

**EFFECT OF FINANCIAL FACTORS ON FINANCIAL DISTRESS OF TIER
TWO COMMERCIAL BANKS IN KENYA**

BY

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MASTER OF SCIENCE IN COMMERCE (FINANCE & INVESTMENT)

KCA UNIVERSITY

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**A DISSERTATION SUBMITTED TO KCA UNIVERSITY IN PARTIAL
FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF SCIENCE IN COMMERCE (FINANCE & INVESTMENT) OF
KCA UNIVERSITY**

NOVEMBER, 2019

DECLARATION

This project is a product of my own work and has not been previously presented to any other institution.

Hellen Minoo Munguti

Reg. No: 18/00621

Signature: _____ Date: _____

I do here confirm that I have examined the master's project of

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And have approved it for examination.

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ABSTRACT

Kenyan banking sector is a fast growing industry playing a critical role in the economy of the country by significantly contributing to the GDP. Despite this growth, the banking sector still faces a number of obstacles that threaten its performance. There are a number of challenges that exist in this sector and among the most notorious challenges is financial distress which is a phenomenon that has steered the closure of several tier two commercial banks thus crippling the financial sector, frustrating investors and creating a major setback in the economy. This study sought to establish the effect of financial factors on the financial distress of tier two commercial banks in Kenya. The variables under this research were leverage, liquidity, organizational size and foreign ownership. The general objective of the study was to establish the effect of financial factors on financial distress of tier two Commercial Banks in Kenya while the specific objectives were to determine the effect of leverage and liquidity, establish the effect of firm size and evaluate the effect of foreign ownership on financial distress of tier two commercial banks in Kenya. The study considered the Trade Off theory, Liquidity Preference theory and Wreckers theory of financial distress. Causal research design was used in the study with a target population of 13 tier two commercial banks in Kenya and covered a ten-year period between 2009 and 2018. 11 out of the possible 13 banks were used in the study since two of the banks were under receivership at the time the study was carried out. The study used secondary data which is quantitative in nature collected from the banks' financial statements. Beneficiaries of the findings of this study included investors, policy makers, management and other researchers. Various diagnostic tests were conducted; these included the Hausman test, Normality test, Multicollinearity test, Linearity and Homoscedasticity test. Panel Regression model was used to predict the effect of financial distress of tier two commercial banks in Kenya using STATA statistical software version 14. Analyzed data was presented in tables and graphs. The study revealed a significant relationship between leverage as a financial factor on financial distress of tier two commercial banks in Kenya. The study recommends that commercial banks should strike a balance between debt and equity in their capital structure and that they should not place much emphasis on debt as too much of it would result to financial distress

Keywords: Financial distress, financial factors, Leverage, Liquidity, Organization size, panel regression.

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DEDICATION

I dedicate this proposal to my dear husband Kitili Kitonga who has been instrumental in the advancement of my education and the role he has played this far; to my dear sons, Ezra and Eleazar who have borne through many days of my being away most of the evenings. I also dedicate it to my sister Ruth Munguti who laid the foundation of my academic world.

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ACRONYMS AND ABBREVIATIONS

CBK	:	Central Bank of Kenya
EBIT	:	Earnings before Interest and Tax
EBIT/TA	:	Earnings before Interest and Taxes to Total Asset
EBITDA	:	Earnings before Interest, Tax, Depreciation and Amortization
EPS	:	Earnings per Share
GDP	:	Gross Domestic Product.
IFRS	:	International Financial Reporting Standards
ISE	:	Indonesian Stock Exchange
MM	:	Modigliani and miller
NACOST	:	National Commission for Science, Technology and Innovation
NPAs	:	Non-Performing Loans
NSE	:	Nairobi Securities Exchange
OER	:	Operating Expense Ratio
ROA	:	Return on Assets
ROE	:	Return on Equity
ROI	:	Return on Investment
SPSS	:	Statistical Software for Social Scientists
STATA	:	Data Analysis and Statistical Software

OPERATIONAL DEFINITION OF TERMS

Financial Distress: This is a continuous process which befalls a firm when it fails to meet its obligation resulting to financial distress. It is a slow process which takes a long period and results to bankruptcy if no interventions are made (Kariuki, 2014)

Leverage : In this study, leverage refers to an organization's ability to cover its debt using income generated from its assets (Kimathi, 2015)

Liquidity : Liquidity can be defined as the capacity of a firm to meet both its long and short-term obligations when they fall due. Liquidity helps an organization fund the purchase of new assets to meet cash and collateral needs at reasonable costs and avoid incurring unacceptable losses (Mwangi, 2014).

Tier Two Commercial Bank: A commercial bank is a financial institution legally recognized by the CBK with the capacity to accept deposits and issue loans. Tier two (medium) commercial banks are those with weighted index between 5% and 1%. The tier classification is done according to the bank's assets, deposits, capital and reserves and the number of loan accounts (CBK, 2017)

Financial Factors: Financial factors are indicators or variables that have a distressing effect on the performance and profitability of an organization (Momba & Abuga, 2013). In this study, the financial factors under consideration were leverage, liquidity and size of the firm.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial distress refers to an organizations inability to pay its debts or other financial obligations. Usually, the phenomenon may be heralded by insufficient cash flows, decline in market value, profit breaches and low growth in businesses (Andrade & Kaplan, 2013). Financial distress is a situation that may cause enormous economic consequences to stakeholders and could cause the companies to lose customers, suppliers, and even key employees (Rose-Green & Lovata, 2013).

An organization in financial distress constantly finds itself in a tight cash position and unable to pay its debts within the designated time. If this situation is not solved, organizations are often forced into financial bankruptcy and sometimes forced to liquidate its assets to pay off its debtors (Altman, 2013). This severe condition is worsened by the inability of the firms under distress to secure any funding as creditors shy away from such struggling organizations. During this time, the falling company will usually experience a decline in its market value coupled with suppliers denying credit purchases and customers cancelling sales orders (Almeida & Philippon, 2016).

Tier two commercial banks act as key intermediaries in the financial aspects and easily facilitate funds flow in the banking industry. Kenya's banking industry is controlled by the Company's Act, the Banking Act, the Central bank of Kenya Act and Kenya capital markets authority regulations. The CBK and CMA are responsible for regulations, suspension, statutory management or receivership and liquidation of commercial banks in Kenya (CBK, 2015)

Sporta (2018) indicated that after the global financial crisis experienced in the year 2008, the US banks share market increased while in Europe, the banks market

share declined and therefore the US banks are in the verge of taking over pole position in European banking. Since the year 2015, Chinese banks have overtaken the position of American and European commercial banks in the Asian-Pacific market. He states that whenever a company experiences financial distress, majorly the operating conditions deteriorate and heavy financial burdens become common place and in worse situations leads to downward renegotiation of wages and salaries or loss of jobs, bankruptcy may as well become a reality. However, if appropriate management steps are taken and financial distress factors are used effectively, it can recover and experience resurgence (Sporta, 2018)

In the year 2008, Dubai Islamic bank and Kuwait finance house in Saudi Arabia were extremely affected due to the declining stocks of the bankers. Malaysian banks were tremendously distressed because of the recession they faced. Six domestic financial groups were instructed to merge in order to survive the onslaught of a greater competition and poor operational efficiency. Private debt played a major role in the crisis and this was particularly by organizations that traded in the Stock Exchange, leading to the distress experienced in the banking system triggering this fall down. The big proportion of this was corporate debt that composed of borrowings and most companies defaulted on their debt payments and failed to meet their obligations due to distress and thus classified the distressed organizations as the ones that were in poor financial condition and are required to provide proposals for restructuring (Choy, Munusamy, Chelliah, & Mandari, 2011)

According to Gebreslassie (2015), Ethiopian banks were littered with capital to loan magnitude relation, web interest financial gain to total revenue magnitude relation that have statistically vital positive influence on the money health of banks. However, the non-performing loan magnitude relation has statically vital negative influence on

the money health of the banks. In Nigeria, excess liquidity syndrome and comparatively vast capital bases fueled reckless loaning by banks in Nigeria thus leading to an increase within the level of unsecured credits in banks. Portfolios ironically helped to mitigate the amount of NPL inside the studied period and once more on determinants of non-performing loans and therefore the chance of developing a composite indicator of economic crisis for Nigerian banks using knowledge from 1985 to 2009 wherever non-performing loans, changes in liquidity ratio were vital variable quantity influencing changes within the chance of economic crisis in African nation (Kimathi, 2015)

Kenyan banking sector has experienced its fair share of banks falling into financial distress and almost in the verge of collapsing. These include the National Bank of Kenya, Imperial bank and Chase Bank. To make matters worse, most of these banks that have experienced financial distress have in the recent past closed down rendering many employees jobless (Kakah, 2015). Management as a party that runs the operational processes the any organization must be good at seeing the condition of the company if the company is in a healthy zone or in financial distress.

Majority of the shareholders in the failed banks were either from one family or one man and therefore the responsible managers did not have the independence in making decisions so majorly were influenced by the owners. It is worth of note that if there existed an ownership structure that could have been more diversified, it would have imposed constraints on insider lending. From the failed banks, it appears that the problem of moral hazard was acute. Insider lending posed a threat to the proper operations and the soundness of the banks due to the fact that these loans were put in real estate projects that are highly speculative in nature and do not easily generate short term returns.

In the last few years, Kenya has become one of the largest financial systems in East Africa due to the significant improvements made in its financial system. Diversification and size are the major aspects of great impact in the banking industry in Kenya since it provides a variety of financial markets unlike the other regions. Despite this positive growth and diversity, Kenya's banking sector continues to face challenges among them financial distress. A good number of banks have failed due to financial distress (Maina, Muriithi, Meeme and Kinyariro, 2016).

According to Kimathi (2015), present day researchers are using various variables to indicate financial distress these include; leverage, liquidity, firms growth levels, default risk indicator and risk-adjusted default probabilities derived from corporate bond spreads. This study measures the effect of financial distress using leverage, size of the firm and liquidity. Tier two commercial banks in Kenya have challenges that can result or do result in financial distress. The recent challenges related to bank distress have strongly reinforced that a crisis in the banking sector can cause serious detriment to the entire economy. Mutuku (2016). Asset that the banking industry is a major sector through which instability may be transmitted to other sectors in an economy.

The main objective of any firm is the maximization of the wealth of its shareholders. This means that every corporate event undertaken by the firm should be geared towards achieving this goal. However, due to inability to fulfill its financial obligation, or in other terms financial distress, firms fail to meet this objective. An entity is said to be in a financial distress state if it faces operating, investing and financing difficulties to the extent that it is not able to settle its obligations when they fall due (Adeyemi, 2016). During the period of distress, the entity incurs various costs whether directly or indirectly which often affects its ability to generate returns and

consequently lead to a reduction in the financial performance of the entity. According to Wangige (2016), when a firm is in financial distress, key suppliers of the firm suspend their supplies for fear of losing their funds or shy away from providing the all required capital injection to the entity or provide the funds at stringent terms making the already troubled entity unable to turnaround causing the firm performance to reduce. Non - financial firms are appropriate for this study because high leverage that is an indicator of financial distress may not have the same meaning for financial firms (Yahaya, 2016).

1.1.1 Financial Factors

There are three categories of financial distress determinants. These include financial factors, non-financial factors and macro-economic factors. Liquidity, leverage, firm size and investment among others are classified as the financial factors; non-financial factors relate to corporate governance factors in an organization (Khalid, 2012). Examining a company's financial position, identifying and mitigating potential risks for creditors' exposure are the primary objectives of financial analysis. However, the exact choice of ratios depends on the object in view and the information available. Financial ratios are usually used to analyze, understand and interpret the financial books and statements and evaluate the firm's performance over a given period of time. The ratios point out changes and recognize abnormalities, irregularities and surprises that need advanced investigations to determine how the current and future financial positions affect the firm (Otom, 2014).

