THE EFFECT OF FINANCIAL DISTRESS ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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DECLARATION

I, the undersigned declare that this project proposal is my original work and it has never been presented to any university for academic credit. All information from other sources are duly cited and acknowledged.

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

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Dr. Josiah.O.Aduda

DEDICATION

This research project is dedicated to my parents Mr Michael Kariuki and Mrs Salome Kariuki for their continued support and bearing the pain of my education. May God bless them abundantly.

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I would like to thank God for enabling me come this far in my education and for His strength throughout this study period.

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ABSTRACT

The Kenyan banking sector is one of the fastest rising in the economy today. It plays major roles in the country contributing immensely to the GDP of the country. However, there are also a number of challenges facing the industry. Financial distress is one of these challenges and if left unchecked it can lead to failure of the banks crippling the economy. Thus it is very important that this industry is carefully watched to ensure such occurrences are dealt with immediately to avoid negative consequences. This study therefore was designed to identify the impact of financial distress on commercial banks performance in Kenya.

Due to the high number of banks that have collapsed in Kenya due to financial distress, there was need to establish or find out how financial distress affects the financial position of a bank. There have been numerous studies on ways of predicting financial distress but few on how it affects the financial performance of a firm. This study thus would be vital in helping banks establish if they are in distress and if so, how their performance is affected and how to rectify the situation.

From a population of forty four banks, a sample of twenty two banks was selected. The sample included eleven listed banks at the NSE and eleven non listed banks. Data was obtained from the financial statements of the banks and the Central bank of Kenya. Altman's Z score model was used to measure financial distress while return on assets ratio was used to measure financial performance. Data was then analyzed using Microsoft excel. Regression analysis was used to establish the effect of financial distress on financial performance. The period under study was from 2008 to 2012.

The study found out that most of the banks under study had financial distress. The non listed banks suffered more from financial distress as compared to the listed banks. The study also showed that financial distress had a significant effect on financial performance of banks where performance was negatively affected. A rise in financial distress led to a decrease in financial performance and vice versa. The study established the need to reduce financial distress by ensuring financial stability in banks to ensure shareholders confidence.

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ABBREVIATIONS

CAMEL	Capital adequacy, Asset quality, Management quality,Earings,Liquidity
CBK	Central Bank of Kenya
CDs	Certificates of Deposit
EBIT	Earnings before interest and tax
GDP	Gross Domestic Product
MDA	Multi Discriminant Analysis
NBFI	Non Banking Financial Institutions
NIM	Net Interest Margin
NPL	Non Performing Loans
NSE	Nairobi Securities Exchange
RE	Retained Earnings
ROE	Return on Equity
ROA	Return on Assets
TA	Total Assets
TL	Total Liabilities
WC	Working Capital

CHAPTER ONE: INTRODUCTION

1.1Background of the Study

Kenya's financial system has improved significantly over the last years and has become the largest in East Africa. In comparison with other East African economies, Kenyan banking sector is credited for its size and diversification. Kenya provides or has a variety of financial institutions and markets unlike others in the region. However, there have been constraints in the growth of the sector especially in the 1980s and 1990s due to factors like non performing loans and weaknesses in corporate governance leading to a number of commercial banks failing (Beck et al., 2010). Kenya's financial sector continues to face challenges among them being financial distress.

Financial distress is one of the most significant threats for many firms globally despite their size and nature. The term financial distress is used in a negative connotation to describe the financial situation of a company confronted with a temporary lack of liquidity and with the difficulties that ensue in fulfilling financial obligations on schedule and to the full extent (Outecheva, 2007). According to Brownbridge (1998), banks are financially distressed when they are technically insolvent and or illiquid. Insolvency is the inability of a business to have enough assets to cover its liabilities. A situation where a firm's operating cash flows are not sufficient to satisfy current obligations and the firm is forced to take corrective action.

The financial health of the banking industry is an important prerequisite for economic stability and growth. As a consequence, the assessment of banks financial conditions is a fundamental goal for many stakeholders. The cost of bank failure is colossal and hence ailing banks require quick action by supervisory authority to salvage them before they collapse (Cheserek, 2007).

This study is motivated by the need to understand how financial performance of commercial banks is affected by financial distress. This will enable banks to take corrective measures in due time if they find themselves in distress to avoid the devastating results. It is very important to ensure the growth of the banking sector in Kenya to ensure it is not crippled by factors such as financial distress which can be

predicted and appropriate measures taken to ensure Kenya remains at the top in East Africa banking sector and beyond.

1.1.1 Financial Distress

Financial distress is a condition where a company cannot meet or has difficulty paying off its financial obligations especially to its creditors. It means there is a tight cash situation and if prolonged may lead to bankruptcy and even liquidation. Foster (1986) notes that filing for bankruptcy has been the most commonly used criterion for corporate financial distress. He indicates that this is a legal event which is heavily influenced by the actions of bankers and or other creditors. He continues to define the term corporate financial distress to mean severe liquidity problems that cannot be resolved without a sizable rescaling of the entities. That is, operations or structure.

According to Outecheva (2007), financial distress can be subdivided into four sub-intervals: deterioration of performance, failure, insolvency, and default. Whereas deterioration and failure affect the profitability of the company, insolvency and default are rooted in its liquidity. In general, financial distress is characterized by a sharp decline in the firm's performance and value. He also notes that, a company can be distressed without defaulting. However he notes that, default and bankruptcy cannot occur without the preceding period of financial distress.

There are various causes of financial distress but Brownbridge (1998) attributed financial distress to insider lending, lending to high risk borrowers, macroeconomic instability, liquidity support and prudential regulation unlike Babalola (2009) who attributes bank distress to a chain of causation from non panic related, observable, exogenous adverse changes in the economic conditions of banks, to intrinsic weakening of bank condition, ultimately leading to bank failure. Managerial incompetence is the most common reason for a company's distress and possible failure according to Aasen (2011) but the ultimate cause of failure is often simply running out of cash and other liquid funds.

Failure does not happen suddenly but it is a gradual process. As Outecheva (2007) points out, it's a dynamic process where a company moves in and out of financial trouble, as it passes through separate stages, each of which has specific attributes and consequently,

contributes differently to corporate failure. This means that financial distress is time varying and once a company enters it, it does not stay in the same state until it is liquidated or until it recovers. Changes in financial conditions affect the transition from one state of financial distress to another. If financial conditions become aggravated, the company most probably will face bankruptcy.

According to Aasen (2011) there are two types of financial distress costs. Direct bankruptcy costs include primarily legal and administrative costs while indirect bankruptcy costs reflect the difficulty of managing a company when it faces bankruptcy. According to Outecheva (2007), indirect costs are hidden and not as obvious as direct costs. He defines indirect costs as lost opportunities which the company misses as a result of a deteriorating solvency position. These costs are unobservable and difficult to estimate.

Opler and Titman (1994) found out that total distress costs consist of three classes of factors causing losses in sales: Customer-driven losses which reduce the willingness of the customers to pay for its products and customers ceasing to do business with the distressed firm, causing sales to collapse. Competitor-driven losses which result to competitors pursuing an aggressive marketing and price strategy in order to attract the customers of the vulnerable company and, therefore, squeeze the troubled competitor out of the market. An employee-driven loss decreases the incentives of the employees to work hard and stimulates them to renegotiate their compensation packages or to leave the company.

1.1.2 Financial Performance of Banks

Financial performance is used to track and review a firm's progress against its strategic plan and goals. According to DeYoung and Rice (2004), most commercial banks earn substantial amounts of non interest income by charging their customers fees in exchange for a variety of financial services. Many of these financial services are traditional banking services, transaction services like checking and cash management, safe-keeping services like insured deposit accounts and safety deposit boxes, investment services like trust accounts and long-run certificates of deposit (CDs), and insurance services like annuity

contracts. In other traditional areas of banking such as consumer lending and retail payments the widespread application of new financial processes and pricing methods is generating increased amounts of fee income for many banks.

DeYoung and Rice (2004) noted that in recent years, banking companies have taken advantage of deregulation to generate substantial amounts of non interest income from nontraditional activities like investment banking, securities brokerage, insurance agency and underwriting, and mutual fund sales. However, the interest margin banks earn by intermediating between depositors and borrowers continues to be the primary source of profits for most commercial banks.

Profit is the ultimate goal of commercial banks but they also have other social and economic goals. There are various ways to measure the profitability of a bank but according to Ongore and Kusa (2013), profitability of commercial banks is measured using three major ratios. The first ratio is the return on equity ratio which is the amount that banks earn compared to the total amount of shareholders equity invested. A high ROE is favorable for a bank as it shows its ability to generate cash internally. According to Khrawish (2011), it reflects how effectively a bank is using shareholders funds.

The second ratio is the return on asset ratio which is the ratio of income to its total asset and measures the ability of the bank to generate income by utilizing the assets at its disposal. A high ROA shows the bank is efficient in using its resources. The third ratio is the net interest margin ratio which measures the interest income generated by banks and the amount of interest paid out to their lenders. The higher the NIM the higher the bank's profitability. However it could also mean riskier lending practices associated with substantial loan loss provisions (Khrawish, 2011).

1.1.3 Financial Distress and Banks Financial Performance

There has been improvement in the Kenyan banking sector which is reflected in the liquidity ratios which have been above minimum statutory requirement and the earnings measures which have improved steadily (Becks et al., 2010). However, according to the number of banks that failed due to financial distress over the last decades all over the world, it is safe to say that financial distress affects profit or operating cash flows

negatively. Tan (2012) in his study on the impact of financial distress on firm's performance using the regression analysis and using financial leverage as a proxy for financial distress found out that financially distressed firms underperform. This means that firm's performance deteriorates during financial distress.

Irungu (2013) notes that banks loan risks continue to rise despite profits. Profit of commercial banks in Kenya rose by a fifth in 2012 and non-performing loans (NPLs) increasing by 13.33 per cent to 61.6 billion shillings. Despite the rise in profit, banks should take precautions when lending money as NPLs could easily lead banks to financial distress leading to failure just like it has in the past.

Ogilo (2012) asserts that the magnitude and the level of loss caused by credit risk as compared to other kind of risks is so high making it the most expensive risk in financial institutions. This is because its severity is such that it can cause high level of loan losses and even bank failure. He thus points out that loans are the largest source of credit risk to commercial banks in Kenya. He adds that banks should be aware of the need to identify measure and control credit risk. This has given rise to the risk management guidelines and the risk based supervision approach of supervising financial institutions.

