

**THE RELATIONSHIP BETWEEN FIRM SIZE AND FINANCIAL  
PERFORMANCE OF COMMERCIAL BANKS IN KENYA**

**BY:  
NZIOKA PHILIP KIOKO  
D61/66680/2010**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION, UNIVERSITY OF NAIROBI**

**NOVEMBER 2013**

## DECLARATION

I declare that this is my original work and has not been presented for a degree in any other university or institution.

Sign: ..... Date: .....

NZIOKA PHILIP KIOKO

D61/ 66680/2010

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

Sign: ..... Date: .....

JOSEPH L. BARASA

Lecturer, Department of Accounting and Finance.

School of Business, University of Nairobi.

## **DEDICATION**

To

My loving mum

Alice Nzioka

(Your support mum was unwavering)

And

My loving sisters

Lesa ngile And Loise Nthule

(Your encouragement was valuable)

And

My loving brother

Joseph Munguti

(You gave me inspiration)

## **ACKNOWLEDGEMENT**

I would like to express my deepest appreciation to all those who provided me the possibility to complete this report. A special gratitude I give to my project supervisor Mr. Joseph Barasa whose contribution, guidance and encouragement helped me to coordinate my project especially in writing this report. I also thank other members of the department of Accounting and finance, school of Business both teaching and non teaching for their continued support. I have to appreciate the guidance given by other supervisor as well as the panels especially in our project presentation that has improved our presentation skills thanks to their comment and advices.

Special thanks to my school mates and friends for their continued support in offering advisory skills, company and material support in the writing of this project. Last but not least a lot of thanks to my beloved family mum, brother and sisters for their financial support and encouragement all through that helped me complete this academic research.

## **ABSTRACT**

This study had the objective of evaluating the relationship that exists between firm size and financial performance. The effects of firm characteristics on firm performance have gained attention in recent theoretical and empirical work. Firm size is a construct of scholarly interest since it traditionally has much explanatory power, and an understanding of its importance can be vital for managers who operate in today's competitive environments. Discussions of the role of firm size in explaining firm performance have been ongoing in the fields of business organization and industrial economics. Early research emphasizes the importance of scale economies and other efficiencies in larger firms. This research was carried out using a correlational design. The target population of this study was all the 43 commercial banks in Kenya as at 31<sup>st</sup> December 2012. The panel data to be used was data from 1998 to 2012. This study used secondary data which was collected from Central Bank of Kenya and bank themselves. Firm size was measured using net assets , total loans , total deposits (measured in Kenya shillings) and number of employees. Financial performance was measured using Return on Assets (ROA). Data which was collected was analyzed using correlation and regression statistics. Analyzed data was presented in tables. Study findings indicate that there is moderate correlation between three of the studied factors of bank size which include total deposits, total loans and total assets. The relationship between three of the independent variables, namely, total loans, total deposits, and total assets and the dependent variable (financial performance- ROA) of commercial banks were all found to be statistically significant. Total deposits and total loans had relatively stronger effects on financial performance compared to total assets. There was no significant relationship between number of employees and financial performance for commercial banks in Kenya. The study recommends that in order for commercial banks to increase their performance (profitability) there is need from commercial banks to increase size by increasing various aspects of customer base, net assets, deposit liabilities and market share. The recommendations from the study include the need for bank policies that give greater importance to the determination and monitoring of their loan portfolio, customer deposits and asset quality. The study further recommends that for commercial banks to remain profitable they should have good portfolio management which will help in making decisions about investment mix and policy, matching investments to objectives, asset allocation for individuals and institutions, and balancing deposits and loans against performance.

## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iv</b>
<b>ABSTRACT.....</b>	<b>v</b>
<b>TABLE OF CONTENTS .....</b>	<b>vi</b>
<b>ABBREVIATIONS AND ACRONYMS.....</b>	<b>viii</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.1.1 Firm Size.....	1
1.1.2 Financial Performance .....	2
1.1.3 Effect of Firm Size on Financial Performance .....	4
1.1.4 Banking Sector in Kenya .....	5
1.2 Research Problem .....	6
1.3 Objective of the Study .....	8
1.4 Value of the Study .....	8
<b>CHAPTER TWO.....</b>	<b>10</b>
<b>LITERATURE REVIEW .....</b>	<b>10</b>
2.1 Introduction.....	10
2.2 Theoretical Review .....	10
2.2.1 Human Capital Model.....	10
2.2.2 Growth of the Firm Theory.....	11
2.2.3 Economic Theory.....	13
2.3 Empirical Review.....	14
2.3.1 Firm Size and Financial Performance.....	14
2.3.2 Cross-Sectional Evidence .....	19
2.3.3 Time-Series Evidence .....	22
2.3.4 Evidence from Panel Data .....	23

2.4 Other Factors Affecting Banks Financial Performance .....	24
2.5 Summary .....	25
<b>CHAPTER THREE .....</b>	<b>28</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>28</b>
3.1 Introduction.....	28
3.2 Research Design.....	28
3.3 Target Population.....	29
3.4 Data Collection Procedures.....	29
3.5 Data Analysis Procedures .....	30
<b>CHAPTER FOUR.....</b>	<b>32</b>
<b>DATA ANALYSIS, FINDINGS AND DISCUSSION .....</b>	<b>32</b>
4.1 Introduction.....	32
4.2 Data Collection and Analysis.....	32
4.3 Findings.....	32
4.4 Discussion .....	35
<b>CHAPTER FIVE .....</b>	<b>39</b>
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>39</b>
5.1 Introduction.....	39
5.2 Summary of Findings.....	39
5.3 Conclusions.....	41
5.4 Recommendations.....	42
5.5 Suggestions for Future Research .....	42
<b>REFERENCES.....</b>	<b>44</b>
<b>APPENDICES .....</b>	<b>49</b>
Appendix I: List of Commercial banks in Kenya .....	49
Appendix II: SPSS Output Sheets.....	51

## **ABBREVIATIONS AND ACRONYMS**

<b>ANCOVA</b>	Analysis of Covariance
<b>CBK</b>	Central Bank of Kenya
<b>DTM</b>	Deposit-Taking Microfinance Institutions
<b>EUR</b>	Euro
<b>MFC</b>	Mortgage Finance Company
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>R&amp;D</b>	Research and Development
<b>ROA</b>	Return on Assets
<b>ROE</b>	Return on Equity
<b>SCP</b>	Structure-Conduct-Performance
<b>SME</b>	Small and Medium Enterprises
<b>UK</b>	United Kingdom
<b>US</b>	United States

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

The effects of firm characteristics on firm performance have gained attention in recent theoretical and empirical work. Firm size is a construct of scholarly interest since it traditionally has much explanatory power, and an understanding of its importance can be vital for managers who operate in today's competitive environments. When using this construct, this study posed the question: does firm size matter for firm behavior and, ultimately, for firm's financial performance. This section introduces the concepts of firm size, financial performance and introduces the relationship expected from firm size on financial performance. Also discussed in this section is the banking sector in Kenya.

##### **1.1.1 Firm Size**

Firm size has become such a routine to use as a control variable in empirical corporate finance studies that it receives little to no discussion in most research papers even though not uncommonly it is among the most significant variables. Firms of different size distinguish themselves along different observable and unobservable dimensions. Therefore there are many different ways of defining a firm's size category. The OECD (2005) classification defined SMEs as firms with between 10 and 250 employees. Firms with less than 10 employees are micro firms and those with more than 250 are large firms. The OECD notes that this definition may vary by country. In the US, for example, the upper limit is set at 500 employees instead of 250. Micro-sized companies are also often defined to have up to 49 employees and hence SMEs to have between 50 and 249

employees. The European Union also uses financial data to define size bands. Firms with turnover between over EUR 2 million and EUR 50 million are classified as SMEs. Firms with less than EUR 2 million in turnover are micro companies and firms with more than EUR 50 million are large firms.

Another critical element in the classification of firm size categories is the ownership structure of firms. It is necessary to treat subsidiaries of large companies that fall into the micro firm or SME categories according to their turnover or number of employees differently from independent micro firms or SMEs. In this study on effect of firm size on financial performance in the Kenyan banking industry, the bank size criterion used by Central Bank of Kenya (CBK) will be applied. This uses the net assets employed by the bank to be the measure of size. However other variables such as amount of deposits, age in years and liquidity levels will be included in the model.

