THE EFFECT OF SIZE ON THE FINANCIAL PERFORMANCE OF DEPOSIT TAKING MICRO FINANCE INSTITUTIONS AND COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

This research project is my original work and has not been presented for award of a degree in any University.

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DEDICATION

This thesis is dedicated to my father, who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my mother, who taught me that even the largest task can be accomplished if it is done one step at a time.
ACKNOWLEDGEMENTS

There are a number of people without whom this research project might not have been done, and to whom I am greatly indebted.

To my mother, Paschalia, who continues to learn, grow and develop and who has been a source of encouragement and inspiration to me throughout my life, a very special thank you for providing a ‘writing space’ and for nurturing me through the months of research. And also for the myriad of ways in which, throughout my life, you have actively supported me in my determination to find and realise my potential, and to make this contribution to our world.

Loving thanks to my friends and learning partners, Charles, Mary, Julie and Lorna, who played such important roles along the journey, as we mutually engaged in making sense of the various challenges we faced and in providing encouragement to each other at those times when it seemed impossible to continue. I offer my gratitude and appreciation to my supervisor, Herick Ondigo, for the deft ways in which you lovingly challenged and supported me throughout the whole of this work. Most of all thanks to God the Divine who continues to make the impossible be possible.
ABSTRACT
Microfinance is the provision of financial services to the poor people with very small business or business projects (Marzys, 2006). Only a small fraction of the world population has access to financial instruments, essentially because commercial banks consider the poor people as unbankable due to their lack of collateral and information asymmetries. According to Ledgerwood, micro-finance is the provision of financial services (generally saving and credit) to low income clients.

Since the Microfinance Act 2006 became operational in 2008 nine Micro-finance institutions (MFIs) have transformed to Deposit Taking Microfinance Institutions (DTMs). The purpose of this study is to assess the factors that are affecting the financial performance of these DTMs since they transformed. There are nine DTMs and forty four Commercial banks licensed in Kenya and which are regulated by Central bank of Kenya. The period under consideration for this research project is 2008 to 2012. During this period secondary data will be obtained from academic sources and financial statements submitted to Central Bank of Kenya(CBK).

Regression analysis using Statistical Program for Social Scientists (SPSS) computer software will be applied to show the relationship between the independent variables and the dependent variables under consideration.
Table of Contents

DECLARATION .................................................................................................................................................. ii

DEDICATION ..................................................................................................................................................... iii

ACKNOWLEDGEMENTS ................................................................................................................................. iv

ABSTRACT ....................................................................................................................................................... v

List of Abbreviations ....................................................................................................................................... 1

List of Tables .................................................................................................................................................... 2

CHAPTER ONE ............................................................................................................................................... 3

INTRODUCTION ........................................................................................................................................... 3

1.1 Background of the Study .......................................................................................................................... 3
   1.1.1 Size ...................................................................................................................................................... 4
   1.1.2 Financial Performance ......................................................................................................................... 5
   1.1.3 Effect of Size on Financial Performance ............................................................................................. 6
   1.1.4 DTM's and Commercial Banks in Kenya .............................................................................................. 6

1.2 Research Problem ..................................................................................................................................... 8

1.3 Objective of the Study ............................................................................................................................... 10

1.4 Value of the Study ................................................................................................................................... 10

CHAPTER TWO .......................................................................................................................................... 11

LITERATURE REVIEW .................................................................................................................................. 11

2.1 Introduction ............................................................................................................................................... 11

2.2 Theoretical Review .................................................................................................................................. 11
   2.2.1 Modigliani and Miller Irrelevance Theory .......................................................................................... 11
   2.2.2 Trade-off Theory ................................................................................................................................. 12
   2.2.3 Pecking Order Theory ........................................................................................................................ 13

