THE DETERMINANTS OF BANKS PROFITABILITY: THE CASE OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

This research project is my original work and has not been submitted for a degree in any other university.

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DEDICATION

TO:

My wife, Catherine Njihia, your love, perseverance, understanding, encouragement and support has brought me this far.

May God bless you.

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TABLE OF CONTENTS

PAGE

ABSTRACT

A large portion of Kenyan 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. Interest rates therefore form an integral part of a commercial bank's determinants of profit. Other sources of income for banks are service charges and commissions, income on foreign exchange dealings among others. It is nevertheless important for commercial banks to manage their non-interest revenues so as to provide diversification and greater ability for its profits.

Not much is known about factors that determine profitability for unquoted commercial banks in Kenya. Thus, an explicit analysis of the determinants of quoted and unquoted commercial banks profitability in Kenya was necessary. This study was to fill this gap and is an attempt to answer the questions: "What factors determine profitability of the Kenyan commercial banks? Do the factors differ between the quoted and unquoted commercial banks?"

The study's objectives were to determine the factors that affect profitability of quoted and unquoted commercial banks in Kenya, the extent to which these factors affect profitability and profitability performance between the quoted and unquoted commercial banks. This study was based on a sample of thirty-six commercial banks. Seven were quoted on the Nairobi Stock Exchange (NSE) and twenty-nine were unquoted. The period of study spans seven years from 1998 to 2004.

Secondary data from the financial statements of individual commercial banks on the profit before taxation, interest income from loans and advances to customers, interest expense on customers' deposits, non-interest income, non-interest expenses, provision for bad and doubtful debts, loans and advances to customers net of provision for doubtful, customers' deposits, non-performing loans, market share in percentage measured by total deposits, total assets net of loans and advances to customers, shareholders' funds, liquid assets and loans to deposits ratios were used. Using Statistical Package for Social Sciences (SPSS), multiple regression analysis was set out between Profitability as the dependent variable and the independent variables on all the banks combined, quoted and unquoted commercial banks separately.

The study found out that the most critical variables affecting commercial banks profitability are non-performing 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. 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.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

Until the 1980s, extensive Government intervention was the norm in the financial markets of developing countries. Ceilings were imposed on bank interest rates, credit was allocated by administrative decisions rather than market criteria and flows of foreign capital were strictly controlled. Most economies, Kenya included had their financial systems heavily repressed. The Oxford dictionary of economic defines financial repression as imposition of liquidity constraints through allocation of loans by administrative means rather than use of the market. Financial repression is a situation in which the Government and Central Bank of Kenya (CBK) regulations distort the operations of financial markets. These regulations include maximum nominal interest rates for lenders and borrowers, compulsory reserve requirements on commercial banks, mandatory credit ceilings and control over the allocation of credit among others. The results, it is argued, is to reduce the flow of funds to the formal sector and distort the most productive allocations of resources leading to lower levels of saving, investment and output growth than otherwise would be the case (Situma, 1997).

Where interest rates are administratively set, they tend to be inflexible hence making financial institutions unable to adjust their lending rates with rising cost of funding. Margins in banking business get narrower making lending institutions unable to absorb loses incurred when lending to high risk projects and for this reason financial system finds it convenient to lend to low risk projects (Nganda, 1997, Situma, 1997).

In Kenya, interest rate has remained an important instrument of monetary policy as it directs effects on macro-economic variables. It affects the exchange rate, capital movement, inflation as well as influencing business condition and economic activity (Kilonzo, 2003). Despite the importance of interest rates, many developing countries, Kenya included, have traditionally followed a policy of administratively setting interest rates. In Kenya, this control regime covered the period up to June 1991.

These policies then were viewed as desirable as they would promote investment; improve allocation of investment and keep financial costs down to avoid possible inflationary effects of interest rate liberalization (Kilonzo, 2003).

There have been attempts to control interest rates through an Act of Parliament. On 6th August 2001, the Central Bank of Kenya Amendment Bill 2000 received presidential assent, thus becoming law. However, the Act has remained inoperative since then but in the 2003/4 fiscal year budget, the Finance Minister reintroduced the Act in various aspects. This included such stipulations as, a requirement that a bank stops charging more interest once it is clear that the loan is not performing and interest charges equal the principal, and the publication of the minimum and maximum lending rates in the local press by the Central Bank of Kenya.

According to the initiator of the bill, the Honourable Joe Donde, it was a mistake for the government to liberalize interest rates, as this was purely attributable to donor pressure at the time. Bank performance/profitability is also affected by economic slump, stiff competition and tighter regulatory framework.

Among the most difficult problems facing banks is the existence of uncertainty regarding their inflows which are mainly constituted by their deposits (Baltensperger and Milde, 1976). The bank does not know in advance exactly what inflows and outflows it will experience in its deposit accounts. Okutoyi (1988) observes that banks consistently compete for deposits as public confidence in the financial system keeps on being eroded as a result of mismanagement, poor lending and investment policies as well as political patronage. This point is further underscored by Channon (1986), who points out that as a result of the growing competition and rapid change more and more banks worldwide are increasing their strategic planning efforts aimed at gaining competitive advantage.

Goacher (1990) notes that deposit expansion is one strategy that a bank can formulate, implement and use to strengthen its financial base, increase its earnings and ultimately market share. In their efforts to retain deposits, banks have felt it necessary to develop a full range of banking services such as providing cheque books, standing orders, credit and cash cards, personal loans, trustee services (Ochung, 1999). Banks charge on the provision of such services.

The Kenya banking system is very diverse in terms of institutions' sizes and structure. As per the Central Bank of Kenya Bank supervision annual report (1997), at the end of December 1997, the total number of institutions stood at 74, out of which 53 were banks, 17 Non-bank financial institutions (NBFIs) including two mortgage finance companies (MFCs) and four building societies.

Definition of Terms

Bank:

According to the Banking Act Chapter 488, a bank is any company, which carries on banking business in Kenya and includes Co-operative Bank of Kenya, but does not include Central Bank of Kenya.

Banking Business:

Any business which includes the accepting of deposits of money from the public repayable on demand or after a fixed period or after a notice, the employing of those deposits in whole or in part by lending or any other means for the account and the risk of the person accepting the deposits and the paying and collection of cheques.

Financial Institution:

A company other than a bank which in Kenya accepts deposits of money from the public payable on demand or after a fixed period or after a notice and employs these deposits in whole or in part by lending or any other means for the account and risk of the person accepting the deposits and other company carrying out financial business which the Minister of Finance by notice on the Kenya Gazette, declares to be a financial institution.

Interest Income

Interest Income refers to the revenue that commercial banks earn from their core intermediation business of taking deposits and making loans.

Interest Rate Spread

Interest rate spread is defined by market microstructure characteristics of the banking sector and the policy environment. Ho and Saunders (1981) differentiate between the pure spread and the actual spread and observe that pure spread is a microstructure phenomenon, influenced by the degree of bank risk management, the size of bank transactions, interest rate elasticity and interest rate variability.

Zarruk (1989), considering risk management by the bank, found that risk-averse operates with a smaller spread than risk-neutral banks. Paroush (1994) explains that risk aversion raises the bank's optimal interest rate and reduces the amount of credit supplied. Actual spread, which incorporates the pure spread, is in addition influenced by macroeconomic variables including monetary and fiscal policy activities. Hanson and Rocha (1986) emphasise the role of direct taxes, reserve requirements, cost of transactions and forced investment in defining interest rate spread.

Risk

The uncertainty that an investment will earn its expected rate of return.

Risk Averse

The assumption about investors that they will choose the least risky alternative, all else being equal.

1.2 STA TEMENT OF THE PROBLEM

According to the Central Bank of Kenya Annual Report (2001), a large portion of Kenya financial institutions revenue is generated from credit extended to various individuals and organisations. This revenue is in the form of interest earned and charges on the preparation and management of the credit process. Interest rates therefore form an integral part of a commercial bank's determinants of profit. Other sources of income for banks are service charges and commissions, income on foreign exchange dealings among others. It is nevertheless important for commercial banks to manage their non-interest revenues so as to provide diversification and greater ability for its profits.

An increase in interest rates may not necessary cause an increase in profits, as there may be more chances of default. Loan products may also be unattractive. Kilonzo (2003), researched on the effect of changes in interest rates on credit granted by commercial banks in Kenya for period 1992 to 2002. His findings were that interest rates have no effect on the amount of credit granted by commercial banks and hence concluded that interest rates are not the most important determinants of the amount of credit granted by commercial banks in Kenya.

Bashir (2000), in his study found that Islamic banks profitability measure respond positively to the increase in capital and loan ratios. Their results also indicate the importance of customer and short-term funding, non-interest earning assets and overhead in promoting banks' profits.

Foreign ownership was also seen to have contributed significantly to Islamic banks' profitability. The results also suggest that the tax factors are more important in the determination of bank performance.

Ndung'u (2003) did a study on the determinants of profitability of quoted commercial banks in Kenya. His findings revealed that sound asset and liability management was found to have a significant influence on profitability. Among the external factors, high market interest rate was found to have an adverse effect on commercial banks profitability in Kenya. On the other hand, market share was found to have a positive impact on profitability. Guru and Shanmugan (1999), in their research on Malaysian banks found that efficiency in expense management was one of the most significant determinants of commercial banks profitability.

Not much is known about factors that determine profitability for unquoted commercial banks in Kenya. Thus, an explicit analysis of the determinants of quoted and unquoted commercial banks profitability in Kenya was necessary. One would expect managers who are conversant with their firm's profitability drivers to outperform other less informed managers.

This study is an attempt to answer the questions: "What factors determine profitability of the Kenyan commercial banks? Do the factors differ between the quoted and unquoted commercial banks?"

1.3 RESEARCH OBJECTIVES

To determine: -

1. The factors that affect profitability of quoted and unquoted commercial banks in Kenya
2. The extent to which these factors affect profitability
3. Profitability performance between the quoted and unquoted commercial banks.

14 IMPOR TANCE OF THE STUD Y

a) Individual Commercial Banks

The findings would provide a basis for long-term strategic planning by these banks. The management as the people charged with the design and implementation of procedures and policies related to investment strategies, rely on the determinants of profitability in profit planning.

b) The Policy Makers

The findings would be important in the issue of prudential guidelines on profitability that can be used in policy formulation. Central Bank of Kenya could employ the findings of this study in formulating guidelines that will enhance profitability in the banking sector while protecting consumers.

c) The Investors

The findings would guide investors on the best performing bank to invest in for higher returns.

d) Academia and Researchers

The findings will add to the existing body of knowledge in area of business finance and banking.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 FACTORS THAT DETERMINE BANK PROFITABILITY IN KENYA

2.1.1 Introduction

Profitability is one of the most important indicators for measuring the success of business. A sustained profitability leads to the continued strengthening of the net worth and value to shareholders. During the last twenty years, the world has seen several changes that can be explained by globalisation. This has allowed capitals to flow from one place to another with neither restrictions nor delays. Regardless of the many surrounding factors that can contribute to attract capitals for short periods of time, profitability has been one of the most evident underlying elements seducing capitals in the long run. Banks are moving more and more towards the most profitable areas seeking the best return related to risk their stockholders are willing to bear (Stinenherr, 1994).

Goacher (1990) suggests that by definition, commercial banks exist in order to generate profits for their shareholders. Strictly, it is important that sufficient profits are generated so as to allow for dividends to be paid to shareholders, and if at all possible, for some funds to be ploughed back into the business in order to finance future growth.

Auerbash (1988) observed that in the 1980s in the United States of America (USA), high and rising interest rates have an effect of driving many banks towards insolvency and collapse. This is as a result of competition for banking services amongst the various banking firms.

Mayer et al (1993) noted that banks have had to respond to the demise of their traditional role of lending and saving funds in order to generate income. Their response has been two fold: First, banks have tried to enter into other lines of business particularly investment banking. Secondly, banks have tried to make up for their lacklustre income from lending by generating additional income from various activities. Banks earn fees in putting together a consortium of banks to make a large loan, lines of credit, commissions for dealing in foreign exchange and off-balance sheet financing for instance letter of credit and interest rate swaps.

Hempel, Simonson and Coleman (1994) appreciate the fact that although non-interest income is relatively small for most banks, adequate returns can be the margin of success for a bank. Furthermore, many bank analysts feel that non-interest income will be a growing contributor to bank returns in the future years.

2.1.2 Interest Rates

In money-using economies, money creates claims because it is an asset, a store of value, as well as a means of exchange. Therefore those who lend money expect to be compensated for handing over their claims for the period of the loan to those who borrow money. The compensation is the interest rate. It is expressed as a rate percent per annum because it is a convenient way of calculating and comparing the cost of borrowing money. Thus, one commonly used definition of interest is that it is a price at which money is lent and borrowed. Borrowers are usually in short of funds to meet their current needs for goods and services. Therefore the interest rate can also be defined as the price the lenders expect (and borrowers pay) for exchanging current claims for greater future claims to goods and services. Interest rates represent the cost of money (Kimutai, 2003).

Margarida (2000) found that net interest margin reacts positively to operating costs and hence profitability. Guru and Shanmugan (1999) stated that changing market conditions would also have an impact on the market interest rates, which would certainly have a direct impact on profitability.

In Kenya, in the last decade or so, the high interest rates have remained one of the endemic macro-economic problems that the relevant authorities have been unable to adequately deal with. Some time in 1997, economic observers and academics in Kenya pointed out that the high interest rates were regressive to the economic development of the country. Pressure mounted on the Central Bank of Kenya to act.

The Central Bank's response was that:

> *"There was no quick solution to lowering interest rates unless the country was ready to accept high levels of inflation and heavily depreciated currency with their consequences to the health of the domestic economy"* (Opiyo, 2001).

The Central Bank therefore pursued price stability and maintained inflation at a single digit. The Central Bank's argument was that by containing inflation through reducing the amount of money in circulation, interest rates would come down on their own accord (Opiyo, 2001). However, this strategy by the Central Bank failed to spur economic growth in the various sectors of the economy. In 2000, Kenya's Gross Domestic Product grew by a meagre 0.1 percent. High interest rates have a tendency of keeping investible funds from the private sector as commercial banks rush for the high yielding and secure government securities.

In recent times the banking industry has been the focus of attention. It is accused of being responsible for the high interest regime currently in place in the country. It is accused of high bank charges that are not commensurate with the services they provide (Ngwiri et al, 1998).

The overall objective of a bank should be to balance its return and risk in a way that maximizes the banks market value to its owners, Hempel (1994). Relating this objective to interest rates, a bank should try to earn the highest margin it can in a manner consistent with reasonable stability in the interest margin. Sinkey (1992) notes that the business of banking involves betting on interest rates while Ritter et al (1997) suggest that the success or failure of a bank depends on how well it buys and sells money.

2.1.3 Non - Interest Income

Other sources of commercial banks' income include service charges on deposits and income from various non-deposit activities. On the other hand, interest expenses, especially interest on deposits, dominate total expenses (Kibe, 2003).

Bank charges are the payments debited to your bank account for the services your bank provides. They include, charges on opening of accounts, bankers cheque processing charges, salary processing charges, loan processing charges, charges on telex services, commission charges and account closing charges among others.

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With the declining interest rates in Kenya banks have sought to maintain their levels of profits by increasing bank charges. The relationship between this action and profitability is also not obvious as this may make their products unattractive.

According to the Market Intelligence Banking Survey (2003), whereas fees and commissions are increasingly becoming a burden to depositors, banks are looking at it as a growth area following the decline in interest earnings and fears of interest rates regulation. This strategy by Kenyan commercial banks has seen fees and commissions income progressively grow from Ksh 9.9 billion in 1999 to K.sh 14 billion in 2002, a 38% growth.

Kibe (2003), in relation to non-interest income established that interest rate spread accounts for 40% of total variations in profits of commercial banks. This means that 60% of variations are due to other factors that do not relate to interest rates. He concluded that interest rate spread does not contribute significantly to the profitability of commercial banks as less than 20% of profits can be explained by interest rate spread leaving 80% to non-interest related factors. He recommended that further research should be done to determine the other factors that affect profitability in banks.

2.1.4 Non-Interest Expenses

The relationship between expenditure and profits may appear to be very straightforward. The lower the expenditure, the higher the profit, income remaining constant. However, this may not necessarily be so especially if higher expenditure is associated with higher volume of business activity and hence higher revenues as well. Thus, in order to assess a bank's efficiency on expense management, it would be necessary to deflate the expenditure to reflect variations in activity levels. To this extent, in line with Steinherr and Huveneers (1994), the banks total expenditure would be deflated by total assets to measure the firm's specific expense management efficiency by measuring the cost incurred per monetary unit of assets.