Ratios of a firm are differentiated with those of an average company that is in the same sector for purposes of comparisons by the analysts. The differences detected are then considered for further analysis so that improvements can be made to better the results in the future. Analytical data in the current period is also compared to similar one in prior years of the same period in order to get some basis of judgment on whether

the business is improving or not. Ratios are good in providing the underlying conditions in an organization and helping uncover the trends that are difficult to detect. Financial ratios are classified into six groups, namely liquidity ratio, capital structure or leverage, profitability ratio, activity ratios, integrated and growth ratios. Liquidity ratios include acid test ratio, current and super quick ratios. Leverage ratios include debt/equity ratio, debt to total capital ratio and debt to total assets ratio among others while profitability ratios include net profit margin ratio (Otom, 2014).

Generally, profitability, liquidity and solvency ratios are the most significant indicators in indicating impending problems. Ratio analysis, however, has several limitations including challenges in comparison, inflation impact and conceptual diversity. Difficulty in comparison may be due to use of different accounting practices and policies for example in the basis of inventory valuation.

Financial distress can be determined through the following factors; firm profitability, firm liquidity, leverage, firm size and firm efficiency as discussed below. Profitability refers to the ability of the firm to keep realizing profits through increased sales and investment in capital assets (Alemu, 2015). Profits are therefore, revenues in excess of the firm's expenses. Profitability ratios are used to indicate the firm's level of profits and they include; the segment of an organization's profit assigned to each ordinary share (earning per share), a measure of net profit returned as a level of investors value (return on value (ROE), profit on investment (ROI), measure of the management efficiency in generation of the revenues by using the assets at their disposal (return on asset (ROA). Anwar (2014) found that good business strategies are necessary to firms in distressed position in order to enhance their profitability for a turn-around opportunity. Financial distress affects the firm profitability through associated direct and indirect costs. Accumulated debts are the largest indirect costs components in

distressed firms while legal costs, lost market shares and administrative expenses are direct firm costs. Internal and external factors affect the firm's profitability level and while internal factors are firm specific, external factors affect all firms in general. The common profitability measures employed in firms are ROA and ROE.

Levi, Russell and Langemeier (2013) noted that liquidity is a company's ability to finance increment in resources and meet money and collateral commitments at sensible costs and without causing unsuitable misfortunes. Cheluget et al. (2014) researched on liquidity and financial distress of insurance firms and found out that relationship exists. Therefore, they concluded that liquidity is an important factor of financial distress. Solvency and liquidity measures significantly affect enhancing cost efficiency; firms with bigger uses on sourced inputs with respect to capital are more likely to enhance the effectiveness (Mwangi, 2014)

Leverage refers to the proportion among cumulative assets and the cumulative of the firm that indicates the degree to which the cumulative assets are funded by borrowings (Cui, De Jong & Ponds, 2011). A rise in this proportion indicates the reliance on the firms on outside money owing funding and higher score being provided to the company by loan facilitators resulting in a financial distress to a business. Total liabilities to equity are normally used to evaluate leverage. Some liabilities such as financial borrowings and shares offered are owed to funding, other liabilities such as operation dues, delayed returns, and annuity liabilities arise from dealings with suppliers, clientele and workers in carrying activities, (Bliss & Gul, 2012). Funding liabilities are usually transacted in proper operating principal markets where issuers are cost takers. On the contrary, companies are likely to increase the worth in business as operations entail transacting in raw materials and finished goods markets that are not much greater than businesses for capital. The commonly used measure of financial

distress is gearing ratios i.e. (total debt to assets ratio and total debt to equity ratio). According to Muthinja& Chipeta, (2018), leverage affects financial distress negatively.

Firm size has a significant impact in establishing whether a firm is in distress or not. This is because of the way that extensive firms source funds efficiently because of their capacity to impact the rate interest further bolstering their advantage. Substantial firms can likewise survive in troubled times than little firms because of the level of retained earnings (Nzoka, 2015). Firm size is commonly measured as a natural logarithm of the total assets. However, existing literature show mixed results on the effect of firm size on finance distress. For instance Osano and Languitone (2016) researched on effect of firm characteristics on financial distress where firm size was considered. The findings indicated that firm size was significant to financial distress. Ahmed and Malik (2015) concluded that firm size did not significantly affect financial distress.

Efficiency in firm indicates how well the assets are used for revenue generation (Wakaisuka-Isingoma, Aduda, Wainaina& Mwangi, 2016). Activity ratios help in indicating how efficient the firm is in its resource utilization for cash generation purposes. Firm efficiency is through sales turnover, working capital to sales ratio, assets turnover, debtors' collection period among others. Debtors' collection period indicates the time it takes for debtors' to meet their credit liabilities. A low collection period shows that the firms' debt policies are efficient and it is not easy for firms' to experience cash flow difficulties while long period increases chances of bad debt which may result to financial distress in firms. Asset turnover ratio shows how well the company generates sales from its assets. A higher ratio shows how profitable the firm is and therefore, minimal investment in assets to raise revenue. A lower ratio is an indication of financial difficulties in firms' and a likelihood of financial distress. When

a firm is financially distressed, managers may be tempted to misappropriate assets and misuse entity resources in the form of incentives and generally avoid risky investments. They may start focusing on the short-term rather than long-term strategies which would be in the best interest of the firm (Wakaisuka-Isingoma, Aduda, Wainaina, & Mwangi, 2016). These decisions often aggravate the already delicate situation of the company leading to further loss in value

1.1.2 Financial distress

Financial distress rarely happens suddenly, it takes time and a series of events that gradually lead to financial distress. The most common situations that can be used to define distress include bankruptcy, insolvency and failure (Maina & Sakwa, 2012). In some cases, it is not easy to remedy a situation of severe financial distress due to high company and individual's obligations that cannot be paid and the revenue collected cannot offset the debt (Bernstein, Colonnelli, Giroud, & Iverson, 2017).

Sharan (2011) classified financial distress into two broad categories; financial failure and economic failure. Economic failure is occasioned when an organization has higher cost of capital than the income it generates, that is, it is operating at a loss but does not liquidate. Financial failure on the other hand occurs when the firm cannot pay its contractual debts to its creditors. Firms under financial distress may find it difficult to secure financing. They may also find their market value dropping significantly and their market share declining (Ross, Hillier, Westerfield, Jaffe, & Jordan, 2012).

Sporta (2018) noted that in financial sector; technological advancement and globalization have led to distress and significant transformation of the banking industry in Kenya over the last two decades. The author further argued that superior performance in the Kenyan banking sector is due to structure and collusive power and not operational efficiency. The Central Bank uses the capital adequacy, asset quality,

management quality, earnings and liquidity (CAMEL) rating system in assessing the financial soundness of the commercial banks. According to CBK (2015) annual supervisory report, the banking sector was on overall rated satisfactory in 2015 as compared to a strong rating which was achieved in 2014.

According to Campbell et al. (2011), financial distress is the detrimental outcome of weakening in a firm's business caused by the quantity of things that may contain any of the following: unwise expansion, poor management, and cut-throat business competition, huge amounts of business debt, court lawsuit and unfavorable contracts.

Shah (2016) asserts that financial distress is a situation where a company finds it difficult in paying off its financial obligations. It is a state that is experienced by firms due to internal and external challenges thus leading to bankruptcy and even liquidation. Sporta (2018) argue that indicators of financial distress among firms can be; declined profits, declined market share, poor service delivery, demotivated employees and inability to adapt to changes. He also notes that, a company can be distressed without defaulting due to internal issues of corporate governance and policies of operation.

According to Saunders, Lewis and Thornhill (2015) financial distress presents a grave concern to stakeholders such as; stockholders, managers, lenders, government and employees. To the managers, their job security and personal reputation are in jeopardy should the firm fail. Financial distress lead to loss of the market share because of competition as the competitors may execute an aggressive strategy aimed at attracting customers of the troubled entity through price wars and the distressed entity may be driven out of the market.

Alemu (2015) noted that in many cases, entities in financial distress strive to get out of the difficult situation by executing different turnaround strategies such as

downsizing, elimination of loss making product lines, hiring of experts, restructuring, disposal of unproductive assets as well as improving the working capital cycle. Altman's Z-score is used to indicate the level of financial distress; whereby a firm with a score of less than 1.8 is considered to be financially distressed. The devastating effect of financial distress among firms listed in Kenya has been highlighted over and over again.

Altman's Z- score has been tested as valid way of forecasting the likelihood of financial distress in firms'. This is evident because of the many firms that have been placed under receivership, undertaking financial restructuring or being delisted from NSE altogether. According to Gebreslassie (2015), there was a significant relationship of Z-score and the predictors that had been used. He concluded that the model was applicable for forecasting distress on firms listed at the NSE his findings was similar to those of Atosh (2017) also supported the validity of the model in his work on Uchumi Supermarkets Limited. The Altman's Z-score is a useful measure for quick determination of the level of financial distress in an organization

1.1.3 Financial factors and Financial Distress

Financial distress is considered as a costly affair yet so vital in determining the optimal capital structure in an organization. It is termed costly due to the fact that it causes firms to perform acts that may harm the providers of capital and other parties like suppliers, employees and customers leading to impaired access to credit and increased stakeholder costs.

Liquidity, a key component in the success of any business is critical in the effective running of various segments of any business. Liquidity determines the ability of an organization to take immediate advantage of profitable investments. An organization that is adequately funded is in a better place to negotiate for better trade

terms as most suppliers would want to deal with it. Funding, therefore, is a prerequisite for success of organizations especially in a highly competitive market. Financial distress becomes evident when a firm is unable to honour the obligations when they become payable (Bony & Moniruzzaman, 2017)

Leverage is a measure of an organization's debt level. It is a financial ratio that indicates the debt level in a firm's capital structure. While research has shown that levered firms have a tax shield advantage compared to those that are not, management and those charged with governance of these firms must ensure that the firms are optimally leveraged to avoid the adverse effects of financial distress, which may lead to a reduction of shareholder's wealth. Non-Financial Indicators such as the age of the organization can also play a major role in financial distress of an organization (Ahmed, 2015).

Evaluating the capability of a company to remain a going concern in the foreseeable future is an area of concern to investors, auditors, creditors and other partners. Muigai (2016) employed the multivariate discriminant approach to financial distress prediction and concluded that increasing the level of financial leverage enhances financial distress in the firms. The significance of this issue has stimulated a lot of research concerning financial distress and formulation of various theories such as the Credit Risk. This theory asserts that a credit risk arises when a borrower does not repay the borrowed funds when they fall due and the lender is exposed to a potential loss due to default. Defaulting on settling obligations when they fall due is an indicator of financial distress, which leads to loss of value (Muchiri, Muturi, & Ngumi, 2016). Moreover Makini (2015) argues that distressed firms outperform those of financially sound firms because as many investors opt out in wake of distress earning per shares of

the firm will be high since profits will be attributable to low number of shares outstanding.

Kioko (2015) argued that financial distress factors are economic indicators, determinants and variables of financial distress that will affect performance of an organization as adopted by the current study. The study asserted that liquidity, profitability, leverage, firm's size, paying of dividends and quantified opinion are financial distress variables that measure a firm's performance (Khalid, 2017). Kariuki (2017) firms with low distress level are in a good position to do better in comparison to those firms with a high level of distress and therefore, a negative connection between performance and financial distress of firms develops. Kanyugi (2016) argued that financially distressed insurance companies contribute to contagion effect in the economy and negatively affect economic stability of other sectors in a country

1.1.4 Tier Two Commercial Banks in Kenya

Kenya's commercial banks are classified into three tiers based on their assets, deposits, capital and reserves; and number of loan accounts. Tier one (large) banks have a weighted composite index of 5% while Tier two (medium) banks are those with weighted index between 5% and 1%. Tier three (small) banks are the ones that have less than 1% of weighted index. As at 2017, there existed 8 Tier one banks (65.98 percent market share), 11 Tier two banks (26.10 percent market share) up from 26.0 percent market share in 2016; and 21 Tier three banks (7.92 percent market share) (CBK, 2017)

Peer Group	Weighted Market Share	No. of Institution	Total Net Assets, (Ksh. M)	Total Deposits, (Ksh. M)	Capital and Reserves (Ksh. M)
Tier one	65.98%	8	2,640,684	2,019,840	414,894
Tier two	26.10%	11	1,052,969	787,147	171,527
Tire three	7.92%	21	309,088	219,438	57,768
Total*	100.00%	40	4,002,741	3,026,425	644,188

* Charterhouse Bank under Statutory Management and Imperial Bank & Chase Bank under Receivership have been excluded

Table 1 Commercial Banks Market Share Analysis

The increase in share of the market of tier two banks from 26.0 % in 2016 to 26.10% in 2017 can be attributed to increase in the customer deposits between December 2016 and December 2017 (CBK Report, 2017). The CBK also highlighted that as at December 2017, tier two banks had a market share of 20.75%, total deposit of 26.01, asset size of 26.01% and capital and reserve size of 26.36%. The tier two commercial banks have experienced tremendous developments over the years coupled with financial crisis, mergers and acquisitions. There are a total of 13 tier two commercial banks in Kenya with Imperial bank and Chase bank experiencing financial and governance crisis and consequently were placed under receivership in 2015 and 2016 respectively.