2.3 Measures of Financial Performance ....................................................................................................... 13
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTM</td>
<td>Deposit Taking Micro-Finance Institution</td>
</tr>
<tr>
<td>MFI</td>
<td>Micro-Finance Institution</td>
</tr>
<tr>
<td>MM</td>
<td>Modigliani and Miller</td>
</tr>
<tr>
<td>MP</td>
<td>Market Power</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
</tr>
<tr>
<td>ROE</td>
<td>Return on Equity</td>
</tr>
<tr>
<td>ROI</td>
<td>Return on Investment</td>
</tr>
<tr>
<td>CBK</td>
<td>Central Bank of Kenya</td>
</tr>
</tbody>
</table>
List of Tables

Table 4.1 ......................................................................................................................... 22
Table 4.2 ......................................................................................................................... 23
Table 4.3 ......................................................................................................................... 23
Table 4.4 ......................................................................................................................... 24
Table 4.5 ......................................................................................................................... 24
Table 4.6 ......................................................................................................................... 25
Table 4.7 ......................................................................................................................... 25
Table 4.8 ......................................................................................................................... 26
Table 4.9 ......................................................................................................................... 26
Table 4.10 ...................................................................................................................... 27
Table 4.11 ...................................................................................................................... 27
Table 4.12 ...................................................................................................................... 28
Table 4.13 ...................................................................................................................... 29
Table 4.14 ...................................................................................................................... 29
Table 4.15 ...................................................................................................................... 30
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study
Microfinance is the provision of financial services to the poor people with very small business or business projects (Marzys, 2006). Only a small fraction of the world population has access to financial instruments, essentially because commercial banks consider the poor people as unbankable due to their lack of collateral and information asymmetries. According to Ledgerwood microfinance is the provision of financial services (generally saving and credit) to low income clients.

Microcredit, or microfinance, is banking the un-bankable, bringing credit, savings and other essential financial services within the reach of millions of people who are too poor to be served by regular banks, in most cases because they are unable to offer sufficient collateral. In general, banks are for people with money, not for people without. Microcredit plays an important role in fighting the multi-dimensional aspects of poverty. Microfinance increases household income, which leads to attendant benefits such as increased food security, the building of assets, and an increased likelihood of educating one’s children. Microfinance is also a means for self-empowerment. It enables the poor to make changes when they increase income, become business owners and reduce their vulnerability to external shocks like illness, weather and more.

Kenya is one of the developing countries of the world and like so many of such countries it struggles with a great part of its population living below the poverty line; according to World Bank data for year 2011 for Kenya 45.6% of her population live below the poverty line. Such people are very poor and they cannot access the main stream financial services. There are many unregulated MFIs in Kenya but in order for them to meet the needs of the many Kenyans who need loans but have no title deeds the government felt it needed to regulate them so that they can have access to commercial funds and hence be able to reach many more clients. It is with such a background that Kenya embraced Microfinance as a tool that had proved quite effective in improving the living standards of people especially in Bangladesh through the initiative of Professor Yunus and Grameen Bank. In the Grameen Bank villages, for instance, 76% of
participants who have taken no loans or only one loan are below the poverty line, compared to only 57% of those who have taken five or more loans (Khandker & Chowdbury, 1996).

1.1.1 Size
Firm size represents a contingent factor that falls into the category of organization characteristics. Smith et al. (1989) noted that organization size has long been an important macro variable in the organizational literature. According to Woodward (2005), the best indication of ‘‘bigness’’ is the size of the management group. Firm size are commonly measured by gross sales or gross value of assets (Kettinger et al., 2004), number of employees (Aiken et al., 2006; Hoque and James, 2000; Merchant, 2011), and sales turnover (Hoque et al., 2001).