Costs arising from financial distress can be huge and devastating to the economy as a whole since banks are the backbone of many economies all over the world. Financial distress is very real in Kenya and although most banks in Kenya are reporting profits there are a couple of banks declaring losses. In Kenya the commercial banks dominate the financial sector and any failure in the sector would have an immense implication on the economic growth of the country because it has a contagion effect that could lead to bank runs, crises and overall financial crisis and economic tribulations (Ongore and Kusa, 2013).

1.1.4 Financial Distress on Commercial Banks in Kenya

The expansion of the local banks and NBFIs was temporarily slowed down in Kenya due to a series of bank failures in the mid 1980s when most of the banks were being started. The growth resumed later in the decade and by the 1990s the banks had captured a

quarter of the commercial banks market. Financial distress has afflicted numerous local banks in Kenya many of which have been closed down or have been restructured. As Brownbridge (1998) points out, nine local banks and twenty NBFIs were closed down or taken over between 1984 and 1996 in Kenya.

He also notes that, most of the financial distress in local banks in Kenya was caused by insider lending, lending to high risk borrowers, macroeconomic instability and liquidity support and prudential regulation. Insider lending contributed to bad loans which consequently led to liquidity problems leading to failure of banks. In particular Continental bank, Trade bank and Pan African bank in Kenya failed due to involvement in extensive insider lending often to prominent politicians.

According to Waweru and Kalani (2009), the leading cause of the many of the financial institutions that collapsed in Kenya was due to non performing loans. They point out that according to the CBK (July 1999) the level of nonperforming loans (NPLs) in 1998 was estimated at 80 billion shillings or 30 percent of advances up from 27 percent in 1997 as compared to 81.3 billion shillings or 33.4 percent of total loans in November 2001.Non performing loans refer to accounts whose principal or interest remains unpaid 90 days or more after due date.

According to Ngige (2011) Kenyan banks disposed off Securities at a loss to meet cash shortfalls. This move was to help ease the liquidity crunch that the banks were experiencing. The sale of government securities by banks to meet cash shortfalls is a clear sign of financial distress which the banks were going through. Due to the tight liquidity conditions, commercial banks borrowed 83.9 billion shillings from the central bank overnight window that week. This means that financial distress is very present in commercial banks in Kenya and that it does affect their performance as evidenced by the 89.6 billion shillings profit in 2011 as compared to 107.7 billion in 2012.

1.2 Research Problem

Financial distress has been a great problem all over the world and cannot be ignored. It leads to bankruptcy which eventually leads to bank failures. Kenya is not an exception

and many banks have collapsed due to financial distress. Nine local banks and twenty NBFIs were closed down or taken over between 1984 and 1996 in Kenya. Due to the huge number of banks that collapsed within that short period, the CBK lost a total of Kenyan Shillings 10.2 billion which was equivalent to 3.8 per cent of 1993 GDP due to bank failures (Brownbridge, 1998). Thus it is very important for banks to be able to tell and predict if they are in financial distress so as to salvage themselves before it's too late and avoid failure.

According to Opler and Titman (1994) they argue that financial distress can improve corporate performance and advocate changes in corporate firm for example leveraged buyouts that are financed primarily with debt. Also in this view Wruck (1990) further point out that firm value can be improved through financial distress by forcing managers to make difficult value maximizing choices which they would otherwise avoid. There is conflicting evidence suggesting that financial distress can cause significant losses in some cases and motivate value maximizing choices in others.

Senbet and Seward (1995) argued that, there is no necessary linkage between bankruptcy and the firm's operating performance. Bankruptcy does not cause economic distress or poor performance. A highly profitable firm with high leverage may remain viable as a going concern, irrespective of bankruptcy, while an unprofitable firm may be liquidated even if it has no debt in its capital structure. This is in contradiction to Tan (2012) who found that distressed firms under perform.

Mamo (2011) and Bwisa (2010) carried out a research on the applicability of Altman (1968) model in predicting financial distress of commercial banks and other firms listed at the Nairobi Stocks Exchange in Kenya where they found the model to be accurate and applicable locally.Chea (2012) researched on the role of cash flow information in predicting financial distress among commercial banks in Kenya. This research differs from those above as it seeks to find out the impact of financial distress on financial performance of commercial banks.

1.3 Objective of the Study

The objective is to assess the impact of financial distress on financial performance of commercial banks in Kenya.

1.4 Value of the Study

The recent financial crises in many emerging markets have drawn attention to the importance of efficient mechanisms to resolve the financial distress of corporations. More importantly, it is very crucial to find ways and means to identify banks having problems that could ultimately lead to failure. Thus, the most important question that arises is how to predict financial distress. Most of the literature on financial distress relates on how to predict failure resulting from financial distress and survival tactics for firms. Financial distress prediction is of great importance to all stakeholders in order to enable better decision-making in evaluating firms. In recent years, the rate of bankruptcy has risen and it is becoming harder to estimate as companies become more complex and the asymmetric information between banks and firms increases.

Thus, a reliable model that can be used to forecast financial failure can also be used by management to take preventive measure. For example, the managers of a bank once they detect financial distress they can, reduce their spending on research and development, abandon unprofitable projects and other investments to spare money.

Banks being some of the heavily levered firms can use such a model to aid in lending decisions and in monitoring accounts receivable whereby they reduce their lending in times of distress. Prediction of financial distress can help creditors and investors to avoid losing their money in case of bank failure. A model that forecasts financial failure can also be valuable to an auditor. It can aid in determination of audit procedures and in making a decision as to whether the company will remain as a going concern. The auditor's report is regarded highly by third parties like shareholders, investors, creditors and others especially when they are making decisions in relation to a certain firm. They rely on the auditor's report to certify financial information. An unqualified auditor's report helps a firm to obtain loans and it improves the firm's public appearance. This in turn attracts investors to the firm.

CHAPTER TWO: LITERATURE REVIEW

2.1Introduction

This chapter looks at some of the theories of financial distress and conclusions drawn from empirical findings of researchers. Due to the rampant bank failures caused by financial distress it has become very important to come up with a model which predicts financial distress not only in banks but in all areas of businesses. Over the last decades, business failure has been studied by many scholars. Prediction models are divided into three broad categories, statistical models, intelligent expert system models and theoretic models.

The statistical models include univariate and multivariate analysis, linear probability, logit and probit models are all multivariate models. Univariate analysis uses ratios in classifying firms as either failing or non failing. The main difference between univariate and multivariate models is the fact that in univariate analysis, the variables are observed and examined one after the other. Statistical models are more widely used multiple discriminant analysis being the most dominant classical statistical method, followed by logit analysis (Balcaen & Ooghe, 2004).

2.2 Review of Theories

2.2.1 Univariate Model

Balcaen and Ooghe (2004) point out that Beaver (1966) was the pioneer in building a corporate failure prediction model with financial ratios. He was the first researcher to apply a univariate discriminate analysis model on a number of financial ratios of a paired sample of failing and non-failing companies in order to predict company failure. In view of selecting the financial ratios to be included in his univariate model, Beaver (1966) applied a dichotomous classification test in order to identify those ratios that were the best in classifying the companies as failing or non-failing.

Beaver's study classified a company as failed when any one of the following events occurred: bankruptcy, bond default, an overdrawn bank account or nonpayment of a preferred stock dividend. Beaver concentrated on a matched pair of 79 failed and 79 non-

failed companies. He selected his samples using dichotomous classification test where he selected financial data of a certain number of failure cases and an equal number of corresponding successful cases. From the two cases, he used mean comparisons and likelihood analysis methods to develop a univariate model. He found that there are three valid financial ratios to forecast financial failure and they are: Cash Flow / Total Debt, Net Income / Total Assets (returns on assets) and Total Debt / Total Assets (debt ratio).

Beaver suggested that the cash flow/total debt ratio was the best with an accuracy of 87 percent. This model assumed a linear relationship between all measures and the failure status. The lower the ratio the lower the risk of failure. That is, the independent variables, the ratios and failure. This is one of the limitations of this analysis as it does not always hold in practice. Many ratios show a non linear relationship with the failure status As a result, the univariate modeling technique is often applied in an inappropriate way and conclusions may be questionable (Balcaen and Ooghe, 2004).

The value for each measure or ratio was analyzed separately and according to the corresponding optimal cut off point of the measure. Firms were classified as failing or non failing. If the ratio value was below the cutoff point, it was classified as failing and vice versa. This is another limitation known as the inconsistency problem where a company can be classified as failed based on one ratio and non failed based on a different ratio. This is not realistic as the nature of a company is dynamic and complex and cannot be analyzed using one ratio. (Argyrou, 2006). A major advantage of this model is that it is extremely simple and does not require any statistical knowledge

2.2.2 Risk Index Model

Tamari (1966) refuted Beavers theory by coming up with a model to eliminate the negative effects of using univariate model. He used the easy handheld point system based on several financial sets to predict precisely. Each firm was attributed a certain number of points, between 0 and 100, according to the values of the ratios for the firm. A higher total of points indicated a better financial situation. The risk index takes account of the fact that some ratios are more important than others.

The index system however, is just a sum up of the univariate ratio which means they simplify the relationship between individual ratios or the correlation coefficient. Secondly, the weight of each variable is allocated by subjective assumption that causes the model unreliable. He also did not consider the multi collinearity between selected ratios. That may cause some factors to be exaggerated for double counting the related financial ratios. These are the reasons why he introduced a risk index. It is a simple point system which includes different ratios, generally accepted as measures of financial health.

2.2.3 Multiple Discriminant Analysis

Altman (1968) was the first researcher to apply the Multiple Discriminant Analysis (MDA) approach to the financial distress prediction domain. His Z-Score model has become a popular and widely accepted measure of financial distress. He used a sample of 33 solvent companies and 33 distressed companies. He developed a Z-score bankruptcy prediction model and determined a cut point of Z-score (2.675) to classify healthy and distressed firms. The results showed that the Z-score model had sound prediction performance one year and two years before financial distress, but did not indicate good prediction utility three to five years before financial distress**.**

MDA is a technique which allows one to distinguish between two or more groups of objects with respect to several variables. In this case, distinguish between failing and non failing firms in respect to financial distress. MDA attempts to derive a linear or quadratic combination of these characteristics which best discriminates between the groups. His model uses five financial ratios weighted in order to maximize the predictive power of the model. The model produces an overall discriminate score, called a Z score or zeta model. Altman's Z-score combined various measures of profitability or risk. The resulting model was one that demonstrated a company's risk of bankruptcy relative to a standard.