1.2 Statement of the Problem

Perpetuity of life in firms is a key aspect and the companies are assumed to be going concerns while in operations. However, this may not be the reality since companies fail because of unanticipated issues and circumstances beyond the control of the firm (Duda & Schmidt, 2010). Gichuki, Njeru and Tirimba (2014) established that 3 out of 5 new firms in Kenya fail within their first few months of operation and that 80% out of those that continue operations after their first year end up failing before their fifth year. The Kenya Economic Report (2013) attributes the failure of firms in Kenya to financial distress factors.

In the last five years, Kenya's banking industry has been hit by serious bank runs and financial crisis (CBK, 2017). The general economic operations have been affected because of the failure of some of the financial institutions since the bank services are the lubricant of the economic activities and the industry is at the center of other industries and entire economy. This has resulted in falling of a number of banks such as Imperial and Chase Bank going under receivership (Udin & Javid, 2017). The falling and safety of banks in Kenya has been put to test as well as struggle of other financial institutions justifies the need to examine the effect of financial factors on financial distress especially among commercial banks in Kenya.

Memba and Abuga (2013) carried a study on financial distress causes and its effects on firms and concluded that financial distress is caused by poor capital decisions, poor internal management shortage of skilled labor and lack of access to credit. This study however failed to bring out how financial distress affects financial performance creating a conceptual gap. Mandi (2014) assessment using Z score model on Kenyan sovereign risk concluded that financial factors contribute heavily on firm's future direction. The focus of this study was on sovereign risk and not financial distress

hence a conceptual gap. Talian (2012) concluded that financial variables were more reliable when predicting financial distress in Kenya. The study also failed to bring out a link between financial distress and financial performance. Thus, from the aforementioned studies, it is clear that there exist gaps as some of the studies were carried out outside Kenya's context. To fill these gaps, the current study sought to determine the effect of firm financial factors on financial distress of tier two commercial banks in Kenya.

1.3 Objectives

1.3.1 General Objective

To establish the effect of financial factors on financial distress of tier two commercial banks in Kenya.

1.3.2 Specific Objectives

- i. To determine the effect of leverage on financial distress of tier two commercial banks in Kenya.
- ii. To assess the influence of liquidity on financial distress of tier two commercial banks in Kenya.
- iii. To establish the effect of firm size on financial distress of tier two commercial banks in Kenya.

1.4 Research Questions

- i. What is the effect of leverage on financial distress of tier two commercial banks in Kenya?
- ii. What is the influence of liquidity on financial distress of tier two commercial banks in Kenya?

- iii. How does the size of the firm affect the financial distress of tier two commercial banks in Kenya?

1.5 Scope

The study covered the 13 tier two commercial banks regulated by the CBK. The data collection covered a ten-year period from 2009 to 2018. The study focused on the financial distress factors that have been used by earlier scholars, and those consistent with available theories. Financial distress factors in this research included liquidity, leverage and firm size.

1.6 Significance

This study will be of significant value to several parties including commercial banks, investors, policy makers and other researchers as well.

1.6.1 Commercial Banks

Banks as well as other financial institutions can use the results of this study to gain deeper insight into financial factors and how they affect financial distress in the banks. They can then utilize this information to establish sound strategies that can prevent them from going under as well as put in place measures to monitor and safeguard the companies against financial distress.

1.6.2 Investors

The research findings will be valuable to potential investors seeking to understand how financial factors impacts financial distress of tier two commercial banks in Kenya. This will go a long way in informing their decisions on whether to invest and which banks to invest in.

1.6.3 Policy Makers

Financial sector policy makers will have a glimpse of the research that can help them come up with proper rules and regulations to manage financial distress among banks. Strong policies on financial management of banks and support systems for struggling companies will help evade situations leading to collapse of financial institutions.

1.6.4 Researchers

This study will help fill the knowledge gap that exists in the scholarly world. The literature generated can also act as reference material for future researchers providing suggestions to areas in financial distress that need further research.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

Literature review covers previous studies in the area of financial factors and financial distress as shown in the conceptual framework. It involves a review of theories advanced in the area of liquidity, leverage and firm size. Subsequent of the literature review, is a conceptual framework which forms the basis and linkages in establishing existing relationships amongst the key variables in this study. Empirical review of previous studies is used to identify the gap that exists in the research.

2.2 Theoretical Review

This section covered the theories that informed the study objectives. A theoretical review focuses on the theories that provide anchorage to the objectives of the study. The study was guided by three theories namely the tradeoff theory, liquidity preference theory and Wreckers theory of financial distress.

2.2.1 Trade off Theory

This theory was developed by Modigliani and Miller (1963) who argued that taxes favor debt over equity financing in firms. The theory states that optimal capital structure can be achieved by a firm that balances the benefits of interest tax shield against the costs of financial distress. Interest tax shield is believed to enhance the firm value though this happens at certain levels because increase in leverage increases the default risk leading to financial distress thus the benefits of interest tax shield get eroded by the increased costs of financial distress.

According to Eckbo (2008), an increase in financial distress costs leads to reduction in the optimal debt levels, levels in optimal debt also reduces with an increase

in non-debt tax shields while an increase in personal tax rate on equity increases the optimal debt levels. Increase in the marginal tax rate leads to decreased debt levels at the optimal capital structure (Eckbo, 2008). Corporations trade off their tax savings that are generated by deducting interest against the costs that are incurred in case of distress/bankruptcy. According to the trade-off theory, leverage has potential benefits to the firm due to tax savings associated with use of debt. However other studies have noted that with higher leverage, volatility of share prices increases with respect to private information; the ultimate fate of the firm depends on issues unknown to the general public (Nyamboga, Omwario, Muriuki, & Gongera, 2014)

Financial managers take the firm's debt equity decision as a trade-off between interest tax shields and the costs of financial distress. Companies that have a tangible assets and high levels of taxable income to shield are expected to have high target ratios while on the other side companies that are loss making and have intangible assets are highly risky and therefore may be forced to rely on equity financing. According to the trade-off theory, an organization should choose the debt ratio that maximizes firm value (Eckbo, 2008). Companies' capital structure decisions point towards a target debt ratio, where debt tax shields are maximized and bankruptcy costs associated with the debt are minimized. According to Myers (2001) debt offers a firm tax shield.

Profitable businesses use lower leverage if the Trade-off Theory is in force. According to the static Trade off Theory, it is likely that profitable firms would have more debt in their capital structure because of the interest tax shield that reduces the taxable profits. This shows that leverage and financial distress are related because for the firms that doesn't use leverage; they are more likely to enter into financial distress because they do not enjoy the interest tax shield. In regard to the firm's liquidity, the Trade-off Theory indicates that firms want to achieve the optimal level of liquidity in

order to balance off the costs of holding cash. These costs include low return rates on assets and tax benefits. There however exist benefits for holding cash that include saving n transactional costs, liquid assets used to finance investments and other activities whenever resources are unavailable or at times when the firm is going through financial distress.

The essence of the tradeoff theory is to offer an explanation of how the firm strives to maintain a balance between how much of the finances will be from debts and the equities. Equity is majorly drawn from the shareholders while debts are source of funds obtained from lending institutions. In choosing and deciding whether or not to use debts, an organization has an option of examining benefits accruing from the use of debts and the risk of debts including bankruptcy and the agency costs. This theory is used as alternative of the pecking order theory of capital structure of the firm. An increase in debt to equity ratio results into tradeoff between the benefits of using debts (interest tax shield) and the costs of bankruptcy in the event the firm fails to repay the borrowed funds and this is likely to raise the value of the firm. According to Raviv and Harris (1990), firms that generate more profits are characterized by high level of gearing ratios. On the other hand, firms with tangible and risky assets will leverage on the equity financing option hence the proportion of debts to equity is very low in such business entities.

Through inclusion of the imperfections in the market, the tradeoff theory argues that the firm is able to get an optimal value optimizing debt to equity ratio through trading off the advantages related with debts in proportion to the disadvantages. Thus, firms will have in place a target debt ratio put in place measures of ensuring that this target is attained. One of the premises by Modigliani and Miller (1958) was the idea of absence of taxes. However, the tradeoff theory is an improvement of the MM Theorem.

The theory can be useful in explaining how the firm can leverage on taxes in manipulation of profits while choosing an optimal level of debt. However, the use of debts in the capital structure is associated with advantages as well as disadvantages. First, the use of debts is associated increased risks of bankruptcy since the firm will have to repay the interest and the principal amount advanced by the lending firm. In the event that the firm does not manage to honor these obligations, it will be deemed as bankrupt. This can be serious because a bankrupt firm may end being placed under receivership and subsequent winding up proceedings (Brealey & Myers, 2003).

Most finance managers think that debt equity decision involve trading off between the costs of financial distress and the interest tax shield associated with the use of debts in the capital structure of the firm. Firms having tangible and safe assets in place are supposed to have higher target ratios. On the hand, firms that are unprofitable with intangible and risky assets should basically be financed by equity portion in their capital structures. In absence of the costs of adjustment of the capital structure, every firm should always remain at the target debt ratio. The tradeoff theory indicates that the management of an organization has a responsibility of choosing a debt ratio which result into maximization of the value of the firm hence the wealth of shareholders.

Therefore, the theory indicates that the capital structure decisions are informed by the target debt ratio where the firm strives to optimize or maximize the advantages related with the use of debts while at the same time minimizing the bankruptcy costs associated with the use of debts. This is premised on the fact that interest on debts is deductible before payment of taxes. According to Myers (2001), debts are so beneficial to an organization since they offer an interest tax shield. More specifically, the use of debts results into interest tax shield that optimizes the wealth of shareholders and the value of the firm in general. Therefore, firms strive to increase the level of debts so as

to gain greater advantages associated with the used of debts. However, this is risky because it may result into bankruptcy to the firm.

The static hypothesis contends that performance of the firm has an effect on the target debt ratio. In turn, this is reflected in the choice of securities that the firm issues and the observed debt ratio. The static tradeoff theory further indicates that a rise in costs related to financial distress is associated with a drop in the optimal level of debts. An increase in non-tax interest is associated with a reduction in the level of optimal debts. An increase in personal tax rates on equities is associated with an increase in the level of optimal debts. With the target or optimal capital structure, a rise in the marginal rate of the debts leads to a decrease in optimal debts. At the same time, risk has an ambiguous effect on use of debts as the assumption made is always that risk is distributed normally. The theory also give a prediction that firms generating more profits will have more debts so as to maximize the benefits associated with taxation hence increasing the available capital.

The tradeoff theory is among the widely embraced and recognizes theories of capital structure. The theory implies that the benefits from tax shield are offset by the agency costs and the cost of financial distress of the firm (Mostafa & Boregowda, 2014). Use of debts in the capital structure is closely related with the concept of leverage. The optimal level of leverage depends is established by striking a balance between payment of the interest amount and the benefits from issue of debts. In most cases, firms strive to choose a target capital structure which ensures that the value of the firm is maximized while the costs related with imperfections in the market are reduced. The theory is premised on the fact that every source of money has its own specific cost as well as related return and all these are directly linked with the earning potential and capacity of the firm, the solvency and business risks.

Therefore, a firm having more debt advantage will ensure that more debts have been issued in financing the operations of the business and the related costs of financial distress. The term bankruptcy costs refer to the direct costs that are incurred when there is a greater than zero probability of the firm defaulting on the borrowed funds from the lending institutions. One major form and type of bankruptcy cost is the cost of liquidation of the firm, this refers to the loss in value brought about by liquidation of the net asset of the firm. Another cost is the cost of financial distress; this is the cost that shall be incurred in the event that the stakeholders of the firm are sure that the firm will have its operations discontinued.