### **1.1.2 Financial Performance**

Performance is the function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage (Chen and Wong, 2004). There are two kinds of performance, financial performance and non-financial performance. Financial performance emphasizes on variables related directly to financial report. Company's performance is evaluated in three dimensions. The first dimension is company's productivity, or processing inputs into outputs efficiently. The second is profitability dimension, or the level of which company's earning are bigger than its costs. The third dimension is market premium, or the level of which company's market value is

exceeding its book value (Walker, 2001). Performance is a difficult concept, in terms of both definition and measurement. It has been defined as the result of activity, and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated, and the objectives to be achieved through that evaluation.

Researchers in the economics field have offered a variety of models for analyzing financial performance. However, little consensus has emerged on what constitutes a valid set of performance criteria. For instance, researchers have suggested that studies on financial performance should include multiple criteria analysis. This multidimensional view of performance implies that different models or patterns of relationship between corporate performance and its determinants will emerge to demonstrate the various sets of relationships between dependent and independent variables in the estimated models (Tangen, 2003). Financial performance have been measured using various standards including gross profit, net profit, return on equity and return on assets among other measures. This study used return on assets which is calculated as net profit divided by net assets employed.

While recent studies have provided additional evidence on the determinants of firm performance, their empirical results are difficult to generalize as they are drawn mostly from data of large firms, a single year or many industries. This study aims at filling this gap. More specifically, we examine the determinants of firm profitability and particularly the role of firm size by considering a dataset from one industry. Moreover, I employ a

regression method that pools panels of cross-section data over time between 2000 and 2012. This panel data model allows us to provide insight into the dynamic nature of firm performance in the past two decades.

### **1.1.3 Effect of Firm Size on Financial Performance**

Discussions of the role of firm size in explaining firm performance have been ongoing in the fields of business organization and industrial economics. Early research, notably by Jelic et al (2001) and Kakani et al (2001) emphasizes the importance of scale economies and other efficiencies in larger firms. On the other hand, the structure-conduct-performance paradigm highlights the importance of market concentration and conduct in explaining profitability. In particular, Baumol (1967) argues that the advantages of larger firms stem from their market power and greater access to capital markets. Caves and Porter (1979), and Porter (1998) also attribute variations in profitability to group strategic behavior in different industries.

With a few exceptions, notably Hagedoorn and Cloudt (2003), there is considerable evidence in early empirical studies (e.g. Liargovas and Skandalis, 2008; Merikas et al, 2006) to support a positive relationship between firm size and profitability. However, as Prasetyantoko and Parmono (2008) point out, many of these studies neglect the possible effects of other factors, such as market structure, entry barriers and firm strategies. More recent studies have attempted to control for these market and firm-specific characteristics and found more equivocal support for a relationship between firm size and profitability. For instance, Tarawneh (2006) find a firm's market share instead of its size plays a

significant role in explaining its relative performance. Amato and Amato (2004) find evidence in US retailing industries to support Porter's (1998) conjecture that both small and large firms can effectively capture niche markets, while middle-sized firms are 'stuck in the middle' in the sense that they are less competitive than their counterparts in either end of the firm size distribution.

Organizational size effects have been the focus of many prior studies. The benefits of organizational size may accrue to the financial performance of the organization. Larger organizations seem able to generate stronger competitive capability than their smaller rivals as a result of their superior access to resources, greater market power, and economies of scale and scope (Glen et al, 2003). However, organizational size effects are mixed, since some studies confirm them (e.g. Tarawneh, 2006; Sarkaria and Shergill, 2000), while others find either mixed effects or no effects at all (e.g. Goddard et al, 2006; Mariuzzo et al, 2003).

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

As at 31<sup>st</sup> December 2012, the banking sector comprised of the Central Bank of Kenya, as the regulatory authority, 44 banking institutions (43 commercial banks and 1 mortgage finance company), 2 representative offices of foreign banks, 5 Deposit-Taking Microfinance Institutions (DTMs) and 126 Foreign exchange Bureaus. Thirty one of the banking institutions are locally owned while 13 are foreign owned. The locally owned financial institutions comprise of 3 banks with public shareholding, 27 privately owned

commercial banks, 1 mortgage finance company (MFC) while 5 Deposit taking Microfinance Institutions and 126 foreign exchange bureaus are privately owned.

The banking sector and the totality of the financial sector is very important to the Kenyan economy. In the period from 2002 to December 2012, the banking sector recorded significant progress among them: Assets grew from Ksh. 456.7 billion to Ksh.2.35 trillion; Total deposits grew from Ksh. 360.6 billion to Ksh.1.76 trillion; Net advances increased from Ksh.222.8 billion to Ksh.1.27 trillion; Profit before tax of Ksh.5.8 billion increased to Ksh.107 billion; The number of bank accounts has increased from 1.9 million accounts to 17.6 million, and; Deposit insurance has evolved to cover fully 94% of the total deposit accounts (Ndung'u, 2013). This phenomenal growth has been supported by the expansion of banks into new market segments, prudent risk management and enhanced economic prospects underpinned by a stable macroeconomic environment. There is expectation that the banking sector will continue on this growth trajectory. Ongoing reforms and initiatives by the Kenyan Government and CBK serve to further propel the banking sector to new frontiers of financial inclusion for more Kenyans to access these services. This is expected to propel the banks to further growth and improved performance

## **1.2 Research Problem**

The subject of financial performance has received significant attention from scholars in the various areas of business and economics. It has also been the primary concern of business practitioners in all types of organizations since financial performance has

implications to organization's health and ultimately its survival. High performance reflects management effectiveness and efficiency in making use of company's resources and this in turn contributes to the country's economy at large.

In Kenya, there is a good performance of many sectors such as banking sector, but many small and medium sized banks have not benefited from the growth of the banking industry in Kenya. Large institution size banks have greater access to large wholesale deposits and have greater power to control cost of deposits and lending rates but these advantages can only be translated into good financial performance with accompanying cost efficiency. Large branch networks provide proximity convenience that may result in higher deposits but the cost of operating such large branch networks, if economies of scale are not exploited, impact negatively on financial performance.

There are various studies which have been carried out in Kenya on the relationship between size and financial performance. Mehrjardi (2012) studied the effect of size and profitability of banks in Kenya. This studied measured profitability using net profits and had only size as the independent variable. Mbogo (2012) studied the effect of portfolio size on the financial performance of portfolios of investment firms in Kenya. Muriithi (2011) studied the relationship between corporate governance practices and financial performance of investment banks in Kenya while Kipkurui (2011) studied the relationship between corporate governance and financial performance of insurance companies in Kenya. Others who have studied financial performance and firm size include Mutie (2011) who studied relationship between prior period dividends and

financial performance of firms listed at the NSE and Gichura (2011) who evaluated the determinants of financial performance of micro-finance institutions in Kenya.

Though the area of size and financial performance has been studied, the previous studies have not included the independent variables and measures that the current study used. This therefore contributed in bringing more knowledge on how firm size and the related variables affect financial performance of commercial banks in Kenya. The study sought to answer the question: what is the relationship between firm size and financial performance in the commercial banking industry in Kenya.

### **1.3 Objective of the Study**

Many business organizations have the objective of maximizing shareholder wealth. This is usually measured using financial performance measures such as ROE, ROA, share price, dividend pay out ratio and many other measures. The financial performance of a firm is a variable affected by very many constructs. This study had the objective of evaluating the relationship that exists between firm size and financial performance.

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

The findings from this study will contribute to both practice and theory. The study importance emerges from the fact that the commercial banking sector plays a significant role in enhancing the country economy, and providing critical services for people in Kenya. The current study will empirically test the effect of size on financial performance. Moreover, the effect of age, liquidity and amount of deposits on financial performance

will be tested. This will give management of commercial banks a feel of the effect of these important organizational factors on financial performance and will hence be in a better position to moderate this effect through various management practices and strategies.

Though the factors affecting financial performance are specific to a certain industry, some factors can be generalized to all industries. From that base, it is likely that the findings from this study will be of use to other organizations apart from those in the banking sector. This is because the study will shed light and provide evidence on the effect of size, liquidity and age on financial performance.

In Kenya, a few researches have investigated factors affecting Kenyan commercial banks from the point of view of size and related factors. The current study will therefore be a base for other studies in the same field, and it will help in adding value to this subject. In this respect, this study can be used by scholars and researchers alike in academics or future research in the subject of firm size or financial performance.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents the review of literature. The chapter presents both the theoretical and empirical review which is used to guide this study. The chapter presents a review of the study findings from previous studies and how these studies are different from the current study.

#### **2.2 Theoretical Review**

This study was guided by different theories that explain the relationship between firm size and financial performance. The theories include human capital model, growth of the firm theory, x-efficiency and economic theory. These theories are discussed hereunder.

