

SIZE AND PROFITABILITY OF BANKS IN KENYA

BY

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DECLARATION

STUDENT'S DECLARATION

I declare that his research project is my original work and has not been presented to any other university for the award of a degree.

Signature _____

Student's Name

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Date _____

SUPERVISOR'S DECLARATION

This research project has been submitted with my permission as the University Supervisor.

Signature _____

Supervisor's Name

Date _____

DEDICATION

I dedicate this dissertation to my family, especially....

To Dad and Mom for instilling the importance of hard work and higher education;

To Maedeh for her patience and understanding;

To Mahdi & Saedeh for motivation;

To grandma, grandpa, for encouragement.

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ABSTRACT

The main purpose behind establishment of every business is to make profit. For the achievement of this objective various factors facilitates ease of attain it, size of the business being one of the main factors. Banks as well as other business aim at making profit despite their key role that they play in pushing forward the economic growth rates, through the mobilization of national savings and using them to finance productive economic sectors they also plays a major role as an engine and a key supporter to the country economy. It is generally argued that big firms possess economies of scale and better access to capital markets to achieve lower costs and higher returns.

The study employed a descriptive design since the study concentrated on all commercial banks in Kenya. Survey study was conducted to get detailed information on the relationship between size and the profitability of the firm. Secondary data was used. The data was obtained from the annual central bank reports, Market Intelligence magazine bank survey report and annual financial accounts of the commercial banks. This ensured that the information obtained was not biased and depicts the real situation of the bank's performance.

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. 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 aspect of customer base, number of branches, deposit liabilities and market share

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The dynamics of firms size and profitability (profit rate) are an important issue for industry practitioners as well as academic researchers (Goddard et al., 2006). If firms growth rate is unrelated to firm size and prior growth rate, then firm growth follows random walk and the variance of firm size can increase indefinitely. Mueller (1977) claimed that firm profitability converges at a certain level due to market competition, which is referred to as persistence of profit (POP). POP studies argue that firm entry and exit are completely free, so any abnormal profit quickly disappears and that the profitability of all firms tends to converge toward the long-run average value.

However, Goddard et al. (2004) stated that although it is generally presumed that firm size and profitability influence each other, they are not necessarily connected. Overall, the impact and direction of this relationship remains ambiguous. This ambiguity is associated with various econometric issues. First, due to the endogeneity it is difficult to capture a clear causality and direction between them. Further, when firm size and profitability time lags are incorporated into the models the endogenous relationship becomes even more complicated due to the unknown influences of different time lags. Recently, a few studies have investigated the inter-relationship between firm growth and profitability (Coad, 2007, Steffens et al., 2009). Although it is worth exploring the relationship, the results of the studies turned out to be inconsistent.

The nature of the relationship between firms size and profitability is an important issue that may shed some light on the factors that maximize profits. A major study done by Crum in 1939 for all United States industry formed the basis for much of the later work done in this field. One of the early themes in the empirical study of this relationship is economies of scale. Other themes or theories in the empirical study of this relationship include market imperfections, the concept of strategic groups, and the relative importance of concentration and market share.

Firms achieve economies of scale when their operating costs increase at a rate lower than their output. Firms do not achieve economies of scale simply by increasing their size. Economies of scale are likely to result only if the firms have sufficient idle capacity and organization systems already in place prior to expanding (Steffens, Davidsson, Fitzsimmons, 2009). The studies of economies of scale found that plant size variations are associated systematically with market share, the degree to which sales are concentrated in the hands of a few leading producers. Concentration or seller concentration is a characteristic of the industry to which a firm belong and one of the measures of inter-product competition computed by the product shipment, had a positive association with plant size (Cowling, 2004).

The size effect in the cross-section of stock returns is one of the oldest and best-known asset pricing anomalies. Since Banz (1981) reported that small firms earn higher returns than big firms, a large body of research has evolved on the size effect (Arndt and Blackert, 1977). However, in recent years a consensus seems to have developed that the size effect has disappeared. Several studies report that small firms have not outperformed big firms after the early 1980s. Realized stock returns are a very noisy measure of expected returns (Blume and Friend, 1973, Sharpe, 1978; Froot and Frankel, 1989; Elton, 1999). Elton (1999) provides examples demonstrating that realized returns can deviate significantly from expected returns over prolonged periods of time. From a standard Campbell and Shiller (1988) decomposition, it is realized that stock returns must, by their very definition, equal the sum of expected returns, shocks to cash flows, and shocks to discount rates. Furthermore, Vuolteenaho (2002) shows that individual stock returns are primarily driven by cash flow shocks.

The financial sector is among one of the most heavily regulated industries in the world. The main reason for regulation is to provide a sound, stable and healthy financial system. Peltzman (1968) was among the first researchers to empirically test the effects of regulation on performance. Peltzman's findings indicated that a prohibition on interstate branching and a legal restriction to new entry had a significant impact on the market value of the sectors' capital hence affect profitability of the financial institution.

As financial intermediaries, organization and specifically, profit oriented institution play a crucial role in the operation of most economies. This includes the business of receiving money on current or deposit account, paying and collecting cheques drawn by or paid in by customers, and the making of advances to customers. Levine (2002) shows that the efficiency of financial intermediation can affect economic growth. This is because institutions and individuals borrow from banks and engage in economic activities which have a direct impact on Gross Domestic Product.

With regards to deposit structure, Heggsted (1977) found that banks heavily committed to time and savings deposits earned considerably lower returns than banks which have higher dependence on demand deposits. Smirlock (1985) confirmed that demand deposits were a cheaper source of funds and had a positive impact on bank profits. Kwast and Rose's (1982) study, however, claimed that operating efficiency had nothing to do with profitability. They found that there was no compelling evidence that high-profit banks were characterized by a greater level of efficiency than low-profit banks.

1.1.1 Firm Size

Firm size represents a contingent factor that falls into the category of organization characteristics. Smith et al. (1989) noted that organization size has long been an important macro variable in the organizational literature. According to Woodward (1965), the best indication of "bigness" is the size of the management group. Firm size are commonly measured by gross sales or gross value of assets (Kettinger et al., 1994), number of employees (Aiken et al., 1980; Hoque and James, 2000; Merchant, 1981), and sales turnover (Hoque et al., 2001).

The increase in size is aimed at gaining from economies of scale. Economies of scale exist when a given proportionate increase in inputs results in a larger than proportionate increase in output. Economies of scale exists when two or more product can be produced together at a lower average cost than if they had been produced together at a lower average cost than if they had been produced separately.

Reinhard's (1983) oligopoly model suggests 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, with the profit rate of the market positively correlated with the concentration ratio and negatively correlated with the marginal concentration ratio (Collins & Preston, 1969). Collins and Preston, (1969) 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 (Montgomery, 1979; Sidhu and Bhatia, 1993).

Various studies suggest that firms with higher levels of capital perform better than their undercapitalized peers. Staikouras and Wood (2003) claim that there exists a positive link between a greater equity and profitability among firms. Abreu and Mendes (2001) also trace a positive impact of equity level on profitability. Goddard et al. (2004) supports the prior finding of positive relationship between capital/asset ratio and firm's earnings. According to Samuels and Smyth (2008) larger firms tend to have lower debt to equity ratios and lower debt to equity ratios lead mechanistically to lower levels of variance in return on shareholders' equity. A symmetric argument linking debt to equity ratios and level of return on shareholders' equity can be posited in the security market domain, but not in the accounting domain. Thus, the effect of financial leverage upon the relationship between firm size and level of profitability is not predictable, but it probably tends to decrease the size of the association.