The Altman's Z-score model is a linear combination of a number of ratios. Original Z score which is applicable to public manufacturing firms was as follows.

$Z = 1.2T_1 + 1.4T_2 + 3.3T_3 + 0.6T_4 + .999T_5$

In a classification context, the essence of the MDA method is to assign a firm to the failing or the non-failing group based on its discriminant score. The firm will be assigned to the group it most closely resembles. In the original Z-score prediction model. The ratios are as follows.

T_1 = Working Capital / Total Assets

T_2 = Retained Earnings / Total Assets

T_3 = Earnings Before Interest and Taxes / Total Assets

T_4 = Market Value of Equity / Total Liabilities

T_5 = Sales/ Total Assets

Altman then further revised the Z-score model where the market value of equity was changed to the book value of equity where the model was applicable to private and non manufacturing firms. He also came up with different coefficients for the ratio as shown below.

$Z=0.717T_1 + 0.847T_2 + 3.107T_3 +0.420T_4 + 0.998T_5$

In 1995 this was further revised to include emerging markets where the model could be used by both manufacturing and non manufacturing companies as well as public and private firms. The model had different coefficients and cut off points as follows.

$Z=6.56T_1+3.26T_2+6.72T_3+1.05T_4$

2.2.4 Logit Analysis

This is the most popular conditional probability model unlike probit and linear probability modeling. This model assumes a logistic distribution. The relationship between the variables and the failure probability is assumed to be linear. It also classifies firms into the two groups of failing or non failing having a set cut off score. If a firms score is lower than or equal to the cutoff point it is classified as non failing and vice versa. The logit analysis is free from the assumptions relied upon by MDA.Its coefficients indicate the importance of the independent variables. However, this model is extremely sensitive to the problem of multicollinearity (Balcaen and Ooghe, 2004).

2.2.5 Artificially Intelligent Expert System Models

These models make use of computers whereby they are able to exhibit the intelligent behaviors of human cognitive activities like problem solving. They are known as artificial intelligence because their intelligence is contained in machines and not in human brains. They include recursive partitioned decision trees where data is divided into sub classes and recursively replacing each of the subsets with a decision tree which gives a final decision tree for the initial set. The most important decision is selecting the variable on which to make the next split. The best splitting rule is the one that maximizes the decrease in the sum of the impurities the impurities being the extent to which a node comprises of training cases from multiple classes. This is also known as inductive learning model where the process of generalization is used. In case based reasoning which also a type of artificially intelligent expert model, problems are solved with help of previously solved cases (Aziz and Dar, 2004).

Neural networks perform classification task in response to impending signals of financial health of a firm in the way a brain would do. According to Caudill and Butler (1991) as cited in Argyrou (2006) artificial neural networks differ from conventional computers as conventional computers adhere to three tenets of Neumann's architecture. That is the processor is digital, the system is serial and the system operates by a cycle of a fetch executive store process. It is digital as it operates on discrete data and serial because the data to be processed, instructions on how to process the data and the results are recorded by a memory system. The third tenet means that the system gets instructions along with data from memory, executes them and stores the results back into memory.

Genetic algorithms are based on the idea of genetic inheritance and Darwinian theory of natural evolution. That is survival of the fittest. They search for optimal solution to problems from complicated space of solutions using stochastic search technique. Vocabulary borrowed from natural genetics is used to explain genetic algorithms. They execute the search process in three phases which are genetic representation and initialization, selection and genetic operation. In solving bankruptcy, extraction of a set of rules or conditions associated with certain cut off points is necessary where the model helps predict if a firm is likely to go bankrupt or not (Aziz and Dar, 2004).

2.2.6 Theoretic Models

These models predict financial distress in firms by looking at distress conditions present in firms. Another way of looking at this problem is by looking at the factors that lead to distress. One model under this category is the balance sheet decomposition where a firms financial statements in this case the balance sheet are used to signal if there are major changes in the composition of assets and liabilities over a certain period of time. If the statements reflect significant changes in the composition of the balance sheet, it is likely that the firm is incapable of maintaining a healthy financial position resulting to distress.

In the gamblers ruin theory the firm takes place as the gambler playing with a certain sum of money with probabilities of gain or loss. In regard to financial distress, a firm will continue to operate until its net worth is zero or until it goes bankrupt. The assumption is that the firm has some given amount of money comes to or exits the firm randomly thus experiencing positive or negative cash flows. If the cash flow is continually negative and the firm declares bankruptcy but continues operation as long as the net worth is greater than zero. The cash management theory is similar to the gamblers ruin theory as it looks at the cash inflows and cash outflows. Prolonged imbalance leads to financial distress (Aziz and Dar, 2004).

2.3 Review of Empirical Studies

In their research on the Prediction of Financial Distress for Commercial Banks in Kuwait, Al-Saleh and Al-Kandari (2012) using the Logistic regression found out that, Out of the eleven ratios that have been included in the study, only three ratios are statistically significant in predicting financial distress of the banks. These are investment in securities to total assets ratio, the loans to total assets ratio and the loans to deposits ratio. These ratios do not support Beavers theory as only one ratio is similar to those identified by Beaver.

Additionally, in their endeavor to determine the most important financial ratios that can be used as a good predictor of financial distress for Kuwaiti commercial banks, they suggested that financial ratios be compared with the standard norms and with ratios of

previous years of the bank. The ratios should also be compared with those of the same sector and should be looked at in isolation.

In their study on predicting financial distress Aziz and Dar (2004) found that the gamblers ruin theory is a better predictive theory with an accuracy rate of 94 percent. Cash management theory had the most errors with 26 percent. They also found that MDA and logit are more accurate in the statistical models with 86 and 87 percent respectively.

In his study of financial distress on Oslo stock exchange, Aasen (2011) found out that the Altman Z-Score models prove to be accurate in correctly classifying the financial distress of firms and relevant even in times of crisis. However, the Type II error of classifying firms as bankrupt when they do not go bankrupt increased substantially during the crisis, with as much as 40-50 percent of the enterprises incorrectly classified as bankrupt. This indicates that the Z-Scores ability to predict bankruptcies significantly worsened in the financial crisis, although its ability to identify financial distress in general still may be intact.

In his study using Pearson correlation analysis and a multiple regression model Ogilo (2012) found that there is a strong impact between the CAMEL components on the financial performance of commercial banks. He also found that asset quality, management efficiency and liquidity had a weak relationship with financial performance but earnings had a strong relationship with financial performance. This is reinforced by Ongure and Kusa (2013) who using linear multiple regression model to establish determinants of financial performance of commercial banks in Kenya found that bank specific factors affect performance of commercial banks except for liquidity.

According to Bhunia and Sarkar (2011), most research studies on company bankruptcy and failure predictions are done in developed countries such as those carried out by Beaver (1966) and Altman (1968) in the United States. Financial failure or distress can be described in so many ways. It can mean liquidation, deferment of payments to short-term creditors, deferment of payments to interest on bonds, deferment of payments on principal on bonds, nonpayment of a preferred stock dividend, overdrawn bank account and attempt to restructure debt to prevent default etc. Different authors have different

definition and hence it is not clear when to classify a business to be financially distressed (Outecheva, 2007).

Balcaen and Ooghe (2004) noted that classical statistical failure prediction models do not explicitly give the expected time to failure, which lessens the practical usefulness of these models. These models only predict whether the business will fail or not but do not give the exact tie when it will fail. They also pointed out that, there seems to be no consensus concerning which type of financial ratios are the best failure indicators. Although many studies have compared the predictive abilities of accrual-based financial ratios and cash flow-based ratios, there seems to be no consensus concerning which ratios lead to the most accurate failure predictions.

Balcaen and Ooghe (2004) argued that the statistical prediction models using ratios may be misleading due to manipulation of accounting information on which they rely on. Firms try to maintain positive earnings and avoid reporting decreases thus they manage their earnings upward. Researchers thus assume that the accounts show a true and fair view of the financial position of companies which is rarely the case especially in failing firms. Again, the models are restricted to large companies which meet a certain criteria for example companies mandated to publish their accounts information which also depends on other factors like firm size. Nonetheless they stressed the importance of financial ratios and the fact that they cannot be neglected.

Classical statistical failure prediction models do not treat company failure as a process. Failure is approached as a discrete event. The models are based on cross-sectional data and, therefore, they do not consider information on the progress of the failure process. The static modeling techniques assume that failure is a steady state. However, reality clearly indicates that failure is not a sudden event that happens unexpectedly (Luoma and Laitinen, 1991).

Finally, the optimal cut-off points for the variables are chosen by trial and error and on an ex post basis, which means that the actual failure status of the companies in the sample is known. Consequently, the cut-off points may be sample specific and it is possible that the

classification accuracy of the univariate model is much lower when the model is used in a predictive context i.e. ex ante (Balcaen and Ooghe, 2004).

2.4 Summary of Literature Review

There is no superior theory or model to the other. However some have more advantages than the others and makes them much more accurate. As much as the univariate model is simple, it is faced with the inconsistency problem where classification of firms can only occur for one ratio at a time. This can give different classification for the same firm for different ratios which is confusing. The risk index model may be intuitive but it is also very subjective.

The MDA may be the most dominant classical statistical method in failure prediction but it is not without its shortcomings. For example, the MDA coefficients are not unique but only the variables are and they do not take into account the inter correlations between the variables in the model. It also requires that the classification rule is linear meaning that the discriminant scores above or below a certain cut off point automatically signals a good or poor financial health contradicting the fact that some variable don't show a linear relationship to financial health. In addition, MDA assumes that the covariance matrices of two populations are identical and both populations need to be described by multivariate normal distribution. Clearly, these assumptions do not always reflect the real world

Nonetheless, the MDA has been shown to be the most applicable and more accurate. In his research using Altman's Z score model, Mamo (2011) found the model to be 90% valid in predicting financial distress of commercial banks in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population of study, the basis of sampling, the data collection as well as the data analysis techniques to be used to achieve the objectives of study.