##### **2.2.1 Human Capital Model**

This theory was developed by Doeringer and Piore (1971). The human capital model, in which earnings reflect skill differentials in perfect factor markets, has dominated the interpretation of earnings functions. The finding that earnings rise with firm size has been widely interpreted in this framework. The human capital explanation is that the vector of relevant productive skills is partially unobserved, and that the significance of firm characteristics in earnings regressions essentially reflects unobserved labour quality. This is under the assumption that large firms hire more able individuals than do small firms. This model illustrates that firm size is positively correlated with earnings and is entirely consistent with competitive labour markets.

The standard approach in labor economics views human capital as a set of skills / characteristics that increase a worker's productivity. This is a useful starting point, and for most practical purposes quite sufficient in explaining the performance of a firm. Human capital is directly useful in the production process. More explicitly, human capital increases a worker's productivity in all tasks, though possibly differentially in different tasks, organizations, and situations. In this view, although the role of human capital in the production process may be quite complex, there is a sense in which it is thought as represented by a one-dimensional object, such as the stock of knowledge or skills, and this stock is directly part of the production function. It is therefore indicative that as a firm grows in size, it is able to attract efficient workers and develop its human capital for better performance.

### **2.2.2 Growth of the Firm Theory**

This theory was fronted by Penrose (1959) who offered durable principles governing the growth of firms and the rate at which firms can grow efficiently and be profitable. Penrose (1959) provides a theory of effective management of firm's resources, productive opportunities, and diversification strategy. Specifically, Penrose (1959) provides an explanatory logic to unravel causal links among resources, capabilities, and competitive advantage, which contributes to a resource-based theory of competitive advantage. Penrose (1959) provides at least three key arguments concerning linkages among firm's resources, productive opportunities, and profitable firm growth.

Penrose (1959) first maintains that firms can create economic value not due to mere possession of resources, but due to effective and innovative management of resources. This indicates that a firm commanding massive resources is not necessarily more profitable than firm commanding little resources. Creative resource deployments spur differences in productive opportunities and financial performance. Penrose (1959) also provides causal links between resources and the generation of productive opportunities for growth and innovation.

The experience of managers with each other and other resources in the firm affects their image of the unique productive opportunities available for their firms. Managers function as a catalyst in the conversion of firm's resources into firm capabilities and new product applications. In the spirit of dynamic capabilities, new combinations of resources lead to innovation and economic value creation. Large firms are expected to have this more than small firms. Penrose (1959) explains the drivers of the rate and direction of firm growth. The availability of top managerial and technical talent serves as the bottleneck for a firm's growth rate in a particular period of time. The current knowledge bases and underutilized resources of the firm determine the direction of firm growth. Penrose (1959) not only articulates why and how these drivers shape the rate and direction of growth, but also argues that ignorance of these limiting factors results in inefficiencies and loss of competitive advantage. Penrose (1959) provides a comprehensive explanation of the link between resource-based relatedness and firm level performance. The choices that lead to an optimal growth pattern have direct consequences for economic rents.

Firms that command huge resources and attract the best management are therefore expected to perform better than their peers according to the growth of the firm theory.

### **2.2.3 Economic Theory**

Economic theory prescribes that increasing firm size allows for incremental advantages because the size of the firm enables it to raise the barriers of entry to potential entrants as well as gain leverage on the economies of scale to attain higher profitability. For example, in the case of banking sector in Kenya, a new entrant has little choice but to incur substantial fixed costs in gaining entry to the industry, in the form of acquiring and maintaining set capital requirements and investments in capital equipment to provide services to customers in addition to advertising extensively to let customers know that it is in the market. The higher the barrier to entry, the lower will be the threat of potential competition, and the higher the profits that existing firms can earn without inducing entry (Chrystal & Lipsey, 1997).

The size of a firm affects performance in many ways. Key features of a large firm are its diverse capabilities, the abilities to exploit economies of scale and scope and the formalization of procedures. These characteristics, by making the implementation of operations more effective, allow larger firms to generate superior performance relative to smaller firms (Amato and Wilder, 1990). Alternative points of view suggest that size is correlated with market power, and along with market power x-inefficiencies are developed, leading to relatively inferior performance.

Industrial organization economists point to industry effects (i.e. concentration levels, industry growth) using the structure-conduct-performance model (SCP) as the main factor determining firm profitability (Porter, 1998). On the other hand, the resource-based view (Barney, 1991) suggests that the explanation for the existence of more or less profitable firms within the same industry must be found in the internal factors of each company (for example, market share, firm size, skill level, etc.). These firm-specific factors favour the achievement and maintenance of competitive advantages of each firm, which eventually lead to different profitability levels among firms belonging to the same industry.

## **2.3 Empirical Review**

Other than the absolute size of a firm, firm performance is conceivably affected by a variety of market-oriented and firm strategic factors. In order to analyze the firm size-profitability relationship, these variables have to be taken into consideration as well. Because an extensive review of the large body of literature on the determinants of firm performance is beyond the scope of this study, this section instead focuses on the major contributions that affect my empirical work. From the viewpoint of empirical methodology, research work on firm profitability can be divided into two groups: cross-section and time-series oriented studies.

### **2.3.1 Firm Size and Financial Performance**

Empirical evidence, however, has not been able to clearly verify the "size does matter" hypothesis. Much of the early works that tried to prove that size does matter was based

on markets in the U.S. and the U.K. Among the pioneering studies conducted in this field is attributed to Hall and Weiss (1967). Their empirical analysis of Fortune 500 Industrial Corporations for the years 1956–1962 aimed at testing the relationship between profit rates and other appropriate variables such as firm size, concentration, leverage and growth. Results of the study showed that firm size (proxied by the log of firm assets) exhibit a positive relationship with profitability [represented by Return on Equity (ROE) and Return on Assets (ROA)]. They concluded that large firms have all the options of small firms, and, in addition, the capability of harnessing economies of scales and access to capital markets from which small firms are excluded, thus leading to higher profit rates. The Hall and Weiss study, however, considered only firms of optimal size.

A comparable study was made by Prasetyantoko and Parmono (2008) who re-evaluated earlier findings against new data within an improved analytical framework. The study by Prasetyantoko and Parmono included the entire distribution of firms. Results showed that firm size influences profitability in some, but not all industries. Since profitability is ultimately determined by several complex factors including product prices, factor costs, and the production function, the relationship to size varies among industries and cannot be readily identified. Thus, the hypothesis that size does matter cannot be offered without providing relevant qualifications.

Another study by Agiomirgiannakis et al (2006) suggested that size is positively related to a firm's ability to produce technologically complicated products which in turn leads to concentration. Such markets are supplied by few competitors and are therefore, more

profitable. Thus, larger firms have access to the most profitable market segments. The empirical relationship between a firm's size, structure, and profitability has found that size is positively correlated with profitability (Gichura, 2011), with the profit rate of the market positively correlated with the concentration ratio and negatively correlated with the marginal concentration ratio (Adams and Buckle, 2000). Amato and Amato (2004) show that the positive association between firm size and profitability stems from implementing greater differentiation and specialization strategies, and should therefore lead to higher efficiency. Further studies also suggest that larger firms are able to leverage on economies of scale (e.g. Bashir, 2003; Geroski et al, 2003; Chen & Wong, 2004).

Wafula (2009) tested the drivers of return for the firms listed on the Nairobi stock exchange. The data collected covered the period covering 2002 December to 2008 December. The focus was to come up with the geometric stock returns on the stock prices for each year. The independent variables which were used in the research were the book to market, cash flow ratio, the dividend yield, firm size and the profitability ratio. The conclusion drawn from the research was that in Kenya, stock returns are weakly driven by the firm specific factors. The study found a weak positive relationship between firm size and return for the firms under study.

However, many of the recent studies that consider the size-profitability relationship tend to show non significant results. In fact, in a meta-analysis conducted by Goddard et al (2006), firm size was considered not significant and further confirmed in an ANCOVA

analysis. Hagedoorn and Cloudt (2003), for example, tested the relationship between firm size and profitability for a sample of 1,478 German manufacturing firms in 31 industries. Results revealed weak size-profitability correlations that were unstable over the study period. These results suggested that firm size is not the major determinant of profitability and that profitability would depend largely on how well firms cope with size and exploit the opportunities associated with it.