Reinhard's (1983) oligopoly model suggests that size is positively related to a firm's ability to produce technologically complicated products which in turn leads to concentration. Such markets are supplied by few competitors and are therefore, more profitable. Thus, larger firms have access to the most profitable market segments. The empirical relationship between a firm's size, structure, and profitability has found that size is positively correlated with profitability, with the profit rate of the market positively correlated with the concentration ratio and negatively correlated with the marginal concentration ratio (Collins & Preston, 2009). Collins and Preston, (2009) show that the positive association between firm size and profitability stems from implementing greater differentiation and specialization strategies and should therefore lead to higher efficiency. Further studies also suggest that larger firms are able to leverage on economies of scale (Montgomery, 2010; Sidhu and Bhatia, 2008).

The larger firms are able to produce the same goods more cheaply because they have achieved more learning and greater cumulative experience and they are able to spread their fixed costs over a greater amount of production. In relation to market power, larger firms can extract premium profits because of their influence upon the industry. They are better able to bargain for more favorable factor costs and can more easily influence the price and quality standards for their goods. Similar to the argument advanced by Bowman suggested that quality management is able to achieve the dual goals of higher market share and higher profitability (Abreu and Mendes, 2001).
1.1.2 Financial Performance

Financial performance measurement in all sectors of the economy is a growing phenomenon worldwide. Increasingly many questions are being raised in its effectiveness in achieving the objective of improving performance. Performance measurement focuses on the metrics used to determine how an organization is performing. According to Lye, (2004) and Thomas (2007), the objective of financial performance measurement is performance improvement, learning and change. The argument then is if performance measurement results obtained are not used as a tool for positive improvements in performance, then it defeats the purpose of developing measures of performance.

Every investment must have some type of economic justification to provide top management and shareholders with financial information. It enables the managers and investors to know the financial soundness of the investments. A popular economic calculation for the benefits of an investment is Return on Investment (ROI). Alinean (2002) observes that ROI ratio should be greater than zero is necessary for a program to be economically attractive. Calculating the ROI on various options will help to ensure that you select the most cost effective technology. Historically, ROI has been applied to large public works projects with societal benefits that are more difficult to quantify than “hard” technology costs. According to Phillips and Stone (2002) ROI is one of the commonly used measurements metric among many business firms especially the small and medium enterprises.

Uniformity with other business measurement metrics, return on investment is also a measure favored by investors when judging how effective management has been in utilizing company assets they have invested in. Concepts of net present value and internal rate of return are best understood within the academic community and seldom conveyed in a company's financial reports to investors. However, ROI is a tool for making business decisions by companies and for analyzing investment results by investors. No other measures have the advantage and serve the dual purpose as well as return on investment (Phillips and Stone, 2002).
1.1.3 Effect of Size on Financial Performance

This is the Market-Power (MP) hypothesis. The hypothesis argues that the effect of a growing size on firms’ profitability is significantly positive to a large extent (Athanasoglou et al., 2005). Kwan and Eisenbeis (2005) suggest that the difference in profitability among large and small firms is due to production technologies and outputs, which vary across them. The relative efficiency hypothesis (Clarke, 1984) presupposes that larger firms (where size is measured by assets) are more efficient than smaller ones, and are more profitable as a result of this superior efficiency.

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

1.1.4 DTMs and Commercial Banks in Kenya

In 2006 Kenya passed Microfinance Act in order to enable Microfinance institutions to transform into regulated microfinance institutions referred to as DTMs. This of course led to the transformation of unregulated MFIs to regulated ones so that they could collect deposits and savings from customers and on lend the same to those who needed small loans. The first two institutions to transform were Faulu Kenya and Kenya Women Finance Trust. These were then followed by SMEP, Uwezo, and REMU. Some transformed from unregulated MFIs while other were incorporated as DTMs. The pace of transformation has been slower than expected because
by December 2010 22 (twenty two) institutions had expressed an interest to become DTMs but to date only 9 (nine) DTMs are registered.