It is assumed that higher debts are associated with greater financial distress and ultimately bankruptcy in the firm. This way, the firm will be forced to liquidate its operations or even restructure the operations. It is therefore assumed that at optimal debt level, the costs of financial distress and the advantages from the tax shield are at equilibrium. As such, firms with high cost of financial distress would have low level of debts in their capital structures. Besides providing interest tax shield, there are several advantages associated with the use of debts in the capital structure. First, debts are an important device that has a signaling effect to the firm. Ross (1977) argues that efforts to increase the leverage of the firm are associated with the possibility of increasing the value of the firm. Secondly, the use of debts in the capital structure is associated with reduction in agency costs for instance the free cash flow problems (investments challenges and problems). Thirdly, the use of debts in the capital structure is associated with reduction in agency costs of the management as it acts as a mechanism for disciplining managers.

Despite the advantages, debts in capital structure are also associated with disadvantages. First, the managers acting in the interests of the shareholders may bring

about a shift in investment to assets that are too riskier and these costs are incurred by the debt holders. At the same time, managers may borrow even more and pay to shareholders and thus it is the debt holders that suffer most. Too many debts may bring about an underinvestment challenge commonly referred to debt overhand situation. This is because some good and viable investment proposals and projects may be by-passed because more debts cannot be issued at the right time due to an already existing debt.

Trade off Theory was useful in this study for assessing the effects of liquidity and leverage on financial distress. It explains how the levels of leverage and liquidity affect financial distress of Tier two Commercial Banks in Kenya. Whenever an organization take up debt, it trades off its freedom in making decisions that influence its profitability with debt constraints and this introduces the risk of financial distress that may lead to bankruptcy in cases where firms fail to repay their debts as scheduled (Anyanzwa, 2016)

2.2.1. Liquidity Preference Theory

The Liquidity Preference Theory was founded by Keynes (1936) who believed that money is the most liquid asset that can be easily converted to cash. He created this theory for the purpose of explaining the role of interest rate by the supply and demand of money. According to him, the demand for money is for transactions, precautionary or speculative. Under the transaction motive/demand, he states that most people prefer being liquid in order to cater for their daily expenses whereby the liquidity level depends on income levels; the higher the income, the higher the spending and the more the money needed to spend. In precautionary motive, the demand for liquidity is to cater for the unforeseen emergencies or expenses like accidents or health. The demand for the liquidity as well increases as the income increases. In speculative motive, money demand takes lead of the future changes of the interest rates and the bond prices. In his

argument about the theory, Keynes shows when the interest rate is high, the speculative demand for liquidity goes down while on the other hand, when the interest rates are low, the speculative demand for money goes up. Holding money is one way of guarding against uncertainty.

Money demanded for the three motives constitute demand for money which is the liquidity preference and this shows how much money people wish to keep at any given time. In regards to money supply, the higher the preference for liquidity, the higher the interest rate and vice versa; when the supply for money is high, the lower will the rate of interest be. As stated in Keynes argument, the interest rate is established by preference for liquidity and money supply. Money supply is determined by government and Central bank policies of any nation and consists of all the coins, notes and demand deposits with banks (Duda& Schmidt, 2010) According to the theory, the interest rate is seen as purely a monetary issue and therefore capital productivity has very little or no impact in determining the interest rate.

According to Baimwera and Muriuki (2014), the curve for the liquidity preference shifts are either upward or downward. This depends on the public interpretation of events and can also originate from a number of factors that can have consequences on the expected results. These factors can be independent of the increase or decrease in the amount of money held by the central bank. An event that leads the public to anticipate a higher interest rate in the future will lead to an increase in the liquidity preference for speculative motive and this would lead to an upward shift in the curve of liquidity preference for speculative motive leading to increased interest rate. When the liquidity preference speculative motive rises, the interest rate also goes up while the amount of money held remains constant. In this case, it is clear that Keynes described the interest rate in pure monetary terms without considering real forces like

capital productivity and thrift. In his terms, demand for money for speculative motive and money supply determine the rate of interest and also indicated that interest is not a reward for saving but for partying with liquidity. He also asserted that the rate of interest does not equalize investment and savings but this equality is brought about by changes in income levels.

The theory has come under criticism because it has been pointed and clearly proven that capital productivity and thriftiness are the real forces which play an important role in determining the rate of interest and therefore it is not purely a monetary policy. Cash balance for businesses are highly influenced by their demand for capital investments therefore the interest rate still depends on investment demand funds like Keynes shows in this theory thus the rate is determined in consideration of the marginal productivity of capital. The theory fails to explain the fact that different interest rates prevail at similar times as well as failing to appreciate that saving is a way of raising monies for investment. It does not also consider the long term effect of the interest rates.

The liquidity preference theory indicates that investors have a strong preference of short term as opposed to long term securities. Unlike short term securities, holding of long term bonds is cauterized by higher interest rates. This has an implication that yield curve will have upwards slope or gradient. It is worthwhile to note that as compared to short terms debts, long debt bonds are deemed to have more earnings because of a number of reasons; investors prefer short term securities as opposed to long term because they are easily liquid and one can easily convert them to cash without any danger of losing the principal amount. On the other hand, borrowers tend to react in reverse manner such that they have strong preference for long term debts as opposed to

short term debts. This is because the short term debts exposes borrowers to repay the loan under conditions that are adverse.

Commercial banks have two critical roles to play: risk transformation and the liquidity role. Examination of the liquidity role of the banks in strengthening the growth of economies has been an issue for a long period of time. Liquidity preference theory provides that banks create liquidity on balance sheet by ensuring that relatively illiquid assets are financed using relatively illiquid liabilities. Initially, it was acknowledged and believed that liquidity preference is equated to demand for money (Alemu, 2015) As such, whenever an individual had constant flow and degree for money, then, liquidity preference emerged as a factor in determining the interest rate in money markets.

Through the interest rate mechanisms, the Central Bank is able to set interest rates in the effort to control the prices of assets through the demand for money mechanisms. This study is supported by liquidity theory as it greatly emphasizes on importance of liquidity. However, the liquidity theory also acknowledges that on its own, liquidity does not give assurance of good performance evidenced by highly liquid companies like Imperial Bank going under receivership. This theory identifies other factors including capital adequacy and leverage that play a major role in the performance of a firm.

2.2.2. Wreckers Theory of Financial Distress

This theory was developed by Campbell, Hilscher and Szilagi (2005), it indicates that stocks of distressed organizations have inferior performance than stocks of organizations that are financially healthy. This theory sought to explain some of the benefits that stakeholders can derive from financially distressed organizations. In efficient markets, returns from stocks of financially distressed firms can reach equilibrium with stakeholders being able to draw returns from these companies. This

can occur when a firm overprices the market price to the expected cash flows to its shareholders. Participants are able to attain return in the form of non-cash when the firms have possibilities of heading towards bankruptcy. For organizations in the verge of bankruptcy, returns in form of cash are impossible; however they are paid out in a non-cash means. Efficient markets make returns to effectively show in the stock valuation. The process of withdrawing funds from already financially distressed firms in serious need of the funds is what is referred to as “wrecking”.

Campbell *et al.* (2005), tells a story of “profiting from a ship wreckage” looking at it in a different perspective. The team paints an illusion of an organization hit by a series of negative shocks, loss making and headed to a state of financial distress. Clients become more cautious as they fear just how long the firm will stay operational, suppliers choose to deal with firms they are certain payments will be made and disposable employees are let go while others will resign from fear of being associated with a falling brand. Further, unpaid creditors are forced to auction assets of the organization to recover the debt.

According to Daniel, Hirshleifer, and Subrahmanyam, (2010), in the stocks market, distressed organizations tend to underperform in comparison to other firms that are financially stable. This can be attributed to shareholders choosing to sell off their shares while they can still salvage some value. The motivation behind this is the desire and longing for the investors to move out before the company fails totally and the investors end up losing everything they had invested. If a financially distressed firm recovers, the shareholders are only likely to suffer the opportunity cost. However if the situation worsens, they may decide to withdraw their funds and reinvest in another company with attractive returns. The withdrawal of funds from an already distressed firm is what is termed as “wrecking”.

The theory gives reasons why securities from financially distressed firms underperform as compared to the securities that are sound financially. This is brought out by the fact that most investors decide to move out of the firm before it fails so that their investment is not lost. This act of withdrawal of funds from the already financially distressed firm is defined as ‘wrecking’ hence the name given to the theory. Studies indicate that firms that are in financial distress have to forego their share of the market share to their competitors who have healthy financial when there are downturns in the industry. Distressed firms most likely end up underperforming financially compared to the ones that are healthy financially (Cheluget, Gekara, Orwa, & Keraro, 2014) this theory supports the general concept under study in this research which is financial distress. It explains the process that a company goes through in its final stages before closure.

2.3. Empirical Review

The section shall review various empirical studies in view of the study variables. Empirical review is based on observed and measured phenomena and derives knowledge and conclusions from actual experience as opposed to theory or belief. This study shall empirically review what other scholars have measured and concluded about the study variables.

2.3.1. Leverage and Financial Distress

Leverage is a variable that examines the change effect of debt on the performance of the organization. It is defined as the use of various financial instruments or borrowed capital to increase the potential return of an investment. Firm’s performance is significantly affected by the changes in leverage and therefore financial companies ought to use their debt financing more efficiently to ensure that they maximize on their performance and return on investment (Saleh, 2015).

Jaafar, Muhamat, Alwi, Karim and Rahman, (2018) sought to examine financial distress in companies that are listed in stock exchange in Malaysia. Altman Z-Score Model was used in the study as a measurement indicator of financial distress. Panel data was employed for analysis in the 18 companies listed in Malaysia for an 8-year period between 2009-2016 using panel regression model. The findings revealed that leverage has a significant effect on financial distress.

Ufo (2015) examined the relationship between leverage and financial distress for firms in the manufacturing sector in Ethiopia. The period under study was between 1999 –2005. Random Effect technique was used and the General Least Square regression analysis method was employed for the study. The findings from this study showed that leverage has a significant but negative effect on financial distress. There was a recommendation from this study that the firms in the manufacturing sector should endeavour to minimize loans from the banks and use equity financing instead and ensure that debt capacity in their companies is optimal as well as ensuring improved cash collection. The study also commended on the need to reduce bad debt expenses for the purpose of maintaining short term cash problem.

Enekwe et al. (2014) sought to assess how financial leverage affected financial performance of selected firms in the pharmaceutical industry that are quoted in the Nigeria Stock Exchange. The study covered a 12 year period from 2001 and 2012. Ex-post facto research design was used for this study and the findings established that debt equity ratio and debt ratio have a negative relation with return on assets while a positive relationship exists between interest coverage ratio and ROA.

Nyamboga, Ongesa, Muriuki and Murimi (2014) examined the factors that contribute to financial distress among NSE listed non-financial firms, among them was leverage being a determinant of financial distress. The researchers used descriptive

research design and collected quantitative data mainly from the financial reports of 38 NSE listed companies. According to the research, leverage was revealed to have an insignificant association with financial distress; however, these findings are particularly true for non-financial companies as the research exempted all financial companies.

Mwaura (2014) sought to determine how capital structure affected the performance of companies that are listed in the NSE in Kenya. The researcher's target was the three companies that are in the investment sector of the market segment of the Nairobi Securities Exchange (NSE) as at June 2014. Time series and cross-sectional data were used in the study. Data for the variables was sourced from annual financial published by the listed investment companies for the years 2010 to 2013. For analysis, quantitative method of data and inferential analysis were used. Leverage has a negative impact on performance as per the findings.

Mwangi, Makau, and Kosimbei (2014) evaluated the association between the capital structure and performance of the non-financial companies listed at the NSE. Panel data of 42 listed non-financial companies between 2006 and 2012 was used to carry out Feasible Generalized Least Square (FGLS) regression. The research revealed that financial leverage contributes to a large extent to financial distress. Further, financial leverage showed a negative but statistically significant effect on performance.