Whittington (1980) even found a negative association between firm size and profitability for U.K. based listed manufacturing companies covering the time period from 1960 to 1974. While no suitable reasoning can be used to explain such a link, organizational theory may perhaps solve part of this quandary. Jermanis (2006) suggests that larger firms can lead to increased coordination requirements, which in turn, makes the managerial task more difficult leading to organizational inefficiencies and lower profit rates. Further, it has been suggested that increased size tends to be associated with higher bureaucratization (Liargovas & Skandalis, 2008). Larger firms may have overly bureaucratic management structures, thereby inhibiting swift and efficient decision-making process. It is also possible that with the additional management layers needed to organize an increasingly large and diverse workforce, management may be affected by the agency problems.

Another plausible argument to justify the possibility of a negative firm size-profitability relationship can be found in the concept of X-inefficiency. X-inefficiency, or organizational slack, is a measure of the degree to which costs are higher than they need

be. Whilst diseconomies of scale refers more to the inadequacy in matching resource requirements to produce more, X-inefficiency reasons that general managerial or technological inefficiency in larger firms cause higher production costs which end up in reductions in the bottom line i.e. profit rates decline.

Based on previous literature, it is difficult to make a clear, let alone a final prediction of the overall effects of the firm size- profitability relationship. From the studies carried out, the association appears to differ depending on the industry under analysis. Given this ambiguity, it seems prudent to empirically resolve, independently, the association between firm size and profitability on a case-by-case basis and avoid the tendency to generalize. This therefore justified a study in the Kenyan banking sector to establish the relationship between firm size and financial performance.

Salim (2012) studied the relationship between bank size and financial performance of commercial banks in Kenya. The study specifically aimed at determining the relationship between bank size factors, namely, total deposits, total loans, and total assets, and financial performance, and went further to investigate the relationship between branch network size and financial performance. The main findings of the study established strong correlations between all the studied factors of bank size. The current study brought in new independent variables (number of employees) which were not considered in the study by Salim (2012).

### **2.3.2 Cross-Sectional Evidence**

The bulk of research relying on cross-sectional data includes measures of firm size and market power as the key variables for explaining firm profits. Considerable evidence supports the convention wisdom of a positive firm size-profitability relationship. However, Porter (1998) point out that the relationship between firm size and profitability may vary across industries. Naser and Mokhtar (2004) find diseconomies to scale at the upper end of the size distribution among retail firms. Similarly, Amato and Amato (2004) find a nonlinear relationship in retailing industries that supports Porter's 'stuck in the middle' hypothesis about the extent of inefficiencies of medium-sized firms.

Prasetyantoko and Parmono (2008) show that the explanatory power of a firm's absolute size in determining its profitability is sensitive to the presence of such variables as its market share and market concentration. In line with the structure-conduct-performance paradigm, they instead find market share to be the key factor in explaining profitability. While Rejc and Slapnicar (2005) interprets market share as a measure of firm efficiency, Liargovas and Skandalis (2008) considers it to be a source of market power. Nevertheless, Bashir (2003) review the results from 76 empirical studies on the relationship between market share and profitability, and conclude that the evidence supports neither the market power nor the firm efficiency hypothesis.

Mariuzzo et al. (2003) also report that in markets of differentiated products, such as soft drinks, market power does not increase for firms with a larger market share. While a firm's market share is widely regarded as an empirical proxy of market power, various

studies (e.g. Amato and Amato, 2004; Connelly and Limpaphayom, 2006) also find strong support for other variables reflecting the extent of market power, such as capital intensity, advertising intensity, R&D expenses and market concentration. Capital requirements, R&D and advertising expenses are widely considered as sources of entry barriers, thus raising the market power of firms in an industry. Advertising intensity also serves as a proxy for product differentiation. Porter (1998) argues that these forms of entry barriers affecting market structure and thus market profitability.

Similar to market share at the firm level, market concentration is regarded as a key source of market power at the industry level. Adams and Buckle (2000) hypothesizes that firms in highly concentrated industries have a greater tendency to collude, driving up the price-cost margin. However, Agiomirgiannakis et al (2006) argue that a stable profits concentration relationship exists only if industries have high entry barriers. Amato and Amato (2004) find that market share dominates the explanatory power over market concentration in explaining profitability. These results further suggest considerable interactions between the alternative measures of market power.

An alternative line of research recognizes firm-specific characteristics and emphasizes that some firms in the same industry are better managed than others. For instance, Bashir (2003) and Amato and Amato (2004) find evidence in retailing industries that higher profit rates are associated with lower inventory to sales ratios, which reflect a firm's efficiency in inventory management. Amato and Amato (2004) also consider the financial conditions of firms by looking at their bad debt to sales ratios and net worth to assets

ratios. They find both variables to be negatively correlated with profit rates. While a large amount of bad debt relative to sales obviously hinders firm performance, the adverse effect of a relatively high net worth on profit rates can be explained by the agency theory that increased borrowing tends to raise scrutiny by the lending institutions, thus giving the firm's managers greater access to lenders' expertise in managing its financial conditions.

In a competitive market, risk can play a role in explaining variations in firm returns. A firm tends to perform better in the long run by taking more risk. However, there is no consensus on how to measure risk. Gschwandtner (2005) measures risk by the standard deviation of profit returns and find it to be a marginally insignificant variable in explaining varying firm profitability. Mueller (1990) considers alternative measures of risk and find a statistically significant estimate for a firm's stock market return beta, which measures the sensitivity of its individual stock price to broad market movements.

Other than industry and firm characteristics, it is widely believed that firm performance responds to overall business cycle conditions. Chen and Wong (2004) assert that the business cycle affects firms, particularly oligopolists, to coordinate behavior. This assertion is partially supported by Liargovas and Skandalis (2008) who find that the relationship between market concentration and profits varies over the course of the business cycle.

Mehrjardi (2012) did a study about size and profitability of banks in Kenya. From the findings, the study found that there was positive relationship between profitability of banks varied with customer base, number of branches, deposit liabilities and market share as there was high positive correlation coefficient. The study further revealed that there was greater variation of profitability of commercial banks as results of change with customer base, number of branches, deposit liabilities and market share in all tiers.

### **2.3.3 Time-Series Evidence**

While earlier studies examine firm profitability from the cross-sectional perspective, a growing literature since Mueller (1986) explores the dynamics of profitability over time using autoregressive models. Some studies (e.g. Geroski et al, 2003) find substantial persistence in firm profits over time. The evidence of high persistence in profit rates suggests that firms can enjoy market power through high entry barriers and that market competition is ineffective in eliminating excess profits from firms. Mueller (1986) examines this competitive environment hypothesis for two periods, 1950–72 and 1964–84, and finds profits to be less persistent and thus markets more competitive in the more recent period.

Most of the traditional time-series based studies focus on the overall patterns of profits over time, ignoring heterogeneity among firms within industries. Gschwandtner (2005) find that profit persistence is associated with industry characteristics, such as concentration and growth, and larger firms tend to enjoy higher long-run profit rates. When Gschwandtner (2005) divides the sample into surviving and exiting firms, findings

indicate that there evidence that exiters behave more competitively than survivors before exiting the market.

A study done in Kenya by Ochung (1999) sought to establish the relationship between deposit portfolio and profitability of publicly quoted banks and financial institutions in Kenya. Using multiple correlation analysis, correlation coefficients were computed to show the degree of association between after tax profit of these institutions and their deposit portfolio. The analysis revealed that there existed a positive relationship between these variables but the magnitude of these relationships varied from one firm to another perhaps due to variations in their size, investment policies and other firm specific factors.

#### **2.3.4 Evidence from Panel Data**

A few recent studies apply panel techniques to accommodate unobserved firm specific effects in time-series regression. Panel models pool cross-section and time series data together. However, the focus of these studies (e.g. Gersoki et al., 2003;Glen et al., 2003; Goddard et al., 2006) remains on the degree of persistence in firm profits over time, which might be less interesting than the determinants of profits across firms or industries, at least from the policy perspective. In addition to the potential insight into firm performance over time, panel data models can account for unobserved heterogeneity among firms, also known as individual effects.

Notwithstanding the extensive research on firm profitability, the bulk of the literature concerns mainly manufacturing industries. Interestingly, Amato and Amato (2004) find

that the typical firm size-profitability relationship established in those studies using data of manufacturing firms does not hold in banking industry. From this perspective, this study contributes to the existing literature in two directions. First, rather than having firms from many industries which may be affected by different industry specific factors, this study will focus on one industry thus bringing homogeneity on the industry aspect. Second, the study incorporates the time dimension of firm-level data in a panel framework so that the profitability of firms over the past years can be related to their sizes.