Demirgue-Kunt (1999), in their research on bank profitability found that the differences in the mix of bank activity have an impact on spreads and profitability. Margarida and Mendes (2000), in their research found that the net interest margin reacts positively to operating costs, but pre-tax profits do not. This means that less efficient banks charge higher interest rates on loans (or pay lower rates on deposits), therefore passing those costs onto customers.

In their study on Malaysian banks, Guru and Shanmugan (1999) divided the profitability determinants into two main categories, namely the internal determinants and the external determinants. The internal determinants included management controllable factors such as liquidity, capital adequacy, asset and liability portfolio management and expenses management.

On the other hand, the external determinants included those factors, which are beyond the control of the management of these institutions such as ownership, firm size and external economic conditions such as inflation rates, market interest rate, regulatory conditions and market growth.

2.1.5 Asset Composition

Demirgue-Kunt (1999), in their research on bank profitability found that banks with relatively high non-interest earning assets are less profitable. Margarida and Mendes (2000) found that the loan-to-asset ratio has a positive impact on interest margins and profitability. Guru and Shanmugan (1999) found that in relation to asset portfolios, the commercial banks should focus on loans rather than investment in securities and investment in subsidiaries where they lack the necessary business expertise in order to improve their profit performance.

Davaajargal (2000), in his research found correlation between performing loan and profitability to be negative and statistically significant. He also found that loans outstanding was one of the factors determining bank profitability, hence banks need to increase their lending. He concluded that due to the weak legal environment loan repayment is very poor, which increases non-performing loans.

2.1.6 Deposit Composition

Ochung (1999) investigated whether there exists any relationship between deposit portfolio and profitability in Public Quoted Banks and Financial Institutions in Kenya. His study indicated a significant correlation between deposit portfolio and profitability of the firms. He emphasized (proper) sound investment of deposit funds in the realization of profit.

Demirgue-Kunt (1999), in their findings concluded that banks that rely largely on deposits for their funding are also less profitable, because deposits entail a high branching and other expenses. Further, variations in overheads and other operating costs are reflected in variation in bank interest margins.

Davaajargal (2000), in his research found that correlation between current accounts of business entities/individuals, government accounts and bank profitability is strongly negative. He concluded that banks do not need to hold large amounts in current accounts of business entities, individuals and government because they bear no or little interest. But, they should stop paying interest on the unmoving balance of current accounts in order to attract customers.

2.1.7 Liquidity

In terms of liquidity management, banks involved in the business of transforming short-term deposits into long-term credit would be constantly faced with risks associated with the maturity mismatch. In order to hedge against liquidity deficits, which can lead to insolvency problems, banks often hold liquid assets, which can be easily converted into cash. However, liquid assets are often associated with lower rates of return. Hence high liquidity would be expected to be associated with lower profitability. Consistent with the foregoing argument, Molyneux and Thornton (1992) had also found a weak inverse relationship between liquidity and bank profitability. However, Bourke's (1989) results had indicated a significant positive relationship between liquidity and bank profitability. One possible reason for the conflicting finding may be different elasticity's of demand for loans in the two samples.

Guru and Shanmugan (1999), in their research concluded that commercial banks should not over commit in loans, since the liquidity variable as proxied by the loans to deposit ratio was generally found to have a negative impact on bank profitability.

2.1.8 Bank Capitalization

Demirgue-Kunt (1999), in their research on bank profitability found a positive relationship between capitalization and profitability and a negative relationship between reserves and profitability. Margarida and Mendes (2000), found out that well capitalized banks (banks with higher equity/assets) face lower expected bankruptcy costs and thus lower funding costs and higher interest margins on assets. They also found that tighter minimum capital adequacy ratios are associated with stronger revenue generation. Marcus (1983), in his study, found out that capital to asset ratios respond negatively to increase in the interest rate and the tax advantage of equity finance.

The business of financial intermediation is exposed to various forms of risk. Examples of such risk are interest rate risk and credit risk. In this respect the profitability of a bank would be dependent on the management's attitude towards risk. The risk inherent in a bank and the management's attitude towards risk can be analysed by examining the capital and reserves a bank chooses to hold in addition to its liquidity policies. Banks with high capital-asset ratios would be considered relatively [saf]er, Guru and Shanmugan (1999).

Thus high capital-asset ratios are assumed to be indicators of low leverage and hence low risk. The conventional risk-return hypothesis would therefore imply a negative relationship between capital-asset ratio and bank profitability.

2.1.9 Market Share

The market share of individual banks may change as a result of competitive behaviour in the banking industry. A change in the market share would certainly have implications on the profit potentials of these institutions. Deposits, loans and advances can be considered as bank output and there is a need to make a choice between a deposit or asset measure of market share. Given that the asset components may include investments in securities and subsidiaries, which certainly would not be homogeneous across firms, the deposit measure of market share is considered to be a more equitable measure of market share for commercial banks, (Bourke, 1989).

Margarida and Mendes (2000) found that the market share variable was not significant when explaining the Net Interest Margin. They concluded that banks do not differentiate traditional loan and deposit products (and do not exert market power in these markets) but rather less 'conventional' bank products and services. It also means that market structure is not relevant in those traditional activities; however, they do exert market power in some other bank products and services such as off-balance sheet activities.

2.1.10 Financial Management

Cooperman et al (2000) and Mishkin (1998) identified the following factors that influence the profitability of commercial banks:

1. Interest rate risk management, which is exposure to bank resulting from unexpected variations in interest rates

2. Credit risk management, which is the risk that advances given to commercial banks' customers may never be repaid

Liquidity management; a commercial bank has to maintain sufficient levels of liquid assets so as to satisfy the needs of customers (both borrowers and depositors) and at the same time these liquid assets have to be invested so as to earn returns

4 Non-interest revenues management; a commercial bank has to manage its non-interest revenues as fee income provides diversification and greater stability for commercial banks profits

Okutoyi (1988) came to a conclusion that the level of strategic marketing in a bank affects the overall level of profitability. However, he discovered that the level of strategic marketing does not affect the level of deposits within the institutions.

2.2 RELA TIONSHIP BETWEEN PROFIT DETERMINANTS AND PROFITABILITY

Empirical results show that the market imperfections widen the interest rate spread. Ho and Saunders (1981) carried out a study approximating market power with bank size and found a significant difference in spread between large and small banks, where smaller banks had higher spreads than the large banks. Barajas et al (1996) also show a significant influence of loan market power on the interest rate spread. Elkayam (1996) observes that in a competitive banking system, interest rate spread derives solely from Central Bank variables (including the discount window loans, reserve requirements and interest on liquid assets on deposit with the Central Bank), while under a monopolistic (or oligopolistic) structure, the interest rate spread is in addition affected by elasticity of demand for credit and deposits.

He also found that there was more market power in the credit market than in the deposit market. In addition, considering monetary policy, Elkayam (1996) found that an increase in money supply under elastic demand reduces the spread more in a monopolistic than in a competitive market.

Kibe (2003) did a study on the relationship between interest rate spread and profitability of commercial banks in Kenya. He found out that as the proportion of interest rate spread increases, the profitability of commercial banks is likely to reduce.
He concluded that other factors other than interest rate spread contribute more to commercial banks profitability as compared to interest rate spread.

Oloo (2001) observes that commercial banks in Kenya had done extremely well in the past few years, compared with other sectors in the economy in terms of profit margins. In other words, the commercial banks were enjoying good profits in a period of economic decline. On average, interest 'ncome constitutes 70% of the total income of commercial banks in Kenya. According to the survey, a few very profitable banks and a few heavy loss-makers dominate the financial sector in Kenya.

To illustrate this point, an analysis was made of profit before tax for three commercial banks in Kenya quoted on the Nairobi Stock Exchange. For the year 2003, Barclays Bank of Kenya made a profit before tax of Ksh 3.035 billion, Standard Chartered Bank Ksh 3.147 billion while Kenya Commercial Bank made a loss before tax of Ksh 0.733 billion (Banking Survey, 2001).

One of the most significant risks faced by banks is the interest rate risk. This is the potential variation in returns caused by unexpected changes in interest rates. Analysis of income and expense data of commercial banks shows that the largest source of revenue is loan interest and discount. This is the income from the core intermediation role of a bank (taking deposits and making loans). Bond (1971) study on deposit composition and earnings of commercial banks in the United States of America (USA) found that commercial banks earn a return on their deposits and capital by investing deposit funds and capital funds in assets, a process that involves costs.

Maina (2003) study on Risk and Return of Investments held by insurance companies in Kenya found very little correlation between the return and risk of investments. Markowitz H (1952) noted that there is a natural trade-off between risk and return of an asset, the higher the return the higher the risk.

Lewis (1980) developed a model to capture the relationship between deposit demand and explicit deposit rate per dollar and implicit deposit rate. He argued that imposition of deposit rate ceilings created incentives for savings associations in the USA to attract deposits by inducements in addition to the payment of explicit deposit rates. He argued that in a deposit rate constrained savings deposit market, the competitive mechanism is exercised through the provision of financial and non-financial goods and services to depositors in order to increase deposit holdings. Lewis observed that net revenues per dollar constitute the available funds to be passed on to the depositor in order to increase deposit holdings. He finally observed that the imposition of deposit rate ceilings in 1966 in the USA led to an increase in net revenues in 1972 and 1973 and provided incentives to increase the number of branches and fixed facilities of savings and loans.

Kang'ethe (1999) did a research on the effect of Government ownership on the share price volatility °f companies quoted at the Nairobi Stock Exchange. His findings were that there is a significance difference in the share stock volatility between the companies in which the Government has share holding and the market index.

Kamanda (2001) did a study on an empirical evaluation of equity portfolios held by insurance companies in Kenya. One of his objectives was to predict the risk and return characteristics of equity portfolios held by insurance companies in Kenya in the period January 1998 to December 1999. His study confirmed that the risk-return relationship is positive and linear which is consistent with the normal market condition.

2.3 EVAL UA TING BANKS PERFORMANCE IN KENYA

Commercial banks derive income primarily from lending and the securities portfolio. Because loans are a larger proportion of assets for large banks, interest and fees on loans are a more important source of their income. When the profit margin is threatened, banks sustain a widening spread. Faced with a rising credit risk due to distress borrowing and poor macroeconomic conditions, banks charge a higher risk premium on their lending rate. Commercial banks in addition need to manage their operating costs as well as other non-interest income and expenses, so as to realize profits (Kibe, 2003).

In Kenya, commercial banks charge relatively high interest rates on loans and pay low interest rates on deposits. This has not however saved commercial banks from banking crises (Kibe, 2003). Commercial banks main business is to buy and sell money. Proper bank management entails buying money and selling it for more than you bought it. The success or failure of a commercial bank depends on how well it buys and sells money (Ritter et al, 1997).

Key determinant of success for a commercial bank includes management's abilities to understand movements in interest rates and inflation, and to interpret forecasts with regard to interest rates.
While all managers must respond to interest rate changes, glowing globalisation of financial markets creates additional requirements e.g. they must make asset/liability decisions in reaction to changes in the value of the currency in use against other currencies (Kibe, 2003).

In an attempt to examine the possible links between the structure and performance of commercial banks in Nigeria, Afolabi et al. (1976) developed a least square regression model from a sample of fifteen commercial banks. The study focused on performance of the sector for two years, 1973 and •974. They observed that commercial banking business in Nigeria had always been an industry with [a] high concentration of inputs (deposits) and output (loans and advances) in very few hands-

results of the analysis revealed that the hypothesis of a strong positive relationship between profitability and market share was generally supported. The results confirmed that market share and return on investment are strongly related.

Bond (1971) carried out a study whose prime objective was to provide quantitative estimates of the marginal net rates of return, which commercial banks realize over their demand deposits, capital stock and time deposits. The study focused on a four year period that is 1963 to 1966 and used data on profits, costs, deposits and capital from a cross-section of 295 member banks in the state of Ohio, USA. A multiple regression model was then developed between profitability as dependent variable and deposits, capital stock and deposit servicing costs as the independent variables.

The empirical results revealed that marginal net rates of return of time deposits of government units were higher than the marginal rates of return on other types of time deposits. Bond argues that government units keep these funds on deposit for relatively long periods of time and that deposit withdrawals when they do take place tend to be at regular and predictable intervals. He further argues that a high level of predictability in deposit behaviour conveys definite advantage to banks in the management of their assets.

Bond (1971) finally observed that average interest costs increased over this period and that competition for loanable funds however was principally in the area of time deposits rather than savings deposits. The lower ceiling rates of interest on savings deposits tended to impede the growth of these deposits.

Brown (1985) carried out a study on the impact of price level changes on bank earnings. The study was based on a single industry (banking) and used the following data:

1- Actual and expected Generally Accepted Accounting Principles (GAAP) earnings

2- Actual and expected inflationary gains and loses based on Statement of Financial and Accounting Standard (SFAS) 33 definition of monetary items.

Inflationary gains and losses using Market values rather than book values.

Brown (1985) noted that the GAAP earnings gearing process is well known but little is known about how to formulate expectations of other items. Brown (1985) finally made the following observations on the basis of his analysis:

1 That bank's reported earnings contain two types of errors. The first one relates to general price level changes and arises because banks fail to include holding gains and losses on monetary items in their reported earnings.

2. That the second error relates to specific price level changes and exist because banks do not include reported earnings changes in the value of their investment portfolios.

2.4 REGULA TJON OF BANKS IN KENYA

In Kenya today, commercial bank managers are wary of what interest rates regulations could mean to their businesses. The Central Bank of Kenya (Amendment) Bill 2000 was enacted by the Parliament of Kenya and was to be effective on 1st January 2001. Among the provisions of this bill was that the commercial banks were to ensure that the maximum interest rate charged on loans and advances is the 91-day Treasury bill rate published by the Central Bank of Kenya on the last Friday of each month plus 3%. Although the bill never became operational, this shows that the interest rates issue is very important to bank managers. Any interest rates ceilings put by the regulators would impact heavily on commercial banks profitability. Unal (1989) analysed two theories of interest rates ceilings and how they impact on bank stock returns. The traditional view hypothesises that ceilings eliminate competition for deposit, decreases bank risk and increases bank soundness.
An opposing view claims that ceiling, during times of high interest rates, cause disintermediation, which is ultimately costly to banks. An indifference view claims that ceilings do not have any impact on bank risk since banks would be forced to pay implicit interest rates to make up for the difference between market and ceiling rates.

The passing of the Donde bill and attention it generated illustrates the current quest to control and regulate interest rates.

> *"Whatever route the banks decide to follow, one thing is certain, the Donde law has written a new chapter on banking finance in this country. Bankers will no longer be able to fix interest rates as arbitrarily as they have done in the past. Very careful and exact calculations will be necessary in order to obey the law and remain profitable "* (Kihanya, 2001).

Jegadeesh and Pennacchi (1996) observed that management of interest rate risk is a critical factor for the success of banks and corporations. Prompted by the increased volatility and deregulation of interest rates in 1980s in Europe, a wide array of financial instruments were introduced to cater for the growing risk management needs.

Koehn (1980) found that regulations, which increase the capital adequacy requirements, would increase the capital-assets ratio and thus reduce risk. This may induce the banks to absorb greater risk in their asset portfolios in the hope of maximizing expected returns. Thus, there is also the possibility of a positive association between capital-assets ratio and bank profitability.

Margarida and Mendes (2000) found that Portuguese and Spanish banks suffered from the liberalization of capital movements (occurred in Portugal in 1992 and in Spain in 1993), both in terms of interest margin and profitability. Given the increased competition brought about by liberalization, fund holders did look for more efficient banking systems and more profitable applications.

In Kenya, the Central Bank has been issuing guidelines relating to capital adequacy, cash ratio requirements, liquidity and reporting requirements. These guidelines have effect on the profitability since deposits with Central Bank do not earn interest. Kathanje (2000) found that the performance of banks improved during the post-liberalization period.

CHAPTER THREE

3 0 RESEARCH METHODOLOGY

jj THE POPULATION

The population of interest in this study consists of all the 42 commercial banks registered and licensed under the Banking Act Chapter 488 of the Laws of Kenya and were in existence on 31st December 2003 (CBK Records and Daily Nation of 19 October 2004). The period of study is from 1998 - 2004. The choice of a 7 years period is considered reasonable because ratios shift over time and also due to availability of necessary data (Altman, 1968).

3.2 DATA SAMPLE

A sample of 36 commercial banks that satisfies the above criteria and has not been affected by any confounding effect was studied (Appendix A). This was 7 quoted and 29 unquoted commercial banks as per Appendix B and C respectively.

3.3 DATA COLLECTION PROCEDURE

Secondary data was obtained from the financial statements of individual commercial banks in Kenya. This was supplemented with other data from various Government publications such as Central Bank of Kenya publications (Annual Bank Supervision Reports) and the Central Bureau of Statistics data (Economic Surveys).

