banking System

According to Moin (2008) Islamic banking is defined as banking in consonance with the ethos and value system of Islam, governed in accordance with the principles of Islamic *Sharia'h*. Islamic banking is consistent with principles of Islamic law (Sharia'h) and economics. It is derived from a branch of *sharia'h* called *fiqh mua'malat* (Islamic rules on transactions). According to Siddiqui (2008) Islamic financial instruments are based on the principles that they exclude dealing in interest (*riba*), does not possess major uncertainty (*gharar*) or gambling like features (*maysir*), and prohibits undertaking of unlawful business (*haram*), while advocating for *profit and loss* sharing principles and supports for *asset-backed* financial transactions.

The Islamic banking model operates on the principle of *profit and loss* sharing (PLS) concept developed by Siddiqui (1967) as an alternative to interest-based banking. The PLS Model came into effect following strong condemnation by scholars that the charging of any guaranteed returns on financing was not only unacceptable but also illogical, irrational and unjust to the society. This led to development of *Modaraba* contracts that recognizes partnership trading, where rate of return (profit) on productive investments is shared in proportion to equity or efforts contributed by either party(s). Siddiqui further developed and formalized the Islamic financial intermediation system called “two-fold *Modaraba*” which entails a bank-depositor and bank-users of funds relationship. The fundamental principle of a two-fold *Modaraba* was a noble and economic wise credit system aim to empower entrepreneurs to obtain financial resources based on profit sharing contract as opposed to *riba*-based system.

Chapra (1985); Dar and Presley (2000) in their studies observed that similar to conventional bank, Islamic bank plays roles of an intermediary and trustee of public money, though, based on profit and loss sharing principles (PLS), assets backed, and centers on risk-sharing mechanism; subject to return from real economic performance underlying the contract, unlike conventional principle which is largely interest-based and allows for risk transfer. Islamic banking is thus characterized by its unique terms of reference for money, financial cooperation and investment. It stands for equity-sharing, ethical framework and stake-taking, while doing away with a debt-based relationship. Therefore, the concept of Islamic banking and finance is regarded as a lynchpin to achieving the economic and social justice through share of profit and losses by the stakeholders.

### **1.1.3 Conventional Banking System**

According to historical evidence, banking operations dates as early as 34<sup>th</sup> centuries BC, during which religious temples acts as a custodian of the worshiper's savings and advance loans to those who needs finance, thus acting as banks (Chachi 2005). It was believed that the ancient traditional banking system evolved from a dealership model. The pioneer study by Ho-Saunders (1981), observed the initial conceptualization of "bank firms" as mere intermediaries between lender and borrower. The modern commercial banks collect deposits from customers in form of saving and lend-out the money to borrowers at interest. The interest paid by the borrowers becomes borrowing costs. The conventional banks charge a spread for intermediation roles of providing financial immediacy services calculated as the differences between the lending rate and the deposit rate. The degree of spread affects the interest rate margin, which substantially contributes to the level of profitability of banks. The

interest rate margin approach is based on the Ho and Saunders (1981) dealership model; further extended, by Angbazo (1997), and Saunders and Schumacher (2000) (as cited in Gischer and Guttner, 2002). The fact that a bank is a risk-averse agent stands ready, to accept randomly incoming deposits and make loan on demands. Analogously to the posted buy and sell prices in securities trading, banks are committed to the advertised deposit and loan rates for the next period. Due to stochastically arrivals time of deposit inflows and loan requests, banks select optimal deposit and loan rates that minimize the build-up of unwanted cash reserves and excessive loan demands. They do this by adding a loan-granting fee to the riskless interest rate and subtracting a deposit-granting fee from the riskless rate as compensation for providing immediacy and for bearing interest rate risk (Gischer and Guttner, 2002).

#### **1.1.4 Kenya Banking Sector**

As at 31<sup>st</sup> December 2012, the banking sector consisted of the Central Bank of Kenya (CBK) as the regulator, 43 commercial banks (two fully fledged Islamic banks) and 1 mortgage finance company (MFC), 5 representative offices of foreign banks, 8 Deposit-Taking Microfinance Institutions (DTMs), 112 Forex Bureaus and 2 Credit Reference Bureaus (CRBs). According to Central bank of Kenya, supervisory report (2012) the financial performance of the banking sector remains stable and sound characterized by improved performance compared to previous year; though, still slowed down by sluggish global economy. The key financial highlights, as at 31 December 2012 are as follows; total assets stood at Kshs.2.32 trillion up from Kshs. 2.02 trillion recorded in 2011; customer deposits grew by 14.8 per cent to Kshs. 1.71 trillion, net loan and advances rise by 12.5 per cent to close at Kshs.1.29 trillion in



2012, while pre-tax profit reached Kshs. 107.9 billion; a rise of 20.6 per cent. The sector's average liquidity closed at 41.9 per cent up from 37 per cent recorded in 2011 compared to minimum 20 per cent threshold. The sector's capital adequacy measured by ratio of total capital to total risk weighted assets stood at 23 per cent up from 21 per cent, and better compared to 12 per cent statutory limit. The sector is also supported by continued regional expansion, adoption of cost effective channels and embracing innovative use of technology (CBK, 2012).

The journey to the 'birth' of Islamic banking in Kenya reached climax during the budget speech of June 2006, after amendment of section 53 (1) of the Banking Act, Chapter 488 laws of Kenya, resulting to an exemption of Islamic banks from the provisions of section 12 that deals with restrictions on trading and investments. The amendment was intended to pave way for the introduction of an innovative ways of balance sheet management in the banking sector as a vehicle for financing *sharia'h* compliant products. This amendment led to Barclays bank of Kenya, to become the first pioneer bank to operate *la-riba* product under Islamic window. Subsequently, in 2007, First Community bank and Gulf African bank; were approved by the CBK to operate as a fully fledged *sharia'h* compliant institution. Since then several conventional banks have introduced Islamic windows among them the Kenya Commercial Bank Ltd, National Bank of Kenya and Chase Bank Ltd (*Jamia Mosque Committee, 2007*).

## **1.2 Research Problem**

Islamic banks operate under PLS principles based on Islamic *sharia'h law*. They have a responsibility just like conventional bank to support country's economy through mobilization of saving and provision of credit for business expansion. Suleiman

(2001), perhaps views Islamic banks as seeking a ‘just’ and ‘equitable distribution of resources’ compared to non-Islamic banks. Islamic bank is based on Islamic faith and its operations must be within the confines of Islamic law. Turk (2007) also observed that Islamic financial institutions operate under the constraints of complying with *sharia’h*, the Islamic legal code. Notwithstanding, they have to find alternative but acceptable means to improve financial performance and compete in a banking environments structured along western guidelines.

The evolution and widespread practice of Islamic finance over the past four decades has led scholars, economists and policy makers to carryout empirical studies on the financial performance of banks including comparative analysis across many countries. One such study conducted by Mahmood (2005) (taken from Ika and Abdullah, 2011), to evaluate the financial performance of Islamic and conventional banks in Pakistan for the period 2000 to 2004, revealed that Islamic banks were superior to conventional banks in all aspects. Another study conducted by Ika and Abdullah (2011), on whether there are differences between the performances of Islamic and conventional banks in Indonesia, during the year 2000 to 2007, observed no significant differences between the two banking system except stronger liquidity position shown by Islamic banks.

Notably, most of these studies are done in the developed economies. Therefore, despite the banking sector prominence, a few related studies were done on performance of banking sector in Kenya over the years. This includes studies by Njihia (2005), Musundi (2008), Ibrahim (2009), Halkano (2012) and Ongore & Kusa (2012) among others. However, there are only two studies done on comparative analysis of two banking system but none of these studies fully evaluated the empirical

analysis of factors affecting financial performance of Islamic versus conventional banks in Kenya, specifically, the effects of the external factors on banks performance. Perhaps due the differences in the orientations, this is the gap that the current study seeks to fill. Therefore this study seeks to answer the following research questions:

- i. How do bank characteristic, industry and macroeconomic variables affect commercial banks performance in Kenya?
- ii. Is there any significant difference(s) between the performance of Islamic and conventional banks in Kenya?

### **1.3 Research Objectives**

The objectives of this study are as follows:

- I. To identify and evaluate the major factors influencing the financial performance of commercial banks in Kenya.
- II. To establish whether Islamic banks are as profitable as conventional banks operating in Kenya.

### **1.4 Value of the Study**

This research finding would help potential investors and shareholders to identify investment opportunity available to them, so that they can make best investment decision. The finding would enable the bank management to focus on a competitive strategy aim to improve shareholders value; while at the same time strive to meet public expectations by embracing best market practice in terms of offering quality services and improved efficiency.

The research findings are also beneficial to public, customers and potential customers interested on effectiveness of customer service delivery mechanism offered by the banks. This will inform them on whether they would wish to continue with business or scale down their operations or withdraw their banking activities based on the result of the institutional financial performances. The bank regulator is interested to find out whether the financial system is sound, strong and earns public confidence at any giving time. Therefore this research will guide policy makers and regulators on the gaps that need to be closed to avoid any financial distress. The study should, in addition, make significant contribution to a growing body of scholars' and academicians' existing literatures on determinants of bank performance in the country. Last but not least, finance students and academician may need the study findings to stimulate further research in this area.

### **1.5 Justification of the Study**

The studies by Ibrahim (2009) and Halkano (2012), though a comparative studies on two banking models, narrowly focused on internal factors only. Yet it is a common knowledge that banks cannot operate in a vacuum and thus their performances are subject to external factors variations based on their orientations. Hence their studies failed to extensively cover multiples of the internal factors, while completely missed out on the external factors, which also play a significant roles in financial performance of commercial banks. Notably, their studies somewhat applied simple descriptive analysis to evaluate the data, while this study would employ multiples regression model to analyze the data. In this study, Islamic banks would be compared to the set of small and large conventional banks based on a weighted composite index provided by CBK. Additionally, this study covers recent time frame (2009-2012),

based on quarterly performance reports, reflecting a more matured data compared to Ibrahim, who had only one year data. More importantly, Islamic banks having begun operations in 2008, recorded huge losses for first three years, hence it was obvious that its ROA cannot match that of conventional banks then, compared to current period, when it is making profits for better comparison. Therefore, the researcher would evaluate multiple variables of both internal and external factors that are important in explaining profitability performance of commercial banks in the country.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter presents an in-depth literature on relevant theories of performance and its application to banks. It discusses performance indicators, and the evaluation of factors affecting financial performance of banks. The chapter provides empirical review on determinants of banks performance and concludes by giving the rationale for the selected topic understudy.