On the Economies of scale, the larger firms are able to produce the same goods more cheaply because they have achieved more learning and greater cumulative experience and they are able to spread their fixed costs over a greater amount of production. In relation to market power, larger firms can extract premium profits because of their influence upon the industry. They are better able to bargain for more favorable factor costs and can more easily influence

the price and quality standards for their goods. Similar to the argument advanced by Bowman suggested that quality management is able to achieve the dual goals of higher market share and higher profitability (Abreu and Mendes, 2001).

1.1.2 Profitability

The importance of firm profitability can be appraised at the micro and macro levels of the economy. At the micro level, profit is the essential prerequisite of a competitive banking institution and the cheapest source of funds. It is not merely a result, but also a necessity for successful banking in a period of growing competition on financial markets. Hence, the basic aim of a firms' management is to achieve a profit, as the essential requirement for conducting any business. At the macro level, a sound and profitable institution is better able to withstand negative shocks and contribute to the stability of the financial system. The importance of firms profitability at both the micro and macro levels has made researchers, academics, firms managements and bank regulatory authorities to develop considerable interest on the factors that determine bank profitability (Athanasoglou *et al.*, 2005).

The determinants of firm profitability have been widely studied theoretically and empirically some the researchers who focused on this concept are Naceur and Goaid, 2001; Naceur, 2003 and Athanasoglou, 2005. Based on the findings of these and other related studies, company-level determinants of firms profitability can be identified with some ease. Essentially, company-level determinants of firms' profitability comprise characteristics of individual bank companies that affect their profitability. Shareholder and managerial decisions and activities can directly influence these characteristics; hence, they also differ from company to company.

Capital structures in firms are made up of shareholders' funds, reserves and retained profits. In addition, capital also represents a source of funds along with deposits and borrowings which is regulated by the capital adequacy requirements. Capital structure is assumed to affect the profitability of firm via its effect on leverage and hence on risk. Relating to the bank concept, to this extent, the assets of the commercial banks can either be capital or debt financed. However, debt financing can be more risky compared to capital financing in view of the credit risk and liquidity risk faced by the commercial banks (Williams, 2003).

Technology has a significant impact on profitability of firms operating in developing countries (Dermirguc and Kunt, 1999). This finding may reflect the fact that in developing countries a firm technological edge is relatively strong, apparently strong enough to overcome any informational disadvantage in 'lending or raising funds locally. The finding also indicates that firms are less profitable in industrial countries, where they may not have a technological edge.

1.1.3 Firm Size and Profitability

The relationship between firm size and profitability remains unclear. It is generally argued that big firms possess economies of scale (Montgomery, 1979; Sidhu & Bhatia, 1993) and better access to capital markets (Hall & Weiss, 1967) to achieve lower costs and higher returns. However, the opposing view from strategic perspectives suggests that bigger firms are mired with increased coordination requirements and bureaucratization, thus making the managerial task more difficult (Downs, 1967). The size-profitability relationship is perhaps best explained as a curvi-linear relationship where beyond a certain point, scale economies cease to exist and the relationship then may reverse owing to the problems associated with size as highlighted by Downs. Ahuja and Majumdar (1998) concluded that the arguments remain unclear and must be empirically resolved on a case-by-case basis.

In line with this a good number of researchers had investigated the relationship between firm size and profitability. Most of the results come out with varying opinions. Some studies postulate negative results while some studies have evidence supporting the positive notion. Athanasoglou *et al.*, (2005) suggested that expansion of the relative size of a firm boosts its market power and increases profits. This is the Market-Power (MP) hypothesis. The hypothesis argues that the effect of a growing size on firms' profitability is significantly positive to a large extent (Athanasoglou *et al.*, 2005). Kwan and Eisenbeis (2005) suggest that the difference in profitability among large and small firms is due to production technologies and outputs, which vary across them. The relative efficiency hypothesis (Clarke *et al.*, 1984) presupposes that larger firms (where size is measured by assets) are more efficient than smaller ones, and are more profitable as a result of this superior efficiency.

Amato and Wilder, (1985) conveyed that the relationship between firm size and profitability may be positive for some firm size ranges and negative for others. Again, if the size reached a threshold, additional expansion of firm size may further separate ownership from control. This suggests that the relationship between firm size and profitability can become negative beyond the threshold firm size. (Fama& French, 1993) captured much of the cross-section of average stock returns. From the company's perspective, small firms apparently faced higher capital costs than larger firms. Baumol, (1959) propositioned that large firms have all of the options of small firms, and in addition, they can invest in lines requiring such scale that small firms are excluded. Additionally, Michaelas et al., (1999) indicated that larger firms use higher gearing ratios than smaller firms, and they suggest this is a result of smaller firms facing higher financial barriers. Hall et. al., (2000) and Cassar and Holmes, (2003), supported the argument by providing evidence suggesting that size is positively related to long term debt and negatively related to short-term debt.

1.1.4 Banking Industry in Kenya

The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK, 2009). The banking sector was liberalised in 1995 and exchange controls lifted.

The CBK, which falls under the Minister for Finance docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. There are 44 licensed commercial banks in Kenya. Of the 44 licensed commercial banks, 31 are locally owned and 13 are foreign owned. The banks have come together under the Kenya Bankers Association (KBA), which serves as a lobby for the banking sector's interests. The KBA serves a forum to address issues affecting members.

Over the last few years, the Banking sector in Kenya has continued to grow in assets, deposits, profitability and products offering. The growth has been mainly underpinned by, the industry's wide branch network expansion strategy both in Kenya and in the East African community region, and automation of a large number of services and a move

towards emphasis on the complex customer needs rather than traditional 'off-the-shelf' banking products. Players in this sector have experienced increased competition over the last few years resulting from increased innovations among the players and new entrants into the market (Price WaterHouse Coopers (PWC) 2008).

In Kenya, commercial banks play an important role in mobilizing financial resources for investment by mobilizing investors and boosting businesses as well as offering financial services to the public with the aim of making profit. Lending represents the heart of the banking industry and loans are the dominant assets as they generate the largest share of operating income. As per the central bank of Kenya, bank supervision annual report (2010), at the end of December 2010, the banking sector comprised of 45 institutions, 41 of which were commercial banks, two mortgage finance companies, one non-bank financial institution and one building society. Despite their number being high their total assets account for only 48.2% of the sectors total assets.

1.2 Statement of the Problem

The main purpose behind establishment of every business is to make profit. For the achievement of this objective various factors facilitates ease of attain it, size of the business being one of the main factors. Banks as well as other business aim at making profit despite their key role that they play in pushing forward the economic growth rates, through the mobilization of national savings and using them to finance productive economic sectors they also plays a major role as an engine and a key supporter to the country economy.

Kaen and Baumann (2003) found that profitability bears no relation to size measured by the number of employees. They also found that firms of a given size as measured by sales and assets, the fewer the employees, the more profitable the firm. Athanasoglou *et al* (2006) in their research on bank specific determinants of bank profitability found that the estimated effect of size does not provide evidence on economies of scale in banking. This is because small sized banks usually tried to grow faster, even at the expense of their profitability. Furthermore, newly established banks are not particularly profitable (if at all profitable) in their first years of operation, as they place greater emphasis on increasing their market share, rather than on improving profitability.