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

The concept of Microfinance has developed over time and a review of literature will show the stages through which Microfinance institutions have developed and how they have affected people especially those at the bottom of the pyramid. There has been growing interest in Microfinance as its importance as a way of alleviating poverty emerged. It has become necessary to study the performance of microfinance institutions in a bid to make them more sustainable so that they can reach out to more poor people. DTMs are in the business of giving micro loans to micro entrepreneurs.

Researchers on the other hand came up with recommendations that microfinance institutions should transform to regulated MFIs so that they could have access to commercial funds and thus reach more poor people. This would as stated earlier meet two important development aspects. On one hand provide micro loans to the poor and secondly be a profitable business venture for the providers of the loans. The 1990s “saw accelerated growth in the number of microfinance institutions created and an increased emphasis on reaching scale” (Robinson, 2001, p.54). Dichter (1999, p.12) refers to the 1990s as “the microfinance decade”. Microfinance had now turned into an industry according to Robinson (2001). Along with the growth in microcredit institutions, attention changed from just the provision of credit to the poor (microcredit), to the provision of other financial services such as savings and pensions (microfinance) when it became clear that the poor had a demand for these other services (MIX, 2005).
The demand for loans and other financial instruments became so much that the providers could not meet them. They needed more sources of funds in order to meet the needs. However, they needed funds at rates that when they loaded their own margin their customers could be able to accommodate. Such sources would be customer deposits and savings. Thus, regulation came in because the government needed to ensure that if an institution collected people’s savings and deposits these would be protected and the customers would not be at risk of losing all their savings while at the same time encouraging the microfinance institutions to offer their services because studies had shown this industry was quite important in poverty eradication.

The importance of microfinance in the field of development was reinforced with the launch of the Microcredit Summit in 1997. The Summit aims to reach 175 million of the world’s poorest families, especially the women of those families, with credit for the self-employed and other financial and business services, by the end of 2015 (Microcredit Summit, 2005). More recently, the UN, as previously stated, declared 2005 as the International Year of Microcredit.

1.2 Research Problem

The relationship between firm size and financial performance remains unclear. It is generally argued that big firms possess economies of scale (Montgomery, 1979; Sidhu & Bhatia, 1993) and better access to capital markets (Hall & Weiss, 1967) to achieve lower costs and higher returns. However, the opposing view from strategic perspectives suggests that bigger firms are mired with increased coordination requirements and bureaucratization, thus making the managerial task more difficult (Downs, 1967). Scholars such as Kaen and Baumann (2003) have concluded that profitability bears no relation to size measured by the number of employees. They found that firms of a given size are measured by sales and assets and number of employees such that the fewer the employees, the more profitable the firm.

MFIs provide similar products and services to their customers as formal sector financial institutions. The scale and method of delivery differ, but the fundamental services of savings, loans, and insurance are the same therefore there should be no significant difference between the financial performance of DTMs and commercial banks and if DTMs are lagging behind banks then their management should be concerned and relook at the way they are doing things with a
view to improve and correct what could be going wrong. The locally owned commercial banks recently have experienced a unique trend with Equity bank which was a micro finance institution performing better and expanding quickly as opposed to larger multinational banks like Barclays bank and Standard Chartered having a lower profitability and their market share being taken away by Equity Bank, Kenya Commercial Bank and Co-operative bank.

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

Karimi & Maru (2003) state the institution must look at Micro-Finance primarily as a profitable business and not as a social commitment. Clients must also understand that microfinance is a financial service and not a government/donor funded loan or some social service that the micro finance institution is providing. Otherwise, the staff in the micro finance institution will not be serious about loan collection, and the clients will not be serious about repayment. This statement is known to all in the microfinance industry therefore this study will endeavor to find out whether the DTMs are indeed taking this advice seriously and hence being as profitable as commercial banks if not even more so. MFIs which are grappling with the dilemma as to whether to transform to DTMs, or to Banks or remain as unregulated can use the study to guide them in making up their minds which way to go. The study intends to answer the question: What is the effect of size on the financial performance of deposit taking micro finance institutions and commercial banks in Kenya?
1.3 Objective of the Study
To establish the effect of size on the Financial Performance of Deposit Taking Micro Finance Institutions and Commercial Banks in Kenya