Ndung'u (2003) did a study to establish the determinants of commercial banks profitability in Kenya. This study focussed on the Kenyan quoted banks. The findings of this study revealed that market share has a positive impact on profitability. The findings from Ndung'u's study provided an insight into the characteristics and practices of the successful commercial banks in terms of profitability.

#### **2.4 Other Factors Affecting Banks Financial Performance**

Empirical literature examines how financial and non-financial factors, such as number of employees, market share, number of branches and management competence index have an influence on the firms' financial performance and growth (Salim, 2012). A large portion of financial institutions revenue is generated from credit extended to various individuals and organizations. This revenue is in the form of interest earned and charges on the preparation and management of the credit process (Ndung'u, 2003).

Other sources of income for banks are service charges and commissions, income on foreign exchange dealings among others. Mehrjardi (2012) found out that the most critical variables affecting commercial banks profitability are nonperforming loans and advances, loans and advances to customers net of provision for doubtful, interest expense on customers' deposits, interest income from loans and advances to customers, operating expenses, customers' deposits, provision for bad and doubtful debts, shareholders funds, loans to deposits ratio and total assets net of loans and advances to customers. Among the quoted banks, provision for bad and doubtful debts, non-performing loans and advances, loans and advances to customers net of provision for doubtful and customers' deposits were the variables that affected profitability significantly (Muriithi, 2011). In the unquoted banks, operating expenses, non-performing loans, provision for bad and doubtful debts, shareholders funds, market share and loans and advances to customers net of provision for doubtful were the variables that affected profitability significantly.

## **2.5 Summary**

The reviewed literature has indicated theories and empirical studies that have looked at the relationship between firm size and financial performance. The reviewed studies have indicated that the effect of size on financial performance can either be positive or negative depending on the context, industry or other environmental variables (Serrasqueiro et al, 2008). This implies that the findings from a study in one industry cannot be applied to another industry. This therefore calls for a study to establish the effect of firm size on the financial performance of the banking sector in Kenya. However, the size of a firm plays an important role in determining the kind of relationship the firm

enjoys within and outside its operating environment. The larger a firm is, the greater the influence it has on its stakeholders. Again, the growing influences of conglomerates and multinational corporations in today's global economy (and in local economies where they operate) are indicative of what role size plays within the corporate environment.

Refocusing the importance of size in corporate discourse, Bhayani, (2010) argue that an interesting aspect of economic growth is that much of it takes place through the growth in the size of existing organizations. As the popularity of corporate size phenomenon continues to rise within the external business environments, more attentions are being pushed to its real effects on the internal structures of corporations and the specific impact on the relationship between the firm and its key stakeholders. However, various past studies have used various proxies to measure size including asset base, market share, number of employees and other such factors. This study will be different from some of these studies since it will use a measure of size that is more applicable to the study (assets employed).

One of the most popular areas where the influence of firm size has been much queried is the area of practice of corporate finance. It would not be wrong to say that firms have been playing a central role in today's global and capitalist world economy and their performance is one of the most important issues for many firm stakeholders such as shareholders, creditors, employees, suppliers and governments (Bhayani, 2010). By this reason, analyzing the factors determining firm profitability is regarded as an important research theme. In this context, size has been considered as a fundamental variable in

explaining firm profitability by the researchers and a number of studies investigate the effects of size on firm profitability (Serrasqueiro et al, 2008; Wu, 2006). Here, it should be stated that according to the conclusions of various studies the impacts of size on profitability can be negative or positive (Serrasqueiro et al, 2008).

For as much as some authors argue that larger firms have some advantages such as a greater possibility of taking advantage of scale of economies which can enable more efficient production (Hardwick, 1997; Fiegenbaum and Karnani, 1991), a greater bargaining power over both suppliers and distributors or clients, exploiting experience curve effects and setting prices above the competitive level (Fiegenbaum and Karnani, 1991). It is also argued that larger firms are more stable and mature and they can generate greater sales because of the greater production capacity that enhances capital cost savings with the economies of scale (Ravenscraft and Scherer, 1987). On the contrary, some authors claim that size may have no or negative impacts on profitability (Shepherd, 1972), especially if growth in size causes a diseconomies of scale (Goddard et al., 2005). These inconsistencies in findings indicates that to establish the effect of size on financial performance in the Kenyan banking sector, a study needed to be carried out which justified the current study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research methodology that was applied in the study. This includes the research design that was applied, the target population for the study and the sampling procedures that were applied. The chapter presents the sample size, data collection procedures and data analysis techniques that were applied.

#### **3.2 Research Design**

This research was carried out using a correlational design. Correlational research tests for statistical relationships between variables. Correlational research represents a general approach to research that focuses on assessing the covariation among naturally occurring variables. The goal of correlational research is to identify predictive relationships by using correlations or more sophisticated statistical techniques (Cooper & Schindler, 2006). The results of correlational research also have implications for decision making, as reflected in the appropriate use of prediction. This ability of predicting a causal relationship between variables has made this design to be appropriate in this study to relate firm size and financial performance. The researcher began with the idea that there might be a relationship between firm size and financial performance. The variables were then measured from the banking sector to establish the nature of relationship.

### **3.3 Target Population**

The target population of this study was all the 43 commercial banks in Kenya as at 31<sup>st</sup> December 2012. The banking sector was selected as the target of this study due to its strategic location as the driver and financier of economic development and growth in Kenya and the way the buzz of core system replacement has gained momentum following the financial crisis of 2008/09. The panel data to be used was data from 1998 to 2012. No sampling was done since the population was small (N=43). The study therefore was a census of all the 43 commercial banks. According to Mugenda and Mugenda (2003), sampling is not necessary when the population is small. Sampling in a small population increases the risk of sampling errors which can distort the reliability of the sample in relation to its representativeness to the population.

### **3.4 Data Collection Procedures**

This study used secondary data. This data was collected from Central Bank of Kenya which is the major regulatory authority for banks in Kenya. Firm size was measured using net assets employed while financial performance was measured using Return on Assets (ROA). Other factors that were included in the model include Total assets (which were the total net assets for the bank), Total loans (which was measured as the total amount advanced by the bank as loans to customers), total deposits (measured in Kenya shillings) and number of employees. Data was collected from CBK department of bank regulation.

### 3.5 Data Analysis Procedures

Data which was collected was analyzed using correlation and regression statistics. The following regression model was applied. The data that was collected relating to net assets employed, ROA, total assets, total loans, number of employees and total deposits was analyzed using the Statistical Package for Social Sciences (SPSS) which developed the correlation and regression models.

The regression model was of the form;

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

Where, Y = Performance of Commercial banks as measured by Return on assets

$B_0$  = Constant

$\beta_i$  = coefficients of the independent variables

$X_1$  = Total assets

$X_2$  = Total loans

$X_3$  = Amount of deposits measured using Kenya shillings

$X_4$  = Number of employees

$\varepsilon$  = Error term

The tests that were performed were the f-test and t-test. F-test was used to test the overall significance of the regression model while t-test was used to test the significance of independent variables in the model. The tests were done at a significance level of 5%. A correlation analysis was done to establish how firm size and the other independent

variables such as total assets, total loans, total deposits and number of employees are correlated to firm performance. Analyzed data was presented in tables.

## **CHAPTER FOUR**

### **DATA ANALYSIS, FINDINGS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the analysis of data, findings and discussion of the findings. Part 4.2 presents data analysis while 4.3 presents findings from the study. Part 4.4 presents discussion of the findings.

#### **4.2 Data Collection and Analysis**

Data was collected for 43 commercial banks from 1998 to 2012 from Central bank of Kenya and the banks themselves. Data collected included information on net assets employed, ROA, total loans, number of employees and total deposits. The data collected was entered into SPSS and regression and correlation analysis performed.

#### **4.3 Findings**

The regression analysis was performed with the independent variables being total assets, total loans, total deposits and number of employees. Return on assets (ROA) which is operating profit divided by net assets was the dependent variable. Results are as indicated in tables 4.1 to 4.4.

The r-squared for the regression model was 0.3052. The model therefore is explaining 30.52% of the change in ROA using the four independent variables. These findings indicate that the four independent variables selected (assets, deposits, loans and employees) can explain 30.52% of the change in ROA of the selected Commercial banks.

**Table 4.1: Regression Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.5524	.3052	.2987	3.0274626

Analysis of variances in the regression model is presented in Table 4.2. The f-value was 66.453 which was significant at 1% level of significance indicating that the regression model provided some explanatory power and the overall model is significant. This indicates that assets, deposits, loans and number of employees can be used to predict ROA of a commercial bank in Kenya.