Yegon and Koske (2018) conducted a study to determine the role of trading activity on the connection of financial leverage and the possibility of financial distress among listed firms in Kenya. The analysis considered a sample of 40 companies listed at the Nairobi Securities Exchange in Kenya for the period 2006- 2015. The study found a significant positive effect of leverage ($\beta=0.824$; $p < 0.05$), hence presence of moderating effects of trading activity on leverage. The findings show that trading activity accounted for a significant variance presents major contributions of this study

as they extend feedback theories. This is by centering the influence of trading activity on the empirical testing of feedback theory. This study recommended that firms should have reversion of excess debt to an optimum and initiate trading activity enhancing policies so as to lower the probability of financial distress.

2.3.2. Liquidity and Financial Distress

Liquidity refers to the ability of a firm to meet its obligations in the short term. It is a clear indicator of how working capital is managed and in extension the organization's performance. Liquidity determines the ability of an organization to take immediate advantage of profitable investments. An adequately funded organization is in a better place to negotiate for better trade terms as most suppliers would want to deal with it. Funding, therefore, is a prerequisite for success of organizations especially in a highly competitive market (Ikpesu & Eboiyehi, 2018).

Dang (2011) through an empirical analysis of financial distress, risks, financial performance and firm investment noted that adequate level of funding and liquidity was positively correlated to financial stability and improved financial performance. He concluded that high liquidity is advantageous to the organization's level of investment and improves the organization's growth opportunities and consequently reduced financial distress. Waswa, Mukras and Oima (2018) on the other hand estimated a random effects regression model which produced results suggesting that there is a negative relationship between liquidity and performance.

Roslan (2017) researched on the influence of liquidity, leverage, profitability, sales growth, and cash flow on financial distress in listed companies in the manufacturing sector in Malaysia. This research used logistic regression to evaluate the concept under study for the period between 2001 and 2014. The findings revealed a significant relationship between liquidity, leverage, profitability, sales growth and

corporate financial distress while cash flows are negatively significant with financial distress.

Cheluget, Gekara, Orwa and Keraro (2014) sought to assess financial distress in the insurance sector in Kenya. The target population of the research was 45 registered insurance companies from which a sample of 15 registered insurance companies was extracted. From the analysis findings, the study concluded that there exists a significant relationship between liquidity and financial distress with an $R^2 = .447$.

Ong'era, Muturi, Oluoch and Karanja (2017) assessed the association between liquidity and financial distress for the companies listed at the NSE. Descriptive research design was used with a population target of 65 listed companies listed. A logistic regression model revealed was used and upon evaluation, the findings show a significant relationship between financial distress and liquidity.

Kimathi (2015) sampled from twenty tier three banks was used and causal research design with the aim to analyze financial distress and profitability the banks. The research was conducted using secondary data sourced from the financial reports of the banks as well as other empirical studies. Multiple linear regression method was used for analysis and the findings proved that a positive but insignificant association exists between liquidity and performance of the banks. The study concluded that non-performing loans are most likely cause for financial distress among small banks in Kenya.

Masdupi, Tasman and Davista (2018) analyzed the relationship between liquidity, leverage and profitability on financial distress of companies that are in the manufacturing industry and listed in Indonesian Stock Exchange (ISE). All the listed manufacturing companies were the target population of the study. Purposive method of sampling selected the sample that resulted in a total of 118 companies. Logistic

regression was employed for data analysis and results showed that liquidity has a negative and significant influence on financial distress of listed manufacturing companies in the Indonesian Stock Exchange.

2.3.3. Firm Size on Financial Distress

Firm size of an organization is indicated by the total assets it owns at any given point in time. Larger companies have easy access to finance and the agency costs are also greater. It is therefore easier for them to increase the funds with lower costs and fewer constraints than the smaller companies. This shows that reliance on internally raised funds will decrease as the size of the company increases (Ike, 2012).

Rianti and Yadiati (2018) analyzed firm size influence on financial distress for companies in the agriculture sector registered in the stock market in Indonesia from 2012 to 2014. Using the Altman Z's Score, net profit margin, cash ratio, and natural logarithm, total assets were used as the proxy of financial distress and firm size. Purposive method of sampling was used and this led to 18 being used as samples in the research. Data from secondary sources was retrieved from the financial statements of the companies and Indonesian Capital Market Directory (ICMD). The results indicated that the size of the firm has an insignificant effect on financial distress.

Ikpesu and Eboiyehi (2018) sought to know the results of capital structure on financial distress in corporate manufacturing firms in Nigeria. The study employed panel corrected standard error (PCSE) technique. The results revealed negative effect of capital structure on corporate financial distress. On the other hand, profitability, company age and asset tangibility had a positive effect on corporate financial distress. Further, the findings show that firm size and growth had a negative effect on financial distress.

Wangige (2012) did a study to establish the causes of financial distress among companies listed at the Nairobi Securities Exchange (NSE) in Kenya. A causal design was used to study the 42 non-financial firms that are listed in the stock market. This study covered the years 2004 – 2012. Logit model was used to analyze the data that was obtained from secondary sources at the NSE and CMA and the findings revealed a negative non-significant relationship between financial distress and financial size.

Muigai and Muriithi (2017) analyzed the size of the firm as the moderating variable in the association of financial distress and capital structure of companies that are non- financial and are listed in the Kenyan stock market. Findings from the panel regression show that there is a significant moderating effect of the firm size that exist between capital structure and financial distress. Without the moderating variable, the relationship between financial distress and debt is negative though turns positive with the increase in the size of the firm. There is further revelation that the debt period matters in that a positive effect exists with long-term debts while a negative effect is experienced with short-term debt for large organizations.

Kariuki (2013) examined eleven NSE listed companies in an effort to find out the relation between performance of financial institutions and financial distress. Using the Altman's Z-score model to measure the financial distress and return on asset as an indicator of performance, the findings revealed a significant effect of financial distress on performance where negative performance existed. The researcher however failed to identify key financial distress contributors and how these factors affect performance of banks.

Kosikoh (2014) did a study to establish antecedents of financial distress in Kenya's Insurance Sector using profitability, liquidity, efficiency leverage and firm size as measurement indicators. Kosikoh (2014) argued that a positive association existed

between the variables of study. Inefficiency and under-liquidity came out clearly as the major causes of financial distress in the insurance industry.

2.4. Conceptual Framework

According to Shapira (2011), conceptual framework is defined as a tool used to organize empirical observations in a meaningful form and structure. Childs (2010) stated that a conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation.

With proper articulation, conceptual framework is very useful to the researcher since it helps in making meaning of subsequent findings. It forms part of the agenda for negotiation to be scrutinized, tested, reviewed and reformed as a result of investigation and it explains the possible connections between the variables (Durham & Stokes, 2015). A conceptual framework for the present study shows the effect of financial factors on financial distress of tier two commercial banks in Kenya and has been depicted in Figure 2.1 below. Figure 2.1 conceptualizes that financial distress factors (leverage, liquidity and firm size) influence on financial distress for tier two commercial banks in Kenya.

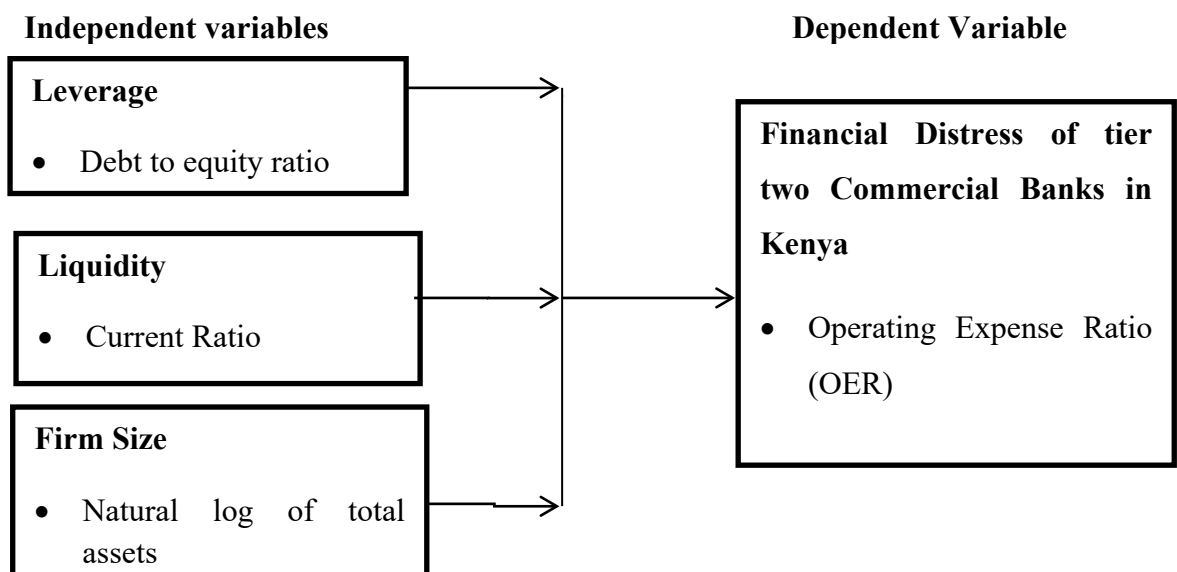


Figure 2.1: Conceptual Framework

2.4.1. Leverage

Leverage is a variable defined by the use of borrowed capital to increase the potential return of an investment (Zeitun & Saleh, 2015). The researchers argued that changes in leverage also have a significant effect on firm's performance and financial distress; financial firms should use their debt financing more efficiently in order to maximize their returns and performance. The increase of debt financing during the financial crisis period implies that the debt financing makes firms more susceptible to refinancing risks and borrowing at higher costs which in turn decreases their performance (Zeitun & Saleh, 2015)

The current study used debt to equity ratio to measure leverage. Debt to equity ratio for tier two commercial banks is determined by total liabilities divided by total equity and reflects the company's ability to meet its obligations, which is indicated by what proportion of equity capital is used to pay the debt. This ratio is used to determine what portion of any equity capital is used as collateral for overall corporate debt or to assess the amount of debt used by the company. A higher ratio indicates that more debt is used compared to equity or investor financing which may be a sign of financial distress. The higher the ratio, the more the financial distress in the firm. A lower debt to equity ratio usually implies a more financially stable business. This ratio was used in this study since banking industry uses this ratio very frequently in their credit appraisal. Banks normally keep a provision of margin money to maintain this ratio and check the seriousness of the owners towards the business.

2.4.2. Liquidity

Liquidity is one of the key financial stability indicators given that its shortage in one bank causes systemic crisis in the banking sub-sector due to interconnectedness. Liquidity held by commercial banks reflects their ability to fund increases in assets and

meet their obligations (CBK, 2015). Mwangi (2013) noted that liquidity is a bank's capacity to fund increase in assets and meet both expected and unexpected cash and collateral obligations at reasonable cost and without incurring unacceptable losses.

According to Kosikoh (2014), liquidity ratios measure the ability of a company to pay its short-term debt obligations. Examples of financial ratios include; current ratio, quick ratio and working capital as percentage of sales. The difference between these ratios is the type of current asset used. Stakeholders will normally prefer larger ratios of liquid assets to short term debt since it is an indication that the firm can pay off its short-term debts and still fund its operations. Average liquidity ratios of healthy firms are higher than those of financially distressed firms (Kosikoh, 2014)

This study shall measure liquidity by use of current ratio calculated by Current Assets divided by Current liabilities. This ratio is the most liquid assets scaled by current liabilities, if a firm runs out of cash and cannot secure financing it will fail (Renato, 2010). The current ratio is considered superior compared to other liquidity ratios since it helps in measuring the financial health of a company. When a company records a current ratio of more than one, it indicates that the company is in good health in term of liquidity. A ratio of less than one means that there must make a swift decision to salvage the situation.