#### **2.1 Theoretical Review**

There are various theories to explain determinants of bank performance and its profitability. As Athanasoglou, Sophocles, and Matthaios (2005) observed, a more organized application of industrial organization models to bank performance started in late 1980s (as cited in Olweny & Shiphoo, 2011). These theories are discussed as follows;

##### **2.1.1 Market Power Theory**

The Market Power (MP) theory states that the performance of the bank is influenced by the market structure. The hypothesis suggests that only firms with large market share and differentiated portfolios can win their competitors and earns monopolistic profits. The market structure matters for the bank's power irrespective of the nature of banks, whether Islamic or conventional, as it can directly affect bank performance.

There are two distinct approaches within the MP theory: The traditional structure–conduct performance and the relative market power theories as discussed below.

#### **2.1.1.1 Structure Conduct Performance**

The traditional structure–conduct-performance (SCP) hypothesis developed by (Bain, 1956) states that increased exogenous market forces in bank’s conduct influences its profitability. The SCP paradigm assumes that higher level of bank concentration allows a higher degree of cooperation between banks thus result to set of higher prices and consequently gains substantial profits through oligopolistic behavior and collusive argument. The SCP hypothesis states that bank performance depends on various elements of market concentration, market structure, number and size of banks, and collusion. The more concentrated the market, the less the degree of competition and hence, the higher profitability.

#### **2.1.1.2 The Relative Market Power**

Shepherd (1986) formulated Relative Market Power (RMP) theory, which states that earning supernormal profits are due to firms with well-differentiated products that can increase market share and exercise their market power in pricing products. Consequently, under the RMP hypothesis, individual market shares accurately determine market power and market imperfections. The RMP hypothesis is empirically proved when concentration introduced in the explanatory equations of performance is found non-significant in contrast to market share which should be positively and significantly correlated with price and/or profitability. Therefore, the bank with a strong position in the market may either reinforce its domination over the market or achieves a higher efficiency.

### **2.1.2 The Efficiency Structure Theory**

Demsetz (1973) formulated the Efficiency Structure Theory (ES) which states that a bank which operates more efficiently than its competitors gains higher profits resulting from low operational costs. The same bank holds an important share of the market. Consequently, differences at the level of efficiency create an unequal distribution of positions within the market and an intense concentration. The efficiency theory further suggests that enhanced managerial capability and scale efficiency level leads to higher concentration and higher profitability. Among these capabilities, the bank should be skilled in areas of knowledge sets which includes; the talent to reinforce the training process and the relational network, its ability to master the sense of prediction, selection and rely on human capital and its capability to minimize cost while seeking adjustment of costs based on quality and products volumes in order to be efficient. The efficiency structure hypothesis is usually divided into the X-efficiency and scale efficiency hypotheses.

### **2.1.3 The Balanced Portfolio Theory**

The portfolio theory approach formulated by Nzongang and Attemnkeng as cited in Olweny and Shipho (2011); so far, was the most relevant and outstanding theory, as it plays an important role in bank performance studies. According to this theory of asset diversification, the optimum holding of each asset in a wealth holders portfolio is a function of policy decision determined by a number of factors such as vector of rates of return on all assets held in portfolio, a vector of risk associated with the ownership of each financial assets and the size of the portfolio. Therefore, it implies that the portfolio composition of the bank, its profit and the return to the shareholders is the



result of the optimum assets utilization, prudent management and overall policy decisions of the board.

## **2.2 Bank Performance Indicators**

Financial management theories have over the years provided various indexes for measuring banks' performances. However, Levonian (1994) stated that there was no single universally accepted measure for firm's performance (as cited in Soylu & Durmaz, 2013). In evaluating banks' performance, the use of financial ratio is most prevalent in existing literatures. For instance, O'Connor (1973) and Libby (1975) used ratios as a measure of performance (as cited in Samad, 2004). Accounting measures have several strength, besides, it's readily availability due to regulatory requirements for its publication; they are also subject to internal controls, which enhances data reliability. Generally, return on asset (ROA), return on equity (ROE), return on capital employed (ROCE) and Net interest Margin (NIM) have been widely used as profitability indicators. Samad and Hassan (2000) observed that bank regulators often used financial ratios to evaluate banks performance over the years. Also, the supervisory authority including the Central Bank of Kenya employs CAMEL rating approach to assess the soundness and financial stability of commercial banks in the country. The acronym stands for Capital adequacy, Asset quality, Management quality, Earnings (profitability) and Liquidity (CBK, 2012).

### **1.2.1 Return on Asset**

Return on asset (ROA) is considered one of the most popular ratios used to measure financial performance of banking industry. The ROA ratio is computed by dividing the net profit after tax over total assets. It reflects the ability of a bank's management

to generate profits from the bank's assets. This ratio put more emphasis on the efficient utilization of assets to generate revenues. It is expected that the higher the ratio, the higher the profitability.

## **2.3 Evaluation of factors Affecting Banks Performance**

The determinants of bank performances can be classified into bank specific (internal) and macroeconomic factors (external) (Al-Tamimi, 2010; Haron, 2004). The relationships of these factors to profitability are discussed as below;

### **2.3.1 Bank Specific (Internal) Factors**

Internal factors are bank specific characteristic, which affects bank performance. They are influenced by decision of the management and the board strategy. The relevant variables are discussed as follows;

#### **2.3.1.1 Capital adequacy**

In this study, capital adequacy will be measured using the ratio of equity to total assets. It assists bank management to understand the shock captivating capability during times of adverse development in the market. This variable is an indicator of bank capital strength. The rationale is that the high equity/total assets ratio, the better it will aid the bank in providing a strong cushion to increase its credit undertakings leading to better profitability.

#### **2.3.1.2 Asset Quality (Credit risk)**

Asset quality will help the management to understand the risk with respect to the exposure of a bank to borrowers. Asset quality in this study will be measured by the ratio of nonperforming loans to total loan portfolio outstanding. Loans portfolio are

the main source of revenues for banks but equally considered as largest source of credit risk due to the problem of adverse selection. Equally, asset quality can also be used to measure the creditworthiness and reliability of the bank. Asset quality theory suggests that increased nonperforming loans can lead to credit risk hence decline in profitability.

#### **2.3.1.3 Management Efficiency**

This ratio measures superiority of the management performance through cost efficiency operations. In this study, cost to income ratio will be utilized to measure the management quality. This variable is calculated by dividing total operating expenses by total operating income. This implies that the smaller the ratio, the greater the operational efficiency. Thus, the cost to income ratio is expected to be inversely related to profitability.

#### **2.3.1.4 Liquidity ratio**

This performance parameter measures the ability of the bank to quickly meet its financial obligation arising from unforeseen circumstance that can result to an insolvency risk. Liquidity means the ability to readily convert assets into cash for utilization without extraneous condition. The ratio of liquid assets (cash and bank equivalent) to customer deposit is employed to capture liquidity. In order to hedge against liquidity risk, banks often hold liquid assets to meet adverse shocks. Therefore, the higher this ratio, the lesser liquid the bank and hence, the higher expected profitability. The minimum liquidity ratio as stipulated by CBK is at 20 percent. This requirement is an absolute measure of solvency and is usually established by regulatory authority.

### **2.3.1.5 Interest Spread**

Interest rate spread is calculated as the difference between the average yields a bank receives from loans and other interest-accruing activities and the average rate it pays on customers' deposits and borrowing funds. The net interest rate spread is a key determinant of a bank's profitability. The greater the spread, the more profitable the financial institution is likely to be. However, for Islamic banks income from financing activities is the appropriate terms used in Kenya. In this study a positive and strong relationship between interest spread and profitability is expected.

### **2.3.1.6 Bank Size**

Total assets are measure of bank size. In the balance sheet, bank assets consist of short and long term in nature. In order to capture possible non-linear relationship between size and profitability, the use of logarithm of total assets as a proxy for bank size is paramount. The rationale behind this thinking is because large banks are more likely to benefit from economies of scale. In this study it is assumed the bigger the bank size the higher the profitability.

## **2.3.2 Industry Specific Factors**

These are industry-wide factors that affect profitability of the financial sector performance as a whole. In this study, banking sector development and financial market development were considered;

### **2.3.2.1 Banking Sector Development**

This refers to financial resources provided to private sector. It is calculated as the ratio of domestic credit to private sector as a percentage of GDP. This variable proxy to

country's banking sector development, which influences banking performance. It's expected that a robust and well structured banking sector development is due to improved macroeconomic performance and hence positively affects the bank's profitability.

### **2.3.2.2 Financial Market Development**

In this study the ratio of Stock Market Capitalization (SMC) to GDP is used as a proxy for financial market development. The stock market plays a significant role in country's economic development through provision of short and long term funding to enhance productivity. This variable is expected to have positive relationship with profitability.

### **2.3.3 Macroeconomic Factors**

These are country wide external factors beyond the control and influence of the management that affects banks profitability. In isolate the effect of bank characteristic on profitability. In this study, the GDP and inflation variables were considered;

#### **2.3.3.1 Growth in Gross Domestic Product**

This index measures country's economic performance i.e. the total country's outputs in a single year. The real GDP growth rate is expected to have a positive relationship with bank performance such that when country experience high growth rate, the bank's profits are expected to be higher.

#### **2.3.3.2 Inflation Rate**

Inflation rate as measured by percentage change in the price of goods and services in a country. Inflation rate affects banks pricing of its products and services. The general

understanding is that banks continuously adjust its prices with changes in inflation rate. Hence, there is expected a positive relationship between the inflation and profitability, given that banks revised its pricing accordingly.