**Table 4.2: Analysis of Variances in the Regression Model**

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Regression	23.393	4	5.848	66.453	.000
Residual	53.260	610	.088		
Total	76.653	614			

The test of the statistical significance of the independent variables in the model was done using t-tests. Results are presented in Table 4.3 which indicates that Net assets has a positive coefficient when used as a predictor to ROA ( $B = 0.0356$ ) and has a t-statistic of 2.093 which is significant at 5% level of significance. This indicates that net assets are a significant predictor of ROA. It has a positive coefficient indicating that increase in net assets by a commercial bank in Kenya increases the return on assets.

Loans advanced by the commercial banks which were measured in millions of shillings had a positive coefficient in the regression model ( $B = 0.4318$ ) indicating that rise in loans advanced by a commercial bank will cause a rise in ROA. The t-statistic was 2.159

which was significant at 5% level of significance. This indicates that loans advanced by a commercial bank in Kenya can be used as a predictor of return on assets.

Amount of customer deposits measured in Kenya shillings had a positive coefficient in the regression model ( $B = 0.06906$ ) indicating that a rise in amount of customer deposits will have a positive effect on ROA. The t-statistic was 2.656 which was significant at 5% significance level. This indicates that amount of customer deposits is a significant predictor of ROA.

Number of employees had a positive coefficient in the regression model ( $B = 0.01129$ ) indicating that rise in number of employees would have a positive effect on ROA. The t-statistic for number of employees in the regression however was 0.185 which was not significant at 5%. This result indicates that number of employees is not significant predictor of ROA in commercial banks in Kenya at 5% level of significance.

**Table 4.3: Test of Significance of Independent Variables**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	.014	.001		13.550	.000
Assets	0.0356	.031	.017	2.093	.049
Loans	0.4318	.027	.200	2.159	.041
Deposits	0.06906	.026	.577	2.656	.027
Employees	0.01129	.003	.061	0.185	.427

A correlation analysis was performed to establish the relationship between the variables under study. Person correlation coefficients were established for all the variables with

findings as indicated in Table 4.4. The study results indicate that there were moderate positive correlation between ROA and amount of deposits (0.409) and number of employees (0.154). This indicates that a rise in amount of deposits and number of employees would probably indicate that there was a rise in ROA. The relationship between ROA and number of employees was very weak. The study results also that net assets owned by commercial banks (0.491) and loans advanced to customers (0.395) were also positively correlated to ROA. Further results indicate that the relationship was moderate. This indicates that rise in assets owned and loans advanced would indicate an increase in ROA.

**Table 4.4 Correlation Matrix**

	Assets	Loans	Deposits	Employees	ROA
Assets	1				
Loans	.485	1			
Deposits	.494	.987	1		
Employees	.283	.546	.550	1	
ROA	.491	.395	.409	.154	1

#### 4.4 Discussion

Net assets has a positive coefficient when used as a predictor to ROA ( $B = 0.0356$ ) and has a t-statistic of 2.093 which is significant at 5% level of significance. This indicates that net assets are a significant predictor of ROA. It has a positive coefficient indicating that increase in net assets by a commercial bank in Kenya increases the return on assets. These study results agree with the growth of the firm theory developed by Penrose (1959). This theory indicates that there is a linkage between firm resources and profitable firm growth. The study findings established that availability of more resources (net assets) was not linked to improved profitability (ROA). The study findings also agree

with the study by Hall and Weiss (1967). Their empirical analysis of Fortune 500 Industrial Corporations for the years 1956–1962 aimed at testing the relationship between profit rates and other appropriate variables such as firm size, concentration, leverage and growth. Results of the study by Hall and Weiss (1967) showed that firm size (proxied by the log of firm assets) exhibit a positive relationship with profitability [represented by Return on Equity (ROE) and Return on Assets (ROA)]. The study results also agree with the findings from a study by Nyanga (2012) which established a positive influence on RPOA by bank size. The findings however, disagree with observations by Amato and Wilder (1990) who indicated that as a firm grows in size (net assets) x-inefficiencies are developed, leading to relatively inferior performance (ROA). Another study with dissimilar results to this study was by Prasetyantoko and Parmono (2008) who re-evaluated earlier findings against new data within an improved analytical framework. The study by Prasetyantoko and Parmono (2008) showed that firm size (measured by assets) influences profitability in some, but not all industries. This is because profitability is ultimately determined by several complex factors including product prices, factor costs, and the production function, the relationship to size varies among industries and cannot be readily identified.

Loans advanced by the commercial banks which were measured in millions of shillings had a positive coefficient in the regression model ( $B = 0.4318$ ) indicating that rise in loans advanced by a commercial bank will cause a rise in ROA. The t-statistic was 2.159 which was significant at 5% level of significance. This indicates that loans advanced by a commercial bank in Kenya can be used as a predictor of return on assets. The study

assumed that bigger banks are able to advance more loans to their customers. These study results disagree with a meta-analysis conducted by Goddard et al (2006) where firm size was considered not significant and further confirmed in an ANCOVA analysis. Another study which disagrees with this study is by Hagedoorn and Cloudt (2003) who tested the relationship between firm size and profitability for a sample of 1,478 German manufacturing firms in 31 industries. Results revealed weak size-profitability correlations that were unstable over the study period. The study results also agreed with findings from a study by Murira (2010) which concluded that there exists a relationship between loan portfolio and financial performance of commercial banks in Kenya as loan portfolios are the major asset of banks and other lending institutions.

Amount of customer deposits measured in Kenya shillings had a positive coefficient in the regression model ( $B = 0.06906$ ) indicating that a rise in amount of customer deposits will have a positive effect on ROA. The t-statistic was 2.656 which was significant at 5% significance level. This indicates that amount of customer deposits is a significant predictor of ROA. These results concur with results of a study by Salim (2012) which established a statistically significant relationship between three of the size variables, namely, Total Loans, Total Deposits, and Total Assets and the Financial Performance of commercial banks.

Number of employees had a positive coefficient in the regression ( $B = 0.01129$ ) indicating that rise in number of employees would have a positive effect on ROA. The t-statistic for number of employees in the regression was 0.185 which was not significant

at 5%. This result indicates that number of employees is not significant predictor of ROA in commercial banks in Kenya at 5% level of significance. These results are supported by the human capital theory advanced by Doeringer and Piore (1971). The findings indicate that earnings reflect skill differentials in perfect factor markets, has dominated the interpretation of earnings functions. The finding that earnings rise with firm size has been widely interpreted in this framework. This is under the assumption that large firms hire more able individuals than do small firms. This model illustrates that firm size is positively correlated with earnings and is entirely consistent with competitive labour markets. The study results had the same findings that large human capital was correlated with good performance (ROA). However, the correlation of number of employees and ROA in this study was weak and not statistically significant.

These study results also agree with findings from a study by Wafula (2009) who tested the drivers of return for the firms listed on the Nairobi stock exchange. The data collected covered the period covering 2002 December to 2008 December. The conclusion drawn from the research was that in Kenya, stock returns are weakly driven by the firm specific factors. The study found a weak positive relationship between firm size and return for the firms under study. This study determined that there was a weak and insignificant relationship between number of employees and financial performance of banks.

## **CHAPTER FIVE**

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

#### **5.1 Introduction**

In this chapter, the researcher presents the summary, conclusions and the recommendations made from the study findings. In part 5.2, summary of findings are presented. Part 5.3 presents conclusions made from the study findings while 5.4 presents recommendations made after considering the study findings. Part 5.5 presents suggestions for any further studies that may be done in relation to study the relationship between firm size and financial performance.

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

The study results indicate that the regression model explains 30.52% of the change in ROA using the four independent variables. These findings indicate that the four independent variables (assets, deposits, loans and employees) therefore can explain 30.52% of the change in ROA of the selected Commercial banks in Kenya. The f-value was 66.453 which was significant at 1% level of significance indicating that the regression model provided some explanatory power and the overall model is significant. This indicates that assets, deposits, loans and number of employees can be used to predict ROA of a commercial bank in Kenya. Net assets has a positive coefficient when used as a predictor to ROA ( $B = 0.0356$ ) and has a t-statistic of 2.093 which is significant at 5% level of significance. This indicates that net assets are a significant predictor of ROA. It has a positive coefficient indicating that increase in net assets by a commercial bank in Kenya would positively boost the return on assets.