3.2 Research Design

A research design is a framework or a blue print for conducting a research. It provides a clear plan on how the research will be conducted and helps the researcher in sticking to the plan. The research was conducted using a descriptive research design which sought to assess the effect of financial distress on performance of commercial banks.

3.3 Population

A population is the entire set of elements from which a sample is drawn. The population included all the forty four commercial banks (see appendix 1.1) licensed and regulated by the Central Bank of Kenya as mandated under the Banking Act cap 488 in Kenya.

3.4 Sample

A sample is a segment of the population under study. A sample of twenty two banks was used. Eleven banks listed at the Nairobi Securities Exchange (see appendix 1.2) and eleven non listed banks. This constituted fifty percent of all the commercial banks in Kenya which ensured data accuracy and validity. Random sampling was used to select the non listed banks.

3.5 Data Collection

Secondary data was used in this study which was extracted from past financial reports of the banks under study and the annual supervision reports from the Central Bank of Kenya. That is, income statements, statement of financial position and statements of changes in equity. The data was collected in the form of current assets and liabilities, total assets, retained earnings, earnings before interest and taxes, book value of equity, total assets and total liabilities.

3.6 Data Analysis

Data analysis is a systematic process which applies statistic techniques to evaluate data through inspecting, transforming and modeling data to draw useful information for decision making. Data was analyzed using multivariate analysis with the aid of Microsoft Excel. The data collected was summarized in tables. The period of analysis covered five financial years from 2008 to 2012. Financial distress was calculated using Altman Z score model as shown below. Mamo (2011) used the model to predict financial distress in commercial banks in Kenya and found the model to be 90% valid. Bwisa (2010) also evaluated Altman's model applicability in prediction of financial distress in Kenya and found the model to be 80% applicable.

$Z=6.56T_1+3.26T_2+6.72T_3+1.05T_4$

Where

T_1= (current assets – current liabilities)/Total assets
T_2=Retained earnings/Total assets
T_3=Earnings before interest and tax /Total assets
T_4=Book value of Equity/Total liabilities

Zones of discrimination

Z>3.75-Safe zone
1.75<Z<3.75-Grey zone
Z<1.75 –Distress zone

The relationship between financial distress and financial performance was shown using a simple linear regression analysis as shown below.

$Y=B_o+B_1X$

Where Y will be the dependent variable (Financial performance)
X will be the independent variable (Financial distress)
B_o = Intercept constant
B_1=X coefficient

Return on assets was used to measure financial performance. This is because ROA corrects for banks size allowing for comparability between banks performance. It shows how efficiently the bank is utilizing its assets to generate earnings and was calculated as follows.

ROA=Net income/Total assets.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter shows how the data was analyzed and shows how data was presented in order to achieve the objective of the study of determining the effect of financial distress on financial performance of the banks. The interpretation of the findings from the data analysis is also contained in this chapter.

4.2 Data Presentation

4.2.1 Barclays bank

Barclays bank had Z scores of 1.26 and 1.74 in 2008 and 2009 indicating financial distress in those two years. These are the only two years under the study that it was under distress. In a five year average it had a Z score of 1.83 and an overall ROA of 6.08. (See appendix 1.3).The Z scores in 2010, 2011 and 2012 were 2.22, 2.09 and 1.83 with ROA of 6.24, 7.18 and 7.0.In overall, the bank was not under financial distress. The bank was not under the risk to face bankruptcy. The banks ROA also kept rising which is a positive sign.

4.2.2 CFC Stanbic bank

CFC Stanbic bank had Z scores of 0.72, 0.92, 1.25 and 1.33 Z scores in 2008, 2009, 2010 and 2011 respectively. However in 2012 it had a score of 1.96. ROA increased as the financial distress got better with the highest being 3.5 in 2012 and the lowest being 1.35 in 2009.In overall the Z score was 1.24 with an ROA of 2.11. (See appendix 1.4).The bank was not under financial distress in 2012 but was under distress in 2008, 2009, 2010 and 2011.The rise in ROA from 2012 could continue in future making the bank more stable.

4.2.3 Diamond Trust bank

Diamond Trust bank had an overall Z score of 1.52 with an ROA of 4.11 (See appendix 1.5).In 2011 it had the worst financial distress with a score of 1.4 with the best year being 2010 with a score of 1.65 and consequently with the best performance of 4.9 ROA.The worst financial performance was in 2008 with an ROA of 3.1 and a Z score of 1.43.

Diamond Trust bank had financial distress in 2008, 2009, 2010, 2011 and 2012.This shows that the bank could go bankrupt if the situation prevails for a long period.

4.2.4 Equity bank

Equity bank had the best Z scores among all the banks. The scores were 2.2, 2.0, 2.02, 2.15 and 2.52 from 2008 to 2012 in that order (See appendix 1.6) .The ROAs were 6.1, 5.66, 6.95, 6.84 and 7.4 respectively. The five year average was a Z score of 2.18 with an ROA of 6.59.This was the only bank without financial distress in all the five years. It was also the best performing bank with the highest ROA.The bank is not likely to suffer liquidation. The rising trend of the ROA is likely to attract more investors leading to higher growth.

4.2.5 Housing Finance Co Kenya

Housing finance Co Kenya had an overall average Z score of 2.46 with an ROA of 2.07.In 2009 the Z score was 1.62 being the lowest for the five year period under study. The Z scores in 2008 was 1.97, 2.76 in 2010, 2.94 in 2011 and 3.0 in 2012 with ROA of 1.3, 1.91, 3.1 and 2.2 respectively (See appendix 1.7).The bank suffered financial distress in 2009.Despite the bank not being under distress it exhibited very low return on asset ratios. This could lead to problems in the future as shareholders are likely to lose confidence in the bank and withdraw their investments leading to bankruptcy all together.

4.2.6 Kenya Commercial bank

Despite this being the largest bank in Kenya in terms of assets, it had very low Z scores of 0.55, 0.73, 1.56, 1.53 and 1.35 in 2008, 2009, 2010, 2011 and 2012 respectively (see appendix 1.8).The ROA were however not the lowest among the listed banks. They were 3.0, 3.57, 5.17, 4.98 and 5.2 respectively. In average, it had a Z score of 1.15 and an ROA of 4.38.The bank may have been under financial distress but the ROAs were not that low compared to other banks. This is likely to rise in future pulling the bank out of financial distress.

4.2.7 National bank of Kenya

National bank had an overall average of Z score of 1.21 with an ROA of 3.58. In 2008 the Z score was 0.94 with an ROA of 4.0.In 2009 the score was 1.3, 1.51 in 2010, 1.16 in

2011 and 1.11 in 2012.The ROA changed in relation to the scores from 4.13 to 4.49 to 3.56 and 1.70 respectively (See appendix 1.9).The bank was under distress from 2008 to 2012.The Z scores were not consistent and did not show any trend. The bank should take measures to ensure financial stability.

4.2.8 NIC bank

The Z score for NIC bank were 1.49, 1.37, 1.58, 1.44 and 1.46 with corresponding ROA of 3.4, 3.3, 4.41, 4.57 and 4.2 in 2008, 2009, 2010, 2011 and 2012 respectively. In overall the bank had a Z score of 1.47 with an ROA of 3.98 (See appendix 1.10).This means that the bank was distressed. The Z scores were just slightly below the limit and with the right measures in place, the bank could pull out of financial distress.

4.2.9 Standard Chartered bank

The Standard Chartered bank had an average Z score of 1.42 with an ROA of 5.28. During the five years the scores were 1.28,1.37,1.49,1.24 and 1.69 for the years 2008, 2009, 2010, 2011 and 2012.The ROAs were 4.7, 5.39, 5.37, 5.03 and 5.90 respectively (See appendix 1.11).The bank had very high return on asset ratios despite being under financial distress. This means that there were some factors that the bank was not getting right which should be investigated and rectified.

4.2.10 Co operative bank

Co-operative bank had Z scores of 1.34,1.13,1.12,0.92 and 1.28 with corresponding ROAs of 3.7, 3.26, 3.61, 3.68 and 4.8 for the years 2008 to 2012.The five year Z score average was 1.16 and the ROA was 3.81(See appendix 1.12).From the scores the bank was financially distressed.

4.2.11 I&M Bank limited

The five year Z score average for this bank was 1.83 with an ROA of 4.83 (see appendix 1.13). It had Z scores higher than 1.75 in 2008, 2010, 2011 and 2012 with the scores being 1.78, 1.95, 1.97 and 1.92 respectively. The corresponding ROA were 4.4, 4.8, 5.8 and 5.2.In 2009 the Z score was 1.53 with an ROA of 3.94.This means that the bank was not financially distressed.

4.2.12 Ecobank Kenya

The five year Z score average for this bank was 0.08 with an ROA of -2.06.The Z scores for the years 2009 and 2012 were negative with negative ROAs. These were -0.53 and -0.38 for the Z scores with the ROAs being -7.13 and -4.8 respectively. The scores for 2008, 2010 and 2011 were 0.31, 0.9 and0.10 with the ROA being 0.50, 0.70 and 0.45 (see appendix 1.14).This was one of the worst performing banks and at a very high risk of facing bankruptcy and liquidation. To avoid this, the bank should undertake restructuring and other measures to improve its performance.

4.2.13 Consolidated bank

The Z scores for consolidated banks were 0.23, 0.45, 0.67, 0.38 and 1.31 with ROAs of 1.50, 1.54, 2.46, 1.61 and 1.0 for the years 2008, 2009, 2010, 2011 and 2012 respectively. The five year Z score average was 0.61 with an ROA of 1.62 (see appendix 1.15).This bank also faces possibility of bankruptcy due to the low Z scores. This implies a low working capital which should be rectified to reduce financial distress.

4.2.14 Fina bank

The five year Z score average for the bank was 0.99 with an ROA of 1.23 (see appendix 1.16).The relationship between the Z scores and the corresponding ROAs were not consistent. The scores for the five years were 1.05, 0.93, 1.13, 0.81 and 1.0 in that order. The ROAs were 0.8, 0.18, 1.07, 2.12 and 2.0 respectively. The bank had very low return on asset ratios but rising nonetheless. Consequently, the bank was under financial distress.

4.2.15 Gulf African bank

This was one of the worst performing banks with an average Z score of 0.38 and an ROA -1.04.In 2008 and 2009 it had negative ROAs of -7.6 and -2.10 with Z scores of 0.31 and 0.07.The scores for 2010, 2011 and 2012 were 0.22, 0.44 and 0.87 with positive ROAs of 0.49, 1.20 and 2.80 respectively (see appendix 1.17).This bank also faces possibility of liquidation. The negative ROAs are likely to push investors away which can be the downfall of the bank.