3- 4 DA TA ANAL YSIS METHODOLOGY

Multiple Regression Technique

The Multiple Regression Technique was used in data analysis. Regression analysis is used when a researcher is interested in finding out whether an independent variable predicts changes in a given dependent variable. Multiple regression attempts to determine whether a group of variables together Predict a given dependent variable.

lical multiple regression model is of the form:

$$Y = P_o + P.X_1 + P_2 X_2 + \ldots\ldots\ldots\ldots\ldots + p_n x_n + e$$

Where:

*	is the dependent variable
X_{I-n}	are the independent variables
P_o	is a constant, the value of Y when all X are zero,
P_{1-n}	is the regression coefficient or change induced in Y by each X and
C	is an error term

In this study: -

Y	was a commercial bank's annual profit before taxation
XI	was annual interest income from loans and advances to customers
X2	was annual interest expense on customers' deposits
X_3	was annual non-interest income represented by fee and commission income
X4	was annual non-interest expenses represented by staff costs, directors' emoluments and depreciation
X_5	was annual provision for bad and doubtful debts
X_6	was loans and advances to customers net of provision for doubtful debts as at 31st December
X7	was customers' deposits as at 31st December
X_g	was non-performing loans as at 31st December
X_9	was market share in percentage measured by total deposits as at 31st December
X10	was total assets net of loans and advances to customers as at 31st December
XII	was shareholders' funds as at 31st December
X12	was liquid assets as at 31st December as defined by the Banking Act Chapter 488 Section 19
X13	was the loans to deposits ratio as at 31st December

The data was analysed by use of Statistical Package for Social Sciences (SPSS).

CHAPTER FOUR

4 0 DATA ANALYSIS, FINDINGS AND INTERPRETATION

U INTRODUCTION

This study set out to examine the factors that affect profitability of commercial banks in Kenya and their extent. The data analysis was guided by the research objective presented in Chapter one. The body of the report only contains information that directly relates to the study objective. The objective of this study was to determine the factors affecting profitability of Kenyan commercial banks and to what extent. Yearly data on the profit before taxation, interest income from loans and advances to customers, interest expense on customers' deposits, non-interest income, non-interest expenses, provision for bad and doubtful debts, loans and advances to customers net of provision for doubtful, customers' deposits, non-performing loans, market share in percentage measured by total deposits, total assets net of loans and advances to customers, shareholders' funds, liquid assets and loans to deposits ratios were used.

Using SPSS, Regression Analysis was set out between Profitability (Y) as the dependent variable and interest income from loans and advances to customers, interest expense on customers' deposits, non-interest income, non-interest expenses, provision for bad and doubtful debts, loans and advances to customers net of provision for doubtful, customers' deposits, non-performing loans, market share in percentage measured by total deposits, total assets net of loans and advances to customers, shareholders' funds, liquid assets and loans to deposits ratios as the independent variables.

The Regression Results are as set out in appendix 4.1 to 4.23

REGRESSION RESULTS

4*21 Results for annual interest income from loans and advances to customers

From the regression results, twenty-three banks show a positive relationship between interest income loans and advances to customers and bank profitability while thirteen depict a negative [rel]ationship. Interest income from loans and advances to customers of seven banks depicts a [s,]gnificant relationship with bank profitability (Table 4.1).

I^js results are consistent with Margarida (2000) which found that net interest margin reacts positively to operating costs and hence profitability. Guru and Shanmugan (1999) stated that changing market conditions would also have an impact on the market interest rates, which would certainly have a direct impact on profitability. As noted by Auerbash (1988), high and rising interest rates have an effect of driving many banks towards insolvency and collapse. Market forces exogenous to the bank determine interest rates while other factors are largely determined by the banks internal policies.

TahlP 4.1

BANK_	B	Std. Error	Beta	T - Value	P-Value
Middle East Bank of Kenya Ltd	0.555	0.102	0.925	5.449	0.003
ImDerial Bank Ltd	0.433	0.089	0.909	4.864	0.005
Chase Bank Ltd.	1.476	0.373	0.871	3.956	0.011
Standard Chartered Bank Ltd	-0.709	0.212	-0.832	-3.349	0.020
Investment and Mortgage Bank Ltd	-0.162	0.076	-0.693	-2.150	0.084
Prime Bank Ltd	-0.397	0.188	-0.685	-2.104	0.089
Southern Credit Banking Corporation Ltd	-0.381	0.188	-0.672	-2.029	0.098

NOTE: A variable is significant if the p value is less than 0.10

4.2.2 Annual interest expense on customers' deposits

From the research results, sixteen banks show a positive relationship between interest expense on customers' deposits and bank profitability while twenty depict a negative relationship. Interest expense on customers' deposits of three banks depicts a significant relationship with bank profitability (Table 4.2).

This is consistent with Kibe (2003) who concluded that interest rate spread does not contribute significantly to the profitability of commercial banks as less than 20% of profits can be explained by interest rate spread leaving 80% to non-interest related factors.

Table_42

	B	Std. Error	Beta	T-Value	P-Value
MMdjgjggt Bank of Kenya Ltd	0.374	0.065	0.932	5.736	0.002
y^bibAGZunch	0.330	0.160	0.678	2.062	0.094
Souther - ggEIICredit Banking Corporation Ltd	0.598	0.286	-0.683	2.090	0.091

I E:NOVariable
NOTE: A variable is significant if the p value is less than 0.10

4 2 3 Annual non-interest income

From the regression findings, twenty-four banks show a positive relationship between non-interest income and bank profitability and twelve depict a negative relationship. Non-interest income of eleven banks depicts a significant relationship with bank profitability (Table 4.3).

This is consistent with Hempel et al (1994) evidence that non-interest income is a growing contributor to banks returns. This is also consistent with Mayer et al 1993) who noted that banks have had to respond to the demise of their traditional role of lending and saving funds in order to generate income by entering into other lines of business particularly investment banking.

These findings are consistent with Kibe (2003) who found out that interest rates spread has been diminishing as a growth area for profitability of commercial banks in Kenya. Even though there is no sufficient evidence, it is believed that this trend is likely to reduce profitability of commercial banks based on the assumption that the interest rates spread is unstable as compared to non-interest factors that contribute to commercial banks profitability.

Table 4.3

BANK	B	Std. Error	Beta	T - Value	P-Value
Imperial Bank Ltd	1.406	0.091	0.990	15.374	0.000
Prime Bank Ltd	1.040	0.107	0.974	9.710	0.000
Bank of Baroda (K) Ltd	5.18	0.709	0.956	7.31	0.001
Chase Bank Ltd.	3.087	0.814	0.861	3.791	0.013
National Bank of Kenya Ltd	-6.183	1.733	-0.847	-3.567	0.016
African Banking Corporation Ltd	1.220	0.358	0.836	3.405	0.019
Transnational Bank Ltd	32.500	9.624	0.834	3.375	0.020
Standard Chartered Bank Ltd	1.312	0.484	0.771	2.709	0.042
MjddleEast Bank of Kenya Ltd	-2.629	1.102	-0.730	-2.386	0.063
Fidelity Commercial Bank Ltd	-1.094	0.466	-0.724	-2.350	0.066
Citibank N A	2.260	1.020	0.703	2.208	0.078

NOTE: A variable is significant if the p value is less than 0.10

Annual non-interest expenses

From the research findings, nineteen banks show a positive relationship between non-interest [ex]Penses and bank profitability and seventeen depict a negative relationship. Non-interest expenses eleven banks depict a significant relationship with bank profitability (Table 4.4).

rpjjjg is consistent with Guru and Shanmugan (1999) who found that efficiency in expense management was one of the most significant determinants of commercial bank profitability.

Tahle 4.4

	B	Std. Error	Beta	T- Value	P-Value
Akiha Bank Ltd	0.817	0.082	0.976	9.919	0.000
Prime Bank Ltd	0.366	0.044	0.966	8.309	0.000
Imperial Bank Ltd	0.690	0.136	0.915	5.073	0.004
rhase Bank Ltd.	0.341	0.089	0.864	3.841	0.012
qtanbic Bank Kenya Ltd	0.939	0.281	0.831	3.338	0.021
npvelopment Bank of Kenya Ltd	-0.382	0.129	-0.798	-2.966	0.031
Qirdian Bank Ltd	0.207	0.072	0.791	2.890	0.034
First American Bank of Kenya Ltd	-0.616	0.227	-0.771	-2.711	0.042
Equatorial Commercial Bank Ltd	-1.560	0.726	-0.693	-2.150	0.085
Giro Commercial Bank Ltd	-0.386	0.182	-0.687	-2.1 16	0.088
Co-operative Bank of Kenya Ltd	0.300	0.146	0.678	2.064	0.094

NOTE: A variable is significant if the p value is less than 0.10

4.2.5 Annual provision for bad and doubtful debts

From this study, eighteen banks show a positive relationship between the provision for bad and doubtful debts variable and bank profitability while an equal number depict a negative relationship. Provision for bad and doubtful debts of four banks depicts a significant relationship with bank profitability (Table 4.5).

This is consistent with Davaajargal (2000), who found that correlation between performing loan and profitability to be negative and statistically significant. He concluded that due to the weak legal environment loan repayment is very poor, which increases non-performing loans.

Table 4.5

	B	Std. Error	Beta	T-Value	P-Value
EiDIBankLtd	-0.215	0.048	-0.896	-4.510	0.006
CFC Bank Ltd	0.921	0.340	0.771	2.708	0.042
Southern Credit Bankinq Corporation Ltd	0.174	0.071	0.739	2.452	0.058
E^ndard Chartered Bank Ltd	-0.531	0.247	-0.694	-2.155	0.084

NOTE: A variable is significant if the p value is less than 0.10

2.6 Loans and advances to customers net of provision for doubtful debts

The business of financial intermediation is exposed to various forms of risks such as interest rate and default risk. In this context the bank profitability would be dependent on the management attitude towards risk. We expect a positive relationship between bank profitability and loans and advances. This is because the bank will only adjust their loans and advances upwards to improve earnings.

From the regression results, twenty-two banks show a positive relationship between the loans and advances to customers net of provision for doubtful debts variable and bank profitability and fourteen depict a negative relationship. Loans and advances to customers net of provision for doubtful debts of nine banks depict a significant relationship with bank profitability (Table 4.6).

Table 4.6

BANK	B	Std. Error	Beta	T - Value	P-Value
Bank of Baroda (K) Ltd	0.141	0.018	0.963	7.993	0.000
Chase Bank Ltd.	0.079	0.005	0.989	15.200	0.000
Prime Bank Ltd	0.049	0.004	0.981	1 1.393	0.000
Imperial Bank Ltd	0.089	0.013	0.948	6.662	0.001
African Banking Corporation Ltd	0.113	0.023	0.908	4.849	0.005
Equatorial Commercial Bank Ltd	0.102	0.023	0.888	4.330	0.008
Victoria Bank Ltd	0.058	0.021	0.774	2.735	0.041
Gurdian Bank Ltd	0.016	0.006	0.748	2.523	0.053
Fidelity Commercial Bank Ltd	-0.038	0.018	-0.680	-2.073	0.093

NOTE: A variable is significant if the p value is less than 0.10

4.2.7 Customers' deposits

From the results, twenty-four banks show a positive relationship between the customers' deposits variable and bank profitability and twelve depict a negative relationship. Customers' deposits of eight banks depict a significant relationship with bank profitability (Table 4.7).

^s result is consistent with Guru and Shanmugan (1999), who found that current account deposit ^as the most profitable component probably due to the fact that no direct interest is paid on current account deposits. They found time and savings deposits to be a less profitable component since they evolve explicit interest payments.

ffabjje4J					
	B	Std. Error	Beta	T - Value	P-Value
i—jporial Bank Ltd	0.073	0.006	0.983	11.922	0.000
nrjmp Bank Ltd	0.017	0.002	0.976	10.063	0.000
chacP Bank Ltd.	0.087	0.012	0.955	7.170	0.001
^i^nBanking Corporation Ltd	-0.056	0.013	0.888	4.312	0.008
[C^torial Commercial Bank Ltd	0.096	0.024	0.873	3.996	0.010
b^Tnf Baroda (K) Ltd	0.036	0.01	0.848	3.575	0.016
fjHplitv Commercial Bank Ltd	-0.034	0.015	-0.704	-2.218	0.077
Gurrlian Bank Ltd	0.016	0.007	0.696	2.169	0.082

4.2.8 Non-performing loans and advances

From the research findings, fifteen banks show a positive relationship between the non-performing loans and advances variable and bank profitability and twenty-one depict a negative relationship. Non-performing loans and advances of four banks depict a significant relationship with bank profitability (Table 4.8).

This is consistent with Davaajargal (2000) who concluded that due to the weak legal environment loan repayment is very poor, which increases non-performing loans. As a result of that banks have set aside loan loss provision that impact negatively on profitability.

A significant portion of the commercial banks credit is deemed as non-performing as a result of **borrowers** being unable to honour their obligations partly due to the high interest rates which commercial banks have been charging borrowers throughout the **1990s** in the background of a **depressed** economy. Since **1990,** the country has been unable to attract significant foreign capital **following** the withdrawal of the World Bank and International Monetary Fund (IMF) financial **support** due to the government's failure to embrace reforms championed by Bretton Wood **institutions.** With the depressed economy many businesses were unable to meet their financial **obligations** and many others closed down.

Table 4.8

BANK	B	Std. Error	Beta	T - Value	P-Value
Prime Bank Ltd	0.156	0.050	0.812	3.107	0.027
Chase Bank Ltd.	0.508	0.209	0.735	2.426	0.060
Fina Bank Ltd	-0.087	0.043	-0.671	-2.026	0.099
Stanbic Bank					
M q ^ ^ Kenya Ltd	0.192	0.095	0.671	2.023	0.099

A variable is significant if the p value is less than 0.10

4 2 9 Market share in percentage measured by total deposits

prom the results, twenty banks show a positive relationship between the market share measured by total deposits variable and bank profitability and sixteen depict a negative relationship. Market share $_0$f twelve banks depict a significant relationship with bank profitability (Table 4.9).

The results are consistent with Afolabi et al (1976) that revealed the hypothesis of a strong positive relationship between profitability and market share. The results confirmed that market share and return on investment are strongly related.

Table 4.9

BANK	B	Std. Error	Beta	T-Value	P-Value
Prime Bank Ltd	0.000	0.000	0.915	5.073	0.004
National Bank of Kenya Ltd	0.000	0.000	0.905	4.764	0.005
Southern Credit Banking Corporation Ltd	0.000	0.000	-0.846	-3.543	0.017
Middle East Bank of Kenya Ltd	0.000	0.000	0.832	3.353	0.020
Paramount-Universal Bank Ltd	0.000	0.000	0.819	3.191	0.024
Bank of Baroda (K) Ltd	0.000	0.000	0.813	3.1 18	0.026
Chase Bank Ltd.	0.000	0.000	0.805	3.037	0.029
Development Bank of Kenya Ltd	0.000	0.000	0.755	2.577	0.050
Citibank N A	0.000	0.000	0.745	2.497	0.055
Imperial Bank Ltd	0.000	0.000	0.719	2.315	0.068
Standard Chartered Bank Ltd	0.000	0.000	-0.705	-2.221	0.077
Diamond Trust Bank Kenya Ltd	0.000	0.000	0.690	2.129	0.087

NOTE: A variable is significant if the p value is less than 0.10

4.2.10 Total assets net of loans and advances to customers

Total assets net of loans and advances to customers consist mostly of investments in securities, which is dependent on the volatility of the market. If the impact is positive then banks make high profits. This variable is expected to have a positive impact on the profitability of banks.

From the regression, twenty-four banks show a positive relationship between the total assets net of loans and advances to customers' variable and bank profitability and twelve depict a negative relationship. Total assets net of loans and advances to customers of nine banks depict a significant relationship with bank profitability (Table **4.10).** This is inconsistent with Njoka **(2002)** and Mugo (2001) who found out that asset size has no relation with bank performance.

	B	Std. Error	Beta	T - Value	P-Value
injjjfirial Bank Ltd	0.163	0.120	0.986	13.215	0.000
prime Bank Ltd	0.024	0.004	0.946	6.513	0.001
^J^snational Bank Ltd	1.054	0.147	0.955	7.159	0.001
Chase Bank Ltd.	0.119	0.031	0.866	3.875	0.012
National Industrial Credit Bank Ltd	-0.043	0.013	-0.827	-3.284	0.022
^fH^n Banking Corporation Ltd	-0.074	0.024	0.815	3.147	0.025
^ T o f Baroda (K) Ltd	0.039	0.013	0.806	3.042	0.029
standard Chartered Bank Ltd	0.046	0.017	0.776	2.749	0.040
Mabib AG Zurich	-0.043	0.020	-0.682	-2.083	0.092

NOTE: A variable is significant if the p value is less than 0.10

4.2.11 Shareholders' funds

From the results, twenty-four banks show a positive relationship between shareholders funds and bank profitability and twelve depict a negative relationship. Shareholders' funds of thirteen banks depict a significant relationship with bank profitability (Table 4.11).