2.4.3. Firm Size

Some studies have revealed that larger firms are more likely to suffer financial distress due to their high appetite for debt financing. Other studies have shown that smaller firms are susceptible to financial distress due to their inability to access credit. There are several ways of determining the firm value; market capitalization, total assets, natural log of sales and natural log of total assets. This study shall use the natural log of total assets to determine the relationship between firm size and financial distress since

not all the tier two commercial banks are listed in the stock exchange and therefore may pose a challenge in determining the market value of the shares (Baimwera & Muriuki, 2014)

2.4.4. Financial Distress

This study used operating expense ratio (OER) and net worth turnover ratio (NWTR) to measure financial distress factor. OER will be determined by dividing total operating expenses by Total revenue/ gross Income. A lower OER means that the company is stable (Jeong & Phillips, 2001) High ratio indicates that a company could be funding its operations with a disproportionately high amount of debt which increases the risk of bankruptcy (Kosikoh, 2014).

Table 2.1: Operationalization of Variables

Variable	Proxy	Method of Computation
Leverage	Debt to Equity Ratio	$LEV = \frac{\text{Total Liabilities}}{\text{Shareholders Equity}}$
Liquidity	Quick Ratio (Current ratio)	$LIQ = \frac{\text{Current Asset}}{\text{Current Liabilities}}$
Firm size	Natural log of total assets	$OS = \text{Natural log total assets}$
Financial distress	Operating expense ratio (OER)	$OER = \frac{\text{Total operating expenses}}{\text{Gross income}}$

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter reviewed the study methodology including research design. It also discussed the population and sample of the study, sources of data and the collection instruments employed in the study, data processing and analysis and ethical considerations.

3.2. Research Design

A research design is a road map that guides how the entire study will be conducted. It is critical in ensuring the researcher does not deviate from the main objective of the study (Shukla, 2010). A research design is a framework that guides the study and goes a long way to determining how one collects and analyze data (Creswell & Creswell, 2017). A research design is a framework that dictates the entire process of achieving research objectives (Yin, 2017). The study adopted a causal cross-sectional design.

Ghuri and Gronhaug (2005) defined causal research as research that has both the cause and effects with the main task being to isolate the causes and attempt to conclude the extent of these causes. Causal research design helps to establish the cause and effects of the relationship between independent variables and dependent variable. Cross-sectional descriptive research design according to Cooper and Schindler (2011) gives an account of the way things exist in their original state. It tries to answer questions about how? Why? What? and When? According to Cooper and Schindler (2011), this research design presents a snap manifestation of variables in a large number of subjects at one point in time. Wiersma (1985) observes that, a descriptive cross-sectional design is concerned with gathering of facts or obtaining pertinent and precise

information concerning the current status of a phenomenon and where possible, draws possible conclusions from the facts obtained.

3.3. Target Population

Target population refers to the complete cluster of objects to which a researcher intends to generalize the findings or outcomes of the study (Mugenda & Mugenda, 2003). The term population is used to refer to all items and elements which are line with some established threshold of the study (Burn, 2003). Hewing (2011) consider population as the set of unit used in sampling that form the basis of the study. Kothari (2004) view the term population as set of items in the universe within given inquiry fields. Borg and Gall (2007) opine that the term target population refers to members of either hypothetical or real set of individuals that play an important role as far as generalization of the findings is concerned.

The target population for this research comprised the 13 tier two commercial banks in Kenya. According to Central Bank of Kenya (CBK), in 2017, there were 13 tier two commercial banks as compared to 14 in 2014 due to some merging and others being dissolved. Out of the 13 banks, the study will be carried out on 11 of them because Chase and Imperial banks were placed under receivership from the year 2016 and thus their financial data was not available for all the years under study. This shall be a census study and therefore no sampling shall be needed.

3.4 Data Collection Instrument

The study used secondary data obtained from annual audited financial reports, journals, and publications as well as websites of firms studied. Financial information of a ten-year period between 2009 and 2018 was collected. The data collected was quantitative in nature. Data for the study was annual since financial reports are usually published on a yearly basis. Secondary data was collected on the variables of the study. The period

(2009-2018) was selected because it is the most recent where data was readily available. Secondary data unlike primary data was used because the nature of the study variables dictated that. Secondary data was collected from publications by the Central Bank of Kenya (CBK) and published financial statements of the covered banks.

3.5 Data Collection Procedure

Data collection procedure describes the process that the researcher will follow in sourcing data from the sample population to be used for data analysis (Mugenda & Mugenda, 2003). For this research, data was collected from secondary sources including annual financial results published in the companies' websites, from the regulatory body (CBK) and from previous empirical studies. Information was collected for a ten-year period between 2008 and 2018.

3.6 Data Processing and Analysis

Panel regression analysis was conducted using STATA version 14. The model to be used is as follows;

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \epsilon_{it} \dots \dots \dots (i)$$

Fixed Effect Models (FEM) will be:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_i + \epsilon_{it} \dots \dots \dots (ii)$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \lambda_t \epsilon_{it} \dots \dots \dots (iii)$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \lambda_t + \mu_i + \epsilon_{it} \dots \dots \dots (iv)$$

Random Effect Models (REM) will be:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \epsilon_i + \epsilon_{itm} \dots \dots \dots (v)$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \omega_{it} \dots \dots \dots (vi)$$

Where $\Omega_{it} = \epsilon_i + \epsilon_{it}$

Where;

ϵ_{it} = Error term

μ_i = fixed effect

ϵ_{it} = error term

μ_i = between entity error term

ϵ_{itm} = within entity error term.

Where

Y = Financial distress of tier two commercial banks in Kenya

X₁ = leverage

X₂ = liquidity

X₃ = firm size

3.7. Diagnostic Tests

The study carried out the following diagnostic tests on the data.

3.7.1. Multicollinearity

Multicollinearity refers to a situation in which two or more explanatory variables in a multiple regression model are highly linearly related. In order to check multicollinearity in the three variables, the study checked on the interconnection among these factors. Multicollinearity occurs when these factors are highly correlated with the value of r being more than 0.8. If the degree of correlation between variables is high it can interfere with the interpretation of regression results. Multicollinearity can increase standard errors and result in changes in the signs as well as in the magnitudes of the

regression coefficients. In addition, multicollinearity makes it difficult to accurately explain the variations in the dependent variables that are caused by the independent variables. The multicollinearity test was carried out under Pearson correlation and the output explained in chapter four.

3.7.2. Hausman test

The Hausman test is used to determine the appropriate multivariate model to adopt between the fixed effect model and the random effect model. This test examines for the presence of correlation between unique errors and repressors. According to Bell and Kelvyn (2015), Hausman test examines whether the unique errors are correlated with the repressors and the null hypothesis is that unique error is not correlated while the alternative hypothesis is that unique error is related. If null hypothesis is accepted then the preferred model is random effects otherwise use the fixed effects model. When the p value is less than 0.05 we reject the null hypothesis and conclude the alternative hypothesis (Baltagi, & Liu, 2016).

3.7.3. Breusch-Pagan Lagrange multiplier (LM) test

Heteroscedasticity (panel effect) is the presence of dependence between the variance of the errors from regression and the values of the independent variables over time. Heteroscedasticity is a serious problem for panel regressions as it causes the estimates to be inconsistent since the models are usually estimated using cross-sectional. This study shall use the Breusch-Pagan test to detect presence of any form of heteroscedasticity and select the preferred model for the study between the pooled effect model and the random effect model. The null hypothesis in the LM test is that there is no significant heteroscedasticity (no panel effect) and therefore the variances are zero, as a result, random effect should not be used. While the alternative hypothesis is that random effect should be adopted (Bell & Kelvyn, 2015).

3.8. Ethical Consideration

Research ethical guideline considerations in any study are quite key and this were well adhered to in this research. Collected information was stored and used with confidentiality and utilized for the purpose of the education only and therefore not revealed to any other party with need to carry out a similar study. The researcher obtained a valid official research letters from NACOSTI and University to seek consent for the research

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

The chapter presents the findings on the data that was collected on the variables including liquidity, size and leverage. The chapter begins by providing the general description of the study objectives and the necessary regression analysis tests that were carried out. Once data was collected, it was entered into excel spread sheets for cleaning up before being entered into the Stata version 14 for analysis. The analysis of the findings was done with the help of descriptive and inferential statistics. The specific descriptive statistics included means and standard deviations while the inferential statistics included regression analysis.

4.2 Descriptive Statistics

The descriptive statistics included means and standard deviation that are collectively referred to as measures of central tendency and dispersion. The findings are shown in Table 4.1.

Table 4.1: Descriptive Statistics

. xtsum Leveragedebttoequityratio LiquidityCurrentRatio SizeLogofAssets NTWR OER					
Variable	Mean	Std. Dev.	Min	Max	Observations
Levera~o overall	95.40402	280.4887	1.198105	1214.878	N = 110
between		280.4887	1.198105	1214.878	n = 110
within		0	95.40402	95.40402	T = 1
Liquid~o overall	.4886066	.180041	.144	.96	N = 110
between		.180041	.144	.96	n = 110
within		0	.4886066	.4886066	T = 1
SizeLo~s overall	8.016643	.5900916	7.128828	9.800735	N = 110
between		.5900916	7.128828	9.800735	n = 110
within		0	8.016643	8.016643	T = 1
NTWR overall	.7582812	.4651165	.1427627	4.324187	N = 110
between		.4651165	.1427627	4.324187	n = 110
within		0	.7582812	.7582812	T = 1
OER overall	5.704503	17.04184	.1422884	72	N = 110
between		17.04184	.1422884	72	n = 110
within		0	5.704503	5.704503	T = 1

As indicated in Table 4.1 above, most of the tier two banks in Kenya have an average leverage of 95.40, liquidity of 0.488, operating expense ratio of 5.704 and size of 8.01. Leverage is maximum at 1214.874 while operating expense rate is minimum at 0.1422. The highest value of standard deviation was 280.40402 that represented leverage while the lowest value of standard deviation was 0.180041 as shown by liquidity. Thus, there was little spread in the variables of the study. The lowest minimum value was 0.142 as shown by operating expense ratio while the highest value was 7.128828. The highest maximum value was 1214.878 with the lowest value standing at 0.96.

A number of implications can be drawn from the findings in Table 4.1. First, it can be inferred that most of the tier two banks are financed by more debts as compared to equity as supported by a relatively high level of leverage. This assertion is in line with the trade-off theory where Modigliani and Miller (1963) who argued that taxes favor debt over equity financing in firms and that optimal capital structure can be achieved by a firm that balances the benefits of interest tax shield against the costs of financial distress.

From the findings, it can be deduced that most of the financially distressed banks in Kenya have a large proportion of current assets as compared to current liabilities as supported by a low value of liquidity. This observation is supported by the liquidity preference theory which acknowledges that on its own, liquidity does not give assurance of good performance evidenced by highly liquid companies like Imperial Bank going under receivership.

Lastly, it can be interpreted that majority of the banks in Kenya have an adequate asset base as explained by a large value of firm size. This finding is in line

with Ike (2012) who indicated that firm size of an organization is indicated by the total assets it owns at any given point in time. The CBK highlighted that as at December 2017, tier two banks had asset size of 26.01% and capital and reserve size of 26.36%.

4.3 Trend Analysis

The study used a graph to depict the movement in the variables over the time horizon. This was represented by the independent and the dependent variables of the study.

4.3.1 Independent Variables

The findings of trend analysis on firm size, liquidity and leverage as the independent variables of the study are as presented in Figure 4.1.