1.4 Value of the Study
Central bank of Kenya as the regulator of Banks and DTMs can use the study to make policy changes that can be implemented in order to assist DTMs to do better and be more profitable so as to attract more investors and hence enable them reach more of the unbanked. Reaching the unbanked is a major vision 2030 goal and eradicating poverty. The importance of DTMs in fighting poverty cannot be underscored, therefore, effective than Banks therefore it would be in the interest of the government of Kenya to create an enabling environment for DTMs. The Management of DTMs can use the study to make changes in their operations so that they can improve their performance.

Entrepreneurs especially those coming from the financial services sector who would like to start a business and would consider starting a DTM either a regional one or a community one since the capital is only 60 or 20 million respectively. Finally the study is carried out to increase the academic wealth on financial performance of DTMs as these financial institutions are becoming very important in the economic development of many countries.

The findings of this study will be of interest to the management of the commercial banks who will be able to determine the policies of interest rate spread that should be favourable to the commercial banks and liaise with government for the better performance of the economy. Scholars and academicians also may wish to use the findings of this study as a basis for further research on this subject.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction
Literature review provides important experience from all over the world on the subject matter of the research project. This chapter is intended to provide a summary compilation of background information and international experiences on Microfinance performance and the various factors that have affected its performance.

2.2 Theoretical Review
The relationship between size and the financial performance of banks is of concern to bank managers and to other stakeholders. According to Brewer (2003), the banking management have to weigh the potentially beneficial effects of size and financial performance and viability against the possible detrimental impact on consumer welfare. Based on this consideration, the study paid particular attention to the delicate balance between size and financial performance. The theories forming guiding principles are trade off theory, pecking order theory and MM theory which give more insight into this.

2.2.1 Modigliani and Miller Irrelevance Theory

Modigliani and Miller (1958) argued that capital structure is irrelevant to the value of a firm under perfect capital market conditions with no corporate tax and no bankruptcy cost. This implies that the firm’s debt to equity ratio does not influence its cost of capital. A firm’s value is only determined by its real asset, and it cannot be changed by pure agency costs of debt include the opportunity costs caused by the impact of debt on the investment decisions of the firm; the monitoring and bond expenditures by both the bondholders and the owner manager; and the costs associated with bankruptcy and reorganization. Since both equity and debt incur agency costs, the optimal debt-equity ratio involves a tradeoff between the two types of cost. Jensen and Meckling (1976) introduced two types of conflicts that are a major source of agency costs and
these are: agency costs that arise due to the conflicts of interest between managers and shareholders and agency costs that arise as a result of the conflicts of interest between shareholders and debt holders. The subsequent discussions present shareholders-managers conflicts and shareholder-bondholder conflicts in an orderly manner.

This kind of conflict stems from the separation of ownership and control. If managers do not own 100% of the firm, they can only capture a fraction of the gain earned from their value enhancement activities but they need to bear the entire costs of these activities.

2.2.2 Trade-off Theory

The trade-off theory argues that firms generally prefer debt for tax considerations. Profitable firms would, therefore, employ more debt because increased leverage would increase the value of their debt tax shield (Myers 1984). In addition to the tax advantage of debt, agency and bankruptcy costs may encourage highly profitable firms to have more debt in their capital structure. This is because highly profitable firms are less likely to be subject to bankruptcy risk because of their increased ability to meet debt repayment obligations. Thus, they will demand more debt to maximize their tax shield at more attractive costs of debt. For these considerations, the trade-off theory predicts a positive Relationship between leverage and profitability.