Loans advanced by the commercial banks which had a positive coefficient in the regression model ( $B = 0.4318$ ) indicating that rise in loans advanced by a commercial bank will cause a rise in ROA. The t-statistic was 2.159 which was significant at 5% level of significance. This indicates that loans advanced by a commercial bank in Kenya can be used as a predictor of return on assets. Amount of customer deposits measured in Kenya shillings had a positive coefficient in the regression model ( $B = 0.06906$ ) indicating that a rise in amount of customer deposits will have a positive effect on ROA. The t-statistic was 2.656 which was significant at 5% significance level. This indicates that amount of customer deposits is a significant predictor of ROA. Number of employees had a positive coefficient in the regression model ( $B = 0.01129$ ) indicating that rise in number of employees would have a positive effect on ROA. The t-statistic for number of employees in the regression however was 0.185 which was not significant at 5%. This result indicates that number of employees is not significant predictor of ROA in commercial banks in Kenya at 5% level of significance.

Correlation analysis through Person correlation coefficients established moderate positive correlation between ROA and amount of deposits (0.409) and a weak positive correlation between number of employees and ROA (0.154). This indicates that a rise in amount of deposits and number of employees would probably indicate a rise in ROA. The relationship between ROA and number of employees was very weak. The study results also indicate that net assets owned by commercial banks (0.491) and loans advanced to

customers (0.395) were also positively correlated to ROA. Further results indicate that the relationship was moderate.

### **5.3 Conclusions**

The main conclusion of the study is that there is moderate correlation between three of the studied factors of bank size which include total deposits, total loans and total assets. The relationship between three of the independent variables, namely, total loans, total deposits, and total assets and the dependent variable (financial performance- ROA) of commercial banks were all found to be statistically significant. Total deposits and total loans had relatively stronger effects on financial performance compared to total assets. There was no significant relationship between number of employees and financial performance for commercial banks in Kenya.

The study also concludes that every bank should strive to have the best mix of assets, loans and should strive to encourage more customer deposits to positively affect financial performance. The study also concludes that that bank size is desirable and that size could act as a buffer for better performance. Additionally large banks with large net asset, deposits and loan portfolio post superior return on assets. In conclusion, some banks in Kenya appear to be earning much higher returns than their counterparts despite being in same macroeconomic environment.

#### **5.4 Recommendations**

The study recommends that in order for commercial banks to increase their performance (profitability) there is need from commercial banks to increase size by increasing various aspects of customer base, net assets, deposit liabilities and market share.

The recommendations from the study include the need for bank policies that give greater importance to the determination and monitoring of their loan portfolio, customer deposits and asset quality. The study further recommends that for commercial banks to remain profitable they should have good portfolio management which will help in making decisions about investment mix and policy, matching investments to objectives, asset allocation for individuals and institutions, and balancing deposits and loans against performance.

#### **5.5 Suggestions for Future Research**

This study focussed on the effect of size on financial performance. The size variables used in the study included net assets, total loans, total deposits and number of employees. Another study that incorporates other size variables such as branch network, number of deposit accounts and number of loan accounts is suggested. This would shed more light on how these size variables are related to performance.

This study had only one variable that was used to measure performance: return on assets. Further studies that incorporate other performance factors, including return on equity and riskiness of assets is recommended to give a clearer picture on how these performance

factors are affected by size. Another study is also recommended that could factor in other bank performance measures such as asset quality, Tobin Q, Capital adequacy ratio and return on equity in addition to the performance measure utilized in this study.

The current study was conducted on commercial banks operating in Kenya. There is therefore need for a similar study to be carried out in other sectors of the economy. The sectors that may be considered for study include the manufacturing sector or telecom sector to establish whether size variables affect financial performance.

The current study focussed on size and how it affects financial performance. Another study is suggested in the commercial banking industry to establish how size affects riskiness of the banks. Riskiness can be measured by variables such as capital adequacy ratio, liquidity levels and asset quality. This is because risk is an important variable in the banking industry due to the role of banking in the economy.

Lastly, financial performance is affected by very many variables. This may include management quality, corporate governance, reward systems and years of operation among others. Future research should be conducted to establish how these other variables come into play to influence financial performance.

## REFERENCES

- Adams, M., & Buckle, M. (2000). The determinants of operational performance in the Bermuda insurance market. *Applied Financial Economics*, 13, 133-143.
- Agiomirgiannakis, G., Voulgaris, F., & Papadogonas, T. (2006). Financial factors affecting profitability and employment growth: the case of Greek manufacturing. *Int. J. Financial Services Management*, 1(2/3), 232–242.
- Amato, L. and Wilder, R. P. (1990). Firm and industry effects in industrial economics. *Southern Economic Journal*, 50, 93–105.
- Amato, L. J. and Amato, C. H. (2004). Firm size, strategic advantage, and profit rates in US retailing. *Journal of Retailing and Consumer Services*, 11(3), 181–193.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99–120.
- Bashir, A. (2003). Determinants of Performance in Islamic Banks Some Evidence from the Middle East. *Middle East Islamic Economic Studies*, 11, 2, 1-20.
- Baumol, W. (1967). *Business behavior value and growth*. New York: Harcourt Brace Jovanovich.
- Bhayani S. J. (2010). Determinant of Profitability in Indian Cement Industry: An Economic Analysis. *South Asian Journal of Management*, 17 (4), 6-20.
- Capon, N., Farley J. V. and Hoenig, S. (1990). Determinants of financial performance: A meta-analysis. *Management Science*, 36, 1143–1159.
- Chen, R., & Wong, K., (2004). The Determinants of Financial Health of Asian Insurance Companies. *Journal of Risk and Insurance*, 71(3), 469-499.
- Chrystal, K. A. and Lipsey, R. G. (1997). *Economics for business and management*. Oxford University Press.
- Connelly, J. Limpaphayom, P. (2006). Board Characteristics and Firm Performance: Evidence from the Life Insurance Industry in Thailand. *Chulalongkorn Journal of Economics*, 16 (2), 101-124.
- Cooper, D. and Schindler, P. (2006). *Business Research Methods*. 9th Ed. New Delhi: McGraw-Hill.
- Doeringer, P. and Piore, M. (1971). *Internal Labour Markets and Manpower Analysis*. D. C. Heath, Lexington.

- Fiengenbaum, A. and Karnani, A. (1991). Output Flexibility – A Competitive Advantage for Small Firms. *Strategic Management Journal*, 12, 101-114.
- Geroski, P. A., Lazarova, S., Urga, G. and Walters, C. F. (2003). Are differences in firm size transitory or permanent. *Journal of Applied Econometrics*, 18(1), 47–59.
- Gichura, S. N. (2011). *The determinants of financial performance of micro-finance institutions in Kenya*. An unpublished MBA project, University of Nairobi.
- Glen, J., Lee, K. and Singh, A. (2003). Corporate profitability and the dynamics of competition in emerging markets: A time series analysis. *Economic Journal*, 113 (491), 465–484.
- Goddard, J., McMillan, D. and Wilson, J. O. S. (2006). Do firm sizes and profit rates converge? Evidence on Gibrat's law and the persistence of profits in the long run. *Applied Economics*, 38(3), 267–278.
- Goddard, J., Tavakoli M. and Wilson, J. O. S. (2005). Determinants of profitability in European Manufacturing and services: evidence from a dynamic panel model. *Applied Financial Economics*, 15 (18), 1269-1282.
- Hagedoorn, J. and Cloudt, M. (2003). Measuring innovative performance: Is there an advantage in using multiple indicators? *Research Policy*, 32(8), 1365-1379.
- Hall, M. and Weiss, L. (1967). Firm size and profitability. *Review of Economics and Statistics*, 49, 319–331.
- Hamel, G. and Prahalad, C. (1994). *Competing for the Future*. Boston: Harvard Business School Press.
- Jelic, M., Briston, R., & Aussenegg, W. (2001). The Financial Performance of Privatized Firms: evidence from Three Transition Economies. *Journal of Business Finance & Accounting*, 7(4), 9-25.
- Jermanis, D. (2006). *System of Measures for Evaluating the Financial Performance of the Company Lasko*. Unpublished MA thesis, University of LJUBLJANA.
- Kakani, R., Saha, B., & Reddy, V. (2001). Determinants of Financial Performance of Indian Corporate Sector in the Post-Liberalization Era: An Exploratory Study. *NSE Research Initiative Paper*, No. 5, 12-30.
- Kipkurui, K. (2011). *The relationship between corporate governance and financial performance of insurance companies in Kenya*. An unpublished MBA project, University of Nairobi.