4.2.16 Bank of Africa

This was one of the better performing banks among the non listed banks with an average Z score of 1.39 and an ROA of 1.35.Its Z scores during the five years were above one with the scores being,1.13,1.31,1.22,1.90 and 1.39 from 2008 to 2012 in that order. The ROAs were 0.70, 1.53, 1.81, 1.43 and 1.3 respectively (see appendix 1.18).Compared to the other non listed banks, this bank was doing much better though still under financial distress. With the right measures the bank has potential to do much better although the returns on asset ratios are still low. In 2011, the bank was not under financial distress.

4.2.17 Equatorial Commercial bank

This was another bank among the non listed banks with a negative ROA.The average Z score was 0.2 with an ROA of -0.58.It had negative Z scores in 2010, 2011 and 2012 of -0.28,-0.03 and -0.88 with corresponding ROAs of -0.32, 0.55 and -4.60.In 2008 the Z score was positive (0.94) with a negative ROA of -0.2.In 2009 the Z score and the ROA were both positive 1.26 being the score and 1.69 being the ROA (see appendix 1.19).This bank had high chances of facing bankruptcy due to the poor performance. The bank was under financial distress with the scores going to the negative side. The bank could be lending to high risk borrowers, insider lending leading to the adverse effects.

4.2.18 Oriental Commercial bank

Oriental commercial bank had an average Z score of 0.94 with an ROA of 2.62. The Z scores were 0.82, 0.58, 1.0, 1.3 and 1.0 with ROAs of 2.5, 0.97, 4.01, 3.83 and 1.8 respectively in 2008 to 2012 in that order (see appendix 1.20).The bank was under financial distress. However, as indicated by the high ROA in 2010 and 2011 the bank showed potential of being among the best in non listed banks.Aggresive strategies should be undertaken by the bank to maintain this trend.

4.2.19 Imperial bank

Imperial bank was among the best performing non listed banks with high ROAs.The Z scores were 1.50, 1.57, 1.64, 1.58 and 1.4 from 2008 to 2012.The respective ROAs were 4.9, 5.09, 6.43, 6.37 and 5.5 respectively (see appendix 1.21).The overall score was 1.54 with a ROA of 5.66.Despite the high ROA the bank was not free from financial distress.

Thus, the root of the financial distress should be identified and eliminated to sustain the high performance.

4.2.20 Credit bank

Credit bank had high Z scores but low ROAs with the average score being 1.43 and a ROA of 1.45.In 2009 the Z score was very close to 1.75 as it was 1.71 with a ROA of 2.15.The scores for 2008, 2010, 2011 and 2012 were 1.41, 1.5, 1.24, and 1.25 with ROAs of 2.1, 0.74, 0.95 and 1.3 respectively (see appendix 1.22).The bank should take measures such as debt restructuring to rectify the financial distress situation since it has potential to do better.

4.2.21 Family bank

Family bank had an overall Z score average of 1.19 with a return on asset ratio of 2.94.The scores for the period between 2008 to 2012 were 1.58,1.06,1.22, 0.9 and 1.19 with ROAs of 5.0,2.5,2.48,2.01 and 2.7 respectively (See appendix 1.23).This means that the bank was under financial distress in 2008, 2009, 2010, 2011 and 2012.The bank had high return on asset ratios which is encouraging but measures should be taken to resolve financial distress as it could eventually lead to declining performance leading to bankruptcy.

4.2.22 Victoria Commercial bank

Victoria commercial bank had an overall Z score of 1.9 with an ROA of 4.42.However in 2008 and 2010 the scores were below 1.75 with the scores being 1.28 and 1.53 and the ROAs for the two years being 3.8 and 5.0. For the years 2009, 2011 and 2012 the Z scores were1.78, 2.31and 2.6 with ROAs of 4.22, 4.31 and 4.8 respectively (see appendix 1.24).In general, the bank was not under financial distress. However, its performance was not so off track and the bank is unlikely to face bankruptcy due to the rising trend of its performance and the declining trend of its financial distress.

4.2.23 Regression analysis summary output

Table 1.1 Summary Output

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.831345054
R Square	0.691134599
Adjusted R Square	0.670543572
Standard Error	0.012539263
Observations	17

Table 1.2 Anova

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.005277505	0.005278	33.56484	3.54266E-05
Residual	15	0.002358497	0.000157		
Total	16	0.007636001			

Table 1.3 Coefficients

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	**-0.01741**	0.00773	-2.253	0.0396673	-0.0339	-0.00094	-0.0339	-0.0009388
FINANCIAL DISTRESS	**0.03901**	0.00674	5.794	3.543E-05	0.0247	0.053431	0.0247	0.0534310

4.3 Summary and Interpretation of Findings

According to Altman's Z score model, any score below 1.75 meant the bank was financially distressed while a score above 3.75 meant that bank was safe from financial distress. Any score between 1.75 and 3.75 meant the grey zone.

Using the five year Z score average, CFC Stanbic bank, Diamond Trust bank, Kenya Commercial bank, National bank of Kenya, NIC bank, Standard Chartered bank and Co operative bank were all under financial distress among the listed banks as they had Z scores below 1.75. However, among the banks that were experiencing financial distress

CFC Stanbic bank did not have financial distress in 2012, the rest experienced financial distress in all the five years under study.

Barclays bank, Housing Finance Co Kenya, Equity bank and I&M bank did not have financial distress according to the five year Z score average. However there were some years they did experience financial distress in one year or two during the period under study. Barclays bank experienced distress in 2008 and 2009, Housing finance in 2009, I&M bank in 2009. Only one bank did not experience financial distress at all in the five year period and that was Equity bank.

Among the non listed banks, Ecobank, Consolidated bank, Fina bank, Equatorial bank, Oriental commercial bank, Bank of Africa, Imperial bank, Credit bank, Family bank and Gulf African bank were under financial distress as their average Z scores were below 1.75. All these banks experienced financial distress every single year under study except for Bank of Africa which did not experience financial distress in 2011.Victoria commercial bank was the only bank not under financial distress among the non listed banks. However, it had financial distress in 2008 and 2010.

Out of the twenty two samples used in this study only five banks were not under financial distress. These are Barclays bank of Kenya, Equity bank limited, Housing Finance Co limited, I&M bank Kenya and Victoria Commercial bank limited. Only one of these five banks was not listed at the Nairobi Securities Exchange and that is Victoria Commercial bank limited.

The study found out that financial distress existed in most of the banks under study. This is especially in the non listed banks under study as only one out of the eleven did not have financial distress. This is in contrast to the listed banks where four out of the eleven banks sampled did not have financial distress.

Generally the non listed banks seemed to be suffering more from financial distress as indicated by the low Z scores. The listed banks were doing better as they had higher Z scores as compared to the non listed banks meaning distress was less in the listed banks. The listed banks had a financial distress of 1.59 on average and an ROA of 6.01 as

compared to the non listed banks with average distress of 0.97 and average ROA of 1.60. This could be because the listed banks are able to raise more capital by issuing shares at the stock exchange thus enlarging their asset base leading to higher returns.

The study observed that the lower the Z scores of the bank the lower the return on asset ratio and vice versa. This means that the higher the financial distress indicated by the low Z score the worse the financial performance indicated by the low ROA and the higher the Z score the higher the financial performance. This showed that financial distress affected the financial performance of banks negatively. This is a reinforcement of the study by Tan (2012) where he found out that financially distressed firms underperform.

In order to find out the effect of financial distress on financial performance of banks a regression analysis using excel was done. From the regression analysis carried out using the data on the five year average of financially distressed firms (see appendix 1.25) the results were as shown below.

From the summary of the regression analysis carried out on the performance of banks and financial distress the intercept coefficient and coefficient of financial distress are -0.017 and 0.039 respectively. Thus the fitted line is as shown below.

$Y = -0.017 + 0.039 x$

Or

Financial Performance = -0.017 + 0.039 Financial Distress

The coefficients of the independent variable give the size of the effect that the variable has on the dependent variable. The sign of the coefficient (positive or negative) gives the direction of the effect. That is, if the independent variable increases by one, the dependent variable will increase by the size of the coefficient if it is positive and decrease if it is negative. According to the results of the study, the X coefficient (0.039) is positive meaning that if financial distress is increased by one, financial performance will increase by 0.039.In reality however, this relationship does not hold as an increase in financial distress leads to a decrease in financial performance. However, according to Wruck (1990), he pointed out that improved corporate performance due to financial distress

could be as a result of managers being forced to make difficult value maximizing choices which they would otherwise avoid.

The intercept of the model is the value of the dependent variable when the independent variability is zero. The intercept of this model (-0.017) was found to be negative indicating that when financial distress is zero, financial performance is negative. This means that even in the absence of financial distress the banks earnings were negative. The particular banks that elicited this behavior included Ecobank limited, Gulf African Bank limited and Equatorial commercial bank. The three banks had a negative five year average of return on asset ratio.

The R square gives the measure of how well the model fits the data. It shows how good one variable is at predicting the other. The higher the R square the better the model fits the data. From the study model, the R square was found to be 0.67 or 67 percent. This tells how good the independent variable is at predicting the dependent variable. In this case how good the financial distress is at predicting financial performance which is 67 percent.

This observation of the relationship depicted by the model is backed up by Balcaen and Ooghe (2004) where this peculiar observation could be from the fact that the Z score model relies on financial statements of firms or account information which may be biased by extreme ratio values. The extreme values have the effect of biasing the coefficients for the ratios in the model. He pointed out further that due to data instability, it may result in poor predictive abilities of the model resulting to out of sample results.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Financial distress is a universal problem and affects many firms all over the world Kenya not being an exception. It is one of the most significant threats affecting businesses globally despite their size and nature. Kenya has seen closure or restructuring of local banks in recent decades following financial distress which is very unfortunate as banks are the backbone of the country's economy given the many major roles they play. Failure of banks can be very detrimental to a country as it can dent the economy. This research thus sought to find the impact financial distress has on financial performance of banks to ensure banks know how financial distress impacts their performance and take up corrective and preventive measures.