Although in the international front, a lot of publications have been done on determinant of bank profit as well as profitability and its relation with bank size. Locally, in Kenya to the knowledge of the researchers only 3 studies have been carried out on the effect of profit on the bank performance. Kavale (2007) studied the factors firms consider when implementing strategies and the factors leading to success, especially for commercial banks sustainability and prosperity by profiling strategic alliances in money transfer services in Kenya. Koigi (2002) carried out a survey on the Implementation of Profit Strategies experience by Kenya Post Office Savings Bank (KPOSB) and Citibank. While, Serem, (2002) did a survey on the effect of human resource practices on banks profit in Nairobi. However to the knowledge of the researcher no known study has focused on the relationship between size and profitability, it is against this backdrop of this knowledge gap that the study aims to determine the relationship between size and profitability within commercial banks in Kenya and how the findings can be used to improve performance of the banks in relation to their size based on the findings. In order to achieve the main objective, the study will seek to answer the following question, is there relationship between firm size and profitability within the banks in Kenya?

1.3 Research Objectives

This study sought to determine the relationship between size and profitability of commercial banks in Kenya.

1.4 Significance of the Study

It is hoped that the information obtained from this study might provide commercial bank managers and decision makers with better insights into different strategies used by the banks in expansion of their firm size. This study will be invaluable to the banking management and company as a whole as its findings would appraise its size of the firm and link the same to the organization performance in terms of the profit earning. The study will offer an opportunity for review market shares of the banks as it will try to unearth how it has been effective on increasing firm profitability.

The study will benefit both academicians and future researchers in Kenya and beyond. Academicians and researchers are always searching for new information and references.

They can benefit from this study as it will add to the wealth of already existing knowledge on size and link the same with profitability of the firm, in this case banks. The study will, thus, broaden the knowledge on firm size and provide a basis for future research on the same.

This study will aim at contributing to the existing body of knowledge on the relationship between firm size and profitability. Another beneficiary of the study will be the Kenyan government whose objective is the socio-economic development of the country. Firm size, anchor in ensuring that organization in their endeavor of profitability, contributes to the society. Thus, government, through its institutionalized corporate governance principles, would benefit from the study's findings which seek to appraise firm size and encourage organization on expansion of their size in their capacity.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviewed the literature available on the banks size and their relationship with profitability. The chapter was hence broken down into firm size, measures of the banks size, profitability and profitability and firm size.

2.2. Firm Size

Organization size can be measured by the number of employees, the amount of sales, the size of the budget, the size of the capital investment, and other factors (Minzberg (1979). Prior studies had examined the effects of organization size on the design of accounting control systems and on the profitability characteristics include Merchant (1981), Ezzamel (1990), Libby and Waterhouse (1996), Gosselin (1997), Guilding (1999), Hoque and James (2000) and Hoque et al. (2001). Merchant (1981) put strong support for the organization's size, measured by number of employees, being strongly related to the choice of organizational control strategies. He noted that larger firms with more diverse and more decentralized tend to implement a more administratively-oriented control strategy and greater budgeting sophistication. On the other hand, he indicated that the use of an interpersonal control strategy found in smaller, less diverse, and more centralized firms.

A recent study by Hoque and James (2000) found that larger organization size, measured by number of employees, is positively associated with the overall profitability measures. Also, Guilding (1999) provided strong support for the view that size is positively related to profitability. Furthermore, firm size is also an important determinant of profitability (Ketinger et al., 1994). Ketinger et al. (1994) pointed out that large firms are usually associated with more access to resources, economies of scale, and value chain alliances.

Short (1979), considered firm size as an independent variable to account for size related economies and diseconomies of scale. Short (1979) goes further by claiming that size has a positive influence on profitability through lowering the cost of raising capital for big firms. Later, studies by Bikker and Hu (2002) and Goddard et al. (2004) support the proposition that

increasing a bank's size positively affects profitability through cost of capital. Heggstad (1977), and Smirlock (1985), had also included firm size in their profitability models to take account of the possibility of greater loan and product diversification and accessibility of larger firm to excess markets which are not available to smaller banks. If indeed this is true, then it should imply higher profits for larger banks.

However, studies by Ezzamel (1990); Libby and Waterhouse (1996); Gosselin (1997) and Hoque et al. (2001) show conflicting findings. The results of Ezzamel's (1990) study found no support for the association of organization size as measured by the number of employees with budget characteristics, given the importance of organization size in explaining variations in the budget characteristics as reported in the literature. Also, Libby and Waterhouse (1996) reported that change in management accounting and control system is not associated with larger organizations. Similarly, size does not influence the adoption of an activity management approach (Gosselin, 1997).

Berndt (2005) indicates that a tradeoff between firm size and performance do exist in small firms. Size has a significant negative influence on performance and performance has a significant negative influence on size. Explanation to this could be reduction in labor productivity. The increased costs associated with hiring more employees, with rising effort being expended in recruiting and training new staff. Thus the small firm sacrifices increase in profit to grow. Larger firms are likely to have a higher degree of product and loan diversification than smaller financial firms. In addition to the higher diversification potential, economies of scale can also arise from a larger size. As diversification reduces risks and economies of scale lead to increased operational efficiency, however, it is well known that companies that have become extremely large exhibit a negative relationship between size and profitability due to agency costs, bureaucratic processes and other reasons related to a large firm size.

2.3 Measures of Firm Size

Essentially, firm size comprises structure of individual firms' influences their profitability. Shareholder, managerial decisions and activities can directly impact to these structures; hence, they differ from company to company. They include capital size, size of deposit

liabilities, size and composition of credit portfolio, market share among others (Athanasoglou, 2006). Naceur (2003) agree that well-capitalized banks face lower need to external funding and lower bankruptcy and funding costs hence this advantage translates into better profitability. Naceur and Goaid(2001) advocated that best performing banks are those who have maintained a high level of deposit accounts relative to their assets. According to Bashir (2000), loans generate revenue through interest and increase bank profits implying to improved profitability. Heggsted andMongo (1976) alleged that a bigger marketshare means more power to the bank in controlling the prices and services it offers to tiescustomers hence adverse profit.

2.3.1 Size by Capital Base

According to Bobakova, (2003) capital base is the money contributed by the shareholders who first purchased shares in the company plus retained earnings.Capital base is important because it provides a benchmark when measuring returns. Without it, investors and companies would be unaware of how they are doing relative to their investments. The relationship between capital structure and return on equity is of considerable importance to all firms. Industries are sensitive to changes in financial leverage due to their low level of equity capital to total assets. In addition, the capital structure of firms is highly regulated.

Firm capital can be seen in two ways. Narrowly, it can be seen as the amount contributed by the owners of a firm (paid-up share capital) that gives them the right to enjoy all the future earnings of the firm. More comprehensively, it can be seen as the amount of owners' funds available to support a farms' business. A firm capital is widely used to analyze the status of its financial strength (Bobakova, 2003). Better capitalized firm seem to be more profitable. In addition, an above-average loan volume growth affects firm profitability positively. The share of interest income at total income also has a significant impact on profitability. Firms that are heavily dependent on interest income are less profitable than firms whose income is more diversified.

The usage of scarcity of capital can be used to measure the economy-wide profitability of all industries in a particular country (Bourke, 1989). In his study, Bourke used both central bank

discount rates and the interest rates on long-term government securities. He found that these hypothesis had a significant positive relationship with profitability. Short's hypothesis was further tested by Molyneux and Thornton (1992). The findings of these two studies also found that capital scarcity had a significant positive relationship with profitability.