These results are consistent with Demirgue-Kunt (1999) who found a positive relationship between capitalization and profitability and a negative relationship between reserves and profitability. They are also consistent with Margarida and Mendes (2000) who found out that well capitalized banks (banks with higher equity/assets) face lower expected bankruptcy costs and thus lower funding costs and higher interest margins on assets.

Table 4.11

	B	Std. Error	Beta	T-Value	P-Value
!E£erial Bank Ltd	0.333	0.022	0.989	14.933	0.000
Prime Bank Ltd	0.182	0.015	0.983	1 1.965	0.000
African Banking Corporation Ltd	0.388	0.058	0.948	6.691	0.001
§ank_of Baroda (K) Ltd	0.31	0.048	0.945	6.479	0.001
Eguatorial Commercial Bank Ltd	0.557	0.075	0.958	7.450	0.001
Sjase^Bank Ltd.	0.207	0.034	0.940	6.135	0.002
Wddl^East Bank of Kenya Ltd	-0.790	0.231	-0.837	-3.414	0.019
Sandard Chartered Bank Ltd	0.503	0.168	0.801	2.997	0.030
^IjonaNndustrial Credit Bank Ltd	-0.138	0.046	-0.800	-2.977	0.031
^i£diarL^{B}ank Ltd	0.061	0.023	0.768	2.680	0.044
!=23>erative Bank of Kenya Ltd	-0.412	0.171	-0.733	-2.412	0.061
i^Ofnational Bank Ltd	1.111	0.524	0.688	2.122	0.087
feibAG Zurich	-0.288	0.142	-0.671	-2.026	0.099

• A variable is significant if the p value is less than 0.10

4 2 12 Liquid assets

Liquid assets as defined by section 19 of the Banking Act are notes and coins, balances held at the CBK. and at other banks. These are often associated with lower rates of return or none at all. Hence too many liquid assets would be expected to be associated with lower profitability.

From the regression findings, twenty-two banks show a positive relationship between liquid assets and bank profitability and fourteen depict a negative relationship. Liquid assets of ten banks depict a significant relationship with bank profitability (Table 4.12).

[jjbjej.12

RANK	B	Std. Error	Beta	T-Value	P-Value
Transnational Bank Ltd	0.963	0.110	0.969	8.779	0.000
Imperial Bank Ltd	0.189	0.024	0.961	7.822	0.001
Prime Bank Ltd	0.026	0.005	0.930	5.666	0.002
National Industrial Credit Bank Ltd	-0.047	0.013	-0.845	-3.540	0.017
Bank of Baroda (K) Ltd	0.0426	0.013	0.819	3.188	0.024
Chase Bank Ltd.	0.134	0.044	0.803	3.012	0.030
African Banking Corporation Ltd	-0.068	0.025	0.767	2.677	0.044
Standard Chartered Bank Ltd	0.051	0.019	0.767	2.674	0.044
Credit Bank Ltd	0.052	0.019	0.766	2.665	0.045
Habib AG Zurich	-0.046	0.023	-0.671	-2.024	0.099

NOTE: A variable is significant if the p value is less than 0.10

4.2.13 Loans to deposits ratio

Banks are involved in the business of transforming short-term deposits into long-term credit. They would constantly be faced with the risk associated with maturity mismatch. Liquid assets are often associated with lower rates of return. Hence high liquidity would be expected to be associated with lower profitability.

From the observations of the regression results, eighteen banks show a positive relationship between loans to deposits ratio and bank profitability while an equal number depict a negative relationship. Loans to deposits ratio of four banks depict a significant negative relationship with bank profitability (Table 4.13).

^jjis is inconsistent with the findings by Bourke (1989) who found a significant positive relationship between liquidity and bank profitability. They are consistent with Molyneux and Thornton (1992) who found a weak inverse relationship between liquidity and bank profitability.

T?hle 4.13					
	B	Std. Error	Beta	T-Value	P-Value
fcuthern Credit Banking Corporation Ltd	0.000	0.000	-0.894	-4.473	0.007
[pj^me^Bank Ltd	0.000	0.000	-0.854	-3.666	0.015
standard Chartered Bank Ltd	0.000	0.000	-0.808	-3.064	0.028
Middle East Bank of Kenya Ltd	0.000	0.000	-0.695	-2.160	0.083

NOTE: A variable is significant if the p value is less than 0.10

4.2.14 All Banks for the study period

All the variables were regressed for all the banks for the review period and the regression results **were** that, eight of the independent variables had a positive relationship with bank profitability and **five** depict a negative relationship. Only fees and commission income, market share and liquid assets **were** insignificant (Table **4.14).**

Table 4.14

Variable	B	Std. Error	Beta	T Value	P-Value
Annual Interest Income From Loans and Advances to customers	0.383	0.1	0.62	3.816	0
Annual Interest Expense on Customers' Deposits	-0.376	0.104	-0.287	-3.62	0
Annual Operating Expenses	0.231	0.053	0.468	4.325	0
Annual Provision for bad and Doubtful Debts	0.284	0.029	0.921	9.674	0
Loans and Advances to Customers Net Provision for Doubtful Debts	-0.168	0.023	-1.863	-7.15	0
J^ustomers' Deposits	0.134	0.024	2.131	5.515	0
J^tal Non-Performing Loans and Advances	-0.222	0.024	1.03	-9.37	0
_^reholders' Funds	0.132	0.05	0.309	2.634	0.009
J^^f^toJDeposits Ratio	113960	52933	0.058	2.153	0.032
Total Assets Net of Loans and Advances to Customers	-0.006	0.03	-0.649	-2.06	0.041

NOTE: A variable is significant if the p value is less than 0.10

42.i5 Quoted Banks

There **were** seven quoted banks on the Nairobi Stock Exchange (NSE) as per Appendix **B.** All the **variables** were regressed for all the quoted banks for the review period and the regression results were that, eight of the independent variables had a positive relationship with bank profitability and five depict a negative relationship. Only four variables were significant (Table 4.15).

Table 4.15

BANK	B	Std. Error	Beta	T Value	P-Value
"Annual Provision for bad and Doubtful Debts	0.3	0.08	1.048	3.758	0.001
Total Non-Performing Loans and Advances	-0.236	0.062	-1.172	-3.82	0.001
Loans and Advances to Customers Net Provision for Doubtful Debts	-0.159	0.073	-1.603	-2.17	0.037
Customers' Deposits	0.123	0.072	1.78	1.712	0.096

NOTE: A variable is significant if the p value is less than 0.10

4.2.16 Unquoted Banks

There were twenty-nine unquoted banks as per Appendix C. All the variables were regressed for all the unquoted banks for the review period and the regression results were that, seven of the independent variables had a positive relationship with bank profitability and six depict a negative relationship. Six of the variables were significant (Table 4.16).

Table 4.16

Variable	B	Std. Error	Beta	T Value	P-Value
Annual Operating Expenses	0.24	0.043	0.561	5.534	0
Iotal Non-Performing Loans and Advances	0.112	0.031	0.759	3.642	0
Annual Provision for bad and Doubtful Debts	-0.16	0.047	-0.756	-3.43	0.001
Shareholders' Funds	0.131	0.051	0.482	2.579	0.011
Market Share in Percentage Measured by Jttal_Deposits	77463	32997	0.687	2.348	0.02
Loans and Advances to Customers Net Ln^isipn for Doubtful Debts	-0.005	0.027	-0.968	-2.03	0.044

NOTE: A variable is significant if the p value is less than 0.10

All the variables were regressed for all the banks for the year 1998 and the regression results were that, six of the independent variables had a positive relationship with bank profitability and seven depict a negative relationship. Four of the variables were significant (Table 4.17).

Table 4.17

Variable	B	Std. Error	Beta	T Value	P-Value
Customers' Deposits	0.268	0.096	3.243	2.794	0.011
Liquid Assets	-0.186	0.084	-1.141	-2.203	0.039
Total Assets Net of Loans and Advances to Customers	0.206	0.110	1.943	1.869	0.076
Total Non-Performing Loans and Advances	0.255	0.146	0.319	1.743	0.096

NOTE: A variable is significant if the p value is ess than 0.10

4.2.18 Year 1999

All the variables were regressed for all the banks for the year 1999 and the regression results were that, eight of the independent variables had a positive relationship with bank profitability and four depict a negative relationship. Seven of the variables were significant (Table 4.18). Market value variable is dropped due to its high correlation with the other variables.

Table 4.18

Variable	B	Std. Error	Beta	T Value	P-Value
Annual Interest Income From Loans and Advances to customers	0.979	0.208	1.543	4.713	0.000
Annual Interest Expense on Customers' Deposits	-2.259	0.275	-1.600	-8.201	0.000
Total Non-Performing Loans and Advances	0.335	0.071	0.608	4.737	0.000
Annual Operating Expenses	-0.956	0.248	-1.539	-3.853	0.001
Loans to Deposits Ratio	-115511	45527	-0.065	-2.537	0.018
Liquid Assets	0.074	0.034	0.408	2.189	0.039
Annual fee and Commission Income	0.606	0.329	0.422	1.841	0.079

NOTE: A variable is significant if the p value is less than 0.10

4.2.19 Year 2000

All the variables were regressed for all the banks for the year 2000 and the regression results were that, seven of the independent variables had a positive relationship with bank profitability and five depict a negative relationship. Only two of the variables were insignificant (Table 4.19). Market value variable is dropped due to its high correlation with the other variables.

Table 4.19

Variable	B	Std. Error	Beta	T Value	P-Value
Customers' Deposits	0.431	0.057	7.107	7.536	0.000
Loans and Advances to Customers Net Provision for Doubtful Debts	-0.338	0.046	-4.128	-7.366	0.000
Liquid Assets	-0.325	0.071	-2.334	-4.559	0.000
Loans to Deposits Ratio	137084	33474	0.132	4.095	0.000
Annual Interest Expense on Customers' Deposits	-1.527	0.466	-1.193	-3.280	0.003
Annual Provision for bad and Doubtful Debts	0.335	0.112	1.589	2.993	0.006
Annual fee and Commission Income	-1.665	0.558	-1.662	-2.983	0.007
Annual Interest Income From Loans and Advances to customers	0.850	0.316	1.612	2.694	0.013
Total Non-Performing Loans and advances	-0.213	0.080	-1.515	-2.683	0.013
Annual Operating Expenses	0.408	0.179	1.140	2.281	0.032

NOTE: A variable is significant if the p value is less than 0.10

4.2.20 Year 2001

All the variables were regressed for all the banks for the year 2001 and the regression results were that, six of the independent variables had a positive relationship with bank profitability and an equal number depict a negative relationship. Eight of the variables were significant (Table 4.20). Market value variable is dropped due to its high correlation with the other variables.

Table 4.20

Variable	B	Std. Error	Beta	T - Value	P-Value
Total Non-Performing Loans and Advances	-0.367	0.029	-2.603	-12.582	o.ooo
Annual Provision for bad and Doubtful Debts	0.451	0.041	2.239	10.925	o.ooo
Loans and Advances to Customers Net Provision for Doubtful Debts	-0.310	0.039	-3.448	-7.946	o.ooo
Customers' Deposits	0.343	0.043	5.400	7.942	o.ooo
Loans to Deposits Ratio	306199	46243	0.144	6.621	o.ooo
Shareholders' Funds	0.323	0.066	0.843	4.877	o.ooo
Annual Operating Expenses	0.690	0.142	1.417	4.852	o.ooo
Total Assets Net of Loans and Advances to Customers	-0.279	0.061	-2.925	-4.601	o.ooo

NOTE: A variable is significant if the p value is ess than 0.10

4.2.21 Year 2002

All the variables were regressed for all the banks for the year 2002 and the regression results were that, seven of the independent variables had a positive relationship with bank profitability and five depict a negative relationship. Four of the variables were significant (Table 4.21). Market value variable is dropped due to its high correlation with the other variables.

Table 4.21

Variable	B	Std. Error	Beta	T-Value	P-Value
Annual Provision for bad and Doubtful Debts	-0.382	0.154	-1.000	-2 483	0.021
Annual Interest Income From Loans and Advances to customers	0.441	0.185	0.623	2.387	0.026
Total Assets Net of Loans and Advances to Customers	0.164	0.073	2.027	2.244	0.035
Total Non-Performing Loans and Advances	0.223	0.105	1.162	2.121	0.045

NOTE: A variable is significant if the p value is less than 0.10

4.2.22 Year 2003

All the variables were regressed for all the banks for the year 2003 and the regression results were that, five of the independent variables had a positive relationship with bank profitability and seven depict a negative relationship. Four of the variables were significant (Table 4.22). Market value variable is dropped due to its high correlation with the other variables.

Table 4.20

Variable	B	Std. Error	Beta	T-Value	P-Value
Annual Interest Income From Loans and Advances to customers	1.031	0.318	1.223	3.241	0.004
Loans and Advances to Customers Net Provision for Doubtful Debts	-0.291	0.096	-3.064	-3.020	0.006
Customers' Deposits	0.245	0.118	4.062	2.085	r 0.048
Loans to Deposits Ratio	345177	197530	0.096	1.747	0.094

NOTE: A variable is significant if the p value is less than 0.10

4.2.23 Year 2004

All the variables were regressed for all the banks for the year 2004 and the regression results were that, eight of the independent variables had a positive relationship with bank profitability and five depict a negative relationship. Four of the variables were significant (Table 4.23).

Table 4.23

Variable	B	Std. Error	Beta	T - Value	P-Value
Market Share in Percentage Measured by Total Deposits	-1629735	708478	-7.523	-2.300	0.031
Total Non-Performing Loans and Advances	-0.522	0.252	-2.197	-2.070	0.050
Annual Provision for bad and Doubtful Debts	0.626	0.341	1.700	1.838	0.080
Customers' Deposits	0.293	0.166	5.281	1.762	0.092

NOTE: A variable is significant if the p value is less than 0.10

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 SUMMARY AND CONCLUSIONS

The regression results for all the banks show that the most critical variables affecting profitability are non-performing 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 ranking in that order.

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. 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.

The study found that the loan and deposit components affect quoted banks profit significantly. This may be due to the fact quoted banks are affected by the external factors in the same way and none has the advantage over the others to earn higher profits. Management expenses, shareholders funds and market share amongst the loans and deposits components, determine the unquoted banks profitability.

Customers' deposits, liquid assets, total assets net of loans and advances and non-performing loans variables significantly determined profit in 1998 just after the multi-party general elections of 1997. In 1999, interest income from loans and advances, interest expense, non-performing loans, operating expenses, loans to deposits ratio, liquid assets and fee and commission income influenced banks' profits significantly. In year 2000, only shareholders' funds, total assets net of loans and advances to customers and market share insignificantly affected profitability.

^on-performing loans, provision for bad and doubtful debts, loans and advances to customers net of Provision for doubtful debts, customers' deposits, loans to deposits ratio, shareholders funds, operating expenses and total assets net of loans and advances significantly determined profit in year 2001.

Year 2002, another general election year where the Kenya African National Union (KANU) government lost to National Rainbow Coalition (NARC) had provision for bad and doubtful debts, interest income from loans and advances, total assets net of loans and advances and non-performing loans significantly determining banks profitability. Interest income from loans and advances, loans and advances to customers net of provision for doubtful debts, customers' deposits and loans to deposits ratio variables significantly contributed to commercial banks profitability. In year 2004, market share, non-performing loans and advances, provision for bad and doubtful debts and customers' deposits influenced commercial banks profitability significantly.

In conclusion, the study found the most critical variables affecting commercial banks profitability are non-performing 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. 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.

5.2 LIMITATIONS

The study considered only interest income from loans and advances to customers, interest expense on customers' deposits, non-interest income, non-interest expenses, provision for bad and doubtful debts, loans and advances to customers net of provision for doubtful, customers' deposits, non-performing loans, market share in percentage measured by total deposits, total assets net of loans and advances to customers, shareholders' funds, liquid assets and loans to deposits ratio as the only determinants of commercial banks' profitability, other factors not included as variables in this study could also contribute to the commercial banks' profitability.

Secondary data could be obtained for seven years only and hence this can affect the ratios that shift over time. If data were available for a longer period, the study would have been more comprehensive.