There are several methods or models of determining financial distress broadly divided into three broad categories, statistical models, intelligent expert system models and theoretic models. Statistical models are the most widely used with multiple discriminate analyses being the most popular model was used to detect financial distress. This is because of its high accuracy.

A sample of twenty two banks, eleven listed and eleven non listed banks was used from a population of forty four commercial banks. Altman's Z score model was used to measure financial distress while financial performance of banks was measured using return on assets ratio. Data was collected from financial statements of the bank and from the central bank of Kenya. Financial distress for each bank under study was calculated for the period between 2008 to 2012. A five year average of the return on assets ratio and the financial distress of commercial banks found to be undergoing distress, were regressed using the Microsoft excel to come up with a regression model explaining or showing the effect of financial distress on banks performance.

The study found out that financial distress is present in our commercial banks with the non listed banks being more financially distressed than the listed banks. The effect of financial distress on financial performance was found to be negative.

5.2 Conclusion

The findings of this study show or indicate that financial distress is present in the Kenyan commercial banks. Almost all the banks suffered financial distress in at least one year during the five year period. Banks are negatively affected by financial distress as is seen in the low financial performance in the presence of heavy financial distress.

It was to be expected that the listed banks would exhibit a strong healthy financial position. However, out of the eleven banks only four of them could be considered to be in good financial health. This is not even half of the listed banks. Being listed at the NSE does not automatically mean good financial health because even the four banks were not in the safe zone but in the grey zone. None of the twenty two banks was in the safe zone.

It is assumed that firms in the same sector should be similar or not so different in terms of financial status. In general the non listed banks performed poorly as compared to the listed banks and they also have higher financial distress in comparison to the listed banks. This could be due to their small size in terms of assets as compared to the listed banks which are bigger in size. The effect of financial distress is the same in all the banks regardless of whether they are listed or not. The higher the distress the lower the financial performance and the lower the distress the higher the financial performance.

For most of the banks, their ROA which indicated financial performance increased from year to year from 2008 to 2012.This means that their financial distress situation got better and better with time. This could be attributed to the increase in the assets which consequently led to increase in retained earnings, working capital and book value of equity. Hence, despite the financial distress, banks performance kept improving every year for most of the banks.

Since the financial distress keeps getting lower and lower, there is hope that in few years to come, there will be no financial distress in the commercial banks in Kenya. It is also an indication that the banks are taking measures to minimize the financial distress. This will lead to an overall growth in the economy as a whole.

5.3 Policy Recommendation

From the finding of the study, most of the banks did suffer financial distress. This can lead to failure of the banks if it goes on for a long period of time. The banks should ensure they find out the source of the financial distress in their specific banks since each bank is unique in its operations and ensure that measures to combat or reduce financial distress are carried through. Some of the remedies they could pursue include selling major assets, merging with other banks, issuing new securities, exchanging debt for equity, reducing capital spending among others.

Due to the high number of banks experiencing financial distress according to the study this can lead to the loss of stakeholder's confidence in the commercial banks which can lead to other problems all together or even escalation of the financial distress. Thus, the banks should ensure that financial stability is an integral part of its policy framework.

Due to unexpected situations such as recession, it may render the financial ratios redundant temporarily. Financial ratios are observed or used by stakeholders to convey vital or important information about a firm under normal operations. It is thus recommended that the practical applicability of financial distress models be redeveloped from time to time as the economy changes to avoid this problem of ratio redundancy.

Financial distress could be caused by many things but one of the major contributors of financial distress is poor management. This is where the management team lacks appropriate management skills and qualities like hiring skills, delegation skills among others. This can lead to management not recognizing internal signs that could lead to distress. This consequently means the appropriate measures will not be taken on time to avoid distress. The recommendation would be to change the management team to a more qualified and experienced team which will lead to positive returns by bringing fresh and new ideas to the firm.

For the firms or banks that slipped in and out of distress, it would be important to have a suitable exiting plan that will lead to better profits. It is also equally important to understand the reasons that led to distress in the first place. By identifying these reasons they can be used as a solution to prevent financial distress from happening again.

5.4 Limitations of the Study

Due to time constraints, the study was conducted on a sample of twenty two commercial banks out of the forty four commercial banks in Kenya. This may have made it difficult to find significant or meaningful relationship from the data meaning the sample data may have not been representative of the whole population. The results were thus generalized and conclusions could have been different had the whole population been studied.

Another limitation was the fact that this method of trying to establish if financial distress exists depended purely on ratios. These ratios are derived from the financial statements of the various banks under study. There is an assumption that the financial statements or the annual reports give a true and fair view of the financial position of the banks. However this can be misleading because annual accounts are unreliable because firms or companies manipulate their accounts in order to portray a positive image of the firm by maintaining positive earnings. Thus the accounts may not give a true and fair view of the financial position of the banks making the ratio analysis method of determining distress unreliable.

Most of the studies carried out on financial distress deal with ways of predicting financial distress. There is lack of research on the effects of financial distress on performance of companies especially banks. Thus it was difficult to lay out a foundation for understanding the research problem due to lack of an established framework.

Due to the high volume data that needed to be collected for this study, there may have been human errors during entry. This may have occurred due to time limit which could not allow for double checking the entries. This can result in errors that ruin statistical results and conclusions by for example affecting the coefficients incorrectly .Data entered incorrectly can change the interpretations and findings of the study. These errors would have been minimized by having methods for detection and prevention of data errors.

5.5 Suggestions for Further Research

Most of the models used to determine financial distress rely on financial accounts which are easily manipulated. Using unreliable financial ratios from manipulated annual

accounts can lead to inconsistency problem. Further research can be carried out on other models of detecting distress which do not rely on financial information or those that use non accounting information since financial information can easily be manipulated resulting to misrepresentations.

Generally large firms perform better that small firms and consequently large firms are expected to have a lower probability of failure compared to the small firms. This is because of the many advantages enjoyed by large firms. Thus the need for industry and size specific models. In addition, new firms are more likely to fail compared to older firms. This could be due to the advantage of learning effect that old firm's have. Thus extended research could be carried out to come up with models that are age specific.

As much as ratios have been criticized in their ability to determine financial distress, they are very important and cannot be totally disregarded. However, there are disagreements as to which ratios are best for predicting financial distress. There is no consensus as to whether accrual based or cash flow based ratios are batter or if profitability ratios better than liquidity ratios. More research needs to be carried out in order to determine the best ratios to use to detect financial distress.

One assumption that the multiple discriminant analysis model makes is that the companies are stable and do not change overtime. This however is a very simple representation of financial distress process as in reality Company's change from time to time due to business cycles, inflation rates, interest rates and other factors. More investigations should be carried out to establish a model which incorporates time dimension.

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APPENDICES

1.1Commercial Banks in Kenya

1	African Banking Corporation Ltd	23	First Community Bank Ltd
2	Bank of Africa Kenya Ltd	24	Giro Commercial Bank Ltd
3	Bank of Baroda Kenya Ltd	25	Guardian Bank Ltd
4	Bank of India	26	Gulf African Bank Limited
5	Barclays Bank of Kenya Ltd	27	Habib Bank A.G Zurich
6	CFC Stanbic Bank Ltd	28	Habib Bank Ltd
7	Charterhouse Bank Ltd	29	Housing Finance Co Kenya Ltd
8	Chase Bank Ltd	30	Imperial Bank Ltd
9	Citibank N.A Kenya	31	I &M Bank Ltd
10	Commercial Bank of Africa Ltd	32	Jamii Bora Bank Ltd
11	Consolidated Bank of Kenya Ltd	33	Kenya Commercial BankLtd
12	Co-operative Bank of Kenya Ltd	34	K-Rep Bank Ltd
13	Credit Bank Ltd	35	Middle East Bank of Kenya Ltd
14	Development Bank of Kenya Ltd	36	National Bank of Kenya Ltd
15	Diamond Trust Bank Ltd	37	NIC Bank ltd
16	Dubai Bank of Kenya Ltd	38	Oriental Commercial Bank Ltd
17	Ecobank Kenya Ltd	39	Paramount Universal Bank Ltd
18	Equatorial Commercial Bank Ltd	40	Prime Bank Ltd
19	Equity Bank Ltd	41	Standard Chartered Bank Kenya Ltd
20	Family Bank Ltd	42	Trans-National Bank Ltd
21	Fidelity Commercial Bank Ltd	43	Victoria Commercial Bank Ltd
22	Fina Bank Ltd	44	UBA Kenya Bank Ltd

1.2 Commercial Banks listed at the NSE

1	Barclays Bank of Kenya Ltd	7	National Bank of Kenya Ltd
2	CFC Stanbic Bank Ltd	8	NIC Bank ltd
3	Diamond Trust Bank Ltd	9	Standard Chartered Bank Kenya Ltd
4	Equity Bank Ltd	10	Co-operative Bank of Kenya Ltd
5	Housing Finance Co Kenya Ltd	11	I&M Bank Ltd
6	Kenya Commercial BankLtd		

1.3 Barclays Bank of Kenya ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	172113	169788	172691	167305	215829	
Total liabilities	148322	140941	141225	139276.65	155518.12	
Working capital	13583	22808	31900	27247.32	29432.75	
WC/TA*6.56	0.5177	0.8812	1.2118	1.0684	0.8946	
Retained earnings	15236	16882	19326	17006.3	21811	
RE/TA*3.26	0.2886	0.3241	0.3648	0.3314	0.3294	
EBIT	8016	9002	10775	12012.56	13020	
EBIT/TA*6.72	0.3130	0.3563	0.4193	0.4825	0.4054	
Book value of equity	20463	24210	31465	26992.91	29583.45	
BVE/TL*1.05	0.1449	0.1804	0.2339	0.2035	0.1997	
Zsore	1.2641	1.7420	2.2298	2.0857	1.8292	**1.83**
ROA%	4.70	5.30	6.24	7.18	7.00	**6.084**

1.4 CFC Stanbic Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	84450	98401	107139	140087	133378	
Total liabilities	76831.98	89194.5	97103.87	129936.53	115276.84	
Working capital	5386.26	9181.05	14166.36	19920.63	26630.35	
WC/TA*6.56	0.1484	0.6121	0.8674	0.9328	1.3098	
Retained earnings	2976.46	3765.54	4972.35	7179.05	10177.56	
RE/TA*3.26	0.1149	0.1248	0.1513	0.1671	0.2488	
EBIT	1313	1333	2104	3128.37	4712	
EBIT/TA*6.72	0.1045	0.0910	0.1320	0.1501	0.2374	
Book value of equity	6334.27	8142.55	10034.73	10150.02	18101.34	
BVE/TL*1.05	0.0866	0.0959	0.1085	0.0820	0.1649	
Zsore	0.7243	0.9237	1.2592	1.3320	1.9608	**1.24**
ROA%	1.50	1.35	1.96	2.23	3.50	**2.108**