Investigating on the determinants banks' performances, Naceur and Goaid (2001) indicated that the best performing banks are those who struggle to improve labour and capital productivity and those who are able to reinforce their equity. Bourke (1989), Abreu and Mendes (2002) and Naceur (2003) agree that well-capitalized banks face lower need to external funding and lower bankruptcy and funding costs; and this advantage translates into better profitability. Therefore, researchers widely posited that the more capital a firm has, the more resistant it will be to failure as it is in position to make more profit through investment (Uche, 1998).

Beranke and Lown (1991) found that limited bank capital in relation to loan demand contributed to restrictive bank lending in US during recession period of 1990. Diamond and Rajan (2000) on their study on "a theory of Bank Capital" found that create liquidity because deposits are fragile and prone to runs. This is because uncertainly makes deposits excessively fragile, creating a role for outside bank capital. They also found that an abrupt transition to higher capital requirements can lead to a bank run because maturing deposits may exceed what the bank can pledge. Greater bank capital reduces the probability of financial distress but also reduces liquidity creation. The quantity of capital influence the amount that banks can include borrowers to pay.

2.3.2 Size by Number of Branches

Competition in the markets has intensified significantly in recent years (DeBandt and Davis, 2000) due to the need of each firm be viable in the market and to defend itself from the competitors. Firms have responded to rising competitive pressure by offering a wider range of products and services and conducting a significant proportion of their business through establishing branches both in strategic and remote areas. Demsetz and Strahan (1997) examine the impact of expansion of the firm in terms of branch and find that firm with more branches enjoys more profit as they serve customers in areas that their specialized

counterparts had not yet identified the opportunity. Diversified firms are more profitable on average if only there are prior strategies adopted by the management to control those branches to achieve one common objective of the firm.

According to Hughes *et al.* (1999) firm growth through product and geographic diversification increases its profit as well as improving efficiency trends as a result of geographic diversification. Further, Hughes' found that many firms have increased in size, significantly increasing profit and diversifying to the convenient area that clients can access in order to maintain competitiveness. In contrast, Scholtens (2000) finds that the profits of small firms (in terms of assets) grew faster than those of the larger firms. Bourke (1989) finds that both capital and liquidity ratios are positively associated with profitability of the organization as they are backbone determinant of the survival of every financial institution.

Bashir (2003) stressed on importance of customer services at door steps and argued that profitability measures respond positively to increase in deposits and negatively to loans. Haron and Azmi (2004) also investigated the determinants of firms profitability and concludes that liquidity, deposit, asset structure, total expenditures, consumer price index and money supply have significant impact on profitability while capital structure, market share and bank size have no impact to the profitability.

2.3.3 Size by Deposit Liabilities

Customer deposits are an item on the liability side of the balance sheet and include all funds received from public bodies, private enterprises individuals and other non-profit making institutions. It also includes current account balances, fixed/call deposits by whatever name both in local and foreign currencies whether matured or not. A total of these in any given year are a measure of customer deposits.

Empirical evidence from Naceur and Goaid (2001) indicate that the best performing banks are those who have maintained a high level of deposit accounts relative to their assets. Increasing the ratio of total deposits to total assets means increasing the funds available to use by the bank in different profitable ways such as investments and lending activities. In

turn, this should increase the bank's returns on assets (Allen and Rai, 1996 and Holden and El-Bannany, 2006).

Deposit assets are behind banks dismal profitability (Demiurgekunt, 1999). This is contrary to Guru and Shanmugan (1999) findings. They found that deposits as a component of assets contributes immensely on the profitability of banks. This is in consistent with Margarida and Mendes (2000) who found that deposit assets ratio has a positive relationship with interest margins and profitability. Devaajargal (2000) examined relationship between deposit and profitability and found the correction to be negative and statistically significant.

2.3.4 Size by Market Share

Market share is the percentage of an industry or market's total sales that is earned by a particular company over a specified time period. Market share often is associated with profitability and thus many firms seek to increase their sales relative to competitors. Market share is calculated by taking the company's sales over the period and dividing it by the total sales of the industry over the same period. This metric is used to give a general idea of the size of a company to its market and its competitors. Market share increases can allow a company to achieve greater scale in its operations and improve profitability. Companies are always looking to expand their share of the market, in addition to trying to grow the size of the total market by appealing to larger demographics, lowering prices, or through advertising.

Investors look at market share increases and decreases carefully because they can be a sign of the relative competitiveness of the company's products or services. As the total market for a product or service grows, a company that is maintaining its market share is growing revenues at the same rate as the total market. A company that is growing its market share will be growing its revenues faster than its competitors. Additionally, market share is considered as a profitability determinant under the assumption that firms will obtain a bigger market share and increase their profitability due to their greater efficiency. A bigger marketshare also means more power to the bank in controlling the prices and services it offers to tiescustomers. Heggested and Mongo (1976) found that the greater the market share, the greater is a bank's control over its prices and the services it offers. Heggested (1977) and

Mullineaux (1978), however, found that market share had an adverse relationship with profitability.

Short (1979) believed that some banks might sacrifice current profits by growing at a faster rate or expanding their market share with the intention of earning more profits in the future. He used the growth of assets rate as a proxy for measuring the effect of market share on profitability and found that growth of assets did not have a significant effect on profit. Smirlock (1985) not only believed that market share influenced profitability but that growth in the market created more opportunities for a bank and thus generated more profits. His findings indicated that growth had a significant positive relationship with profits.

According to the Central Bank Annual Supervision report (2006), employment on the banking sector rose by 23%. The report attributes this due to the expansion of the institutions branch network and expanded business volume. The human resource factor is measured by the number of employees in the institution as per the central bank of Kenya.

2.4 Profitability

Profitability is simply the difference between total revenue and total cost. Determinants of bank profitability have received much attention from academic researchers and in business oriented. Beyond the importance of the banking sector position as a major contributor to the gross domestic product, it also plays a major role as an engine and a key supporter to the every country economy. In this sense, the efficient functioning of the banking sector has become one of the main objectives of financial reforms (Vong and Chan, 2006). The profitability and efficiency also become one of the challenges faced by the banks to strengthen their financial positions in order to meet the risks associated with openness and globalization.

Vong and Chan (2006) examined the impact of bank characteristics, macroeconomic variables and financial structure on the performance of the banking industry; they found that the strength of the bank's capital is of paramount importance in influencing profitability. A well-capitalized bank is perceived to be of lower risk and such an advantage will be translated into higher profitability. In addition, banks with a large retail deposit-taking

network do not achieve a level of profitability higher than those with a smaller network. With regard to macroeconomic variables, only the rate of inflation showed a great relationship with the profitability of banks.

Kosmidou *et al.* (2006) studies the impact of bank-specific characteristics, macroeconomic conditions and financial market structure on the banks profits, the results showed that the strength of capital of these banks has a positive impact on profitability; and other important factors being the efficient management of expenditures and size of the bank. These bank-specific determinants are robust to the inclusion of additional macroeconomic and financial market measures of bank performance, which adds little to the explanatory power but it seems, however, that had positive impact on profitability.