The secondary data was extracted from the financial statements of individual commercial banks. There is a possibility of this data being manipulated to suit a bank's management and hence one has to be cautious of this limitation.

The study was conducted within the constraint of time and resources and therefore, other issues inherent in such a broad study could not be addressed adequately. The study made use of data that was not adjusted for price (inflationary) changes.

5.3 RECOMMENDA TIONS FOR FURTHER RESEARCH

This study considered all the banks to be of the same size and profitability. A recommendation is made that a research can be carried out where banks are categorised per profitability, customers deposits or shareholders funds. A longer period can also be considered if unquoted banks can give data beyond the non-disclosure period of 1998. A research can also be done to determine whether other factors influence profitability other than those considered in this study. Emphasis can be laid on qualitative factors such as management strategies towards human resource management.

A further research may extend the analysis to include other industry players such as building societies and non-bank financial institutions. A researcher can conduct the same study using current cost accounting or price adjusted data. This will enable the behaviour of historical data to be compared to those of inflation adjusted.

REFERENCES

Afolabi, S and Ademola, O: Market Share and Profitability in Commercial Banking, - The case of Nigeria, Journal of Management Studies Volume 8 No.1, March 1976, pages 52 - 57.

Altman, E (1968): Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy, The Journal of Finance, September Issue.

Auerbash, R (1988): Money, Banking and Financial Markets, McMillan, 3rd Ed., New York

Baltensperger, E and Milde, H: Reserve Demand, Information Costs and Bank Portfolio Behaviour, Journal of Finance, Vol. XXXI No. 3 March 1976 pp 835-842

Laws of Kenya, Banking Act, Chapter 488.

Banking Survey (2001, 2003): Market Intelligence, The Business and Finance Journal

Barajas, A, Steiner, R and Salazar, N (1996): Interest Spread in Banking: Costs, Financial Taxation, Market Power and Loan Quality in the Colombian Case, 1974-1988, IMF Working Paper No. 110, Washington, DC.

Bashir, A M (2000): Determinants of Profitability and Rate of Return Margins in Islamic Banks, Some Evidence from Middle East.

Bond R E: Deposit Composition and Marginal Net Rates of Returns for Commercial Banks, Journal of Finance, Volume XXXVI, March 1971, pages 39-50.

Bourke, Philip (1989): Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia, Journal of Banking and Finance, Vol. 13, 65-79.

Brown D L: Measurement Error and Banks Reported Earnings, The Accounting Review, Volume 60 No.3, July 1985, Page 576.

Central Bank of Kenya (Amendment) Bill 2000

Central Bank of Kenya (1997, 2001): Banks Supervision Annual Reports

Channon, D F (1986): British Banking Strategy and International Challenge

Cooperman, E Mills, D and Gardner, J (2000): Managing Financial Institutions: An Asset/Liability Approach, The Dryden Press, Harcourt College Publishers, Orlando, FI.

Davaajargal, L (2000): Bank Profitability in Mongolia

Demirgue-Kunt, A and Huizinga, H (1999): Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence.

Elkayam, D (1996): The Effect of Monetary Policy on Local Currency Segment in Israel 1986-2000, Bank of Israel Economic Review, 68, pp 1-22.

Frankfort-Nachmias, C and Nachmias, D: Research Methods in Social Sciences, London, Arnold, 1996.

Goacher, D (1990): The Monetary and Financial System, The Chartered Institute of Bankers, London EC 3V 9AS, 2nd Edition pp 171-177.

Guru K B and Shanmugan, B (1999): Determinants of Commercial Bank Profitability in Malaysia, www.afbc.banking.unsw.edu.au

Hanson, J A and Rocha, R R (1986): High Interest Rates, Spreads and the Costs of Intermediation, Industrial and Finance Series, Vol. 18, The World Bank.

Hempel, G, Simonson, G and Coleman, A (1994): Banking Management: Text and Cases, John Wiley and Sons Inc., 4th Ed., USA.

Hempel, George H (1994): Bank Management. Text and Cases. 4th Ed., Wileys, New York.

Ho, T S Y and Saunders, A (1981): The Determinants of Bank Interest Margin: Theory and Empirical Evidence, Journal of Financial and Quantitative Analysis, XVI (4), pp 581-599.

jegadeesh, N and Pennacchi, G G (1996): The Behaviour of Interest Rates Implied by the Term Structure of Eurodollar Futures, Journal of Money, Credit and Banking, pp 426-446.

Kamanda (2001): An Empirical Evaluation of Equity Portfolios Held by Insurance Companies in Kenya, Unpublished MBA Dissertation, University of Nairobi.

Kang'ethe, P K (1999): The Effect of Government Ownership on the Share Price Volatility of Companies Quoted at the Nairobi Stock Exchange, Unpublished MBA Dissertation, University of Nairobi.

Kathanje, M N (2000): An Evaluation of Financial Performance of the Kenyan Banking Sector for the period 1987-1999, Unpublished MBA Dissertation, University of Nairobi.

Kibe, M M (2003): The Relationship Between Interest Rate Spread and Profitability of Commercial Banks in Kenya, Unpublished MBA Dissertation, University of Nairobi.

Kihanya, M (2001): The Donde Bill - How Banks will feel the Impact, Market Intelligence, February 2001, pp 41

Kilonzo, B M (2003): The Effect of Changes in Interest Rate on Credit Granted by Commercial Banks in Kenya, Unpublished MBA Dissertation, University of Nairobi.

Kimutai, T K (2003): An Empirical Analysis of Factors Contributing to High Interest Rates Spreads in Kenya, Unpublished MBA Dissertation, University of Nairobi.

Koehn, M and Santomero A M (1980): Regulation of Bank Capital and Portfolio, Journal of Finance, Vol. 35, pp 1235-1250.

Levin, R I and Rubin, D S (1999): Statistics for Management, Prentice Hall of India, New Delhi.

Lewis, J Spellman: Deposit Ceilings and Efficiency of Financial Intermediation, Journal of Finance, volume XXXV, No. 1, March 1980, pages 129-136

Maina K P (2003): Risk and Return of Investments held by Insurance Companies in Kenya, Unpublished MBA Dissertation, University of Nairobi.

Marcus, A J: The Bank Capital Decision: A Time Series Cross Section Analysis, Journal of Finance, Vol. XXXVIII, No. 4, September 1983, pp 1217-1230.

Margarida, A and Mendes, V (2000): Commercial Bank Interest Margins and Profitability: Evidence for some EU Countries.

Markowitz, H (1952): Portfolio Section, Journal of Finance, Vol 7, pp 77-91.

Mayer, T, James, S and Aliber, R (1993): Money, Banking and Economy, 5th Ed.

Mishkin, F S (1998): The Economics of Money, Banking and Financial Markets, Addison-Wesley, 5th Edition.

Molyneux, Philip and Thornton, John (1992): Determinants of European Bank Profitability: A Note, Journal of Banking and Finance, Vol. 18, No. 6, 1173-1178

Mugo, J M (2001): Predictive Model of Bank Failure, Unpublished MBA Dissertation, University of Nairobi.

Ndung'u, C W (2003): Determinants of Commercial Banks Profitability in Kenya. The Case of Kenya Quoted Banks, Unpublished MBA Dissertation, University of Nairobi.

Nganda, B M (1997): Interest Rate Controls and Credit Allocation in Africa, Financial Liberalization and Economic Development in Africa Seminar in March '

Ngwiri, Alan et al (1998): State of Kenyan Banking Sector, The Kenyan Banker, Vol 1 No. 5, January - March 1998

L

jsjjoka, C W (2002): Interest Rates Under the Treasury Bill Regime. Unpublished MBA Dissertation, 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. Unpublished MBA Dissertation, University of Nairobi.

Okutoyi P G (1988): The Relationship Between the use of Strategic Marketing and Bank Performance in Kenya, Unpublished MBA Dissertation, University of Nairobi.

Oloo, O (2001): Are Banks Making 'Obscene' Profits? Market Intelligence, The Business and Finance Journal, September, pp 10-16.

Opiyo, V (2001): The Interest Rate Puzzle. Market Intelligence, The Business and Finance Journal, April/May, pp 37-38.

Paroush, J (1994): The Effect of Uncertainty, Market Structure and Collateral Policy on the Interest Rate Spread, Bank of Israel Banking Review, 4, pp 79-94.

Ritter, F K, Silber, W and Udell, G (1997): Principles of Money, Banking and Financial Markets. Addison Wesley Longman, Inc., New York.

Sinkey, J F (1992): Commercial Bank Financial Management in the Financial Service Industry, 4th Edition, Macmillan Publishers, New York, 1992.

Situma, E N (1997): Financial Liberalization and Private Investment in Africa, Fiscal Policy and Private Investment in Developing Countries Seminar, July.

Stinenherr, A and Huveneers, C (1994): On the Performance of Differently Regulated Financial Institutions: Some Empirical Evidence, Journal of Banking and Finance, Vol. 18, pp 271-306.

Unal, H (1989): Impact of Deposit Rate Ceiling Changes on Bank Stock Returns. Journal of Money, Credit and Banking, pp 206-220.

L

Zarruk, R E (1989): Bank Spread with Uncertainty Deposit Level and Risk Aversion, Journal of Banking and Finance, 13 pp 797-810.

Appendix 4.1

Annual interest income from loans and advances to customers

Bank	B	Std. Error	Beta	T-Value	P-Value
Middle East Bank of Kenya Ltd	0.555	0.102	0.925	5.449	0.003
Imperial Bank Ltd	0.433	0.089	0.909	4.864	0.005
Chase Bank Ltd.	1.476	0.373	0.871	3.956	0.011
Victoria Bank Ltd	0.082	0.041	0.668	2.009	0.101
National Industrial Credit Bank Ltd	0.098	0.049	0.664	1.984	0.104
Habib AG Zurich	0.779	0409	0.649	1.906	0.115
Diamond Trust Bank Kenya Ltd	0.125	0.069	0.630	1.815	0.129
Barclays Bank of Kenya Ltd	1.269	0.742	0.607	1.710	0.148
Habib Bank Ltd	0.221	0.140	0.577	1.579	0.175
Charterhouse Bank Ltd	0.235	0.155	0.560	1.513	0.191
Stanbic Bank Kenya Ltd	0.321	0.356	0.374	0.902	0.408
Akiba Bank Ltd	1.574	1.817	0.361	0.866	0.426
Fidelity Commercial Bank Ltd	0.104	0.123	0.354	0.848	0.435
Bank of Baroda (K) Ltd	0.664	0.86	0.327	0.773	0.475
National Bank of Kenya Ltd	0.383	0.554	0.295	0.691	0.521
Giro Commercial Bank Ltd	0.013	0.023	0.250	0.578	0.588
Commercial Bank of Africa Ltd	0.059	0.104	0.247	0.569	0.594
CFC Bank Ltd	0.142	0.253	0.243	0.561	0.599
Development Bank of Kenya Ltd	0.075	0.163	0.201	0.459	0.666
Consolidated Bank of Kenya Ltd	0.129	0.351	0.162	0.367	0.729
Citibank N A	0.153	0.461	0.147	0.333	0.753
First American Bank of Kenya Ltd	0.018	0.095	0.084	0.189	0.858
Bank of India	0.042	0.324	0.059	0.131	0.901
Kenya Commercial Bank Ltd	-0.020	0.161	-0.054	-0.121	0.909
Fina Bank Ltd	-0.014	0.062	-0.010	-0.228	0.829
Paramount-Universal Bank Ltd	-0.086	0.280	-0.136	-0.307	0.771
Gurdian Bank Ltd	-0.027	0.073	-0.163	-0.369	0.727
Credit Bank Ltd	-0.107	0.222	-0.210	-0.480	0.651
Transnational Bank Ltd	-1.363	1.999	-0.292	-0.682	0.526
Equatorial Commercial Bank Ltd	-0.239	0.304	-0.332	-0.787	0.467
Co-operative Bank of Kenya Ltd	-0.308	0.382	-0.339	-0.805	0.457
African Banking Corporation Ltd	-0.137	0.127	-0.434	-1.077	0.331
Southern Credit Banking Corporation Ltd	-0.381	0.188	-0.672	-2.029	0.098
Prime Bank Ltd	-0.397	0.188	-0.685	-2.104	0.089
Investment and Mortgage Bank Ltd	-0.162	0.076	-0.693	-2.150	0.084
Standard Chartered Bank Ltd	-0.709	0.212	-0.832	-3.349	0.020

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.2

Annual interest expense on customers' deposits

Bank	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Middle East Bank of Kenya Ltd	0.374	0.065	0.932	5.736	0.002
Habib AG Zurich	0.330	0.160	0.678	2.062	0.094
Victoria Bank Ltd	0.070	0.040	0.622	1.774	0.136
National Bank of Kenya Ltd	0.616	0.370	0.597	1.663	0.157
Charterhouse Bank Ltd	1.281	7.910	0.586	1.619	0.166
National Industrial Credit Bank Ltd	0.102	0.078	0.507	1.316	0.245
Stanbic Bank Kenya Ltd	0.355	0.271	0.506	1.310	0.247
Development Bank of Kenya Ltd	0.783	0.649	0.475	1.210	0.282
Habib Bank Ltd	0.123	0.108	0.454	1.140	0.306
Imperial Bank Ltd	0.306	0.430	0.303	0.712	0.509
Giro Commercial Bank Ltd	0.012	0.019	0.261	0.604	0.572
Diamond Trust Bank Kenya Ltd	0.051	0.091	0.244	0.564	0.597
Commercial Bank of Africa Ltd	0.067	0.122	0.239	0.551	0.605
Fidelity Commercial Bank Ltd	0.047	0.109	0.190	0.433	0.683
Consolidated Bank of Kenya Ltd	0.179	0.932	0.085	0.192	0.855
Bank of India	0.019	0.260	0.033	0.075	0.943
First American Bank of Kenya Ltd	-0.002	0.096	-0.010	-0.022	0.983
Kenya Commercial Bank Ltd	-0.007	0.202	-0.016	-0.036	0.972
Co-operative Bank of Kenya Ltd	-0.022	0.376	-0.026	-0.059	0.955
Citibank N A	-0.045	0.546	-0.038	-0.084	0.936
Bank of Baroda (K) Ltd	-0.093	1.039	-0.04	-0.09	0.932
Fina Bank Ltd	-0.009	0.041	-0.097	-0.218	0.836
Akiba Bank Ltd	-0.625	1.927	-0.144	-0.325	0.759
CFC Bank Ltd	-0.097	0.240	-0.179	-0.406	0.702
Investment and Mortgage Bank Ltd	-0.108	0.247	-0.192	-0.437	0.680
Paramount-Universal Bank Ltd	-0.070	0.151	-0.203	-0.464	0.662
Barclays Bank of Kenya Ltd	-0.222	0.475	-0.205	-0.468	0.660
Credit Bank Ltd	-0.059	0.086	-0.293	-0.686	0.523
Transnational Bank Ltd	-2.292	2.059	-0.446	-1.113	0.316
Gurdian Bank Ltd	-0.081	0.057	-0.540	-1.440	0.211
Standard Chartered Bank Ltd	-0.507	0.345	-0.549	-1.469	0.202
Prime Bank Ltd	-0.385	0.227	-0.605	-1.700	0.150
African Banking Corporation Ltd	-0.181	0.100	-0.630	-1.813	0.129
Chase Bank Ltd.	-1.690	0.910	-0.638	-1.854	0.123
Equatorial Commercial Bank Ltd	-0.263	0.134	-0.658	-1.956	0.108
Southern Credit Banking Corporation Ltd	-0.598	0.286	-0.683	-2.090	0.091

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.3

Annual fee and commission income

Bank	B	Std. Error	Beta	T-Value	P-Value
Imperial Bank Ltd	1.406	0.091	0.990	15.374	0.000
Prime Bank Ltd	1.040	0.107	0.974	9.710	0.000
Bank of Baroda (K) Ltd	5.18	0.709	0.956	7.31	0.001
Chase Bank Ltd.	3.087	0.814	0.861	3.791	0.013
African Banking Corporation Ltd	1.220	0.358	0.836	3405	0.019
Transnational Bank Ltd	32.500	9.624	0.834	3.375	0.020
Standard Chartered Bank Ltd	1.312	0484	0.771	2.709	0.042
Citibank N A	2.260	1.020	0.703	2.208	0.078
Equatorial Commercial Bank Ltd	5.150	2.578	0.666	1.999	0.102
Credit Bank Ltd	1.271	0.658	0.654	1.931	0.111
Gurdian Bank Ltd	0.982	0.556	0.620	1.766	0.138
Investment and Mortgage Bank Ltd	0.198	0.130	0.565	1.531	0.186
Charterhouse Bank Ltd	2.617	1.780	0.550	1 470	0.201
Akiba Bank Ltd	4.711	3.834	0.482	1.229	0.274
Fina Bank Ltd	0.282	0.374	0.321	0.757	0483
Barclays Bank of Kenya Ltd	0.286	0.405	0.301	0.706	0.512
CFC Bank Ltd	0.368	0.612	0.260	0.601	0.574
Diamond Trust Bank Kenya Ltd	0.251	0.417	0.260	0.601	0.574
Consolidated Bank of Kenya Ltd	0.278	0.545	0.222	0.510	0.632
Bank of India	1.470	3.715	0.174	0.396	0.709
Development Bank of Kenya Ltd	0.971	2.844	0.151	0.341	0.747
Paramount-Universal Bank Ltd	-0.088	1.505	0.026	0.058	0.956
First American Bank of Kenya Ltd	0.044	0.919	0.021	0.048	0.964
Co-operative Bank of Kenya Ltd	0.011	0.408	0.013	0.029	0.978
Victoria Bank Ltd	-0.051	0.630	-0.036	-0.081	0.938
Kenya Commercial Bank Ltd	-0.235	1.335	-0.078	-0.176	0.867
Commercial Bank of Africa Ltd	-0.226	0.559	-0.178	-0.404	0.703
Habib Bank Ltd	-1.219	2.288	-0.232	-0.533	0.617
Stanbic Bank Kenya Ltd	-0.949	1.626	-0.252	-0.583	0.585
Giro Commercial Bank Ltd	-0.185	0.285	-0.279	-0.649	0.545
Southern Credit Banking Corporation Ltd	-1.131	1.309	-0.361	-0.864	0.427
National Industrial Credit Bank Ltd	-0.534	0438	-0.479	-1.221	0.277
Habib AG Zurich	-1.257	0.866	-545.000	-1452	0.206
Fidelity Commercial Bank Ltd	-1.094	0.466	-0.724	-2.350	0.066
Middle East Bank of Kenya Ltd	-2.629	1.102	-0.730	-2.386	0.063
National Bank of Kenya Ltd	-6.183	1.733	-0.847	-3.567	0.016

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.4

Annual operating expenses i.e. staff costs, directors' emoluments, depreciation etc.