### **2.3 Review of Empirical Studies**

In his paper Srairi (2009), examines the impact of bank characteristic, macroeconomic, and financial structure on the profitability of conventional and Islamic banks operating in GCC countries for the period 1999-2006, using regression model. The selected sample includes 18 Islamic and 48 conventional banks. Empirical results show that the profitability of both Islamic and conventional is mainly affected by capital adequacy, credit risk and operational efficiency while liquidity and financial risk have positive impact on Islamic banks only. The study also found that GDP, money supply (M2) and stock market development positively influence profitability. However, there is insignificant relationship between banking sector development and inflation to profitability.

Jaffar and Manarvi (2011) directed a study on performance of Islamic and conventional banks in Pakistan. The study included a sample of 5 banks from each group for a period 2005–2009. The study reveals that Islamic banks performed well in terms of capital adequacy and liquidity compared to conventional banks which also performed better in earnings and management quality. However, the study observed that asset quality has no impacts in both banks.

In his research Al-Tamimi (2010) investigated some significant factors influencing the performance of UAE Islamic and conventional banks during the year 1996 to 2008, using regression analysis, specifically ROA and ROE as dependent variables.

The researcher observed that liquidity and concentration were the most significant factors for conventional national banks whereas number of branches and costs were reported as the most significant factors for Islamic banks performance.

As for the most recent literature, Zeitun (2012) conducted a study to assess the factors that affect Islamic and conventional banks performance in GCC for the period 2002–2009. The study had a sample of 13 Islamic and 38 conventional banks. The factors studied were foreign ownership, bank specific variable and macroeconomic variables. The study concluded that bank's equity was important factor in maximizing the profitability for conventional banks but negatively affected Islamic banks. As for cost to income ratio reflected a negative and significant impact on performance of both banks. The size of the banks supported the economies of scale utilizing the ROE for Islamic banks. However, foreign ownership has no impacts on both banks, while GDP was positively correlated; Inflation was found to be negatively related to the banks performance.

A study by Ongore and Kusa (2012), investigated the determinants of financial performance of commercial banks in Kenya, during the period 2001-2010, using multiple regression and t-statistic analysis. The study had a sample of 37 banks fully operational during the entire study period. The findings showed that bank specific factors affected performance of commercial banks except for liquidity variable, while the GDP (positively related) and inflation variables coupled with moderated ownership identity showed an insignificant result at 5% significance level. Accordingly a research conducted by Musundi (2008), on the relationship between size and profitability of Kenyan commercial banks between the year 1998 and 2007. The findings reveals that some variables like the number of ATM, number of

employees, net liquid assets, shareholders funds, customer deposits and bank loans have positive effect on profitability; whereas the number of branches, total assets and number of customers have a negative effect on profitability of banks.

Ibrahim (2009) compared performance of Kenyan conventional and Islamic banks during 2008-2009, using financial performance ratios with a sample of 2 banks from each group. The t-test and f-test were employed to analyze the data. The study revealed that conventional banks were more profitable and efficient but more risky and less solvent than Islamic banks. Additionally, another more recent comparative study done by Halkano (2012), on performance of Islamic and conventional banks in Kenya, for the period 2008-2011, from a selected sample of 2 Islamic and 5 conventional banks using financial ratios. The study captured four broad measures of financial performances ratios such as profitability, liquidity, efficiency and risk and solvency of banks. In comparison to Islamic banks, the conventional banks performed better in all areas save for liquidity where the Islamic banks performed better.

#### **2.4 Summary of Literature Review**

The evolution and widespread practice of Islamic banking and finance over the past four decades has generated interest and discussion amongst scholars, economists and policy makers. This led to a large number of empirical studies been conducted about determinants of bank performance coupled with comparative analysis. It is evident from the above literature review that comparative bank performance showed mixed results about Islamic and conventional banks performance. Bank performance is measured by use of different financial indicators especially panel data, CAMEL rating and financial ratios have been commonly applied. The above literature discussion confirms a strong linkage between bank characteristic, industry factors and its



performances. Therefore this research aims to analyze how bank's specific; industry characteristics and macroeconomic variables affect the performance of two set of banks, where both types of financial institutions operates side by side in Kenya.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter provides an overview of the research methodology and tools used to gather data to meet the objective of the study. It specifically entails the research design, target population and sample design, data collection methods, and data analysis techniques applied in the study.

#### **3.2 Research Design**

The study adopts a causal comparative research design to evaluate the factors influencing the financial performance of Islamic and conventional banks in the country. According to Mugenda and Mugenda (2003), in a causal comparative design, the study creates two or more distinct group(s) whose performances are compared based on certain parameters.

#### **3.3 Population of the Study**

The target population for this study was 43 commercial banks operating in Kenya, broadly classified into three peer groups based on a weighted composite index of total assets, deposits, capital size, number of deposit accounts and loan accounts. The composite index market shares classified banks into the following categories: large banks >5 per cent, medium banks >1 to <5 per cent and small banks <1 percent of aggregate market share. As 31<sup>st</sup> December 2012, the statistics reveals that there are only 6 large banks, 15 medium size banks and 22 small size banks (CBK, 2012).

### 3.4 Sampling Design and Sample Size

Cooper and Schindler (2003) define a sampling design as the procedures used in selecting the sample. The stratified sampling technique was used to pick the sample strata based on composite index. Simple random sampling method was employed to select the conventional banks under study from each category of strata groups. The selected sample consists of 10 commercial banks operating in the country during the period under review. However, conventional banks offering window *sharia'h* products and the entire medium size banks were excluded from the study. The aim of the study was to compare Islamic banks to its peer of small size and large conventional banks to be able to elicit any performance differences between the groups based on their orientations. As shown in Table 3.I below, the sample proportion for each category was quite adequate.

**Table 3.1: Population and sample frame**

| Categories of banks                  | Population size | Sample size | Sample Proportion | Sample banks  |
|--------------------------------------|-----------------|-------------|-------------------|---|
| Islamic banks (small-size)           | 2               | 2           | 100%              | First community and Gulf Africa bank                      |
| Small-size Conventional banks (peer) | 20              | 5           | 25%               | ABC, Trans-National, Victoria, K-Rep and Development bank |
| Large-size Conventional              | 6               | 3           | 50%               | Equity, Coop and Standard Chartered                       |

Source: Author (2013)

### **3.4 Data Collection**

The secondary data were sourced from the published quarterly and annual financial statements and websites of the selected commercial banks. The sample is a balanced panel data set observed over 16 quarters from year 2009–2012. The data on country's macroeconomic and financial sector variables was sourced from CBK, World Bank and Kenya National Bureau of Statistics (KNBS) publications and websites.

### **3.5 Data Analysis**

Statistical analysis was performed on data obtained from secondary source. The process involved preparation of data through coding, editing and cleaning to ensure accuracy and consistency and avoid any omission. The Statistical Package for Social Sciences (SPSS) was used to provide the descriptive statistics (means, standard deviations Kurtosis, and skewness) to elicit some differences in the performances. The Analysis of Variance (ANOVA) was used to run the multiple linear regression model outlined hereunder to determined how the internal and external variables affects the performance of commercial banks in the country. Thereafter, several techniques of data presentation including tables and graphs were employed to explain the findings.

#### **3.5.1 Profitability Determinants and Variables**

Understandably profitability is the key yardstick for measuring financial performance of any institution. Sinkey (as cited in Zeitun, 2012) described ROA as the best measure of profitability. This study employed CAMEL rating approach in the regression model to measure the profitability. The ROA as the major profitability indicator (dependent) was used against 10 explanatory variables including

macroeconomic indicators. The bank-specific factors (independents) that was considered in this study include; capital adequacy, asset quality (credit risk), management capability, liquidity, interest spread, and bank size. This was proxy by selected ratio to measure the influence on profitability. The financial sector development and macroeconomic variables considered in this study are bank sector development (BSD), stock market capitalization (SMC), real GDP growth rate and inflation rate.

### 3.5.2 Model Formulation

According Hair, Black, Babin, Anderson, and Tathan (2006) multiple regression analysis is described as a statistical technique that is used to analyze the relationship between dependent variable and several independent variables. The objective is to predict the dependent variable from known independent variables. Through the use the weights also referred as regression coefficient, the relative contribution of each independent variable to dependant variable is established. These weight influences the power of prediction in the model. In this study, in order to identify the significant factors and the relationship that affect the profitability of banks (2009-2012), a multiple regression model was employed.

The model equation is as follows;-

$$y_{i,t} = \alpha + \beta_1 CA_{i,t} + \beta_2 AQ_{i,t} + \beta_3 ME_{i,t} + \beta_4 LQ_{i,t} + \beta_5 INTSPR_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 BSD_{i,t} + \beta_8 FMD_{i,t} + \beta_9 GDP_{i,t} + \beta_{10} INFL_{i,t} + \epsilon_{i,t}$$

Where;

$y_{i,t}$  = Return on Assets (ROA) for bank i in year t, (dependent variable )

$CA_{i,t}$  = Capital Adequacy ratio ( Equity /Total Asset) for bank  $i$  in year  $t$ ,

$AQ_{i,t}$  = Asset Quality ratio (Gross nonperforming loan /Total loan) for bank  $i$  in year  $t$ ,

$ME_{i,t}$  = Management Efficiency ratio (Total Cost /Total income) for bank  $i$  in year  $t$ ,

$LQ_{i,t}$  = Liquidity ratio (Cash and cash equivalent/ Deposit & Borrowing) for bank  $i$  in year  $t$ ,

$INTSPR_{i,t}$  = Interest Spread ratio {(Interest income/earnings assets) minus (Interest expense/(deposit and borrowing))} for bank  $i$  in year  $t$ ,

$SIZE_{i,t}$  = Bank Size calculated as log of Total Asset for bank  $i$  in year  $t$ ,

$BSD_{i,t}$  = Banking Development index calculated as (Credit to private sector/GDP) in year  $t$ ,

$FMD_{i,t}$  = Financial Market Development ratio as (Stock Market Capitalization/GDP) in year  $t$ ,

$GDP_{i,t}$  = Real Gross Domestic Product growth rate in year  $t$ ,

$INFL_{i,t}$  = Inflation rate calculated as percentage change in Overall annual Inflation rate in year  $t$ ,

$\alpha$  = a constant,

$\beta_1 - \beta_{10}$  represents coefficients parameters, and

$\epsilon_{i,t}$  = error term; where  $i$  is cross sectional and  $t$  is time identifier

Dummy variables for the bank type were introduced.