Athanasoglou *et al.* (2006) in their research on bank specific determinants of bank profitability found that the estimated effect of size does not provide evidence on economies of scale in banking. This is because small sized banks usually try to grow faster, even at the expense of their profitability. Furthermore, newly established banks are not particularly profitable (if at all profitable) in their first years of operation, as they place greater emphasis on increasing their market share, rather than on improving profitability.

2.5 Profitability and firm size

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. Financial institution such as banks aims at maximizing profit and therefore should minimize their cost through economies of scale. Brown and Connor (1995) sited that there was problems in measuring economies of scale in financial institutions. To solve this puzzle, two schools of thoughts were developed.

The first school of thought known as the production approach views financial intermediaries as producers of services associated with individual loan and deposit accounts. These services are produced using capital and labor, while output is proxied by the number of account serviced. In this context, deposit accounts are seen as an output and interest paid is excluded

from total costs. The second theory contends that financial intermediaries are producers of services that are related directly to their role as intermediaries in the financial markets (Goddard, Molyneux and Wilson, 2004). In other words, they are viewed as collecting deposits and purchasing funds to be transformed into loans and other earning assets. As such, provision of deposit services is a payment in kind for use of funds which are used to make loans. Thus deposits are viewed as an input and interests paid in that is included in the total costs.

Kaen and Baumann (2003) found that profitability bears no relation to size measured by the number of employees. They also found that firms of a given size as measured by sales and assets, the fewer the employees, the more profitable the firm. Schuree *et al* (2004) did a research to estimate the productivity of European banking sector for the period 1993 – 1997. Their results indicated that large commercial banks were more productive on average than smaller banks; this is because of the advantage of economies of scale. Flamini and Schumacher (2009) studies the determinants of bank profitability, the paper proposed that higher returns on assets are associated with larger bank size, activity diversification, and private ownership. Bank returns are affected by macroeconomic variables, which indicate that macroeconomic policies that promote low inflation and stable output growth promote the expansion of credit.

Hester and Zoellner (1996) studied the relationship between balance sheet items and the earnings of 300 banks in Kansas City and Connecticut. They found that changes in balance sheet items had a significant impact on a bank's earnings. While all asset items obtained positive results, liability items such as demand, time and saving deposits adversely affected profits. Haslem (1968) used 64 operating ratios in order to measure the effects of management, size, location and time on profitability of commercial banks. Haslem's findings indicated that all variables tested were significantly related to profitability. Fraser and Rose (1971) found that loan rate, time deposit rate, loan-to-deposit ratio, service charges and portfolio selection had no effect on profitability. Fraser *et al* (1974) considered operating costs, deposit and loan compositions as factors within the control of management. They found that the factor which had the biggest influence on bank performance is bank cost

followed by bank's deposit and loan composition. Mullineaux (1992) used a profit-function approach in his study and found that balance sheet structure had a significant impact on profitability and, depending on the nature of the balance sheet items; the relationship can either be negative or positive.

Hall and Weiss (1967) did a study on 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 Marcus (1969) who re-evaluated earlier findings against new data within an improved analytical framework. Marcus' study 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.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

According to Kothari (2003) research methodology involves details in approaches and procedures used in carrying out studies. It includes the techniques, methods and procedures adopted in the research. This chapter, therefore discusses the research design, population of interest, data collection procedure and data analysis technique that the study will employ.

3.2 Research Design

Dooley (2007) defines a research design as the scheme, outline or plan that is used to generate answers to research problems. Research design provided the guideline for data collection. It involved the selection of the research approach. The study employed descriptive research design. Descriptive research describes data and characteristics about the population or phenomena being studied. Descriptive research answers the questions who, what, where, when and how (Mugenda and Mugenda, 2003 and Bailey, 1992).

3.3 Population

Population refers to an entire group of individuals, events or objects having a common observable characteristic. Target population is the population which the researcher wants to generalize the results of the study (Mugenda and Mugenda, 2003). The study population was all (43) commercial banks in Kenya within the city of Nairobi. According to the Central Bank of Kenya (CBK, 2010), there were 43 licensed commercial banks by the beginning of 2011.

The study aimed at establishing whether there is significant relationship between size and profitability. In order to achieve this, the study analyzed measurement of the bank size that is capital base, number of branches, deposit liabilities and market share for the period of three years (2008, 2009 and 2010) within all (43) banks in Kenya.

3.5 Data Collection

As the study is mainly on the banks profitability, secondary data was used. For calculating the profitability ratios to be used for comparative analysis, data was obtained from the annual

central bank reports, Market Intelligence magazine bank survey report and annual financial accounts of the commercial banks, more specifically the statement of profitability position and size of the banks statement. Secondary data is chosen as it is cheaper and faster than doing original studies relying on primary data; the data was available from annual central bank reports and Market Intelligence magazine bank survey report. This ensured that the information obtained is not biased.

3.6 Data Analysis

The study intends to establish the relationship between firm size and profitability and therefore regression analysis model was used to determine the nature of this relationship. The model is expressed as follows;

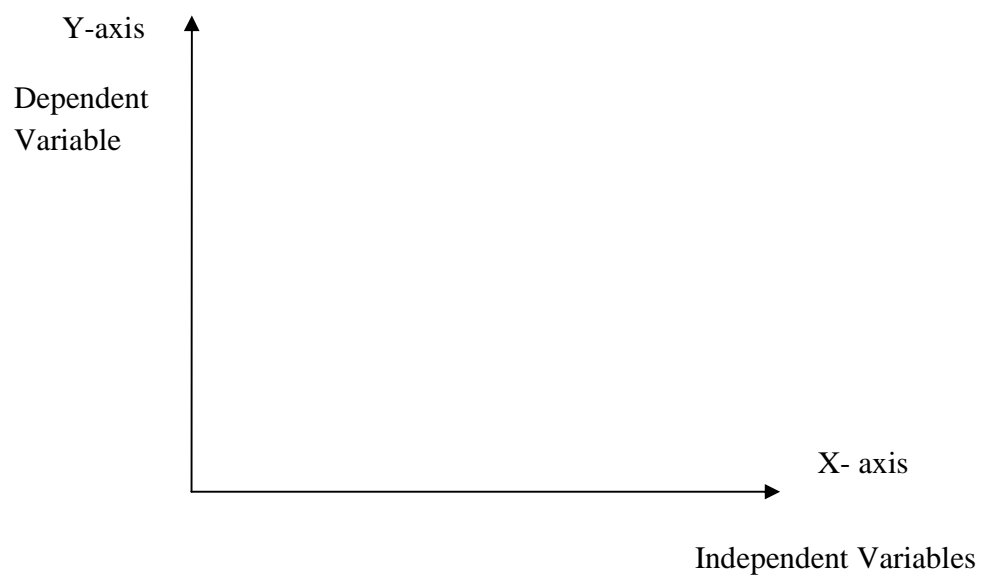
$$Y = a + bX$$

Data was checked for uniformity, accuracy, consistency and completeness and then arranged to enable coding and tabulation before statistical analysis.

Statistical package for social sciences (SPSS) was used to analyze the data. Graphs were essential for understanding the relationship between variables as they will provide the means for visual inspection of data that a list of values from the variables would not.

Test of significance was carried out to determine the extent of relationship among study variables. This would form the basis for conclusions to the study. Comparative analysis was carried out to identify any differences among banks in their size and the profitability.

Each response option was shown as an independent bar on the chart, and the line chart represents the frequency the response was chosen relative to all variables. The result were present the real situation of the banks size within the given period, that is, year 2008, 2009 and 2010.