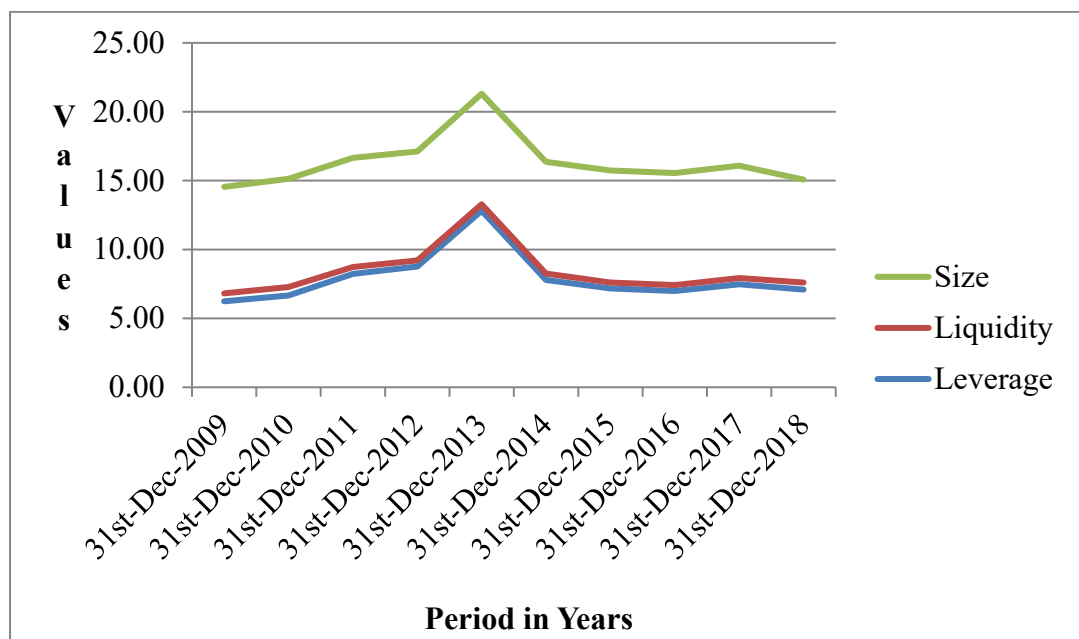


Figure 4.1: Trend Analysis on Independent Variables

Saleh (2015) defines leverage as the use of various financial instruments or borrowed capital to increase the potential return of an investment. In this study, leverage was measured as a ratio of debt to equity. As shown in Figure 4.1, there was generally stability in leverage among the tier two commercial banks across the study period. However, the year 2013 had the highest leverage of 12.81 while 2009 had the least

value at 6.24. This can be interpreted to mean that the operations of tier two banks are financed by both debts as well as equities. The debts and equities are used in almost an equal proportion hence bringing about stability in leverage as depicted in Figure 4.1 above. The findings are consistent with Saleh (2015) who established that a firm's performance is significantly affected by the changes in leverage and therefore financial companies ought to use their debt financing more efficiently to ensure that they maximize on their performance and return on investment.

Ikpesu and Eboiyehi (2018) define liquidity as the ability of a firm to meet its obligations in the short term and it is a clear indicator of how working capital is managed and in extension the organization's performance and stability. Liquidity was the second independent variable of the study and it was measured by current ratio. The findings of the trend analysis on liquidity are indicated in Figure 4.1. From the results, liquidity moved with an increasing trend across the study period of consideration. The findings also indicate that there was stability in liquidity among the tier two banks over the study period. There was however a drop in the level of liquidity for the years 2015 and 2016 which could be attributed to passing of the interest capping legislation which has pushed most of the banks to reduce lending particularly to the private sector and invest in government bonds thus reducing the liquidity levels. The finding agrees with Dang (2011) who concluded that high liquidity is advantageous to the organization's level of investment and improves the organization's growth opportunities and consequently reduced financial distress. Roslan (2017) revealed a significant relationship between liquidity, leverage, profitability, sales growth and corporate financial distress while cash flows are negatively significant with financial distress.

Ike (2012) opines that firm size of an organization is indicated by the total assets it owns at any given point in time and that larger companies have easy access to finance

and the agency costs are also greater. In this study, firm size was measured by the natural logarithm of the asset base of the respective tier two banks. Figure 4.1 reports the findings of trend analysis. From the findings, firm size generally moved on an increasing trend over the period under consideration of the study. This trend in firm size could be attributed to most tier two banks opening up more branches across the country hence increasing their assets thus the market size and share. For instance, as of the end of 2016, Family Bank had plans to open up 100 new branches across the country. According to CBK report for 2017, the combined market share of tier two commercial banks increased from 26.0 percent in December 2016 to 26.10 percent in December 2017. On the contrary, Rianti and Yadiati (2018) analyzed firm size influence on financial distress for companies in the agriculture sector registered in the stock market in Indonesia from 2012 to 2014 and indicated that the size of the firm has an insignificant effect on financial distress. Ikpesu and Eboiyehi (2018) showed that firm size and growth had a negative effect on financial distress. Wangige (2012) revealed a negative non-significant relationship between financial distress and financial size. Muigai and Muriithi (2017) showed that there is a significant moderating effect of the firm size that exists between capital structure and financial distress.

4.3.2 Operating Expense Ratio (Dependent Variable)

Operating Expense Ratio (OER) was used to operationalize financial distress as the dependent variable of the study. The finding of trend analysis on this variable is shown in Figure 4.4.

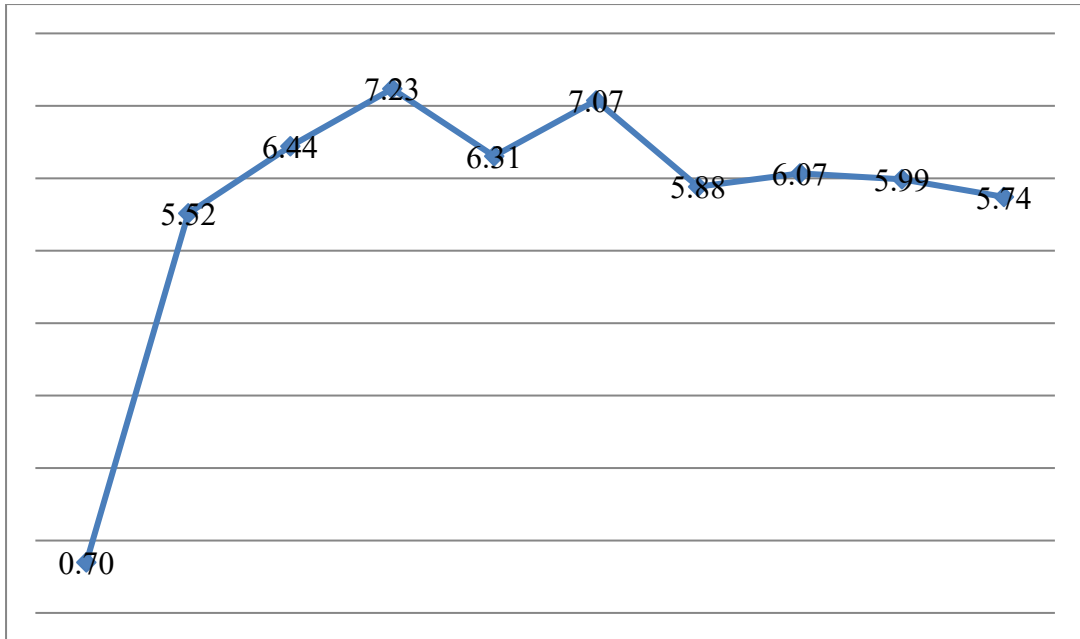


Figure 4.2: Operating Expense Ratio

From Figure 4.2, there was generally an increase and stability in operating expense ratio among the studied firms across the period of consideration. Sharan (2011) classified financial distress into two broad categories; financial failure and economic failure. Economic failure is occasioned when an organization has higher cost of capital than the income it generates, that is, it is operating at a loss but does not liquidate.

4.4 Diagnostic Tests

Diagnostic tests were carried out before regression analysis. This was meant to test and ascertain whether regression model has followed the regression assumptions.

4.4.1 Test for Heteroskedasticity

The findings for heteroskedasticity test are shown below:

```
. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of Leveragedebttoequityratio

chi2(1)      =      3.02
Prob > chi2  =      0.0820
```

Table 4.2: Test for heteroskedasticity

The p-value $p > 0.05$ therefore we fail to reject the null hypothesis and conclude that there is no heteroskedasticity in the data set.

4.4.2 Test for Multicollinearity

VIF stands for Variance inflation factor. When the degree of multicollinearity increases, the estimates for the model become unstable and easily inflate the standard errors. When a variable has a VIF value above 10, it may warrant further investigation. From the table below, the mean VIF is $1.16 < 10$ therefore multicollinearity does not exist and the coefficients are stable.

```
. vif
```

Variable	VIF	1/VIF
LiquidityC~o	1.24	0.807478
SizeLogofA~s	1.19	0.838233
OER	1.05	0.949642
Mean VIF	1.16	

Table 4.3: Test for Multicollinearity

4.4.3 Test for Linearity

It was assumed that a linear relationship existed between the variables. From the table below, this is confirmed a linear relationship is in existence

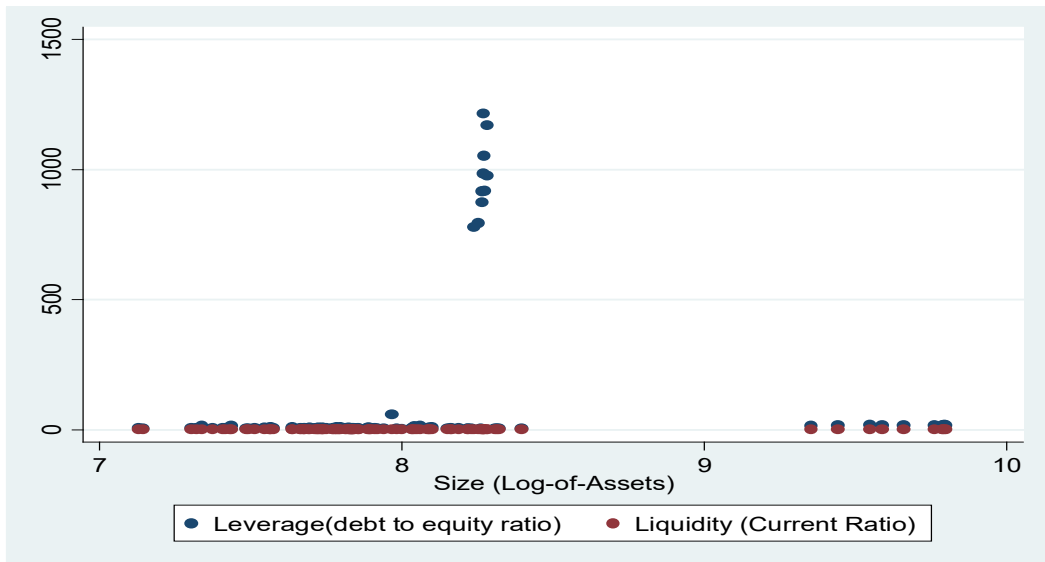


Figure 4.3: Test for Linearity

4.4.4 Test for Normality

Normality test was determined by using the histogram as shown in Figure 4.4.

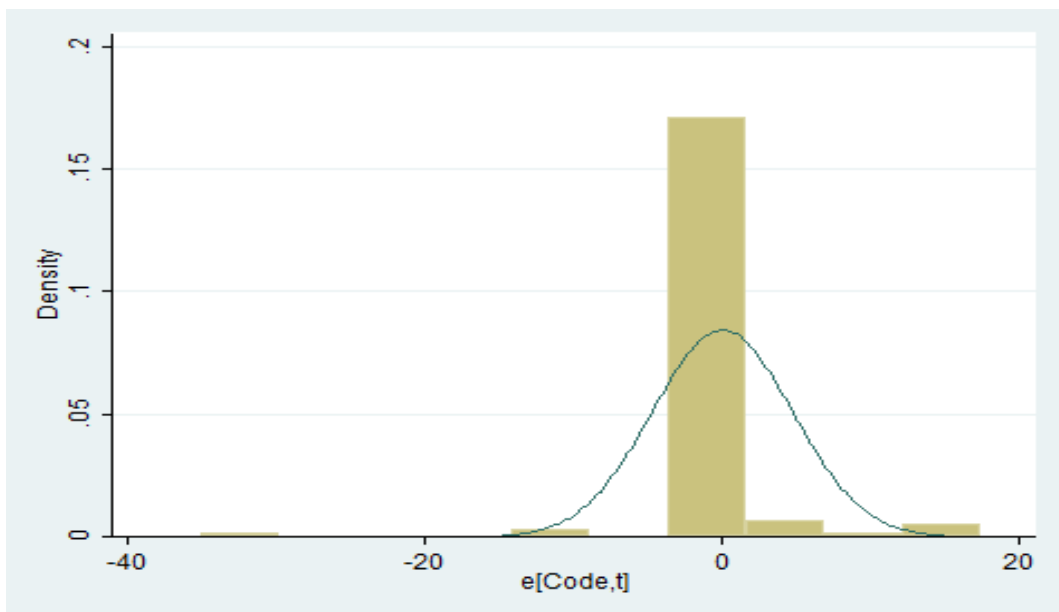


Figure 4.4: Test for Normality

As shown in Figure 4.4, the data set observed a normal distribution since the histogram falls within the bar graph. Hence, there was normality in the data that was used in the study.