The coefficient of determination  $R^2$  and the adjusted  $R^2$  was used to determine the level of variation in profitability of commercial bank in Kenya that can be explained by independent variables, coupled with level of contribution and direction by each factor as best predictor of dependent variable; while  $F$ -test was applied to assess any statistical significance differences in the profitability performance of two sets of banks.

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents analysis and findings of the study as set out in the research objective and research methodology. The study findings are presented on what influences performance of Islamic banks as contrasted with conventional banks. The result findings include descriptive statistics, test for multicollinearity, and econometric results amongst others. The data was exclusively gathered from the secondary source obtained from selected banks websites, records from Central Bank of Kenya and Economic survey reports from the Kenya National Bureau of Statistics.

#### **4.2 Results and Discussion**

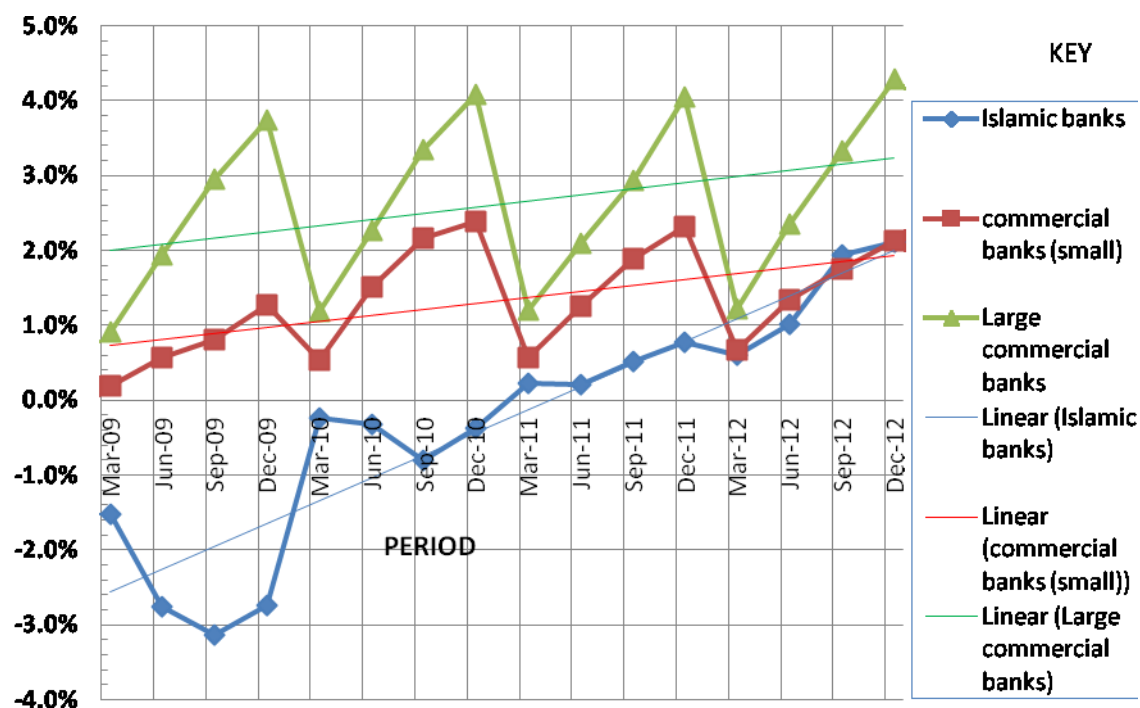
##### **4.2.1: Trend Analysis of bank performance**

The result finding in Figure 4.1 below shows that all bank type exhibited a progressive growth trends during the period. The cyclical trend is due to lack of annualization of the data in the quarters though cumulatively taken at end of every period. Perhaps, it can be deduced from the trend lines that though conventional banks exhibited a better performance than Islamic banks in terms of profitability, the later has demonstrated a superior performance and signs of viable business in the Kenyan financial market, as reflected by a steep rise from loss making institution at the start of period to a trajectory growth, in the later years to the extent of even matching the performance of small commercial banks by December 2012. This means that there is



a greater potential and business case for Islamic banks in the country, save for lack of enabling legal and regulatory framework which can pose some challenges.

**Figure 4.1: Bank Profitability Trend (ROA)**



Source: Author (2013)

**Table 4.1: Descriptive statistics for profitability variable (ROA)**

| Dependent Variable  | N   | Min.    | Max.  | Mean  | SD    |
|---|-----|---------|-------|-------|-------|
| Return on Assets = Profitability (y) [Net Profit After Tax/ Total Assets] | 160 | (0.033) | 0.056 | 0.014 | 0.017 |
| No of Observations  | 160 |         |       |       |       |

Source: Author (2013)

As per Table 4.1 above, the banking sector recorded an average profitability of 1.4 percent measured by return on assets over the period 2009-2012. During the study period, ROA values in the group ranges from a minimum and negative value of (3.3 percent) to a maximum of 5.6 percent. This result is slightly lower compared to the study by Ongore and Kusa (2012) on performance of Kenyan banks during the period 2001-2010, where the average ROA stood at 1.96 percent. The difference in the performance is attributed to the inclusion of startup and loss-making Islamic banks in the current study that was hitherto excluded from their study due to limitation of data.

**Table 4.2: Descriptive statistics for independent variables**

| Code   | Independent Variable  | N   | Min.  | Max.  | Mean  | SD    |
|--------|---|-----|-------|-------|-------|-------|
| CA     | Capital Adequacy Ratio = [Equity /Total Asset]  | 160 | 0.089 | 0.394 | 0.165 | 0.059 |
| AQR    | Asset Quality Ratio = [Gross nonperforming loan /Total loan]  | 160 | 0.000 | 0.267 | 0.078 | 0.068 |
| ME     | Management Efficiency = [Total Cost /Total income]  | 160 | 0.338 | 1.991 | 0.717 | 0.314 |
| LQ     | Liquidity = [Cash and cash equivalent/ Deposit & Borrowing]   | 160 | 0.186 | 0.861 | 0.452 | 0.159 |
| Intspr | Interest Spread = [(Interest income/earning assets) minus (Interest expense/deposit and borrowing)] | 160 | 0.001 | 0.180 | 0.055 | 2.717 |
| Size   | Bank Size = [Log Total Assets]  | 160 | 6.461 | 8.334 | 7.272 | 0.597 |
| BSD    | Banking Sector Development= [Credit to private sector/GDP (%)]                                      | 160 | 0.300 | 0.381 | 0.340 | 0.030 |
| FMD    | Financial Market Development = [Stock Market Capitalization/ GDP (%)]                               | 160 | 0.303 | 0.449 | 0.375 | 0.037 |
| RGDP   | Real GDP = [Real GDP Growth rate (%)]   | 160 | 0.010 | 0.072 | 0.043 | 0.015 |

|                    |                                    |       |       |       |       |
|--------------------|------------------------------------|-------|-------|-------|-------|
| Inf                | Inflation rate=[Average Annual 160 | 0.040 | 0.171 | 0.103 | 0.045 |
|                    | (%)]                               |       |       |       |       |
| Valid N (listwise) |                                    | 160   |       |       |       |

Source: Author (2013)

Table 4.2 above presents various explanatory variables that influence banks' profitability. They are internal and external related factors. As indicated above, the capital adequacy ratio varies from 8.9 percent to 39.4 percent with an average of 16.5 percent. This figure doubled the CBK threshold of 8 per cent. This shows that Kenyan banks are highly capitalized and able to undertake huge project financing on its own. The asset quality ratio ranges from nil to higher of 26.7 percent with an average of 7.8 percent non-performing loan to the total loans. It implies that the repayment rate on average stood at 92 percent and above on loans portfolio. This rating reflects very good performance partly driven by recent regulatory reforms in the country including the enactment of "The Banking (credit referencing bureau) Regulations 2008" by CBK. The aim of the regulation was to capture customer's credit history and subsequently black-list bad debtors in the financial sector to make it difficult for them to access any further credits in the industry.

On the flipside, the management efficiency, proxy as cost to income ratio is an important indicator of performance. This ratio varies from 33.8 percent to 199.1 percent, with an average of 71.7 percent for the banking sector, implying that commercial banks utilize nearly 71.70 percent of its revenues on costs. The rule of the thumb is the lower the ratio the better the efficiency and profitability. Hence, cost curtailment measures need to be properly instituted by banks to improve on efficiency ratio. On average, the sector liquidity stood at 45.2 per cent, which is far above the

statutory minimum requirements of 20 percent. This shows that Kenyan banks are highly liquid in order to cushion it from any adverse liquidity related matters. The interest spread was also important on financial performance of banks. The study reveals that on average Kenyan banks enjoys interest spread of 5.5 percent between interest charged on loan facility vis-à-vis interests paid on customer's deposits and borrowed funds.

Similarly, the study considered macroeconomic factors and interestingly the outcomes was quite promising, despite the slowed growth of the global economy. During the study period, the average GDP stood at 4.3 percent and the inflation rate was at 10.2 percent, while the banking sector development and stock market capitalization showed an upward trend averaged 34 percent and 37.5 percent respectively, thus supporting the banks performance.

#### **4.3 Relationship between Bank Performance and its Determinants**

This study sought to establish the relationship between bank characteristic, industry and macroeconomic factors and the profitability of Kenyan banks. From the onset, it was hypothesized that bank characteristics, industry specific factors and macroeconomic variables affects bank financial performance. Therefore, the first task was to establish the effects of relationship between profitability (ROA) and bank characteristic variables represented by capital adequacy, asset quality, management efficiency, liquidity, interest spread and size by using the multiples regression analysis formula restated as below.

$$Y_{i,t} = \alpha + \beta_1 CA_{i,t} + \beta_2 AQ_{i,t} + \beta_3 ME_{i,t} + \beta_4 LQ_{i,t} + \beta_5 INTSPR_{i,t} + \beta_6 SIZE_{i,t} + \epsilon_i$$

### 4.3.1 Model Assumptions

In order to ensure that the collected data is suitable for the basic linear regression model, some few diagnostic tests were carried out to ensure that key assumptions of the regression model are not violated. Tests to detect the presence of multicollinearity goodness of fit and autocorrelation were conducted as follows.