CHAPTER FOUR: DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.1 Introduction

This chapter presents the research findings to determine the relationship between size and profitability of commercial banks in Kenya. The study was conducted on 43 commercial banks in Kenya in order to establish the relationship between. In inferential statistics, multiple linear regressions were used to determine the relationship between profitability of commercial banks in Kenya and various aspects of size which includes capital base, number of branches, deposit liabilities and market share for the period of three years (2008, 2009 and 2010).

4.2 Regression Analysis

4.2.1 Regression Analysis of Banks with A Balance Sheet of More than Kenya Shillings 40 Billion

Regression analysis for Year 2008

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836 ^a	.690	.678	.61978

Adjusted R^2 is called the coefficient of determination and profitability of banks varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R^2 is 0.678. This implies that, there was a variation of 67.8% of profitability of banks varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variables.

Table No1. Coefficients analysis for year 2008

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.652	.183		9.011	.000
	Capital Base	.231	.055	.250	4.237	.000
	Number Of Branches	.309	.061	.319	-5.035	.000
	Deposit Liabilities	.190	.068	.162	2.777	.006
	Market Share	.040	.079	.032	.512	.009

The established regression equation was for years 2008

$$Y = 1.652 + 0.231 X_1 + 0.309 X_2 + 0.309 X_3 + 0.040 X_4$$

From the above regression model, holding customer base, number of branches, deposit liabilities and market share to a constant zero profitability of commercial banks would be 1.652, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.231, a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.309, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 0.190, also unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.040. This clearly shows that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value were less than 0.05 in all the variables, which shows that all the independent variables were statistically significant and thus in a position to make conclusion for the study.

Regression analysis for Year 2009

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.855 ^a	.731	.712	.52536

Adjusted R^2 is called the coefficient of determination and profitability of banks varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R^2 is 0.712. This implies that, there was a variation of 71.2% of profitability of banks varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variable.

Table No.2 Coefficients analysis for year 2009

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.161	.129		8.978	.000
	Capital Base	.282	.064	.093	1.286	.199
	Number Of Branches	.142	.050	.232	2.867	.004
	Deposit Liabilities	.218	.040	.030	.453	.651
	Market Share	.106	.059	.007	-.106	.916

The established regression equation was

$$Y = 1.161 + 0.282 X_1 + 0.142 X_2 + 0.218 X_3 + 0.106 X_4$$

From the above regression model, holding customer base, number of branches, deposit liabilities and market share to a constant zero, profitability of commercial banks would be 1.161, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.282, a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.142, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 0.218, alsoa unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.106. This clearly shows that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value

were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study

Regression analysis for Year 2010

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.917 ^a	.841	.807	3.69669

Adjusted R² is called the coefficient of determination and profitability of banks varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R² is 0.807. This implies that, there was a variation of 80.7 % of profitability of banks varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variables.

Table No.3 Coefficients analysis for year 2010

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.128	.921		1.225	.222
	Capital Base	.758	.238	.205	3.187	.002
	Number Of Branches	.487	.291	.122	1.673	.095
	Deposit Liabilities	1.006	.386	.160	2.607	.010
	Market Share	.177	.434	.031	.408	.683

The established regression equation was

$$Y = 1.128 + 0.758 X_1 + 0.487 X_2 + 1.006 X_3 + 0.177 X_4$$

From the above regression model, holding customer base, number of branches, deposit

liabilities and market share to a constant zero , profitability of commercial banks would be 1.128, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.758, a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.487, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 1.006, also unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.177. This implies that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study ..

4.2.2 Regression of banks with a balance sheet of less than Kenya Shillings 40 billion but more than Kenya Shillings 10 billion

Regression analysis for Year 2008

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763 ^a	.582	.565	.65445

Adjusted R^2 is called the coefficient of determination and profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R^2 is 0.565. This implies that, there was a variation of 56.5 % of profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variable.

Table No.4. Coefficients analysis for 2008

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.164	.154		6.007	.000
	Capital Base	.095	.059	.119	1.607	.009
	Number Of Branches	.082	.052	.139	1.581	.015
	Deposit Liabilities	.300	.074	.273	4.033	.000
	Market Share	.173	.079	.158	2.202	.029

The established regression equation was

$$Y = 1.164 + 0.095 X_1 + 0.082 X_2 + 0.300 X_3 + 0.173 X_4$$

From the above regression model, holding customer base, number of branches, deposit liabilities and market share to a constant zero, profitability of commercial banks would be 1.164, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.095, a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.082, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 0.300, also unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.173. This clearly shows that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study ..

Regression analysis for Year 2009

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785 ^a	.616	.604	.90861

Adjusted R² is called the coefficient of determination and profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R² is 0.604. This implies that, there was a variation of 60.4 % of profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variable.

Table No.5. Coefficients analysis for year 2009

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.201	.214		19.587	.000
	Capital Base	.176	.082	.143	2.150	.032
	Number Of Branches	.561	.072	.611	7.765	.000
	Deposit Liabilities	.804	.103	.471	7.789	.000
	Market Share	.084	.019	.343	5.351	.000

The established regression equation was

$$Y = 1.201 + 0.176 X_1 + 0.561 X_2 + 0.804 X_3 + 0.084 X_4$$

From the above regression model, holding customer base, number of branches, deposit liabilities and market share to a constant zero , profitability of commercial banks would be 1.201, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.176, a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.561, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 0.804, also unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.084. This clearly shows that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value

were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study ..

Regression analysis for Year 2010

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.858 ^a	.736	.708	.93601

Adjusted R² is called the coefficient of determination and profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R² is 0.708. This implies that, there was a variation of 70.8 % of profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variable.

Table No.6. Coefficients analysis for year 2010

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.766	.235		7.514	.000
	Capital Base	.080	.076	.065	1.053	.023
	Number Of Branches	.213	.105	.125	2.033	.043
	Deposit Liabilities	.629	.085	.455	7.431	.000
	Market Share	.028	.077	.024	.366	.014

The established regression equation was

$$Y = 1.766 + 0.080 X_1 + 0.213 X_2 + 0.629 X_3 + 0.028X_4$$

From the above regression model, holding customer base, number of branches, deposit

liabilities and market share to a constant zero , profitability of commercial banks would be 1.766, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.080, a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.213, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 0.629, also unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.028. This clearly shows that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study .

4.2.3 Regression analysis of banks with a balance sheet of less than Kenya Shillings 10 billion

Regression analysis for Year 2008

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.734 ^a	.538	.524	.59777

Adjusted R^2 is called the coefficient of determination and profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R^2 is 0.524. This implies that, there was a variation of 52.4 % of profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variable.

Table No.7. Coefficients analysis for year 2008

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.942	.178		5.280	.000
	Capital Base	.103	.048	.124	2.136	.034
	Number Of Branches	.349	.052	.439	6.717	.000
	Deposit Liabilities	.513	.056	.619	9.225	.000
	Market Share	.086	.067	.071	1.288	.199

The established regression equation was

$$Y = 0.942 + 0.103 X_1 + 0.349 X_2 + 0.513 X_3 + 0.086 X_4$$

From the above regression model, holding customer base, number of branches, deposit liabilities and market share to a constant zero, profitability of commercial banks would be 0.942, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.103, a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.349, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 0.513, also unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.086. This clearly shows that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study ..