1.5 Diamond Trust Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	42073	47509	58606	77453	94152	
Total liabilities	36258.31	40883.45	50548.45	67086.55	79633.33	
Working capital	5744.82	6554.9	7917.38	8043.15	10884.22	
WC/TA*6.56	0.8957	0.9051	0.8862	0.6812	0.7584	
Retained earnings	2244.75	3042.58	4818.1	6573.48	9229.63	
RE/TA*3.26	0.1739	0.2088	0.2678	0.2767	0.3196	
EBIT	1305	1634	2872	3248.47	4670	
EBIT/TA*6.72	0.2084	0.2311	0.3293	0.2818	0.3333	
Book value of equity	5333.74	6263.32	8057.38	10366.47	14878.49	
BVE/TL*1.05	0.1545	0.1609	0.1674	0.1623	0.1962	
Zsore	1.4326	1.5059	1.6507	1.4020	1.6074	**1.5197**
ROA%	3.10	3.44	4.90	4.19	4.90	**4.106**

1.6 Equity Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	78001	98434	133890	176911	215829	
Total liabilities	57475.6	73174.29	105582.45	141863.58	173157.54	
Working capital	14850.34	15869.52	20688.86	29888.95	46008.59	
WC/TA*6.56	1.2489	1.0576	1.0137	1.1083	1.3984	
Retained earnings	4455.47	7108.07	11203.58	17974.52	24308.41	
RE/TA*3.26	0.1862	0.2354	0.2728	0.3312	0.3672	
EBIT	4757	5570	9312	12103.51	16060	
EBIT/TA*6.72	0.4098	0.3803	0.4674	0.4598	0.5	
Book value of equity	19837.8	22908.87	27230.91	34285.55	42671.76	
BVE/TL*1.05	0.3569	0.3287	0.2708	0.2538	0.2588	
Zsore	2.2019	2.0020	2.0246	2.1530	2.5244	**2.1812**
ROA%	6.10	5.66	6.95	6.84	7.40	**6.59**

1.7 Housing Finance Co Kenya ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	15601	19342	29326	31972	40686	
Total liabilities	10669.19	14196.53	25056.31	27189.89	35540.11	
Working capital	3554.95	3443.29	10745.8	11917.47	15981.99	
WC/TA*6.56	1.4948	1.1678	2.4038	2.4452	2.5769	
Retained earnings	168.16	174.22	475.04	1017.7	1471.3	
RE/TA*3.26	0.0351	0.0294	0.0528	0.1038	0.1181	
EBIT	196	354	560	976	902	
EBIT/TA*6.72	0.0844	0.1230	0.1283	0.2051	0.1490	
Book value of equity	3661.31	4084.23	4269.53	4782.22	5145.82	
BVE/TL*1.05	0.3603	0.3021	0.1789	0.1847	0.1520	
Zsore	1.9747	1.6223	2.7638	2.9388	2.9960	**2.4591**
ROA%	1.30	1.83	1.91	3.10	2.20	**2.068**

1.8 Kenya Commercial Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	181974	180041	223025	282494	304112	
Total liabilities	154653.48	145825.3	182148.11	237330.9	251186.08	
Working capital	2104.55	3923.78	26352.69	34041.02	25287.87	
WC/TA*6.56	0.0759	0.1430	0.7751	0.7905	0.5455	
Retained earnings	7981.56	10503.99	13963.18	18276.52	22675.60	
RE/TA*3.26	0.1430	0.1902	0.2041	0.2109	0.2431	
EBIT	5394	6426	11538	14081.87	15756	
EBIT/TA*6.72	0.1992	0.2398	0.3477	0.3350	0.3482	
Book value of equity	20058.1	22397.92	40876.45	45162.66	52926.23	
BVE/TL*1.05	0.1362	0.1613	0.2356	0.1998	0.2212	
Zsore	0.5542	0.7343	1.5625	1.5362	1.3580	**1.149**
ROA%	3.00	3.57	5.17	4.98	5.20	**4.384**

1.9 National Bank of Kenya

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	44588	52327	60070	68665	67155	
Total liabilities	36487.86	43496.72	50097.08	58208.04	56704.83	
Working capital	3984.54	6626.59	8179.29	6449.67	6994.47	
WC/TA*6.56	0.5862	0.8307	0.8932	0.6162	0.6833	
Retained earnings	-1374.03	53.56	2006.6	2501.45	2547.1	
RE/TA*3.26	-0.1005	0.0033	0.1089	0.1188	0.1236	
EBIT	1797	2159	2698	2443.85	1147	
EBIT/TA*6.72	0.2708	0.2773	0.3018	0.2392	0.1148	
Book value of equity	6207.85	7907.69	9929.61	10456.47	10449.98	
BVE/TL*1.05	0.1786	0.1909	0.2081	0.1886	0.1935	
Zsore	0.9352	1.3022	1.5121	1.1627	1.1152	**1.205**
ROA%	4.00	4.13	4.49	3.56	1.70	**3.576**

1.10 NIC Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	43609	46326	54776	73581	101772	
Total liabilities	37175.3	38221.35	46880.85	63681.46	86707.10	
Working capital	5778.52	4879.48	6469.79	7153.4	10588.33	
WC/TA*6.56	0.8692	0.6910	0.7748	0.6378	0.6825	
Retained earnings	3171.66	4072.45	5548.16	7596.43	9836.43	
RE/TA*3.26	0.2371	0.2866	0.3302	0.3366	0.3151	
EBIT	1474	1529	2416	3360.60	4311	
EBIT/TA*6.72	0.2271	0.2218	0.2964	0.3069	0.2847	
Book value of equity	5529.14	6433.96	7895.85	9899.86	15054.61	
BVE/TL*1.05	0.1562	0.1768	0.1768	0.1632	0.1823	
Zsore	1.4897	1.3761	1.5783	1.4445	1.4645	**1.471**
ROA%	3.40	3.30	4.41	4.57	4.20	**3.979**

1.11 Standard Chartered Bank Kenya ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	100392	124806	142880	164182	195493	
Total liabilities	87750.39	110102.19	122415.13	143352.17	164889.92	
Working capital	10137.22	13454.67	17011.64	13745.78	25709.08	
WC/TA*6.56	0.3324	0.7072	0.7810	0.5492	0.8627	
Retained earnings	5171.71	6496.62	7751.46	10116.63	14155.24	
RE/TA*3.26	0.1679	0.1697	0.1769	0.2009	0.2360	
EBIT	4709	6729	7668	8250.84	11519	
EBIT/TA*6.72	0.3152	0.3622	0.3606	0.3377	0.3960	
Book value of equity	11389.82	13806.93	20210.49	20571	30603.08	
BVE/TL*1.05	0.1363	0.1317	0.1734	0.1507	0.1949	
Zsore	1.2818	1.3707	1.4919	1.2385	1.6896	**1.415**
ROA%	4.70	5.39	5.37	5.03	5.90	**5.278**

1.12 Co-operative Bank of Kenya ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	91022	114234	153984	167772	199663	
Total liabilities	69983.87	94428.11	133781.08	146800.77	170696.03	
Working capital	10178.05	9535.4	11922.96	8133.53	14884.81	
WC/TA*6.56	0.7335	0.5476	0.5079	0.3180	0.4890	
Retained earnings	4253.64	6514.27	9859.05	10654.9	17648	
RE/TA*3.26	0.1523	0.1859	0.2087	0.2070	0.2881	
EBIT	3337	3727	5559	6167.77	9574	
EBIT/TA*6.72	0.2464	0.2192	0.2426	0.2470	0.3222	
Book value of equity	13549.03	16103.26	20202.45	20971.62	28966.94	
BVE/TL*1.05	0.2033	0.1791	0.1586	0.1500	0.1782	
Zsore	1.3355	1.1318	1.1178	0.9221	1.2776	**1.157**
ROA%	3.70	3.26	3.61	3.68	4.80	**3.81**

1.13 I&M Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	37022	44486	62552	76903	91520	
Total liabilities	28197	36590.1	49556.61	63047.04	74928.80	
Working capital	5689.12	5819.33	10567.73	12628.87	14062.53	
WC/TA*6.56	1.0081	0.8581	1.1083	1.0773	1.0080	
Retained earnings	2545.15	2728.64	4605.64	6609.63	9217.46	
RE/TA*3.26	0.2241	0.2	0.24	0.28	0.3283	
EBIT	1620	1752	3004	4457.33	4722	
EBIT/TA*6.72	0.2941	0.2647	0.3227	0.3895	0.3467	
Book value of equity	6955.23	7465.2	13360.25	13856.24	16590.82	
BVE/TL*1.05	0.2590	0.2141	0.2831	0.2308	0.2325	
Zsore	1.7852	1.5369	1.9541	1.9777	1.9155	**1.83**
ROA%	4.40	3.94	4.80	5.80	5.20	**4.83**

1.14 Ecobank Kenya ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	12589	16134	26892	27210	31771	
Total liabilities	8756.07	11801.27	21887.86	24484.26	28772.13	
Working capital	-158.17	-236.71	2695.12	104.37	28.7	
WC/TA*6.56	-0.0824	-0.0962	0.6574	0.0252	0.0059	
Retained earnings	399	-532.91	-407.79	-205.68	-1261.43	
RE/TA*3.26	0.1033	-0.1077	-0.0494	-0.0246	-0.1294	
EBIT	67	-1151	188	121.40	-1534	
EBIT/TA*6.72	0.0358	-0.04794	0.0470	0.0300	-0.3244	
Book value of equity	2148.13	1742.85	5004.32	1726.24	1999.21	
BVE/TL*1.05	0.2576	0.1551	0.2401	0.0740	0.0730	
Zsore	0.3143	-0.5283	0.8951	0.1045	-0.3750	**0.0821**
ROA%	0.50	-7.13	0.70	0.45	-4.80	**-2.06**