According to trade off theory, firm size could be an inverse proxy for the probability of the bankruptcy costs. Larger firms are likely to be more diversified and fail less often. They can lower costs (relative to firm value) in the occasion of bankruptcy. Larger firms are more likely to have higher debt capacity and are expected to borrow more to maximize the tax benefit from debt because of diversification (Titman and Wessels (1988)). Therefore, size has a positive effect on leverage. Size can be regarded as a proxy for information asymmetry between managers and outside investors. Large firms are subject to more news than small firms because the investment community would be more concerned with gathering and providing information about large firms. This makes large firms more closely observed by analysts and less subject to information asymmetry than small firms. Thus, they should be more capable of issuing equity which is more sensitive to information asymmetry and have lower debt (Rajan and Zingales, 1995). This
suggests that pecking order theory predicts a negative association between leverage and the size of firm.

2.2.3 Pecking Order Theory

The trade-off theory predicts a positive relation between tangibility and debt levels. As the value of intangible assets disappears (almost entirely) in the cases of bankruptcies, the presence of tangible assets is expected to be important in external borrowing as it is easy to collateralize them. Tangible assets often reduce the costs of financial distress because they tend to have higher liquidation value (Titman and Wessels 1988; Harris and Raviv 1991). Pecking order theory of Myers and Majluf, (1984) conclude that issuing debt secured by property, avoids the costs associated with issuing shares. This suggests that firms with more collateralized assets (fixed assets) will be able to issue more debt at an attractive rate as debt may be more readily available. This results in a positive association between leverage and tangibility. Therefore, it is expected that there is a positive relationship between tangibility and leverage ratio. Given agency and bankruptcy costs, there are incentives for the firm not to utilize the tax benefit of debt within the static framework model. Firms with high earnings volatility face a risk of the earnings level dropping below their debt servicing commitments, thereby incurring a higher cost of financial distress. Accordingly, these firms should reduce their leverage level to avoid the risk of bankruptcy.

2.3 Measures of Financial Performance

In Indonesia, a study was conducted that compared the performance of Bank Rakyat Indonesia a regulated MFI with formal Indonesian banks during the financial crisis and they found out that the MFI did better. In this study though the performance of DTMs will be compared with Commercial banks to find out which ones are doing better. There are many factors that can be used to measure and compare financial performance of a business. Such factors can be used to measure performance of a DTM and even of a bank. DTMs and banks both are in the business of lending out money in the form of loans and providing other financial services. There are
profitability and efficiency parameters that can be applied measure. These parameters include Return on Equity, Return on Assets, Asset Quality, Yield on Portfolio,

2.3.1 Return on Equity

\[ \text{ROE} = \frac{\text{Profit Before Tax}}{\text{Share Holders Funds}} \]

These indicators measure the DTMs net income in relation to the structure of its balance sheet. It is a ratio of the revenue earned less expenses incurred to earn that revenue. In DTMs and Banks most of the revenue is earned from interest on loans and the expenses are mostly in relation to cost of providing the loan such as interest paid on loans that the institution borrows in order to on-lend to its customers. Shareholders Equity is capital provided by owners of the institutions. Where the shareholders are willing to invest a lot of money into the institution then such funds can be loaned out and since equity does not attract interest then it can be very cheap funds for on-lending. DTMs being regulated can easily attract investors as shareholders since they are confident they will not lose their investment because the DTM is regulated. This is a measure that can be applied both to Banks and is a suitable parameter for comparison.

2.3.2 Return on Assets

An indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

The formula for return on assets is:

\[ \text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}} \]

Note: Some investors add interest expense back into net income when performing this calculation because they would like to use operating returns before cost of borrowing.
ROA tells you what earnings were generated from invested capital (assets). ROA for public companies can vary substantially and will be highly dependent on the industry. This is why when using ROA as a comparative measure, it is best to compare it against a company's previous ROA numbers or the ROA of a similar company.