Regression analysis for Year 2009

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.750 ^a	.562	.546	.87048

Adjusted R^2 is called the coefficient of determination and profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R^2 is 0.546. This implies that, there was a variation of 54.6 % of profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variable.

Table No.8. Coefficients analysis for year 2009

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	.879	.259		-1.466	.144
	Capital Base	.130	.068	.616	12.150	.000
	Number Of Branches	.200	.063	.155	3.193	.002
	Deposit Liabilities	.399	.097	.201	4.106	.000
	Market Share	.080	.076	.065	1.053	.023

The established regression equation was

$$Y = 0.879 + 0.130 X_1 + 0.200 X_2 + 0.399 X_3 + 0.080 X_4$$

From the above regression model, holding customer base, number of branches, deposit liabilities and market share to a constant zero , profitability of commercial banks would be 0.879, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.130 , a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.200, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 0.399, also unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.080. This clearly shows that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value

were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study ..

Regression analysis for Year 2010

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785 ^a	.616	.610	.96278

Adjusted R² is called the coefficient of determination and profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share. From data, the value of adjusted R² is 0.610. This implies that, there was a variation of 61.0 % of profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share at 95% confidence interval, the study also found that there is a strong positive relationship between the study variable.

Table No.9. Coefficients analysis for year 2010

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.884	.283		6.651	.000
	Capital Base	.045	.099	.027	.454	.650
	Number Of Branches	.252	.099	-.148	-2.538	.012
	Deposit Liabilities	.542	.105	.349	5.157	.000
	Market Share	.150	.097	.099	1.545	.124

The established regression equation was

$$Y = 0.884 + 0.045 X_1 + 0.252X_2 + 0.542 X_3 + 0.150 X_4$$

From the above regression model, holding customer base, number of branches, deposit

liabilities and market share to a constant zero , profitability of commercial banks would be 0.884, its established that a unit increase in capital base would cause an increase in profitability of commercial banks by a factor of 0.045 , a unit increase in number of branches would cause an increase profitability of commercial bank by a factor of 0.252, also a unit increase in deposit liabilities would cause an increase in profitability of commercial banks by a factor of 0.542, also unit increase in market share would cause an increase in profitability of commercial banks by a factor of 0.150. This clearly shows that there is a positive relationship between profitability of commercial banks with, customer base, number of branches, deposit liabilities and market share. The study further revealed that the P-value were less than 0.05 in all the variables, which shows that all the independent variable were statistically significant and thus in position to make conclusion for the study ..

Diagram No 1.

Diagram of Profitability versus Market Share



In order to determine the nature of the relationship between the profitability and market share , the research developed a line graph of profitability versus market share, from the results displayed in the figure above, the study found that there was a linear relationship between profitability and market share.

Diagram No 1.

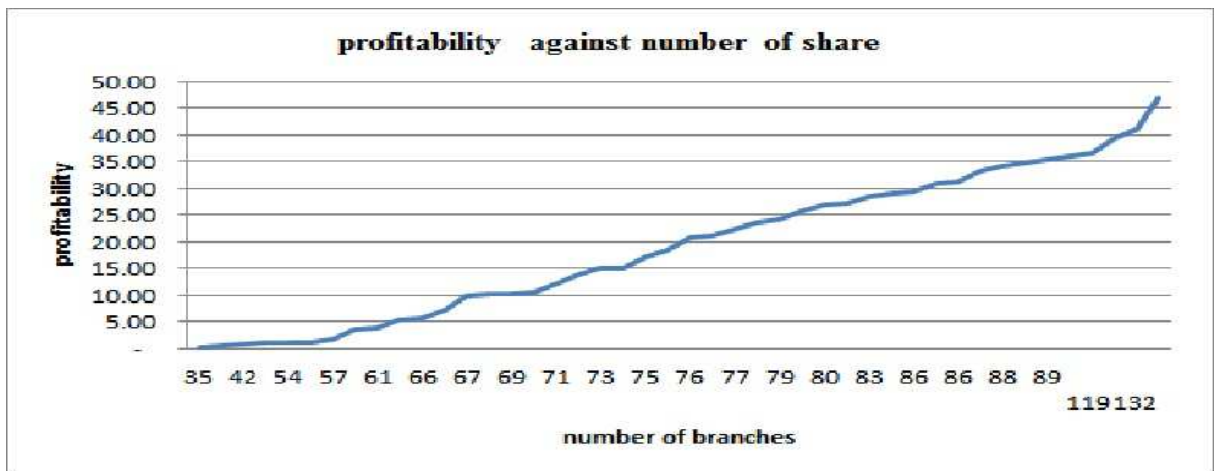
Diagram of Profitability versus capital base



In order to determine the nature of the relationship between the profitability and capital base, the research developed a line graph of profitability versus capital base, from the results displayed in the figure above, the study found that there was a linear relationship between profitability and capital base.

Diagram No 3.

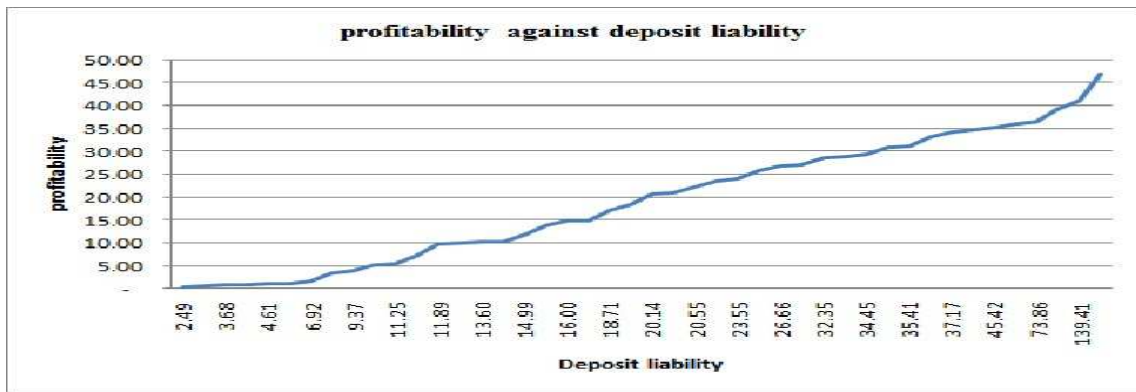
Diagram of Profitability versus number of branches



In order to determine the nature of the relationship between the profitability and number of branches, the research developed a line graph of profitability versus number of branches, from the results displayed in the figure above, the study found that there was a linear relationship between profitability and number of branches.

Diagram No 4.

Diagram of Profitability versus deposit liability



In order to determine the nature of the relationship between the profitability and deposit liability, the research developed a line graph of profitability versus deposit liability, from the results displayed in the figure above, the study found that there was a linear relationship between profitability and deposit liability.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

From the analysis and data collected, the following discussions, conclusion and recommendations were made. The responses were based on the objectives of the study. The researcher had intended to determine the relationship between size and profitability of commercial banks in Kenya.

5.2 Summary of Finding

From the findings on the regression analysis of banks with a balance sheet of more than Kenya shillings 40 billion, the study found that there is strong 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 as the value of adjusted R squared was high .

The established regression equation was for years 2008

$$Y = 1.652 + 0.231 X_1 + 0.309 X_2 + 0.309 X_3 + 0.040 X_4$$

The established regression equation was for year 2009

$$Y = 1.161 + 0.282 X_1 + 0.142 X_2 + 0.218 X_3 + 0.106 X_4$$

The established regression equation was for year 2010

$$Y = 1.128 + 0.758 X_1 + 0.487 X_2 + 1.006 X_3 + 0.177 X_4$$

From the regression analysis of banks with a balance sheet of more than Kenya shillings 40 billion the study found that customer base; number of branches, deposit liabilities and market

share had positive relationship with profitability of commercial banks.