Bank	B	Std. Error	Beta	T-Value	P-Value
Akiba Bank Ltd	0.817	0.082	0.976	9.919	0.000
Prime Bank Ltd	0.366	0.044	0.966	8.309	0.000
Imperial Bank Ltd	0.690	0.136	0.915	5.073	0.004
Chase Bank Ltd.	0.341	0.089	0.864	3.841	0.012
Stanbic Bank Kenya Ltd	0.939	0.281	0.831	3.338	0.021
Gurdian Bank Ltd	0.207	0.072	0.791	2.890	0.034
Co-operative Bank of Kenya Ltd	0.300	0.146	0.678	2.064	0.094
Investment and Mortgage Bank Ltd	0.310	0.169	0.634	1.834	0.126
Bank of Baroda (K) Ltd	1.898	1.115	0.606	1.702	0.149
African Banking Corporation Ltd	0.928	0.567	0.591	1.637	0.163
Credit Bank Ltd	0.256	0.166	0.566	1.536	0185
Citibank N A	0.475	0.360	0.507	1.317	0.245
Transnational Bank Ltd	5.338	4.096	0.504	1.303	0.249
Diamond Trust Bank Kenya Ltd	0.278	0.231	0.475	1.206	0.282
Southern Credit Banking Corporation Ltd	0.408	0.389	0.425	1.049	0.342
Kenya Commercial Bank Ltd	0.162	0.254	0.275	0.638	0.551
CFC Bank Ltd	0.077	0.148	0.227	0.521	0.625
Charterhouse Bank Ltd	0.085	0.230	0.163	0.370	0.727
Consolidated Bank of Kenya Ltd	0.034	0.102	0.149	0.338	0.749
Fina Bank Ltd	-0.005	0.089	-0.026	-0.058	0.956
Standard Chartered Bank Ltd	-0.170	1.203	-0.063	-0.142	0.893
Habib Bank Ltd	-0.107	0.362	-0.131	-0.296	0.779
Barclays Bank of Kenya Ltd	-0.137	0.368	-0.164	-0.371	0.726
Paramount-Universal Bank Ltd	-0.126	0.298	-0.186	-0.424	0.689
Commercial Bank of Africa Ltd	-0.149	0.258	-0.250	-0.577	0.589
National Industrial Credit Bank Ltd	-0.095	0.136	-0.298	-0.697	0.517
National Bank of Kenya Ltd	-0.464	0.592	-0.331	-0.785	0.468
Victoria Bank Ltd	-0.313	0.292	-0.432	-1.070	0.333
Habib AG Zurich	-0.476	0.443	-0.432	-1.072	0.333
Middle East Bank of Kenya Ltd	-1.032	0.942	-0.440	-1.095	0.324
Bank of India	-0.625	0.538	-0.461	-1.160	0.298
Fidelity Commercial Bank Ltd	-0.381	0.191	-0.666	-1.999	0.102
Giro Commercial Bank Ltd	-0.386	0.182	-0.687	-2.116	0.088
Equatorial Commercial Bank Ltd	-1.560	0.726	-0.693	-2.150	0.085
First American Bank of Kenya Ltd	-0.616	0.227	-0.771	-2.711	0.042
Development Bank of Kenya Ltd	-0.382	0.129	-0.798	-2.966	0.031

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.5

Annual provision for bad and doubtful debts

Bank	B	Std. Error	Beta	T-Value	P-Value
CFC Bank Ltd	0.921	0.340	0.771	2.708	0.042
Southern Credit Banking Corporation Ltd	0.174	0.071	0.739	2452	0.058
Citibank N A	1.811	0.900	0.669	2.013	0.100
National Industrial Credit Bank Ltd	0.330	0.168	0.660	1.964	0.107
Habib AG Zurich	1.291	0.668	0.654	1.933	0.111
Prime Bank Ltd	0.249	0.187	0.512	1.333	0.240
Barclays Bank of Kenya Ltd	0.399	0.322	0.485	1.240	0.270
Co-operative Bank of Kenya Ltd	0.112	0.098	0.454	1.140	0.306
Imperial Bank Ltd	0.510	0.457	0.447	1.117	0.315
Gurdian Bank Ltd	0.009	0.009	0.404	0.987	0.369
Stanbic Bank Kenya Ltd	0.105	0.130	0.341	0.811	0.454
Paramount-Universal Bank Ltd	0.022	0.047	0.206	0.471	0.657
Charterhouse Bank Ltd	0.093	0.209	0.196	0.447	0.674
Bank of India	0.116	0.266	0.191	0.435	0.682
Akiba Bank Ltd	0.398	1.265	0.14	0.315	0.765
Habib Bank Ltd	0.005	0.075	0.031	0.070	0.947
Chase Bank Ltd.	0.131	2.490	0.024	0.053	0.960
Middle East Bank of Kenya Ltd	0.001	0.133	0.004	0.009	0.993
National Bank of Kenya Ltd	-0.016	0.114	-0.064	-0.142	0.892
Giro Commercial Bank Ltd	-0.018	0.098	-0.082	-0.183	0.862
First American Bank of Kenya Ltd	-0.016	0.052	-0.137	-0.309	0.770
Transnational Bank Ltd	-0.436	1.248	-0.154	-0.350	0.741
Diamond Trust Bank Kenya Ltd	-0.044	0.115	-0.169	-0.383	0.717
Commercial Bank of Africa Ltd	-0.081	0.207	-0.173	-0.394	0.710
Consolidated Bank of Kenya Ltd	-0.018	0.044	-0.178	-0.405	0.702
Kenya Commercial Bank Ltd	-0.112	0.237	-0.206	-0.471	0.658
Development Bank of Kenya Ltd	-0.041	0.085	-0.210	-0.480	0.652
Fidelity Commercial Bank Ltd	-0.052	0.094	-0.239	-0.551	0.605
Victoria Bank Ltd	-0.037	0.062	-0.261	-0.606	0.571
Bank of Baroda (K) Ltd	-0.386	0.599	-0.277	-0.645	0.547
African Banking Corporation Ltd	-0.272	0.264	-0.419	-1.031	0.350
Credit Bank Ltd	-0.120	0.104	-0.458	-1.151	0.302
Investment and Mortgage Bank Ltd	-0.577	0.475	-0.477	-1.214	0.279
Equatorial Commercial Bank Ltd	-0.239	0.144	-0.595	-1.653	0.159
Standard Chartered Bank Ltd	-0.531	0.247	-0.694	-2.155	0.084
Fina Bank Ltd	-0.215	0.048	-0.896	-4.510	0.006

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.6

loans and advances to customers net of provision for doubtful debts

Bank	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Chase Bank Ltd.	0.079	0.005	0.989	15.200	0.000
Prime Bank Ltd	0.049	0.004	0.981	11.393	0.000
Bank of Baroda ◁◇ Ltd	0.141	0.018	0.963	7993	0
Imperial Bank Ltd	0.089	0.013	0.948	6.662	0.001
African Banking Corporation Ltd	0.113	0.023	0.908	4849	0.005
Equatorial Commercial Bank Ltd	0.102	0.023	0.888	4.330	0.008
Victoria Bank Ltd	0.058	0.021	0.774	2735	0.041
Gurdian Bank Ltd	0.016	0.006	0.748	2523	0.053
CFC Bank Ltd	0.013	0.009	0.547	1 462	0.204
Bank of India	-0.056	0.044	0.503	1.303	0.249
Citibank N A	0.052	0.040	0.503	1.301	0.250
Credit Bank Ltd	0.021	0.017	0.481	1.227	0.274
Diamond Trust Bank Kenya Ltd	0.013	0.012	0.441	1.099	0.322
Development Bank of Kenya Ltd	0.021	0.025	0.351	0.837	0.441
Charterhouse Bank Ltd	0.024	0.029	0.344	0.820	0.450
Barclays Bank of Kenya Ltd	0.030	0.037	0.340	0.808	0.456
Akiba Bank Ltd	0.131	0.169	0.328	0777	0.472
First American Bank of Kenya Ltd	0.014	0.024	0.258	0.596	0.577
Paramount-Universal Bank Ltd	0.012	0.020	0.253	0.585	0.584
Fina Bank Ltd	0.036	0.064	0.243	0.560	0.600
Investment and Mortgage Bank Ltd	0.005	0.023	0.091	0.204	0.847
Consolidated Bank of Kenya Ltd	0.008	0.058	0.059	0.133	0.900
Transnational Bank Ltd	-0.128	1.122	-0.051	-0.114	0.914
Kenya Commercial Bank Ltd	-0.021	0.083	-0.110	-0.247	0.815
Standard Chartered Bank Ltd	-0.019	0.065	-0.128	-0.288	0.785
National Bank of Kenya Ltd	-0.146	0.432	-0.150	-0.339	0.748
Stanbic Bank Kenya Ltd	-1.970	0.054	-0.160	-0.363	0.732
Giro Commercial Bank Ltd	-0.006	0.018	-0.163	-0.370	0.727
Habib Bank Ltd	-0.030	0.079	-0.169	-0.384	0.717
Co-operative Bank of Kenya Ltd	-0.014	0.032	-0.192	-0.438	0.680
National Industrial Credit Bank Ltd	-0.007	0.007	-0.405	-0.992	0.367
Southern Credit Banking Corporation Ltd	-0.076	0.052	-0.552	-1.479	0.199
Commercial Bank of Africa Ltd	-0.115	0.075	-0.564	-1.529	0.187
Habib AG Zurich	-0.129	0.077	-0.599	-1.673	0.155
Middle East Bank of Kenya Ltd	-0.223	0.129	-0.610	-1.723	0.146
Fidelity Commercial Bank Ltd	-0.038	0.018	-0.680	-2.073	0.093

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.7
customers' deposits

Bank	B	Std. Error	Beta	T-Value	P-Value
Imperial Bank Ltd	0.073	0.006	0.983	11.922	0.000
Prime Bank Ltd	0.017	0.002	0.976	10.063	0.000
Chase Bank Ltd.	0.087	0.012	0.955	7.170	0.001
African Banking Corporation Ltd	-0.056	0.013	0.888	4.312	0.008
Equatorial Commercial Bank Ltd	0.096	0.024	0.873	3.996	0.010
Bank of Baroda (K> Ltd	0.036	0.01	0.848	3.575	0.016
Gurdian Bank Ltd	0.016	0.007	0.696	2.169	0.082
Standard Chartered Bank Ltd	0.035	0.021	0.605	1.698	0.150
Transnational Bank Ltd	0.948	0.566	0.600	1.676	0.155
Citibank N A	0.029	0.019	0.563	1.522	0.188
Fina Bank Ltd	0.023	0.016	0.544	1.451	0.206
Akiba Bank Ltd	0.227	0.171	0.51	1.327	0.242
CFC Bank Ltd	0.009	0.007	0.504	1.304	0.249
Credit Bank Ltd	0.014	0.011	0.496	1.278	0.257
Victoria Bank Ltd	0.032	0.028	0.465	1.173	0.294
Middle East Bank of Kenya Ltd	0.072	0.062	0.458	1.153	0.301
Bank of India	0.012	0.011	0.444	1.108	0.318
Barclays Bank of Kenya Ltd	0.035	0.033	0.430	1.066	0.335
Paramount-Universal Bank Ltd	0.014	0.013	0.430	1.065	0.336
Diamond Trust Bank Kenya Ltd	0.013	0.013	0.423	1.045	0.344
Development Bank of Kenya Ltd	0.134	0.179	0.319	0.752	0.486
Charterhouse Bank Ltd	0.014	0.019	0.305	0.717	0.506
Investment and Mortgage Bank Ltd	0.008	0.012	0.293	0.685	0.524
First American Bank of Kenya Ltd	0.022	0.016	0.061	0.137	0.896
Consolidated Bank of Kenya Ltd	0.000	0.024	-0.006	-0.014	0.989
Co-operative Bank of Kenya Ltd	-0.003	0.022	-0.062	-0.140	0.894
Commercial Bank of Africa Ltd	-0.020	0.010	-0.090	-0.201	0.848
Kenya Commercial Bank Ltd	-0.042	0.101	-0.180	-0.409	0.699
National Bank of Kenya Ltd	-0.097	0.199	-0.213	-0.487	0.647
Giro Commercial Bank Ltd	-0.006	0.008	-0.351	-0.839	0.440
Habib Bank Ltd	-0.022	0.025	-0.356	-0.852	0.433
Southern Credit Banking Corporation Ltd	-0.040	0.036	-0.452	-1.132	0.309
Stanbic Bank Kenya Ltd	-0.072	0.051	-0.531	-1.400	0.220
National Industrial Credit Bank Ltd	-0.010	0.006	-0.556	-1.497	0.195
Habib AG Zurich	-0.029	0.017	-0.606	-1.704	0.149
Fidelity Commercial Bank Ltd	-0.034	0.015	-0.704	-2.218	0.077

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.8

Total Non-Performing Loans & Advances

Bank	B	Std. Error	Beta	T-Value	P-Value
Prime Bank Ltd	0.156	0.050	0.812	3.107	0.027
Chase Bank Ltd.	0.508	0.209	0.735	2.426	0.060
Stanbic Bank Kenya Ltd	0.192	0.095	0.671	2.023	0.099
Imperial Bank Ltd	0.421	0.216	0.657	1.948	0.109
Southern Credit Banking Corporation Ltd	0.131	0.069	0.648	1.903	0.115
Akiba Bank Ltd	0.475	0.329	0.542	1.443	0.209
Habib AG Zurich	0.786	0.561	0.531	1.402	0.220
Bank of India	0.609	0.475	0.498	1.280	0.256
Co-operative Bank of Kenya Ltd	0.049	0.044	0.443	1.104	0.320
Citibank N A	0.699	0.655	0.430	1.070	0.335
CFC Bank Ltd	0.191	0.244	0.330	0.781	0.470
Gurdian Bank Ltd	0.005	0.006	0.325	0.767	0.478
Barclays Bank of Kenya Ltd	0.102	0.154	0.284	0.662	0.537
Paramount-Universal Bank Ltd	0.004	0.021	0.085	0.190	0.857
Credit Bank Ltd	0.009	0.054	0.076	0.171	0.871
Consolidated Bank of Kenya Ltd	-0.006	0.029	-0.097	-0.218	0.836
Fidelity Commercial Bank Ltd	-0.011	0.035	-0.136	-0.308	0.771
Kenya Commercial Bank Ltd	-0.024	0.063	-0.169	-0.383	0.717
Giro Commercial Bank Ltd	-0.006	0.016	-0.169	-0.384	0.716
First American Bank of Kenya Ltd	-0.019	0.037	-0.226	-0.518	0.627
Bank of Baroda ◁K) Ltd	-0.206	0.352	-0.254	-0.587	0.583
Standard Chartered Bank Ltd	-0.309	0.506	-0.263	-0.611	0.568
National Industrial Credit Bank Ltd	-0.042	0.062	-0.294	-0.687	0.522
Development Bank of Kenya Ltd	-0.030	0.042	-0.306	-0.718	0.505
Investment and Mortgage Bank Ltd	-0.254	0.314	-0.340	-0.808	0.456
Charterhouse Bank Ltd	-0.060	0.072	-0.393	-0.856	0.440
Diamond Trust Bank Kenya Ltd	-0.077	0.088	-0.365	-0.876	0.421
Commercial Bank of Africa Ltd	-0.098	0.111	-0.370	-0.891	0.414
Victoria Bank Ltd	-0.042	0.040	-0.429	-1.062	0.337
Equatorial Commercial Bank Ltd	-0.100	0.093	-0.435	-1.080	0.329
African Banking Corporation Ltd	-0.171	0.132	-0.503	-1.300	0.250
Habib Bank Ltd	-0.101	0.073	-0.523	-1.373	0.228
Middle East Bank of Kenya Ltd	-0.122	0.077	-5.750	-1.574	0.176
Transnational Bank Ltd	-1.064	0.610	-0.615	-1.743	0.142
National Bank of Kenya Ltd	-0.106	0.053	-0.666	-1.996	0.102
Fina Bank Ltd	-0.087	0.043	-0.671	-2.026	0.099