- Leibenstein, H. (1977). X-Efficiency, Technical Efficiency, and Incomplete Information Use: A Comment. *Economic Development and Cultural Change*, 25, 311-316.
- Liargovas, P. and Skandalis, K. (2008). *Factors affecting firm's financial performance: the Case of Greece*, University of Peloponnese.
- Mariuzzo, F., Walsh, P. and Whelan, C. (2003). Firm size and market power in carbonated soft drinks, *Review of Industrial Organization*, 23(4), 283–299.
- Mbogo, P. K. (2012). *The Effect of Portfolio Size on the Financial Performance of Portfolios of Investment Firms in Kenya*. An unpublished MBA project, University of Nairobi.
- Mehrjardi, M. S. (2012). *Size and Profitability of Banks in Kenya*. An unpublished MBA project, University of Nairobi.
- Merikas, G., Merika, A. and Skandalis, S. (2006). *An effective index of management competence*. Paper presented at the 15th Annual Conference of European Financial Management Association-EFMA, Madrid.
- Mueller, D. C. (1986). *Profits in the Long Run*. Cambridge: Cambridge University Press.
- Mugenda, O.M. and Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- Muriithi, E. (2011). *The relationship between corporate governance practices and financial and financial performance of investment banks in Kenya*. An unpublished MBA project, University of Nairobi.
- Mutie, P. K. (2011). *Relationship between prior period dividends and financial performance of firms listed at the NSE*. An unpublished MBA project, University of Nairobi.
- Naser, K. and Mokhtar, M. (2004). *Determinants of Corporate Performance of Malaysian Companies*. Fourth Asia Pacific Interdisciplinary Research in Accounting Conference, Singapore.
- Ndung'u, N. (2013). *The importance of the banking sector in the Kenyan economy*. A keynote address at the Bank of India, Kenya Branch, Diamond Jubilee Celebrations, Nairobi, 12<sup>th</sup> April.
- Ndung'u, C. W. (2003). *Determinants of commercial banks profitability in Kenya: the case of Kenyan quoted banks*. An unpublished MBA project, University of Nairobi.

- Ochung, D. O. (1999). *An empirical analysis of the relationship between deposit portfolio and profitability: the case of publicly quoted banks and financial institutions in Kenya*. An unpublished MBA project, University of Nairobi.
- OECD (2005). *SME and Entrepreneurship Outlook*. Paris: OECD
- Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. New York: John Wiley.
- Porter, M.E. (1979). The structure within industries and company performance. *Review of Economics and Statistics*, 61(2), 214–227.
- Porter, M.E. (1998). *Competitive strategy: Techniques for analyzing industries and competitors*. New York: Free Press.
- Prasetyantoko, A. and Parmono, R. (2008). A Comparison of Financial Performance in the Banking Sector: Some Evidence from Omani Commercial Banks. *International Research Journal of Finance and Economics*, 3, 1-22.
- Ravenscraft, D. J. and Scherer, F. M. (1987). Life after Takeover. *The Journal of Industrial Economics*, 36 (2), 147-156.
- Rejc, A. and Slapnicar, S. (2005). Corporate Performance Measurement Systems: Empirical Evidence of Determinants. *Harvard Business Review*, 69(1), 131-137.
- Salim, S. B. (2012). *The relationship between size and financial performance of commercial banks in Kenya*. An unpublished MBA project, University of Nairobi.
- Sarkaria, M. and Shergill, G. S. (2000). Market structure and financial performance – An Indian evidence with enhanced controls. *Indian Economic Journal*, 48(2), 98–105.
- Sekaran, U. (2003). *Research methods for business a skill building approach, 4th edition*. John Wiley & Sons, Inc.
- Serrasqueiro, Z. S. and Nunes, P. M. (2008). Performance and size: empirical evidence from Portuguese SMEs. *Small Business Economics*, 31 (2), 195 – 217.
- Shepherd, W.G. (1972). The Elements of Market Structure. *The Review of Economics and Statistics*, 54 (1), 25-37.
- Tangen S. (2003). An overview of frequently used performance measures. *International Journal of Productivity and Performance Management*, 52(7), 347-354.
- Tarawneh, M. (2006). A comparison of financial performance in the banking sector: Some Evidence from Omani Commercial Banks. *International Research Journal of Finance and Economics*, 3, 25-36.

- Wafula, E. (2009). *The Drivers Of Return For Firms Listed On The Nairobi Stock Exchange*. An unpublished MBA project, University of Nairobi.
- Walker, D. (2001). *Exploring the Human Capital Contribution to Productivity, profitability and the Market Evaluation of the Firm*. available on:  
<http://wwwlib.umi.com/dissertations>.
- Whittington, G. (1980). The profitability and size of United Kingdom companies 1960–74. *The Journal of Industrial Economics*, 28(4), 335.
- Wu, M. L. (2006). Corporate Social Performance, Corporate Financial Performance, and Firm Size: A Meta-Analysis. *Journal of American Academy of Business, Cambridge*, 8 (1).

## APPENDICES

### Appendix I: List of Commercial banks in Kenya

1. African Banking Corporation Ltd.
2. Bank of Africa Kenya Ltd
3. Bank of Baroda (K) Ltd
4. Bank of India
5. Barclays Bank of Kenya Ltd
6. CFC Stanbic Bank Ltd
7. Chase Bank (K) Ltd
8. Charter House bank Ltd (Under Statutory Management)
9. Citibank N.A Kenya
10. Commercial Bank of Africa Ltd
11. Consolidated Bank of Kenya Ltd
12. Co-operative Bank of Kenya Ltd
13. Credit Bank Ltd
14. Development Bank of Kenya Ltd
15. Diamond Trust Bank Kenya Ltd
16. Dubai Bank Kenya Ltd
17. Ecobank Kenya Ltd
18. Equatorial Commercial Bank Ltd
19. Equity Bank Ltd
20. Family Bank Limited
21. Fidelity Commercial Bank Ltd
22. Fina Bank Ltd
23. First community Bank Limited
24. Giro Commercial Bank Ltd
25. Guardian Bank Ltd
26. Gulf African Bank Limited
27. Habib Bank A.G Zurich
28. Habib Bank Ltd
29. Imperial Bank Ltd

30. I & M Bank Ltd
31. Jamii Bora Bank Limited
32. Kenya Commercial Bank Ltd
33. K-Rep Bank Ltd
34. Middle East Bank (K) Ltd
35. National Bank of Kenya Ltd
36. NIC Bank Ltd
37. Oriental Commercial Bank Ltd
38. Paramount Universal Bank Ltd
39. Prime Bank Ltd
40. Standard Chartered Bank Kenya Ltd
41. Trans-National Bank Ltd
42. UBA Kenya Bank Limited
43. Victoria Commercial Bank Ltd

## Appendix II: SPSS Output Sheets

```

REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT ROA
  /METHOD=ENTER Loans Deposits Employees Assets.
  
```

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Assets, Employees, Loans, Deposits <sup>b</sup>		Enter

- a. Dependent Variable: ROA  
 b. All requested variables entered.

**Model Summary**

Model	R	R Square	Std. Error of the Estimate	Adjusted R Square
1	.552 <sup>a</sup>	.305	3.0274626	.299

- a. Predictors: (Constant), Assets, Employees, Loans, Deposits

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.393	4	5.848	66.453	.000 <sup>b</sup>
	Residual	53.260	610	.088		
	Total	76.653	614			

a. Dependent Variable: ROA

b. Predictors: (Constant), Assets, Employees, Loans, Deposits

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.014	.001		13.550	.000
	Assets	.036	.031	.017	2.093	.049
	Loans	.432	.027	.200	2.159	.041
	Deposits	.069	.026	.577	2.656	.027
	Employees	.011	.003	.061	.185	.427

a. Dependent Variable: ROA

CORRELATIONS

/VARIABLES=Assets Loans Deposits Employees ROA

/PRINT=TWOTAIL NOSIG

/MISSING=PAIRWISE.

**Correlations**

		Assets	Loans	Deposits	Employees	ROA
Assets	Pearson Correlation	1	.485**	.494**	.283**	.491*
	Sig. (2-tailed)		.000	.000	.001	.033
	N	615	614	615	615	615
Loans	Pearson Correlation	.485**	1	.987**	.546**	.395**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	614	614	614	614	614
Deposits	Pearson Correlation	.494**	.987**	1	.550**	.409**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	615	614	616	616	615
Employees	Pearson Correlation	.283**	.546**	.550**	1	.154**
	Sig. (2-tailed)	.001	.000	.000		.004
	N	615	615	616	616	615
ROA	Pearson Correlation	.491*	.395**	.409**	.154**	1
	Sig. (2-tailed)	.033	.000	.000	.004	
	N	615	614	615	615	615

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

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