#### 4.3.1.1 Multicollinearity Test

Collinearity is defined as linear association between two independent variables. Multicollinearity refers to correlation among three or more independent variables whereas perfect multicollinearity refers to an extreme case of collinearity or multicollinearity, in which one independent variable is perfectly predicted by another independent variable (Hair *et al*, 2006). The presence of multicollinearity condition distorts the standard error of estimates and hence leading to problems when conducting tests for statistical significance of parameters. The study conducted a multicollinearity tests to determine if two or more predictor (independent) variables in the multiple regression model are highly correlated. The diagnostic measures for multicollinearity check are tolerance and variance inflation factor (VIF) values. The two measures indicate the degree to which each independent variable is explained by another independent variable (Hair *et al*, 2006). The Tolerance value indicates the percent of variance in the independent variable that cannot be accounted for by the other independent variable, while VIF is the inverse of tolerance. Table 4.3 below showed that tolerance values ranged between 0.292 and 0.683, while VIF values ranged between 1.464 and 3.423, which is within the acceptable limits placed by researchers. According to rule of thumb, tolerance values above 0.1 or 10 percent (Tabachnick and Fidell, 2001). Likewise, Gujarati (2003) rule of thumb regarding the

benchmark of VIF value is that if VIF value does not exceed 10 for a variable there is no need for concern. The objective is therefore to use independent variables that have low multicollinearity. While similarly, each independent variable should possess higher correlation with dependent variable for better predictive power (Hair *et al*, 2006).

**Table 4.3: Multicollinearity Statistics**

| Statistic | CA    | AQ    | ME    | LQ    | INTSPR | SIZE  | BSD   | FMD   | GDP   | Infl  |
|-----------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| Tolerance | 0.646 | 0.657 | 0.641 | 0.510 | 0.693  | 0.682 | 0.516 | 0.295 | 0.409 | 0.408 |
| VIF       | 1.548 | 1.522 | 1.561 | 1.959 | 1.443  | 1.466 | 1.938 | 3.384 | 2.445 | 2.454 |

Source: Author (2013)

#### 4.3.2 Correlation Matrix

The study used correlation matrix to establish whether linear relationship exists between individual variable and profitability of commercial banks. The higher the coefficient values, the stronger the relationship, and the smaller the coefficient values the weaker relationship to be observed. The signs also indicate the direction of the relationship such that a positive sign signifies a positive association, while a negative sign is an indicator of inverse relationship. Correlation coefficient measures only the degree of linear association between two variables. Values of correlations coefficient are always between -1 and + 1. A correlation coefficient of + 1 indicates that two variables are perfectly related in a positive linear sense while a correlation coefficient

of -1 indicates that two variables are perfectly related in a negative linear sense. A coefficient of 0 indicates no linear relation exists.

The correlation results presented on Table 4.4 shows that there was low but positive linear association between profitability and capital adequacy and liquidity; moderately high and positive linear association was established between profitability and size; negative but low linear relationship was established between profitability and asset quality and interest spread; and, negative and strong linear association was established between management efficiency and profitability. This was expected as costs reduce profitability. However, the correlation matrix shown in table 4.4 just indicates significance of relationship but not necessarily an indicator of presence of multicollinearity between variables. Therefore the strong correlation is only presence between the ROA and the independent variables save for asset quality and liquidity variables.

Table 4.10 in the appendices' shows the effects of correlation after the introduction of macroeconomic variables as control variables. From the analysis the banking sector development, financial market development and real GDP have positive and low association to profitability, while inflation shows negative and low association to profitability. The financial sector development of course is expected to compliment the roles of banks in availing cash for investment purpose through bonds and shares listing. Therefore the relationship was expected to be positive. It is expected that GDP grow imply better economic prospects and hence banks also make good returns in terms of profitability than during economic turmoil's when banks post declined profitability. Similarly inflation as macroeconomic indicators has negative effects on pricing and purchasing power of consumers hence affecting cost of living negatively.

**Table 4.4: Correlation Matrix for Bank characteristics variables**

| Variables | Capital Adequacy | Asset Quality | Management Efficiency | Liquidity | Interest Spread | Size   |
|-----------|------------------|---------------|-----------------------|-----------|-----------------|--------|
| CA        | 1.000            |               |                       |           |                 |        |
| AQ        | 0.417            | 1.000         |                       |           |                 |        |
| ME        | -0.011           | 0.107         | 1.000                 |           |                 |        |
| LQ        | 0.425            | 0.416         | -0.239                | 1.000     |                 |        |
| INTSPR    | 0.034            | 0.074         | 0.098                 | -0.372    | 1.000           |        |
| SIZE      | -0.223           | -0.321        | -0.437                | -0.163    | 0.101           | 1.000  |
| ROA (y)   | 0.213*           | -0.096        | -0.765*               | 0.144     | 0.301*          | 0.504* |

(\*) denote significance at 5% level (two-tailed) to profitability (y).

Source: Author (2013)

#### 4.3.3: Goodness of Fit Statistics

In the endeavor, the study sought to determine the goodness of fit of the regression equation using the coefficient of determination between the overall independent variables and profitability. The coefficient of determination established the strength of the relationship. Table 4.5 illustrates that the strength of the relationship between profitability and independent variables. From the determination coefficients, it can be noted that there is a strong relationship between dependent and independent variables given an  $R^2$  values of 0.830 and adjusted  $R^2$  value of 0.819. This shows that the explanatory variables (capital adequacy, asset quality, management efficiency, liquidity, interest spread and size) as moderated by the intervening variables (banking development index, financial market development, real GDP and inflation rate) in this



study accounts for 81.9% (or 80.6% for bank specific factors only) of the variations in profitability as measured by ROA. This implies that the internal factors play a significant role in bank profitability compared to external factors which accounts for 1.3% only.

Therefore this results support the Efficiency Structure Theory (EST) which suggests that enhanced managerial capability and scale efficiency level leads to higher concentration, and higher profitability. Thus, the management and the board should ensure that internal factors are objectively planned and prioritized for a better performance.

**Table 4.5: Goodness of Fit Statistics**

| No of Observations | Sum of weights | <i>DF2</i> | <i>R</i> <sup>2</sup> | <i>Adj. R</i> <sup>2</sup> | <i>MSE</i> | <i>RMSE</i> | <i>DW</i> | <i>Cp</i> |
|--------------------|----------------|------------|-----------------------|----------------------------|------------|-------------|-----------|-----------|
| 160                | 160            | 149        | 0.830                 | 0.819                      | 000        | 0.007       | 1.581     | 11        |

Source: Author (2013)

The study used Durbin Watson (*DW*) test to check that the residuals of the models were not autocorrelated since independence of the residuals is one of the basic hypotheses of regression analysis. Being that the *DW* statistic were close to the prescribed value of 2.0 (1.581) for residual independence, it can be concluded that there was weak autocorrelation. Similarly, where the values of mean square error (*MSE*), root mean squared error (*RMSE*) and sum square error (*SSE*) are either zero or approaching zero, it's an indicative of better model useful for prediction as indicated below.

#### 4.3.4: Significance of the Regression Model

The first step in interpreting a regression model is to ensure that overall model is statistically significant. This implies that empirical assessment on whether regression model can be generalized for whole population from which the sample was drawn from (Hair *et al*, 2006). In this study, Analysis of Variance (ANOVA) was used to make simultaneous comparisons between two or more means; thus, testing whether a significant relation exists between variables (dependent and independent variables). This helps in bringing out the significance of the regression model. The ANOVA results presented in Table 4.6 shows that the regression model has  $F$ -value of 72.998 and the associated  $p$ -value of the  $F$ -test  $<.0001$ , which is less than the significance level of 0.05. This indicates that the model has a probability of less than 0.1% of giving false prediction. This test implies the significance of the overall model.

**Table 4.6: Significance of the Model**

| Source     | $DF$ | Sum of squares | Mean squares | $F$    | $Pr > F$   |
|------------|------|----------------|--------------|--------|------------|
| Regression | 10   | 0.037          | 0.004        | 72.998 | $< 0.0001$ |
| Error      | 149  | 0.008          | 0.000        |        |            |
| Total      | 159  | 0.045          |              |        |            |

Source: Author (2013)

#### 4.3.5 Regression Results for each Variable

This section examines the role played by each independent variable in the prediction of the dependent variable. The *t*-test is used to perform the examination. The regression coefficient provides two kind of information's: first, the strength of the relationship between the independent variables and the dependent variable, in the regression equation, secondly the type of the relationship whether positive or negative sign. The coefficient values indicate the change in dependent variable as a result of a unit change in independent variable (Hair *et al*, 2006).

The empirical result as per Table 4.7 indicates that capital adequacy variable has a positive and significant impact on commercial banks profitability in the country. This result is consistent with previous studies (Bashir and Hassan, 2003; Srairi 2009; Ongore and Kusa 2012) providing evidence to the argument that banks with a strong capital base are able to pursue business opportunities more effectively than less capitalized banks. Also strong capital base enabled banks to continue advancing credits to private sector which is gradually experiencing a tremendous growth in the recent past. Due to oligopolistic nature of Kenyan banking sector that generally pursues deals with a moderate risk hence earning higher profitability than financing highly risky projects.

Asset quality variable depicts a negative and significant relationship to profitability ratio for all banks in the sample. This can be explained by the fact that provisioning as an expense has inverse relationship to profitability. However, asset quality ratio has been on upward trend especially with the licensing of credit reference bureaus in the country implying less provisioning because of the stringent measure put in place at screening and appraisal levels to lockout serial defaulters from accessing credit. This

finding is consistent with Srairi, (2009); but differed from (Jaffar and Manarvi, 2011) study which reported that asset quality has no impact on profitability.