On the finding of the regression analysis of banks with a balance sheet of less than Kenya Shillings 40 billion but more than Kenya Shillings 10 billion, the study found that there is strong positive relationship between profitability of banks varied with customer base, number of branches, deposit liabilities and market share as the correlation coefficient was high , 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 as the value of adjusted R squared ranged was greater

The established regression equation for 2008 was

$$Y = 1.164 + 0.095 X_1 + 0.082 X_2 + 0.300 X_3 + 0.173 X_4$$

The established regression equation for 2009 was

$$Y = 1.201 + 0.176 X_1 + 0.561 X_2 + 0.804 X_3 + 0.084 X_4$$

The established regression equation for 2010 was

$$Y = 1.766 + 0.080 X_1 + 0.213 X_2 + 0.629 X_3 + 0.028X_4$$

From the regression analysis of banks with a balance sheet of less than Kenya Shillings 40 billion but more than Kenya Shillings 10 billion the study found that customer base; number of branches, deposit liabilities and market share had positive relationship with profitability of commercial banks.

From the findings on the regression analysis of banks with a balance sheet of less than Kenya Shillings 10 billion, the study found that there is strong positive relationship between profitability of banks varied with varied with customer base, number of branches, deposit liabilities and market share as there was high 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 as the value of adjusted R squared was high .

The established regression equation for 2008 was

$$Y = 0.942 + 0.103 X_1 + 0.349 X_2 + 0.513 X_3 + 0.086 X_4$$

The established regression equation for 2009 was

$$Y = 0.879 + 0.130 X_1 + 0.200 X_2 + 0.399 X_3 + 0.080 X_4$$

The established regression equation for 2010 was

$$Y = 0.884 + 0.045 X_1 + 0.252X_2 + 0.542 X_3 + 0.150 X_4$$

From the regression analysis of banks with a balance sheet of less than Kenya Shillings 10 billion the study found that customer base; number of branches, deposit liabilities and market share had positive relationship with profitability of commercial banks.

5.3 Conclusion

The study found that there is strong positive relationship between profitability of banks varies customer base, number of branches, deposit liabilities and market share, 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 as the value of adjusted R squared was high an indication that these were the main factors influencing profitability of commercial banks in Kenya. The study found that customer base; number of branches, deposit liabilities and market share had positive relationship with profitability of commercial banks. Thus the study concludes that there is positive relationship between profitability of commercial banks and it size.

5.4 Recommendation

From the findings and conclusion it was found that there is strong positive relationship between profitability of banks and customer base, number of branches, deposit liabilities and market share, the study thus recommends that in order for commercial banks to increase their performance (profitability) there is need from commercial banks to increase size by increasing various aspect of customer base, number of branches, deposit liabilities and market share.

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APPENDICES

Appendix 1: Data Collection Form

The study aims at establishing whether there is significant relationship between size and profitability. In order to achieve this, the study will analyze measurement of the bank size that is capital base, number of branches, deposit liabilities and market share for the period of three years (2008, 2009 and 2010).

	Name of Bank	Capital Base			Number of Branches			Deposit Liability			Market Share		
		2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
Tier I	< than KSh 40b												
1.	Citibank												
2.	Equity Bank												
3.	Standard Chartered Bank												
4.	Commercial Bank of Africa												
5.	Barclays Bank of Kenya												
6.	NIC Bank												

7.	Kenya Commercial Bank												
8.	National Bank of Kenya												
9.	Diamond Trust Bank												
10	Co-operative Bank of Kenya												
11	CFC Stanbic Bank												
Tier II	>KSh 40b but more than KSh10b												
12	I&M Bank												
13	Bank of India												
14	Bank of Baroda												
15	Family Bank												

16	Imperial Bank												
17	Prime Bank												
18	Bank of Africa												
19	Chase Bank												
20	Fina Bank												
21	EcoBank												
22	HFCK												
Tier III	<KSh of 10b												
23	Habib A.G. Zurich												
24	Victoria Commercial Bank												
25	Credit Bank												
26	Habib Bank (K) Ltd												
27	Oriental												

	Commercial Bank												
28	K-Rep Bank												
29	ABC Bank												
30	Development Bank of Kenya												
31	Middle East Bank												
32	Equatorial Commercial Bank												
33	Trans-National Bank												
34	Dubai Bank												
35	Fidelity Commercial Bank												
36	City Finance Bank												
37	Paramount Universal Bank												
38	Giro Commercial												

	Bank												
39	Consolidate d Bank												
40	Guardian Bank												
41	Southern Credit Bank												
42	Gulf African Bank												
43	First Community Bank												

Appendix II: List of Commercial Banks in Kenya

Classification	Description	Commercial Banks
Tier I	Comprises of banks with a balance sheet of more than Kenya Shillings 40 billion	<ol style="list-style-type: none">1. Citibank2. Equity Bank3. Standard Chartered Bank4. Commercial Bank of Africa5. Barclays Bank of Kenya6. NIC Bank7. Kenya Commercial Bank8. National Bank of Kenya9. Diamond Trust Bank10. Co-operative Bank of Kenya11. CFC Stanbic Bank
Tier II	Comprises of banks with a balance sheet of less than Kenya Shillings 40 billion but more than Kenya Shillings 10 billion	<ol style="list-style-type: none">12. I&M Bank13. Bank of India14. Bank of Baroda15. Family Bank16. Imperial Bank17. Prime Bank18. Bank of Africa

		19. Chase Bank
		20. Fina Bank
		21. EcoBank
		22. HFCK
Tier III	Comprises of banks with a balance sheet of less than Kenya Shillings 10 billion	23. Habib A.G. Zurich
		24. Victoria Commercial Bank
		25. Credit Bank
		26. Habib Bank (K) Ltd
		27. Oriental Commercial Bank
		28. K-Rep Bank
		29. ABC Bank
		30. Development Bank of Kenya
		31. Middle East Bank
		32. Equatorial Commercial Bank
		33. Trans-National Bank
		34. Dubai Bank
		35. Fidelity Commercial Bank
		36. City Finance Bank
		37. Paramount Universal Bank
		38. Giro Commercial Bank
		39. Consolidated Bank

Classification	Description	Commercial Banks
		40. Guardian Bank
		41. Southern Credit Bank
		42. Gulf African Bank
		43. First Community Bank
Tier I	Comprises of banks with a balance sheet of more than Kenya Shillings 40 billion	<ol style="list-style-type: none"> 1. Co-operative Bank of Kenya 2. Kenya Commercial Bank 3. NIC Bank
Tier II	Comprises of banks with a balance sheet of less than Kenya Shillings 40 billion but more than Kenya Shillings 10 billion	<ol style="list-style-type: none"> 1. Prime Bank 2. Family Bank 3. HFCK
Tier III	Comprises of banks with a balance sheet of less than Kenya Shillings 10 billion	<ol style="list-style-type: none"> 44. Development Bank of Kenya 45. K-Rep Bank 46. Consolidated Bank 47. Dubai Bank 48. Habib Bank (K) Ltd 49. ABC Bank

Source: The Banking Survey 2009, pp. 191