NOTE: A variable is significant if the p value is less than 0.10

Appendix **4.9**

Market share in percentage measured by total deposits

Bank	B	Std. Error	Beta	T-Value	P-Value
Prime Bank Ltd	0.000	0.000	0.915	5.073	0.004
National Bank of Kenya Ltd	0.000	0.000	0.905	4.764	0.005
Middle East Bank of Kenya Ltd	0.000	0.000	0.832	3.353	0.020
Paramount-Universal Bank Ltd	0.000	0.000	0.819	3.191	0.024
Bank of Baroda (K) Ltd	0.000	0.000	0.813	3.118	0.026
Chase Bank Ltd.	0.000	0.000	0.805	3.037	0.029
Development Bank of Kenya Ltd	0.000	0.000	0.755	2.577	0.050
Citibank N A	0.000	0.000	0.745	2.497	0.055
Imperial Bank Ltd	0.000	0.000	0.719	2.315	0.068
Diamond Trust Bank Kenya Ltd	0.000	0.000	0.690	2.129	0.087
Victoria Bank Ltd	0.000	0.000	0.606	1.705	0.149
CFC Bank Ltd	0.000	0.000	0.586	1.615	0.167
Habib Bank Ltd	0.000	0.000	0.585	1.615	0.167
Commercial Bank of Africa Ltd			0.546	1.458	0.205
Bank of India	0.000	0.000	0.288	0.671	0.532
First American Bank of Kenya Ltd	0.000	0.000	0.277	0.645	0.547
Charterhouse Bank Ltd	0.000	0.000	0.204	0.465	0.661
Barclays Bank of Kenya Ltd	0.000	0.000	0.134	0.302	0.775
Kenya Commercial Bank Ltd	0.000	0.000	0.069	0.156	0.882
National Industrial Credit Bank Ltd	0.000	0.000	0.003	0.006	0.996
Consolidated Bank of Kenya Ltd	0.000	0.000	-0.010	-0.022	0.983
Investment and Mortgage Bank Ltd	0.000	0.000	-0.043	-0.097	0.926
Fina Bank Ltd	0.000	0.000	-0.095	-0.213	0.840
Giro Commercial Bank Ltd	0.000	0.000	-0.098	-0.221	0.834
Transnational Bank Ltd	0.000	0.000	-0.151	-0.341	0.747
Akiba Bank Ltd	0.000	0.000	-0.19	-0.433	0.683
Habib AG Zurich	0.000	0.000	-0.263	-0.608	0.570
Credit Bank Ltd	0.000	0.000	-0.326	-0.771	0.476
Co-operative Bank of Kenya Ltd	0.000	0.000	-0.352	-0.840	0.439
Stanbic Bank Kenya Ltd	0.000	0.000	-0.355	-0.849	0.435
African Banking Corporation Ltd	0.000	0.000	-0.377	-0.910	0.405
Gurdian Bank Ltd	0.000	0.000	-0.381	-0.922	0.399
Fidelity Commercial Bank Ltd	0.000	0.000	-0.391	-0.949	0.386
Equatorial Commercial Bank Ltd	0.000	0.000	-0.522	-1.368	0.229
Standard Chartered Bank Ltd	0.000	0.000	-0.705	-2.221	0.077
Southern Credit Banking Corporation Ltd	0.000	0.000	-0.846	-3.543	0.017

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.10

Total assets net of loans and advances to customers

Bank	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Imperial Bank Ltd	0.163	0.120	0.986	13.215	0.000
Transnational Bank Ltd	1.054	0.147	0.955	7.159	0.001
Prime Bank Ltd	0.024	0.004	0.946	6.513	0.001
Chase Bank Ltd.	0.119	0.031	0.866	3.875	0.012
African Banking Corporation Ltd	-0.074	0.024	0.815	3.147	0.025
Bank of Baroda (K> Ltd	0.039	0.013	0.806	3.042	0.029
Standard Chartered Bank Ltd	0.046	0.017	0.776	2.749	0.040
Credit Bank Ltd	0.041	0.021	0.669	2.014	0.100
Citibank N A	0.034	0.018	0.655	1.940	0.110
Barclays Bank of Kenya Ltd	0.106	0.055	0.652	1.925	0.112
CFC Bank Ltd	0.025	0.015	0.605	1.700	0.150
Middle East Bank of Kenya Ltd	0.077	0.055	0.532	1.404	0.219
Equatorial Commercial Bank Ltd	0.075	0.068	0.446	1.115	0.316
Akiba Bank Ltd	0.394	0.356	0.444	1.108	0.318
Investment and Mortgage Bank Ltd	0.020	0.019	0.439	1.091	0.325
Bank of India	0.012	0.011	0.404	0.989	0.368
Fina Bank Ltd	0.150	0.015	0.403	0.984	0.370
Paramount-Universal Bank Ltd	0.023	0.023	0.402	0.982	0.371
Charterhouse Bank Ltd	0.028	0.034	0.350	0.835	0.442
Development Bank of Kenya Ltd	0.023	0.105	0.098	0.219	0.835
Commercial Bank of Africa Ltd	0.021	0.011	0.088	0.197	0.851
Victoria Bank Ltd	0.008	0.045	0.082	0.185	0.860
First American Bank of Kenya Ltd	0.003	0.025	0.053	0.118	0.910
Gurdian Bank Ltd	0.000	0.011	0.017	0.037	0.972
National Bank of Kenya Ltd	-0.013	0.618	-0.009	-0.021	0.984
Co-operative Bank of Kenya Ltd	-0.020	0.049	-0.019	-0.042	0.968
Diamond Trust Bank Kenya Ltd	-0.007	0.111	-0.028	-0.063	0.952
Southern Credit Banking Corporation Ltd	-0.037	0.070	-0.231	-0.530	0.619
Fidelity Commercial Bank Ltd	-0.042	0.060	-0.300	-0.702	0.514
Consolidated Bank of Kenya Ltd	-0.029	0.038	-0.325	-0.769	0.477
Habib Bank Ltd	-0.017	0.022	-0.335	-0.796	0.462
Kenya Commercial Bank Ltd	-0.198	0.249	-0.336	-0.797	0.462
Giro Commercial Bank Ltd	-0.026	0.027	-0.392	-0.951	0.385
Stanbic Bank Kenya Ltd	-0.070	0.058	-0.472	-1.196	0.285
Habib AG Zurich	-0.043	0.020	-0.682	-2.083	0.092
National Industrial Credit Bank Ltd	-0.043	0.013	-0.827	-3.284	0.022

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.11

Shareholders' funds

Bank	B	Std. Error	Beta	T-Value	P-Value
Imperial Bank Ltd	0.333	0.022	0.989	14.933	**0.000**
Prime Bank Ltd	0.182	0.015	0.983	11.965	**0.000**
Equatorial Commercial Bank Ltd	0.557	0.075	0.958	7.450	0.001
African Banking Corporation Ltd	0.388	0.058	0.948	6.691	0.001
Bank of Baroda ⊀K) Ltd	0.31	0.048	0.945	6479	0.001
Chase Bank Ltd.	0.207	0.034	0.940	6.135	0.002
Standard Chartered Bank Ltd	0.503	0.168	0.801	2.997	0.030
Gurdian Bank Ltd	0.061	0.023	0.768	2.680	0.044
Transnational Bank Ltd	1.111	0.524	0.688	2.122	0.087
Akiba Bank Ltd	2.44	1.36	0.626	1.794	0.133
Citibank N A	0.142	0.086	0.592	1.643	0.161
Charterhouse Bank Ltd	0.151	0.093	0.587	1.621	0.166
Credit Bank Ltd	0.081	0.075	0.439	1.092	0.324
Barclays Bank of Kenya Ltd	0.286	0.276	0.420	1.035	0.348
National Bank of Kenya Ltd	0.531	0.555	0.393	0.956	0.383
Bank of India	0.045	0.053	0.355	0.849	0435
CFC Bank Ltd	0.114	0.145	0.332	0.787	0.467
Investment and Mortgage Bank Ltd	0.069	0.114	0.262	0.607	0.570
Fina Bank Ltd	0.018	0.077	0.102	0.230	0.827
First American Bank of Kenya Ltd	0.026	0.114	0.100	0.224	0.831
Paramount-Universal Bank Ltd	0.007	0.047	0.068	0.153	0.885
Victoria Bank Ltd	0.021	0.237	0.039	0.088	0.934
Commercial Bank of Africa Ltd	0.010	0.183	0.025	0.055	0.958
Diamond Trust Bank Kenya Ltd	0.012	0.262	0.021	0.048	0.964
Giro Commercial Bank Ltd	-0.002	0.098	-0.007	-0.015	0.989
Southern Credit Banking Corporation Ltd	-0.031	0.119	-0.116	-0.262	0.804
Development Bank of Kenya Ltd	-0.043	0.165	-0.117	-0.263	0.803
Stanbic Bank Kenya Ltd	-0.066	0.210	-0.139	-0.314	0.766
Fidelity Commercial Bank Ltd	-0.026	0.076	-0.152	-0.345	0.744
Habib Bank Ltd	-0.041	0.109	-0.167	-0.379	0.720
Consolidated Bank of Kenya Ltd	-0.057	0.093	-0.266	-0.618	0.564
Kenya Commercial Bank Ltd	-0.256	0.267	-0.394	-0.959	0.382
Habib AG Zurich	-0.288	0.142	-0.671	-2.026	0.099
Co-operative Bank of Kenya Ltd	-0.412	0.171	-0.733	-2.412	0.061
National Industrial Credit Bank Ltd	-0.138	0.046	-0.800	-2.977	0.031
Middle East Bank of Kenya Ltd	-0.790	0.231	-0.837	-3.414	0.019

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.12

Liquid assets

Bank	B	Std. Error	Beta	T-Value	P-Value
Transnational Bank Ltd	0.963	0.110	0.969	8.779	0.000
Imperial Bank Ltd	0.189	0.024	0.961	7.822	0.001
Prime Bank Ltd	0.026	0.005	0.930	5.666	0.002
Bank of Baroda ◁K) Ltd	0.043	0.013	0.819	3.188	0.024
Chase Bank Ltd.	0.134	0.044	0.803	3.012	0.030
African Banking Corporation Ltd	-0.068	0.025	0.767	2.677	0.044
Standard Chartered Bank Ltd	0.051	0.019	0.767	2.674	0.044
Credit Bank Ltd	0.052	0.019	0.766	2.665	0.045
Barclays Bank of Kenya Ltd	0.146	0.085	0.608	1.712	0.148
Citibank N A	0.027	0.017	0.599	1.670	0.155
CFC Bank Ltd	0.029	0.018	0.590	1.633	0.163
Fina Bank Ltd	0.020	0.015	0.509	1.322	0.244
Paramount-Universal Bank Ltd	0.030	0.025	0.477	1.213	0.279
Charterhouse Bank Ltd	0.043	0.039	0.443	1.104	0.320
Bank of India	0.013	0.012	0.417	1.024	0.353
Equatorial Commercial Bank Ltd	0.069	0.068	0.413	1.013	0.358
Investment and Mortgage Bank Ltd	0.022	0.023	0.385	0.932	0.394
Akiba Bank Ltd	0.362	0.559	0.278	0.647	0.546
Commercial Bank of Africa Ltd	0.003	0.012	0.110	0.248	0.814
Middle East Bank of Kenya Ltd	0.013	0.059	0.099	0.222	0.833
Victoria Bank Ltd	0.005	0.046	0.053	0.119	0.910
Diamond Trust Bank Kenya Ltd	0.008	0.025	0.015	0.034	0.974
First American Bank of Kenya Ltd	0.000	0.026	-0.002	-0.004	0.997
Fidelity Commercial Bank Ltd	-0.003	0.073	-0.019	-0.043	0.968
Kenya Commercial Bank Ltd	-0.030	0.222	-0.060	-0.134	0.898
Gurdian Bank Ltd	-0.009	0.022	-0.167	-0.379	0.720
Consolidated Bank of Kenya Ltd	-0.018	0.048	-0.168	-0.381	0.719
Co-operative Bank of Kenya Ltd	-0.050	0.103	-0.214	-0.490	0.645
Development Bank of Kenya Ltd	-0.027	0.052	-0.226	-0.519	0.626
National Bank of Kenya Ltd	-0.334	0.542	-0.265	-0.615	0.565
Southern Credit Banking Corporation Ltd	-0.073	0.094	-0.330	-0.782	0.470
Giro Commercial Bank Ltd	-0.021	0.024	-0.360	-0.863	0.428
Habib Bank Ltd	-0.180	0.020	-0.389	-0.945	0.388
Stanbic Bank Kenya Ltd	-0.103	0.088	-0.466	-1.178	0.292
Habib AG Zurich	-0.046	0.023	-0.671	-2.024	0.099
National Industrial Credit Bank Ltd	-0.047	0.013	-0.845	-3.540	0.017

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.13

Loans to deposits ratio

Bank	B	Std. Error	Beta	T-Value	P-Value
Chase Bank Ltd.	0.000	0.000	0.616	1.751	0 140
National Industrial Credit Bank Ltd	0.000	0.000	0.532	1.404	0-219
Victoria Bank Ltd	0.000	0.000	0.507	1.317	0-245
Giro Commercial Bank Ltd	0.000	0.000	0.482	1.231	0-273
Diamond Trust Bank Kenya Ltd	0.000	0.000	0.453	1.147	0-303
Equatorial Commercial Bank Ltd	0.000	0.000	0.446	1.115	0-315
Gurdian Bank Ltd	0.000	0.000	0.372	0.897	0-411
Charterhouse Bank Ltd	0.000	0.000	0.348	0.830	0-44-4
Stanbic Bank Kenya Ltd	0.000	0.000	0.241	0.556	0-S02
Habib AG Zurich	0.000	0.000	0.240	0.552	0-S05
Habib Bank Ltd	0.000	0.000	0.239	0.551	0.S06
First American Bank of Kenya Ltd	0.000	0.000	0.191	0.435	0-S81
Development Bank of Kenya Ltd	0.000	0.000	0.165	0.374	0-^24
Consolidated Bank of Kenya Ltd	0.000	0.000	0.163	0.370	0-727
National Bank of Kenya Ltd	0.000	0.000	0.163	0.370	0-727
CFC Bank Ltd	0.000	0.000	0.019	0.043	0.967
Commercial Bank of Africa Ltd			0.016	0.035	O.974
Credit Bank Ltd	0.000	0.000	0.015	0.033	0975
Kenya Commercial Bank Ltd	0.000	0.000	-0.020	-0.045	0.966
Barclays Bank of Kenya Ltd	0.000	0.000	-0.056	-0.126	0.905
Fidelity Commercial Bank Ltd	0.000	0.000	-0.066	-0.148	0.888
Akiba Bank Ltd	0.000	0.000	-0.067	-0.149	0.887
Bank of India	0.000	0.000	-0.093	-0.209	O.845
African Banking Corporation Ltd	0.000	0.000	-0.217	-0.497	O.640
Bank of Baroda (K) Ltd	0.000	0.000	-0.231	-0.531	0.618
Citibank N A	0.000	0.000	-0.281	-0.655	0-541
Imperial Bank Ltd	0.000	0.000	-0.409	-1.004	0-362
Investment and Mortgage Bank Ltd	0.000	0.000	-0.451	-1.130	0.3io
Fina Bank Ltd	0.000	0.000	-0.451	-1.131	0.310
Co-operative Bank of Kenya Ltd	0.000	0.000	-0.498	-1.285	0.255
Paramount-Universal Bank Ltd	0.000	0.000	-0.530	-1.398	0221
Transnational Bank Ltd	0.000	0.000	-0.663	-1.983	0.104
Middle East Bank of Kenya Ltd	0.000	0.000	-0.695	-2.160	0.083
Standard Chartered Bank Ltd	0.000	0.000	-0.808	-3.064	0.0^8
Prime Bank Ltd	0.000	0.000	-0.854	-3.666	O.O15
Southern Credit Banking Corporation Ltd	0.000	0.000	-0.894	-4.473	O.O07