Management efficiency variable proxy as cost to income ratio shows a negative and strong statistical association to banks profitability. This finding shows that the cost decisions of bank management are instrumental in influencing bank performance. This result is consistent with previous studies by (Kosmidou and Pasiouras, 2007; Srairi, 2009; Zeitun, 2012) among others, but inconsistent with the study by Ongore and Kusa 2012, which showed a positive relationship between operational efficiency and banks profitability in Kenya. However, the coefficient value is expected to be negative because of inverse relationship between cost and profits.

The liquidity variable was found to be positive and strongly related to profitability of the banks. This result is consistent with Ongore and Kusa, (2012) but differ from Al-Tamimi, (2010) findings. Given that all banks have more than threshold liquidity the positive impact was expected. However, liquidity variable is a double edged effect on banks because more of it implies idle cash which results to reduction in profits, while lack of it implies liquidity risk which can endanger bank smooth operations due to adverse shocks. Therefore management has to strike a trade off as to the level of average level of liquid cash that a bank required to maintain at any given time.

Turning to interest spread (financing income spread is a term for Islamic bank) variable as expected shows positive and strong association to profitability. This implies that commercial banks though has diversified its revenue based still heavily relies on interest income; hence, interest spread still matter a lot. After the introduction of dummy variables for all bank-type, the study revealed that individually, none of the bank groups (as indicated in Table 4.10 appendix) have any

significance correlation to interest spread factor. In fact the small conventional banks category showed negative and insignificant relation to interest spread implying that they have either diversified their revenues stream or their margin is highly eroded while in the case of Islamic banks and large conventional banks reflects positive relationship to profitability.

The size variable proxy as log of total assets has a positive and significant influence on profitability for all bank types. This finding is consistent with previous studies (Maghyerech and Shammout, 2004; Zeitun, 2012). The bank size is a measure of the outcome of the management strategic goal and policy objective in order to benefit from economies of scales gained over years, such that large banks are expected to operate efficiently at lower cost hence better profitability.

As regards, the impacts of external factors such as the macroeconomic and industry specific variables, these variables has mixed results on banks profitability as indicated in Table 4.7. The banking sector development variable proxy as value of credit to private sector revealed a positive and insignificant relation to banks profitability. This result is inconsistent to Srairi (2009) findings which showed significant effects. Likewise, the stock market capitalization shows negative and insignificant result, and was therefore inconsistent with results of Srairi, (2009), study which showed that stock market capitalization had positive association with profitability.

Additionally, the empirical results on macroeconomic factors represented by real GDP growth rate and inflation showed mixed results. The study revealed that real GDP growth rate was positive and significantly related to profitability, while inflation rate was negatively related to performance, though, insignificant. These findings was consistent with Srairi (2009) but inconsistent with (Ongore and Kusa, 2012; Zeitun,

2012) studies. Understandably, GDP growth rate implies better economic prospects as a whole; such that the performance of the banks was expected to improve in tandem with country's economic growth prospects. On the contrary, inflation parameter reveals that bank were not able to compensate in pricing for changes due to inflation rate hence negative association to profitability. However, this finding is partly consistent (on GDP aspects) with study of Kosmidou and Pasiouras, (2007) which stated that both GDP and inflation have positive and statistically significant relation to profitability of European banks. Generally, inflation influences cost of living by lowering the purchasing power parity of consumers including the borrower's ability to borrow from commercial banks hence negative impacts on profitability.

**Table 4.7: Model Parameters**

| Variables             | Value  | Standard error | t       | <i>Pr</i> >  t | Lower bound (95%) | Upper bound (95%) |
|-----------------------|--------|----------------|---------|----------------|-------------------|-------------------|
| Intercept             | -0.034 | 0.019          | -1.814  | 0.072          | -0.071            | 0.003             |
| Capital adequacy      | 0.080  | 0.012          | 6.772   | < 0.000        | 0.057             | 0.104             |
| Asset quality         | -0.034 | 0.010          | -3.250  | <0.001         | -0.054            | -0.013            |
| Management Efficiency | -0.034 | 0.002          | -14.962 | < 0.000        | -0.038            | -0.029            |

|                              |        |       |        |        |        |       |
|------------------------------|--------|-------|--------|--------|--------|-------|
| Liquidity                    | 0.010  | 0.005 | 2.003  | 0.047  | 0.000  | 0.020 |
| Interest Spread              | 0.183  | 0.021 | 8.808  | <0.000 | 0.142  | 0.224 |
| Size                         | 0.006  | 0.001 | 5.135  | <0.000 | 0.004  | 0.008 |
| Banking Sector Devpt.        | 0.027  | 0.026 | 1.025  | 0.307  | -0.025 | 0.078 |
| Financial Market Development | -0.024 | 0.028 | -0.869 | 0.386  | -0.080 | 0.031 |
| Real GDP                     | 0.134  | 0.058 | 2.298  | 0.023  | 0.019  | 0.249 |
| Inflation rate               | -0.014 | 0.020 | -0.724 | 0.470  | -0.053 | 0.025 |

Source: Author (2013)

The multiple linear regression analysis formula is given as:

$$Y_{i,t} = \alpha + \beta_1 CA_{i,t} + \beta_2 AQ_{i,t} + \beta_3 ME_{i,t} + \beta_4 LQ_{i,t} + \beta_5 INTSPR_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 BSD_{i,t} + \beta_8 FMD_{i,t} + \beta_9 GDP_{i,t} + \beta_{10} INF_{i,t} + \epsilon_i$$

From the table, the equation for regression model is formed as follows:

$$\text{Profitability (y)} = -0.034 + 0.080 * \text{Capital Adequacy} - 0.034 * \text{Asset Quality} - 0.034 * \text{Management Efficiency} + 0.010 * \text{Liquidity} + 0.183 * \text{Interest Spread} + 0.006 * \text{Size} + 0.027 * \text{Banking Sector Development} - 0.024 * \text{Financial Market Development} + 0.134 * \text{Real GDP} - 0.014 * \text{Inflation Rate}$$

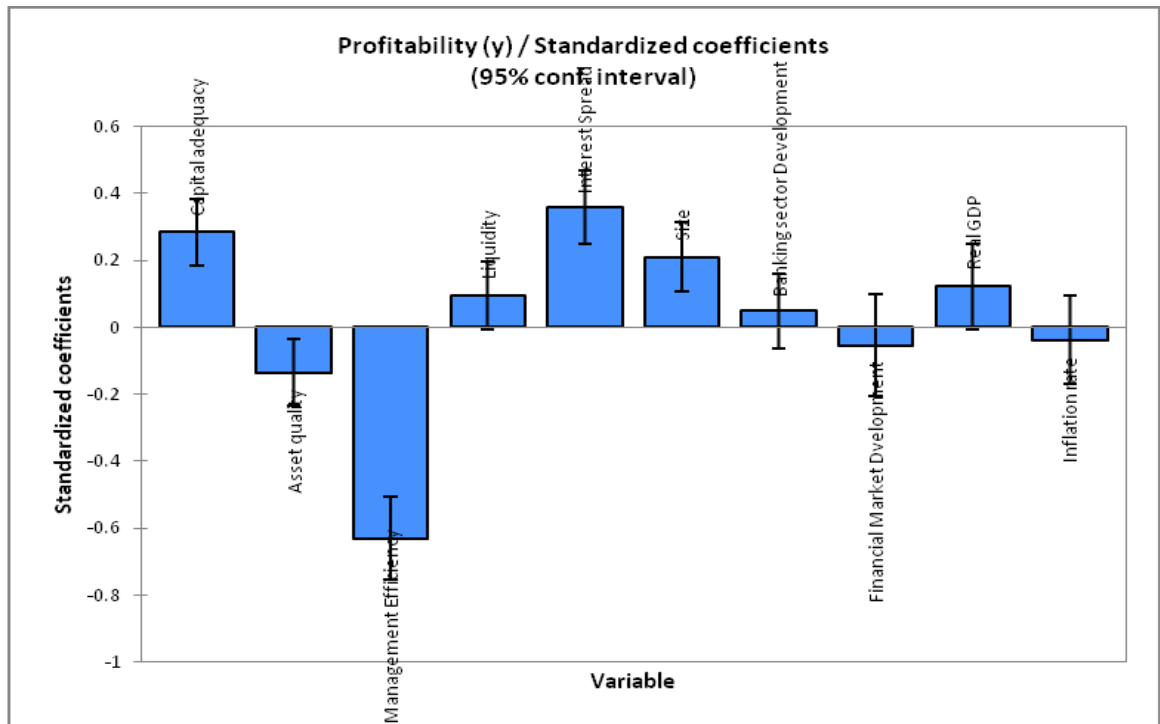
As derived from the result in Table 4.7 above, the equation indicates that holding capital adequacy, asset quality, management efficiency, liquidity, interest spread, size and macroeconomic factors at zero, profitability ratio (ROA) will be -0.034. It was further established that a unit increase in capital adequacy at a time, while holding other factors constant, will lead to an increase in ROA by a factor value of 0.080 as indicated in the above unstandardized regression coefficient value column with a corresponding p-values (in this case  $p < .000$ ) and similar interpretation for the rest of factors. Among the intervening variables, Banking Sector Development (0.027,  $p = .307$ ) and real GDP (0.134,  $p = .023$ ) had positive effect on commercial banks profitability, though the later is significant; while financial market development (-0.024,  $p = .386$ ) and the inflation rate (-0.014,  $p = .470$ ) had negative effects on commercial banks profitability.

As a matter of fact, the  $p$ -value is an important indicator of regression model. If the  $p$ -value of the regression coefficient of an independent variable is less than the significance level ( $\alpha < 0.05$ ), then as a rule, this particular regressor is a significant predictor of the dependent variable and vice versa. From the above table, it is clear that all bank specific variables are significantly related to ROA; hence they are good predictor of the model. However, from the intervening factors only real GDP is best predictor having met the threshold.

The above figure 4.2 depicts a standardized graphical presentation of the impacts of internal and external factors on banks performance in Kenya. A review of the standardized regression coefficients of the independent variables indicates that among the 10 independent factors, the interest spread is best positive predictor while the management efficiency is best negative predictor for bank profitability.