4.4.4 Hausman Test

```

. hausman fixed random

      _____ Coefficients _____
      (b)          (B)          (b-B)      sqrt(diag(V_b-V_B))
      fixed       random      Difference      S.E.
-----+-----+-----+-----+-----
Leveragede~o    -.0829625    .0550572    -.1380197    .0113807
LiquidityC~o     1.304155    -2.618048     3.922203     .
SizeLogofA~s     .2423809    -1.1007641     .3431451    2.442915

      b = consistent under Ho and Ha; obtained from xtreg
      B = inconsistent under Ha, efficient under Ho; obtained from xtreg

      Test: Ho: difference in coefficients not systematic

      chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
              = 147.09
      Prob>chi2 = 0.0000
      (V_b-V_B is not positive definite)

```

Table 4.4: Hausman test

The Hausman test is used to determine the appropriate multivariate model to adopt between the fixed effect model and the random effect model. This test examines for the presence of correlation between unique errors and repressors. According to Bell and Kelvyn (2015), Hausman test examines whether the unique errors are correlated with the repressors and the null hypothesis is that unique error is not correlated while the alternative hypothesis is that unique error is related.

When the p value is less than 0.05, we reject the null hypothesis and conclude the alternative hypothesis is better. Thus, since the p-value is less than 0.05 (0.00), we reject the null hypothesis and use the fixed effects model.

4.5 Fixed Effect Regression Results

Fixed effect regression model findings are shown in Table 4.5.

Table 4.5: Fixed Effect Regression Results

	Coefficient	Std. Err.	t	P> t	95% Conf.	Interval
Leverage	-	.0116	-7.09	0.0	-	-
Age	.082962	.964		0.0	.1061	.0597
					.796	.453
Liquidity	1.30415	4.012	0.33	0.7	-	9.268
					6.660	.593
					.284	
Size	.242380	2.789	0.09	0.9	-	5.778
					5.293	.547
					.785	
Constant	11.0391	22.68	0.49	0.6	-	56.06
					33.99	.857
					.025	

R-sq:

Within = 0.3471

Between = 0.9996

Overall = 0.8069

F (3, 96) = 17.01

corr(u_i, X_b) = -0.9888 Prob > F = 0.0000

From the findings, the overall model is significant in determining the effect of financial factors on financial distress of tier two commercial banks in Kenya. This is because the P Value is 0.000 which is less than 0.05. The value of F calculated at degrees of freedom (3, 96) is 17.01 which is 2.699. Thus, it is evident that F calculated is more than F critical; this means that the overall FE regression model of the study is

significant. The coefficient of determination under the Fixed Effect (FE) model is 0.8069; this means that 80.69% change in financial distress of tier two banks is explained by financial factors.

Based on the findings in Table 4.3, the following regression equation is formulated;

$$Y_{it} = 11.03916 - 0.0829625X_{1it} \dots\dots\dots (ii)$$

Where Y_{it} = Financial Distress and X_{1it} = leverage

Thus, when all the variables of the study were held constant, a unit change in leverage would result into reduction in financial distress by 8.29625%. At 5% level of significance, leverage with a p-value $p=0.000 < 0.05$ has negative and significant effect on financial performance. Mwangi, Makau, and Kosimbei (2014) evaluated the association between the capital structure and performance of the non-financial companies listed at the NSE and revealed that financial leverage contributes to a large extent to financial distress. Further, financial leverage showed a negative but statistically significant effect on performance. Yegon and Koske (2018) established a significant positive effect of leverage ($\beta=0.824$; $p < 0.05$), hence presence of moderating effects of trading activity on leverage. The finding is in line with Ufo (2015) showed that leverage has a significant effect on financial distress. Enekwe et al. (2014) established that debt equity ratio and debt ratio have a negative relation with return on assets while a positive relationship exists between interest coverage ratio and ROA. The findings are consistent with Jaafar, Muhamat, Alwi, Karim and Rahman, (2018) revealed that leverage has a significant effect on financial distress. Nyamboga et al. (2014) revealed that leverage was revealed to have an insignificant association with

financial distress. Mwaura (2014) sought to determine how capital structure affected the performance of companies that are listed in the NSE in Kenya and revealed that leverage has a negative impact on performance as per the findings.

On the other hand, liquidity ($p=0.746>0.05$) and size ($p=0.931>0.05$) all have insignificant effect on financial distress. Ong'era, Muturi, Oluoch and Karanja (2017) assessed the association between liquidity and financial distress for the companies listed at the NSE and a significant relationship between financial distress and liquidity. The $R^2 = .359$, meaning that 35.9% variance is explained by liquidity. Kimathi (2015) proved that an insignificant association exists between liquidity and performance of the banks. Both liquidity and size have positive beta coefficients, implying that they have no direct relationship with financial distress. Masdupi, Tasman and Davista (2018) analyzed the relationship between liquidity, leverage and profitability on financial distress of companies that are in the manufacturing industry and listed in Indonesian Stock Exchange (ISE) and showed that liquidity has a negative and significant influence on financial distress of listed manufacturing companies in the Indonesian Stock Exchange. Kariuki (2013) examined eleven NSE listed companies in an effort to find out the relation between performance of financial institutions and financial distress and revealed a significant effect of financial distress on performance where negative performance existed.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the analyzed findings of the study on the basis of the objectives. The summary is used to draw conclusions and recommendations. The areas for further studies are also presented.

5.2 Summary of the Findings

The general objective of the study is to establish the effect of financial factors on financial distress of tier two commercial banks in Kenya. The specific objectives of the study were; to determine the effect of leverage on financial distress of tier two commercial banks in Kenya, to assess the influence of liquidity on financial distress of tier two commercial banks in Kenya and to establish the effect of firm size on financial distress of tier two commercial banks in Kenya.

Three theories provided anchorage to the study namely; the liquidity preference theory, trade off theory and the Wreckers theory of financial distress. The study adopted a causal research design and data was gathered from secondary sources and the time horizon was from 2009 all through to 2018. The analysis of the collected was conducted using Stata 14 software. The analysis of the findings was conducted using both Fixed Effect Regression Models.

5.2.1 Leverage and Financial Distress

The study sought to determine the influence of leverage on financial distress of tier two commercial banks. Leverage was measured by debt to equity ratio of the tier two commercial banks. From the FE model, leverage had a negative beta coefficient which

means that it has a negative effect on financial distress. The findings of FE model further indicated that leverage has significant effect on financial distress. Thus, based on the FE model, leverage has a significant effect on financial distress.

5.2.2 Liquidity and Financial Distress

The second objective of the study was to determine the effect of liquidity on financial distress of tier two commercial banks. In this context, liquidity was operationalized and measured as current ration that is the values of current assets against the current liabilities of the tier two banks. The findings on FE model further indicated that liquidity has an insignificant effect on financial distress.

5.2.3 Firm Size and Financial Distress

The study sought to establish the effect of firm size on financial distress of tier two commercial banks in. Firm size was operationalized as the natural logarithm of the total assets of the studied tier two banks. The findings of the FE model indicated that firm size has an insignificant effect on financial distress.

5.3 Conclusion

5.3.1 Leverage and Financial Distress

The study sought to determine the influence of leverage on financial distress of tier two commercial banks. Based on the FE model, leverage has a significant effect on financial distress. The conclusion is supported by the tradeoff theory which explains how the levels of leverage affect financial distress of Tier two Commercial Banks in Kenya. Whenever an organization take up debt, it trades off its freedom in making decisions that influence its profitability with debt constraints and this introduces the risk of financial distress that may lead to bankruptcy in cases where firms fail to repay their debts as scheduled. This means that there is need for the tier two commercial banks to

exercise caution when it comes to leverage because a highly leveraged bank is more likely to enter into financial distress since the results indicate that the higher the debt levels, the higher the risk of entering into financial distress.

5.3.2 Liquidity and Financial Distress

The second objective of the study was to determine the effect of liquidity on financial distress of tier two commercial banks. From the FE model, liquidity has an insignificant effect on financial distress. This conclusion is supported by the Liquidity preference theory that acknowledges that on its own, liquidity does not give assurance of good performance evidenced by highly liquid companies like Imperial Bank going under receivership. This means that a bank could be highly liquid and still find itself in a financial distress because liquidity does not significantly affect financial distress. Thus, it can be documented that the study was inconclusive in regards to the relation between liquidity and financial distress.

5.3.3 Firm Size and Financial Distress

The study sought to establish the effect of firm size on financial distress of tier two commercial banks in Kenya. It can further be concluded that firm size has an insignificant effect on financial distress under the FE model. It can therefore be concluded that the study was inconclusive on the relationship between firm size financial distress.

5.4 Recommendations of the Study

The study found out that leverage has significant effect on financial distress of tier two banks. Based on this finding, the study recommends that commercial banks should strike a balance between the debts and equities in their capital structures since these are important components of leverage. Banks should not place a lot of emphasis on debts as

too much of this would result into bankruptcy which is broadly referred as financial distress. From the study results, the tier two commercial banks should endeavour to keep the leverage at manageable levels to ensure that they don't get into financial distress.

The Central Bank of Kenya should increase its vigilance on commercial banks by enforcement of the regulations of CAMEL (Capital Adequacy, Management Efficiency, Earning Management and Liquidity) which are important measures of financial soundness of the banking industry.

5.5 Limitations of the Study

The method used to establish if financial distress exists was purely on ratios that are derived from financial statements of the banks under study. The researcher assumed that the audited annual reports give a true and fair view of the financial position of the tier two commercial banks. It is a concern that most companies manipulate their accounts to ensure that they have reported positive earnings so as to portray a positive image about the firm and therefore the accounts may not necessarily show the true position of the banks under study. This makes the ratio analysis method of determining financial distress uncertain.

The research applied descriptive research design to collect and analyze data for the period of ten years. This design was appropriate in explaining the relationship between the financial firm factors and financial distress of tier two commercial banks. There are however other research designs that can be used by researchers while carrying out related studies like exploratory and cross sectional research designs.

5.6 Areas for Further Studies

The current study focused on tier two commercial banks in Kenya. Future studies should cover other banks in the different existing tiers and across the East Africa region. The study looked at financial factors and how they influence financial distress. From the FE models, the coefficients of determination R square was 80.69% This has an implication that apart from the studied financial factors, there are other factors with an effect on financial distress which future studies should focus on.

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APPENDICES

APPENDIX I: DATA SHEET

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Independent Variables											
Leverage	Debt to asset ratio										
Liquidity	Quick ratio										
Company size	Natural log of total asset										
Dependent Variable											
Financial Distress	Operating Expense Ratio (OER)										

APPENDIX II: CLASSIFICATION OF BANKS

Peer Group	Weighted Market Share	No. of Institution	Total Net Assets, (Ksh. M)	Total Deposits, (Ksh. M)	Capital and Reserves (Ksh. M)
Tier one	65.98%	8	2,640,684	2,019,840	414,894
Tier two	26.10%	11	1,052,969	787,147	171,527
Tire three	7.92%	21	309,088	219,438	57,768
Total*	100.00%	40	4,002,741	3,026,425	644,188
* Charterhouse Bank under Statutory Management and Imperial Bank & Chase Bank under Receivership have been excluded					

Table 1 Commercial Banks Market Share Analysis

APPENDIX III: LIST OF TIER TWO COMMERCIAL BANKS IN KENYA

1. Family Bank Limited
2. National Bank of Kenya Ltd
3. NIC Bank Kenya PLC
4. Bank of Africa Kenya Limited
5. Stanbic Bank Kenya Limited
6. HFC Limited
7. Prime Bank Ltd
8. Ecobank Kenya Limited
9. Bank of Baroda (Kenya) Ltd
10. Bank of India
11. Citibank N.A Kenya
12. Imperial Bank
13. Chase Bank