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.14

All Banks

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Annual Provision for bad & Doubtful Debts	0.284	0.029	0.921	9.674	0
Customers' Deposits	0.134	0.024	2.131	5.515	0
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	0.231	0.053	0.468	4.325	0
Annual Interest Income From Loans & Advances to customers	0.383	0.1	0.62	3.816	
Share Holders' Funds	0.132	0.05	0.309	2.634	0.009
Loans to Deposits Ratio	113960	52934	0.058	2.153	0.032
Annual fee & Commission Income	0.229	0.157	0.212	1.453	0.148
Market Share in Percentage Measured by Total Deposits	20154	26352	0.112	0.765	0.445
Liquid Assets	-0.016	0.032	-0.121	-0.504	0.615
Total Assets Net of Loans & Advances to Customers	-0.062	0.03	-0.649	-2.06	0.041
Annual Interest Expense on Customers'Deposits	-0.376	0.104	-0.287	-3.62	0
Loans & Advances to Customers Net Provision for Dubtful Debts	-0.168	0.023	-1.863	-7.147	0
Total Non-Performing Loans & Advances	-0.222	0.024	-1.03	-9.374	

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.15

Quoted Banks

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Annual Provision for bad & Doubtful Debts	0.3	0.08	1.048	3.758	0.001
Customers'Deposits	0.123	0.072	1.78	1.712	0.096
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	0.245	0.165	0.48	1.482	0.147
Annual Interest Income From Loans & Advances to customers	0.406	0.302	0.612	1.344	0.188
Share Holders'Funds	0.135	0.153	0.281	0.884	0.383
Loans to Deposits Ratio	760051	869978	0.116	0.874	0.388
Market Share in Percentage Measured by Total Deposits	20601	65207	0.105	0.316	0.754
Annual fee & Commission Income	0.032	0.561	0.029	0.057	0.955
Liquid Assets	-0.010	0.105	-0.073	-0.095	0.925
Total Assets Net of Loans & Advances to Customers	-0.034	0.085	-0.341	-0.404	0.689
Annual Interest Expense on Customers'Deposits	-0.482	0.291	-0.392	-1.654	0.107
Loans & Advances to Customers Net Provision for Dubtful Debts	-0.159	0.073	-1.603	-2.17	0.037
Total Non-Performing Loans & Advances	-0.236	0.062	-1.172	-3.818	0.001

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.16

Unquoted Banks

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Annual Operating Expenses i.e Staff Costs, Directors' Emoluments, Depreciation etc.	0.24	0.043	0.561	5.534	0
Total Non-Performing Loans & Advances	0.112	0.031	0.759	3.642	0
Shareholders' Funds	0.131	0.051	0 482	2.579	0.011
Market Share in Percentage Measured by Total Deposits	77463	32997	0.687	2.348	0.02
Annual fee & Commission Income	0.097	0.177	0.104	0.546	0.586
Loans to Deposits Ratio	8756	25144	0.023	0.348	0.728
Customers' Deposits	0.003	0.025	0.069	0.108	0.914
Total Assets Net of Loans & Advances to Customers	−0.001	0.037	-0.016	-0.022	0.982
Liquid Assets	-0.001	0.025	-0.01	-0.025	0.98
Annual Interest Income From Loans & Advances to customers	-0.037	0.082	-0.082	-0.452	0.652
Annual Interest Expense on Customers' Deposits	-0.045	0.099	-0.057	-0.456	0.649
Loans & Advances to Customers Net Provision for Dubtful Debts	-0.056	0.027	-0.968	-2.029	0.044
Annual Provision for bad & Doubtful Debts	-0.16	0.047	-0.756	-3.433	0.001

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.17

year 1998

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Customers' Deposits	0.268	0.096	3.243	2.794	0.011
Liquid Assets	-0.186	0.084	-1.141	-2.203	0.039
Total Assets Net of Loans & Advances to Customers	0.206	0.110	1.943	1.869	0.076
Total Non-Performing Loans & Advances	0.255	0.146	0.319	1.743	0.096
Share Holders' Funds	0.133	0.223	0.291	0.598	0.556
Annual Provision for bad & Doubtful Debts	0.034	0.090	0.067	0.379	0.709
Loans & Advances to Customers Net Provision for Dubtful Debts	0.053	0.151	0.494	0.349	0.731
Annual Interest Income From Loans & Advances to customers	-0.123	0.330	-0.276	-0.372	0.714
Loans to Deposits Ratio	-42283	90978	-0.023	-0.465	0.647
Annual Interest Expense on Customers' Deposits	-0.272	0.352	-0.400	-0.774	0.448
Annual fee & Commission Income	-0.733	0.908	-0.431	-0.807	0.428
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	-0.613	0.393	-0.901	-1.560	0.134
Market Share in Percentage Measured by Total Deposits	-326572	206339	-2.277	-1.583	0.128

NOTE: A variable is significant if the p value is less than 0.10

Appendix 4.18

year 1999

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Annual Interest Income From Loans & Advances to customers	0.979	0.208	1.543	4.713	0.000
Annual Interest Expense on Customers' Deposits	-2.259	0.275	-1.600	-8.201	0.000
Total Non-Performing Loans & Advances	0.335	0.071	0.608	4.737	0.000
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	-0.956	0.248	-1.539	-3.853	0.001
Loans to Deposits Ratio	-115512	45527	-0.065	-2.537	0.018
Liquid Assets	0.074	0.034	0.408	2.189	0.039
Annual fee & Commission Income	0.606	0.329	0.422	1.841	0.079
Annual Provision for bad & Doubtful Debts	0.043	0.034	0.127	1.257	0.222
Customers' Deposits	0.037	0.030	0.458	1.223	0.234
Loans & Advances to Customers Net Provision for Dubtful Debts	0.060	0.057	0.566	1.041	0.309
Total Assets Net of Loans & Advances to Customers	0.009	0.039	0.074	0.234	0.817
Share Holders' Funds	-0.050	0.089	-0.095	-0.556	0.584

NOTE: A variable is significant if the p value is less than 0.10

	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
Market Share in Percentage Measured by Total Deposits	-2.943	-2.046	0.053	-0.400	0.000

Appendix **4.19**

year **2000**

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Customers' Deposits	0.431	0.057	7.107	7.536	0.000
Loans & Advances to Customers Net Provision for Dubtful Debts	-0.338	0.046	-4.128	-7.366	0.000
Liquid Assets	-0.325	0.071	-2.334	-4.559	0.000
Loans to Deposits Ratio	137084	33474	0.132	4.095	0.000
Annual Interest Expense on Customers' Deposits	-1.527	0.466	-1.193	-3.280	0.003
Annual Provision for bad & Doubtful Debts	0.335	0.112	1.589	2.993	0.006
Annual fee & Commission Income	-1.665	0.558	-1.662	-2.983	0.007
Annual Interest Income From Loans & Advances to customers	0.850	0.316	1.612	2.694	0.013
Total Non-Performing Loans & Advances	-0.213	0.080	-1.515	-2.683	0.013
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	0.408	0.179	1.140	2.281	0.032
Total Assets Net of Loans & Advances to Customers	0.010	0.049	0.118	0.214	0.832
Share Holders' Funds	0.001	0.096	0.004	0.015	0.989

NOTE: A variable is significant if the p value is less than 0.10

	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
Market Share in Percentage Measured by Total Deposits	1.613	0.614	0.546	0.130	0.000

Appendix4.18

year 1999

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Total Non-Performing Loans & Advances	-0.367	0.029	-2.603	-12.582	0.000
Annual Provision for bad & Doubtful Debts	0.451	0.041	2.239	10.925	0.000
Loans & Advances to Customers Net Provision for Dubtful Debts	-0.310	0.039	-3.448	-7.946	0.000
Customers' Deposits	0.343	0.043	5.400	7.942	0.000
Loans to Deposits Ratio	306200	46244	0.144	6.621	0.000
Share Holders' Funds	0.323	0.066	0.843	4.877	0.000
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	0.690	0.142	1.417	4.852	0.000
Total Assets Net of Loans & Advances to Customers	-0.279	0.061	-2.925	-4.601	0.000
Annual fee & Commission Income	0.270	0.254	0.267	1.062	0.299
Liquid Assets	-0.009	0.060	-0.067	-0.143	0.887
Annual Interest Expense on Customers' Deposits	-0.218	0.252	-0.104	-0.866	0.396
Annual Interest Income From Loans & Advances to customers	-0.166	0.124	-0.250	-1.340	0.193

NOTE: A variable is significant if the p value is less than 0.10

	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
Market Share in Percentage Measured by Total Deposits	0.162	0.083	0.935	0.018	0.000

Appendix 4.21

year 2002

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Annual Provision for bad & Doubtful Debts	-0.382	0.154	-1.000	-2.483	0.021
Annual Interest Income From Loans & Advances to customers	0.441	0.185	0.623	2.387	0.026
Total Assets Net of Loans & Advances to Customers	0.164	0.073	2.027	2.244	0.035
Total Non-Performing Loans & Advances	0.223	0.105	1.162	2.121	0.045
Annual fee & Commission Income	0.700	0.408	0.756	1.714	0.100
Share Holders' Funds	0.147	0.088	0.341	1.667	0.109
Annual Interest Expense on Customers' Deposits	0.301	0.349	0.122	0.863	0.397
Liquid Assets	0.002	0.039	0.018	0.050	0.961
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	-0.071	0.164	-0.191	-0.432	0.670
Loans to Deposits Ratio	-34768	74731	-0.015	-0.465	0.646
Loans & Advances to Customers Net Provision for Dubtful Debts	-0.032	0.052	-0.379	-0.600	0.554
Customers' Deposits	-0.132	0.086	-2.429	-1.544	0.136

NOTE: A variable is significant if the p value is less than 0.10

	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
Market Share in Percentage Measured by Total Deposits	0.072	0.023	0.982	0.005	0.000

Appendix4.18

year 1999

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Annual Interest Income From Loans & Advances to customers	1.031	0.318	1.223	3.241	0.004
Loans & Advances to Customers Net Provision for Dubtful Debts	-0.291	0.096	-3.064	-3.020	0.006
Customers' Deposits	0.245	0.118	4.062	2.085	0.048
Loans to Deposits Ratio	345177	197530	0.096	1.747	0.094
Share Holders' Funds	0.222	0.217	0.467	1.023	0.317
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	0.051	0.179	0.095	0.288	0.776
Annual fee & Commission Income	-0.024	0.368	-0.023	-0.064	0.950
Annual Provision for bad & Doubtful Debts	-0.083	0.366	-0.199	-0.228	0.822
Total Non-Performing Loans & Advances	-0.066	0.256	-0.265	-0.259	0.798
Liquid Assets	-0.034	0.089	-0.291	-0.382	0.706
Total Assets Net of Loans & Advances to Customers	-0.116	0.138	-1.263	-0.839	0.410
Annual Interest Expense on Customers' Deposits	-0.501	0.486	-0.094	-1.030	0.314

NOTE: A variable is significant if the p value is less than 0.10

	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
Market Share in Percentage Measured by Total Deposits	(13.870)	(3.246)	0.004	(0.569)	0.000

Appendix 4.23

year 2004

Variables	**B**	**Std. Error**	**Beta**	T-Value	P-Value
Market Share in Percentage Measured by Total Deposits	-1629736	708478	-7.523	-2.300	0.031
Total Non-Performing Loans & Advances	-0.522	0.252	-2.197	-2.070	0.050
Annual Provision for bad & Doubtful Debts	0.626	0.341	1.700	1.838	0.080
Customers' Deposits	0.293	0.166	5.281	1.762	0.092
Annual Interest Income From Loans & Advances to customers	0.383	0.250	0.504	1.529	0.140
Total Assets Net of Loans & Advances to Customers	0.224	0.198	2.437	1.129	0.271
Annual Operating Expenses I.e Staff Costs, Directors' Emoluments, Depreciation etc.	0.243	0.253	0.448	0.963	0.346
Annual fee & Commission Income	0.381	0.435	0.398	0.875	0.391
Loans & Advances to Customers Net Provision for Dubtful Debts	0.072	0.150	0.929	0.483	0.634
Loans to Deposits Ratio	33547	221935	0.008	0.151	0.881
Share Holders' Funds	-0.033	0.249	-0.084	-0.134	0.895
Annual Interest Expense on Customers' Deposits	-0.208	0.385	-0.030	-0.540	0.595
Liquid Assets	-0.121	0.121	-0.929	-1.000	0.328

NOTE: A variable is significant if the p value is less than 0.10

Appendix A

KENYAN COMMERCIAL BANKS AS AT OCTOBER 2004

	^ ^	VEAR LICENCFD
1	African Banking Corporation Ltd	1984
2	Akiba Bank Ltd	1972
3	Bank of Baroda (K) Ltd	953
4	Bank of India	1953
5	Barclays Bank of Kenya Ltd	-| 966
6	Commercial Bank of Africa Ltd	1967
7	CFC Bank Ltd	1955
8	Charterhouse Bank Ltd	1996
9	Chase Bank Ltd.	1991
10	Citibank N A	1974
11	Consolidated Bank of Kenya Ltd	-|989
12	Co-operative Bank of Kenya Ltd	1965
13	Credit Bank Ltd	1985
14	Development Bank of Kenya Ltd	-| g73
15	Diamond Trust Bank Kenya Ltd	-j 946
16	Equatorial Commercial Bank Ltd	1995
17	Fidelity Commercial Bank Ltd	igg2
18	Fina Bank Ltd	1986
19	First American Bank of Kenya Ltd	1 g87
20	Giro Commercial Bank Ltd	1993
21	Gurdian Bank Ltd	1992
22	Habib AG Zurich	1978
23	Habib Bank Ltd	1956
24	Imperial Bank Ltd	19g2
25	Investment and Mortgage Bank Ltd	*1974*
26	Kenya Commercial Bank Ltd	18g6
27	Middle East Bank of Kenya Ltd	1 g8o
28	National Bank of Kenya Ltd	1 g68
29	National Industrial Credit Bank Ltd	ig5g
30	Paramount-Universal Bank Ltd	igg3
31	Prime Bank Ltd	igg2
32	Southern Credit Banking Corporation Ltd	igso
33	Stanbic Bank Kenya Ltd	ig70
34	Standard Chartered Bank Ltd	1 g 10
35	Transnational Bank Ltd	1985
36	Victoria Bank Ltd	igg7

Appendix B

QUOTED BANKS

1 Barclays Bank of Kenya Ltd
2 CFC Bank Ltd
3 Diamond Trust Bank Kenya Ltd
4 Kenya Commercial Bank Ltd
5 National Bank of Kenya Ltd
6 National Industrial Credit Bank Ltd
7 Standard Chartered Bank Ltd

Appendix C

UNQUOTED BANKS

1 African Banking Corporation Ltd
2 Akiba Bank Ltd
3 Bank of Baroda (K) Ltd
4 Bank of India
5 Commercial Bank of Africa Ltd
6 Charterhouse Bank Ltd
7 Chase Bank Ltd.
8 Citibank N A
9 Consolidated Bank of Kenya Ltd
10 Co-operative Bank of Kenya Ltd
11 Credit Bank Ltd
12 Development Bank of Kenya Ltd
13 Equatorial Commercial Bank Ltd
14 Fidelity Commercial Bank Ltd
15 Fina Bank Ltd
16 First American Bank of Kenya Ltd
17 Giro Commercial Bank Ltd
18 Gurdian Bank Ltd
19 Habib AG Zurich
20 Habib Bank Ltd
21 Imperial Bank Ltd
22 Investment and Mortgage Bank Ltd
23 Middle East Bank of Kenya Ltd
24 Paramount-Universal Bank Ltd
25 Prime Bank Ltd
26 Southern Credit Banking Corporation Ltd
27 Stanbic Bank Kenya Ltd
28 Transnational Bank Ltd
29 Victoria Bank Ltd