**Figure 4.2: Profitability Standardized Coefficients**



Source: Author (2013)

The bar graph shows a positive relationship between capital adequacy, liquidity, interest spread, size, banking sector development and real GDP growth rate. While asset quality, management efficiency, financial market development, and inflation shows negative association to profitability measured by return on assets. The higher the graph from integer; the stronger the impact it has on the profitability and the closer it's the weaker the relationship.

#### **4.4 Profitability Performance by Bank Type**

This study's second objective sought to establish whether profitability based on the bank-type across the groups of small, large and Islamic banks is similar or not. The results of this findings is presented in Table 4.8 below, which shows that large banks had the largest positive ROA value with corresponding lowest standard deviation

( $M=0.0262$ ,  $SD=0.0126$ ), followed by small commercial banks ROA at ( $M= 0.0134$ ), whereas Islamic bank recorded negative value of ( $M=-.0028$ ). The Islamic banks recorded the highest variance in performance given a standard deviation of 0.0165, reflecting disparities in the performance over the period. Perhaps, the dismal performance of Islamic bank can be attributed to its model, which is still at formative stage in the country. During this period, Islamic banks have recorded losses in the first three years, of the five years of its operations. This is of course expected for any start-up venture especially of higher capital intensive. Another reason for poor performance could be due to aggressive set up of branch networks in a short span, without a proper timeframe for breakeven from earlier branches leading to accumulation of losses compared to conventional banks which are matured, well structured and highly capitalized, and hence increasing their profitability levels.

In nutshell, the analysis below reveals that large banks performed better among the groups, followed by small commercial banks; while Islamic banks recorded the least profitability performance. This findings is consistent with previous studies (Ibrahim, 2009; Jaffar & Manarvi, 2011; Halkano, 2012; Soylu & Durmaz, 2013) providing support to the argument that conventional banks performed better than Islamic banks in terms of profitability but contradicts Mahmood, (2005) finding which showed that Islamic bank performed better than conventional banks. This set of performance scenarios can best be explained by Relative Market Power (RMP) theory, which depicts that banks with more differentiated products and enjoys higher concentration in terms of market powers generates more profits than the banks with lower market share. This finding can further be explained by Table 4.10 at the appendices which shows that large banks are strongly and positively associated with profitability, compared to small size conventional banks which is negatively and insignificantly

associated with ROA, while Islamic banks is strongly but negatively associated with ROA. This implies significance difference in performance between the groups.

**Table 4.8: Profitability (ROA) across Bank Type**

| Bank Type                | Mean    | SD    | Kurtosis | Skewness |
|--------------------------|---------|-------|----------|----------|
| Small Conventional Banks | .0134   | .0127 | 2.213    | (.904)   |
| Islamic Banks (small)    | (.0028) | .0165 | (.887)   | (.420)   |
| Large Conventional Banks | .0262   | .0126 | (.298)   | .535     |
| All banks combined       | .0140   | .0168 | .949     | (.519)   |

Source: Author (2013)

The regression model used the Analysis of Variance (ANOVA) test to establish whether there is a significant difference in profitability of the commercial banks across groups (Islamic, small and large commercial banks). The ANOVA results presented in Table 4.9 shows that there was a significant differences in the profitability of the commercial banks ( $p < .001$ ); simply put, the probability of this result occurring by chance is less than one time out of 1,000. Therefore, the differences in profitability are real and not due to sampling error. More importantly, from Table 4.10 at the appendices, after introduction for the dummy variable for bank-type, Islamic bank is strongly and negatively correlated to ROA, compared to small size conventional bank which is negative and insignificantly correlated; while

large banks are positively but insignificantly correlated to bank profitability. Interestingly, the study found that Islamic bank dummy variable is strongly and negatively correlated to all bank specific variables save for management efficiency and interest spread which are positively correlated though the later is insignificant, implying that Islamic bank is not making more income from the revenue stream. Likewise, small size conventional banks have strong relationship to all variables save for interest spread, whereas, large banks dummy are only strongly correlated to asset quality, management efficiency and bank size variables.

**Table 4.9: Profitability of Commercial Banks across Groups**

| Model                          | Sum of Squares | df  | Mean Square | <i>F</i> | Sig. |
|--------------------------------|----------------|-----|-------------|----------|------|
| Regression<br>(between groups) | .016           | 2   | .008        | 44.416   | .000 |
| Residual (within groups)       | .029           | 157 | .000        |          |      |
| Total                          | .045           | 159 |             |          |      |

Source: Author (2013)

In Kenya, this profitability difference can be explained by the advantages that the large financial institution enjoys compared to small size banks. The large banks have long history of existence, strong capital base, technologically advanced and enjoy

economies of scale over the years compared to other bank-types, which are less capitalized and hence could not invest in latest technology and experienced human capital. More importantly, the small size conventional banks by classification through weighted composite index of have less than 1 percent of the markets share, while the large banks is said to have over 5 percent of market shares (CBK, 2012). The difference in terms of composite market share is quite huge and therefore can explain the performance difference accruing due to economies of scale. As for Islamic bank, we understand that the banks is still at early formative stage of establishing itself and may take sometimes before it can fully competes with large banks. However, it is important to appreciate that the operationalization of these banking model has contributed to improvement on financial inclusiveness in the country from the segment that was hitherto unbanked or ignoring credits due to prevalence of interest element charged by conventional banks in their transactions that are not permissible according to their faith.

## **CHAPTER FIVE:**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of findings, conclusions and limitation of the study and the subsequent recommendations.

#### **5.2 Summary of the Findings**

This study sought to investigate the determinants of banks' performance for Islamic and conventional commercial banks in Kenya during the period 2009 to 2012. The factors that may affect profitability, measured by the return on assets, involve bank-specific characteristics, financial industry and macroeconomic variables.

The empirical results showed that all selected set of bank characteristic factors of capital adequacy, interest spread, asset quality, management efficiency, size and liquidity are major determinants of bank performance and hence significantly influence profitability. Perhaps, from the study interest spread, followed by capital adequacy, bank size and liquidity have positive effects, while the coefficient of management efficiency followed by asset quality have the highest and negative impacts on profitability of the commercial banks. This is so because firms including banks have to invest optimally in both human and capital resources for it to generate revenues which translate to profitability. Conversely, the study found out that assets quality has negative and significant influence on profitability. It is expected that provisioning have inverse relationship to profitability. To isolate the effects of bank characteristics on bank profitability, industry variables and macroeconomic factors

were considered. As for the impact of the industry specific variables, on banks performance; the study revealed that banking sector development index shows positive and insignificant relationship to banks profitability. While the financial market development indicator proxy as stock market capitalization recorded a negative and insignificant association with bank profitability. The macroeconomic factors represented by real GDP growth rate showed a positive and significance relationship to profitability, implying that robust economic growth can support banks performance, while the factor of inflation variable has negative and insignificant impact on performance of the commercial banks in Kenya. This may hold true as inflation tends to escalate the cost of living which lower purchasing power parity for consumers including absorption of the credit services.

Comparatively, the study revealed that the performance of Islamic, small size conventional and large conventional banks is significantly different between the groups, with large banks performed better than the small size conventional banks, while Islamic banks found to be the least performing in the group over the period of the study. The Islamic banks least performance is attributed to the fact that these banks are embracing new phenomenon in Kenya and still emerging concept world over, with slightly over four decades of existence compared to conventional banks which have long history of existence and have benefited from empirical studies. In Kenya, the concept is pretty new, just over five years old but attempting to bridge the gap in terms of financial inclusiveness for segment not previous served or ignored borrowing due to charging of interest by conventional banks. However, the bank is facing some legal and structural challenges that should be addressed in order to perfects its operations. Therefore, based on trend performance depicted in figure 4.1 above, the banking model is quite viable and promising and it is just a matter of time

before it catch up with the rest of commercial banks, provided that the legal and structural factors are firmed up for ease of doing Islamic compliant business in the country.

### **5.3 Conclusions**

The empirical results showed that interest spread followed by capital adequacy has the highest positive significant effects on profitability for commercial banks in Kenya followed by bank size, real GDP, liquidity and banking sector development respectively. While management efficiency had the highest significant effect though negative on profitability for all bank type followed by asset quality, financial market development and inflation respectively, even though, the later are insignificant.

Overall, this empirical study provides evidence that bank specific factors which are within the ambit of management and the board have the most significant impacts on financial performance of commercial banks in Kenya, as depicted by adjusted  $R^2$  of 80.6 % (with a paltry 1.3% supported by macroeconomic variables). Therefore this results support the Efficiency Structure Theory which suggests that enhanced managerial capability and scale efficiency level leads to higher concentration, and higher profitability.

Finally, the study confirmed that there are indeed differences in the profitability performance of commercial banks as measured by return on assets. The large conventional banks continued to dominates the financial industry and make supernormal profits supporting the theory of relative market power (RMP) hypothesis, followed by small conventional banks, while Islamic bank was the least performing



banks in the groups, though shaping up very fast to competes with their counter parts in the small size bank category.

#### **5.4 Limitations of the Study**

This study has some limitations and thus should be carefully considered when interpreting the results. It is important to note that the study was constrained by the number of Islamic banks operating in the country, which are only two, since inception five years ago. This has the impacts on number of variables; resulting to limited number of observations that cannot be reliably analyzed through multiple regression model that would have explained the effects of each variable on profitability performance based on bank-type for a better result. Due to data limitation from Islamic banks, the study was not able to further interrogate how each of these variables affects profitability for each bank type and differences between each of the group, if any. The time frame was relatively short covering four years period, which was based on number of years of existence for Islamic banks for balanced observations, even though 2008 was excluded since it was inception year.

More importantly, this study have not examined any non-financial factors, which may have impacts on banks performance especially ownership issues, number of branch, customers, employees etc. It is estimated that the inclusion of these variables may alter the results of the current findings.

#### **5.5 Recommendations**

On the basis of the study findings and conclusions, the following recommendations are made on ways of improving the financial performance of commercial banks specifically, the Islamic banks in order for them to catch up with rest of the

institutions in Kenya. This calls for regulatory adjustments to address challenges highlighted in the findings.