1.15 Consolidated Bank of Kenya ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	5543	7565	10479	15318	18001	
Total liabilities	3811.1	5972.1	9001.62	13883.38	16426.70	
Working capital	134.04	403.89	638.97	436.8	3120.34	
WC/TA*6.56	0.1586	0.3502	0.4	0.1871	1.1371	
Retained earnings	-453.1	-379.57	-2223.2	-92.24	51.2	
RE/TA*3.26	-0.2665	-0.1636	-0.0694	-0.0196	0.0093	
EBIT	85	117	258	246.54	176	
EBIT/TA*6.72	0.1030	0.1039	0.1655	0.1082	0.0657	
Book value of equity	845.7	926.82	1477.06	1434.81	1574.16	
BVE/TL*1.05	0.2330	0.1630	0.1723	0.1085	0.1006	
Zsore	0.2282	0.4535	0.6683	0.3841	1.3127	**0.609**
ROA%	1.50	1.54	2.46	1.61	1.00	**1.622**

1.16 Fina Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	10201	12836	14112	14630	17150	
Total liabilities	8694.13	11080.19	12776.24	13094.93	14646.22	
Working capital	1126.65	1348.57	1731.25	819.23	1221.83	
WC/TA*6.56	0.7245	0.6892	0.8048	0.3673	0.4674	
Retained earnings	424.89	463.18	633.33	836.67	1114.28	
RE/TA*3.26	0.1358	0.1176	0.1463	0.1864	0.2118	
EBIT	82	23	151	310.48	348	
EBIT/TA*6.72	0.0540	0.0120	0.0719	0.1426	0.1364	
Book value of equity	1171.28	1198.49	1336.13	1535.53	2503.68	
BVE/TL*1.05	0.1415	0.1136	0.1098	0.1231	0.1795	
Zsore	1.0558	0.9325	1.1328	0.8195	0.9950	**0.987**
ROA%	0.80	0.18	1.07	2.12	2.0	**1.234**

1.17 Gulf African Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	5000	7750	9894	12915	13562	
Total liabilities	3726.59	6598.99	8370.22	11595.10	12000.42	
Working capital	588.27	351.22	347.51	721.08	1088.88	
WC/TA*6.56	0.7718	0.2973	0.2376	0.3663	0.5267	
Retained earnings	-476.7	-646.83	-597.14	-497.04	79.23	
RE/TA*3.26	-0.3108	-0.2721	-0.2029	-0.1255	0.019	
EBIT	-382	-162	47	155.38	374	
EBIT/TA*6.72	-0.5134	-0.1405	0.0329	0.0808	0.1853	
Book value of equity	1273.31	1149.95	1223.84	1391.18	1561.4	
BVE/TL*1.05	0.3588	0.1830	0.1535	0.1195	0.1366	
Zsore	0.3064	0.0677	0.2212	0.4411	0.8677	**0.381**
ROA%	-7.60	-2.10	0.49	1.20	2.80	**-1.042**

1.18 Bank of Africa ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	12823	16978	26699	38734	48958	
Total liabilities						
Working capital	1724.89	2554.74	3793.51	9567.01	8504.92	
WC/TA*6.56	0.8824	0.9871	0.9321	1.6203	1.1396	
Retained earnings	129.26	173.53	280.72	503.78	662.31	
RE/TA*3.26	0.0329	0.0333	0.0343	0.0424	0.0441	
EBIT	93	260	484	554.55	636	
EBIT/TA*6.72	0.0487	0.1029	0.1218	0.0962	0.0873	
Book value of equity	1661.72	2510.88	2945.25	4672.02	5009.76	
BVE/TL*1.05	0.1640	0.1830	0.1302	0.1440	0.1197	
Zsore	1.1280	1.3064	1.2184	1.9029	1.3907	**1.389**
ROA%	0.70	1.53	1.81	1.43	1.30	**1.354**

1.19 Equatorial Commercial Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	4477	4528	10399	12927	14109	
Total liabilities	3734.49	3735.88	9492.59	11722.65	13386.68	
Working capital	495.42	602.3	-221.57	-19.17	-766.112	
WC/TA*6.56	0.7259	0.8726	-0.1398	-0.0097	-0.3562	
Retained earnings	48.27	88.55	-687.98	-672.14	-1175.53	
RE/TA*3.26	0.0351	0.0638	-0.2157	-0.1695	-0.2716	
EBIT	-8	77	-34	71.18	-656	
EBIT/TA*6.72	-0.0120	0.1143	-0.0220	0.0370	-0.3124	
Book value of equity	675.95	729.65	911.91	1204.25	722.31	
BVE/TL*1.05	0.1901	0.2051	0.1009	0.1079	0.0567	
Zsore	0.9391	1.2557	-0.2766	-0.0344	-0.8836	**0.2**
ROA%	-0.20	1.69	-0.32	0.55	-4.60	**-0.576**

1.20 Oriental Commercial Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	2774	3421	4558	5030	6220	
Total liabilities	1345.06	2070.3	3420.30	3740.03	4835.38	
Working capital	394.8	421.78	608.83	787	823.25	
WC/TA*6.56	0.9336	0.8088	0.8762	1.0264	0.8683	
Retained earnings	-863.74	-830.58	-682.91	-578.27	-515.4	
RVE/TL*3.26	-1.0151	-0.7915	-0.4884	-0.3748	-0.2701	
EBIT	68	33	183	192.60	114	
EBIT/TA*6.72	0.1647	0.0648	0.2698	0.2573	0.1232	
Book value of equity	944.07	982.29	1138.05	1384.53	1290.06	
BVE/TL*1.05	0.7370	0.4982	0.3494	0.3887	0.2801	
Zsore	0.8203	0.5803	1.007	1.2976	1.0014	**0.941**
ROA%	2.50	0.97	4.01	3.83	1.80	**2.622**

1.21 Imperial Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	13780	15755	19399	25618	34590	
Total liabilities	11520.09	13111.27	16303.67	21932.39	30035.34	
Working capital	1785.09	2052.13	2261.22	2709.96	3009.69	
WC/TA*6.56	0.8498	0.8545	0.7647	0.6939	0.5708	
Retained earnings	639.66	959.61	1462.1	2199.62	3121.24	
RE/TA*3.26	0.1513	0.1979	0.2457	0.2799	0.2942	
EBIT	673	802	1248	1631.69	1912	
EBIT/TA*6.72	0.3282	0.3421	0.4323	0.4280	0.3715	
Book value of equity	1911.62	2246.84	3018.75	3685.23	4554.27	
BVE/TL*1.05	0.1742	0.1799	0.1944	0.1764	0.1592	
Zsore	1.5036	1.5744	1.6371	1.5783	1.3956	**1.538**
ROA%	4.90	5.09	6.43	6.37	5.50	**5.658**

1.22 Credit Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	3803	3840	4530	5394	6407	
Total liabilities	2970.49	2937.21	3582.54	4436.02	5228.69	
Working capital	545.42	682.92	777.16	727.58	820.24	
WC/TA*6.56	0.9408	1.1667	1.1254	0.8849	0.8398	
Retained earnings	109.58	167.38	66.96	114.04	187.94	
RE/TA*3.26	0.0939	0.1421	0.0482	0.0689	0.0956	
EBIT	79	83	34	51.28	81	
EBIT/TA*6.72	0.1396	0.1453	0.0504	0.0639	0.0850	
Book value of equity	666.18	727.74	947.56	958.04	1178.8	
BVE/TL*1.05	0.2355	0.2602	0.2777	0.2268	0.2367	
Zsore	1.4098	1.7142	1.5018	1.2444	1.2571	**1.425**
ROA%	2.10	2.15	0.74	0.95	1.30	**1.448**

1.23 Family Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	10713	13683	20188	26002	30985	
Total liabilities	8852.98	11452.89	17082.48	22678.04	26125.17	
Working capital	1496.8	1230.67	2244.62	1984.93	3155.99	
WC/TA*6.56	0.9166	0.59	0.7294	0.5008	0.6682	
Retained earnings	486.84	565.45	857.76	868.29	1398.22	
RE/TA*3.26	0.1481	0.1347	0.1385	0.1089	0.1471	
EBIT	531	343	501	522.57	843	
EBIT/TA*6.72	0.3331	0.1685	0.1668	0.1351	0.1828	
Book value of equity	1557.41	1852.88	3127.29	3323.72	4859.93	
BVE/TL*1.05	0.1847	0.1699	0.1922	0.1539	0.1953	
Zsore	1.5825	1.0631	1.2269	0.8986	1.1934	**1.193**
ROA%	5.0	2.5	2.48	2.01	2.70	**2.938**

1.24 Victoria Commercial Bank ltd

	Amount in millions					
	2008	**2009**	**2010**	**2011**	**2012**	**Average**
Total assets	4467	5130	6215	7645	10323	
Total liabilities	3696.73	4195.57	5112.46	6392.76	8586.81	
Working capital	378.77	746.87	587.15	711.81	1402.69	
WC/TA*6.56	0.5562	0.9551	0.6197	0.6108	0.8914	
Retained earnings	340.09	490.56	665.42	835.8	1065.86	
RE/TA*3.26	0.2482	0.3117	0.3490	0.3564	0.3366	
EBIT	170	216	311	329.69	491	
EBIT/TA*6.72	0.2557	0.2829	0.3363	0.2898	0.3196	
Book value of equity	763.44	934.53	1102.93	6392.76	8288.81	
BVE/TL*1.05	0.2168	0.2339	0.2265	1.05	1.0503	
Zsore	1.277	1.7836	1.5316	2.307	2.5979	**1.899**
ROA%	3.8	4.22	5.0	4.31	4.80	**4.426**

1.25 Five year average for distressed banks

Five year average for the banks under distress		
Bank	**ROA %**	**Financial distress**
CFC Stanbic bank	2.11	1.24
Diamond Trust bank	4.11	1.52
Kenya Commercial bank	4.38	1.15
National Bank of Kenya	3.58	1.21
NIC Bank	3.98	1.47
Standard Chartered bank	5.23	1.42
Co-operative bank of Kenya	3.81	1.16
Ecobank limited	-2.06	0.08
Consolidated bank	1.62	0.61
Fina bank	1.23	0.99
Gulf African bank	-1.04	0.38
Bank of Africa	1.35	1.39
Equatorial Commercial bank	-0.58	0.2
Oriental bank	2.62	0.94
Imperial bank	5.66	1.54
Credit bank	1.45	1.43
Family bank	2.94	1.19