#### 5.5.1 Policy recommendation and best practice

The study recommends that the government through CBK should enact laws for the harmonization of *sharia'h* advisory boards in the country. The advisory committee shall fit into a subcommittee of the CBK board to strengthen the supervisory team. Their roles include addressing the problems of acceptability of *sharia'h* rulings on Islamic products and services offered by *sharia'h* compliant institution across board. This board shall consult Islamic finance expert and standard setters in the best way to manage conflicting Islamic financial products and services matters amicably.

The legal and regulatory framework of Islamic finance requires further enactment of laws to make it consistent with international best practices, while maintaining the unique features of Islamic finance and not compromising *sharia'h* principles. For instance, the process that requires banks to own property first before it transfers to the buyer need to be clarified for avoidance of any doubts on taxation matters. This will iron out the issue of double taxation and stamp duty that will arise due to tax regime in the country. The issue of *zakat* collection as a mechanism to support charity work and government revenue should be embraced. Also consumer-protection and financial literacy on Islamic finance is an emerging area for regulators.

Lastly, the CBK need to introduce *sharia'h* compliant liquidity mechanism by creating window of linkage with international partner in Arab world, where Islamic banks have developed. As in the case for conventional banks, there needs to have an integrated liquidity management framework in the Islamic financial system. The

framework involves having the mechanism and vehicle to address short-term liquidity problems, and resolving insolvency issues in Islamic financial institutions.

#### 5.5.2 Areas for further studies

Future comparative bank performance studies in Kenya should incorporate all banks categories including the medium size conventional banks which were excluded from this study coupled with more variables including the non-financial factors and longer time frame that captures the differences in the banking model for better results.

It is further recommended that a studies be done on why Kenyan banks continues to make huge profits compared to other industry or sectors in the country, despite marginal growth in the economy, this call for cross-sectoral performance studies. More importantly Kenyan Islamic banks performance can be compared to their counterpart in North Africa or Middle East countries. Another possible area for study is to examines the differences in the determinants of between pure Islamic, pure conventional and mixed (providing Islamic and conventional services).

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## APPENDICES

**Table 4.10: Correlation Matrix with dummy variables for bank-types**

|                               |                        | return on<br>assets | capital<br>adequacy<br>ratio | asset<br>quality<br>ratio | managem<br>ent<br>efficiency | liquidity | intere<br>st<br>sprea<br>d | bank<br>size | banking<br>sector<br>developm<br>ent | financial<br>market<br>developm<br>ent | real<br>gdp | Infl.<br>rate | Small<br>conv.<br>banks | Islamic<br>banks | large<br>conv.<br>banks |
|-------------------------------|------------------------|---------------------|------------------------------|---------------------------|------------------------------|-----------|----------------------------|--------------|--------------------------------------|--|-------------|---------------|-------------------------|------------------|-------------------------|
| return on<br>assets           | Pearson<br>Correlation | 1                   | .213**                       | -.096                     | -.765**                      | .144      | .301**                     | .504**       | .304**                               | .086                                   | .277**      | -.120         | -.037                   | -.501**          | .478**                  |
|                               | Sig. (2-tailed)        |                     | .007                         | .228                      | .000                         | .070      | .000                       | .000         | .000                                 | .278                                   | .000        | .132          | .645                    | .000             | .000                    |
| capital<br>adequacy ratio     | Pearson<br>Correlation | .213**              | 1                            | .417**                    | -.011                        | .425**    | .034                       | -.223**      | -.256**                              | .016                                   | -.110       | .031          | .295**                  | -.288**          | -.070                   |
|                               | Sig. (2-tailed)        | .007                |                              | .000                      | .887                         | .000      | .670                       | .005         | .001                                 | .836                                   | .168        | .693          | .000                    | .000             | .377                    |
| asset quality<br>ratio        | Pearson<br>Correlation | -.096               | .417**                       | 1                         | .107                         | .416**    | .074                       | -.321**      | -.136                                | .058                                   | -.025       | -.057         | .487**                  | -.275**          | -.291**                 |
|                               | Sig. (2-tailed)        | .228                | .000                         |                           | .180                         | .000      | .349                       | .000         | .087                                 | .467                                   | .757        | .478          | .000                    | .000             | .000                    |
| management<br>efficiency      | Pearson<br>Correlation | -.765**             | -.011                        | .107                      | 1                            | -.239**   | .098                       | -.437**      | -.288**                              | -.049                                  | -.195*      | .065          | -.162*                  | .635**           | -.378**                 |
|                               | Sig. (2-tailed)        | .000                | .887                         | .180                      |                              | .002      | .219                       | .000         | .000                                 | .538                                   | .014        | .416          | .041                    | .000             | .000                    |
| liquidity                     | Pearson<br>Correlation | .144                | .425**                       | .416**                    | -.239**                      | 1         | -                          | -.163*       | -.047                                | .076                                   | .030        | -.090         | .322**                  | -.243**          | -.139                   |
|                               | Sig. (2-tailed)        | .070                | .000                         | .000                      | .002                         |           | .372**                     | .000         | .040                                 | .559                                   | .339        | .704          | .260                    | .000             | .002                    |
| interest spread               | Pearson<br>Correlation | .301**              | .034                         | .074                      | .098                         | -.372**   | 1                          | .101         | .125                                 | .045                                   | .104        | -.113         | -.083                   | .002             | .262                    |
|                               | Sig. (2-tailed)        | .000                | .670                         | .349                      | .219                         | .000      |                            | .202         | .116                                 | .573                                   | .192        | .155          | .295                    | .982             | .065                    |
| bank size                     | Pearson<br>Correlation | .504**              | -.223**                      | -.321**                   | -.437**                      | -.163*    | .101                       | 1            | .173*                                | -.004                                  | .078        | .005          | -.625**                 | -.327**          | .968**                  |
|                               | Sig. (2-tailed)        | .000                | .005                         | .000                      | .000                         | .040      | .202                       |              | .029                                 | .960                                   | .329        | .945          | .000                    | .000             | .000                    |
| banking sector<br>development | Pearson<br>Correlation | .304**              | -.256**                      | -.136                     | -.288**                      | -.047     | .125                       | .173*        | 1                                    | -.185*                                 | .389**      | .125          | .000                    | .000             | .000                    |
|                               | Sig. (2-tailed)        | .000                | .001                         | .087                      | .000                         | .559      | .116                       | .029         |                                      | .019                                   | .000        | .114          | 1.000                   | 1.000            | 1.000                   |

|                              |                     |         |         |         |         |         |       |         |        |         |         |         |         |         |         |
|------------------------------|---------------------|---------|---------|---------|---------|---------|-------|---------|--------|---------|---------|---------|---------|---------|---------|
| financial market development | Pearson Correlation | .086    | .016    | .058    | -.049   | .076    | .045  | -.004   | -.185* | 1       | .579**  | -.756** | .000    | .000    | .000    |
|                              | Sig. (2-tailed)     | .278    | .836    | .467    | .538    | .339    | .573  | .960    | .019   |         | .000    | .000    | 1.000   | 1.000   | 1.000   |
| Real GDP                     | Pearson Correlation | .277**  | -.110   | -.025   | -.195*  | .030    | .104  | .078    | .389** | .579**  | 1       | -.465** | .000    | .000    | .000    |
|                              | Sig. (2-tailed)     | .000    | .168    | .757    | .014    | .704    | .192  | .329    | .000   | .000    |         | .000    | 1.000   | 1.000   | 1.000   |
| inflation rate               | Pearson Correlation | -.120   | .031    | -.057   | .065    | -.090   | -.113 | .005    | .125   | -.756** | -.465** | 1       | .000    | .000    | .000    |
|                              | Sig. (2-tailed)     | .132    | .693    | .478    | .416    | .260    | .155  | .945    | .114   | .000    | .000    |         | 1.000   | 1.000   | 1.000   |
| Small Conventional Banks     | Pearson Correlation | -.037   | .295**  | .487**  | -.162*  | .322**  | -.083 | -.625** | .000   | .000    | .000    | .000    | 1       | -.500** | -.655** |
|                              | Sig. (2-tailed)     | .645    | .000    | .000    | .041    | .000    | .295  | .000    | 1.000  | 1.000   | 1.000   | 1.000   |         | .000    | .000    |
| Islamic Banks                | Pearson Correlation | -.501** | -.288** | -.275** | .635**  | -.243** | .002  | -.327** | .000   | .000    | .000    | .000    | -.500** | 1       | -.327** |
|                              | Sig. (2-tailed)     | .000    | .000    | .000    | .000    | .002    | .982  | .000    | 1.000  | 1.000   | 1.000   | 1.000   | .000    |         | .000    |
| large Conventional Banks     | Pearson Correlation | .478**  | -.070   | -.291** | -.378** | -.139   | .089  | .968**  | .000   | .000    | .000    | .000    | -.655** | -.327** | 1       |
|                              | Sig. (2-tailed)     | .000    | .377    | .000    | .000    | .081    | .262  | .000    | 1.000  | 1.000   | 1.000   | 1.000   | .000    | .000    |         |
|                              | No of Observations  | 160     | 160     | 160     | 160     | 160     | 160   | 160     | 160    | 160     | 160     | 160     | 160     | 160     | 160     |

(\*\*) and (\*) denote significance at 1% and 5% level (two-tailed) respectively

Source: Author (2013)

**Table 4.11: List of Selected Commercial Banks**

| Bank                     | Islamic<br>bank | Small<br>Commercial | Large<br>Commercial | Frequency |
|--------------------------|-----------------|---------------------|---------------------|-----------|
| Africa Banking Corp. ltd | 0               | 16                  | 0                   | 16        |
| Co-operative bank        | 0               | 0                   | 16                  | 16        |
| Development bank         | 0               | 16                  | 0                   | 16        |
| Equity bank ltd          | 0               | 0                   | 16                  | 16        |
| First Community          | 16              | 0                   | 0                   | 16        |
| Gulf Afican bank         | 16              | 0                   | 0                   | 16        |
| K-Rep bank ltd           | 0               | 16                  | 0                   | 16        |
| Standard Charttered      | 0               | 0                   | 16                  | 16        |
| Trans National bank      | 0               | 16                  | 0                   | 16        |
| Victoria commercial bank | 0               | 16                  | 0                   | 16        |
| Total                    | 32              | 80                  | 48                  | 160       |