The assets of the company are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the company is earning more money on less investment. For example, if one company has a net income of $1 million and total assets of $5 million, its ROA is 20%; however, if another company earns the same amount but has total assets of $10 million, it has an ROA of 10%. Based on this example, the first company is better at converting its investment into profit. When you really think about it, management's most important job is to make wise choices in allocating its resources. Anybody can make a profit by throwing a ton of money at a problem, but very few managers excel at making large profits with little investment.

This will also be a useful ratio to compare DTMs with banks since they are in the same industry only targeting different markets and it will be interesting to find out which one of the two is creating more income from what shareholders have invested in the institution.

2.3.3 Portfolio Yield

Portfolio yield is a percentage (%). It shows the average gross returns as a proportion of the portfolio outstanding. Generally speaking, Portfolio Yield is the initial indicator of an institution's ability to generate revenue with which to cover its financial and operating expenses.

\[
\text{Portfolio Yield} = \frac{\text{Interest on Loans}}{\text{Average Outstanding Loan}}
\]

Portfolio Yield measures how much the Microfinance Institution (MFI) actually received in interest payments from its clients during the period. It also provides an insight into portfolio quality. If the MFIs use cash accounting here, the Portfolio Yield will not include the accrued
(interest and fee) income that delinquent loans should have generated, but did not. For Portfolio Yield to be meaningful, it must be understood in the context of the prevailing interest rate environment the MFI operates in.

Goldstein (1996) stated that determinants of commercial banks performance can be grouped into two categories, namely internal and external factors. Internal determinants of profitability, which are within the control of bank management, can be broadly classified into two categories, i.e. financial statement variables and non-financial statement variables. While financial statement variables relate to the decisions which directly involve items in the balance sheet and income statement; non-financial statement variables involve factors that have no direct relation to the financial statements. The examples of non-financial variables within this category are number of branches, status of the branch (e.g. limited or full-service branch, unit branch or multiple branches), location, size of the bank and number of branches. Haron, Sudin (2004), stated that external factors are those factors that are considered to be beyond the control of the management of a bank. Among the widely discussed external variables are competition, regulation, concentration, market share, ownership, scarcity of capital, money supply, Interest rate spread, and inflation size.

2.4 Empirical Review
Essentially, firm size comprises structure of individual firms’ influences their profitability. Shareholder, managerial decisions and activities can directly impact to these structures; hence, they differ from company to company. They include capital size, size of deposit liabilities, size and composition of credit portfolio, market share among others (Athanasoglou, 2011). Smirlock (2011) not only believed that market share influenced profitability but that growth in the market created more opportunities for a bank and thus generated more profits. His findings indicated that growth had a significant positive relationship with profits.

Naceur and Goaied (2011) advocated that best performing banks are those who have maintained a high level of deposit accounts relative to their assets. Naceur (2010) agree that well-capitalized banks face lower need for external funding and lower bankruptcy and funding costs hence this advantage translates into better profitability. According to Bashir (2009), loans generate revenue
through interest and increase bank profits implying to improved profitability. Heggested and Mongo (2006) alleged that a bigger market share means more power to the bank in controlling the prices and services it offers to ties customers hence adverse profit.

Investigating on the determinants banks’ performances, Naceur and Goaied (2009) indicated that the best performing banks are those who struggle to improve labour and capital productivity and those who are able to reinforce their equity. Bourke (2009), Abreu and Mendes (2007) and Naceur (2010) agree that well-capitalized banks face lower need to external funding and lower bankruptcy and funding costs; and this advantage translates into better profitability. Therefore, researchers widely posited that the more capital a firm has, the more resistant it will be to failure as it is in position to make more profit through investment (Uche, 2008).

Short (2009) believed that some banks might sacrifice current profits by growing at a faster rate or expanding their market share with the intention of earning more profits in the future. He used the growth of assets rate as a proxy for measuring the effect of market share on profitability and found that growth of assets did not have a significant effect on profit.

Beranke and Lowns (2011) found that limited bank capital in relation to loan demand contributed to restrictive bank lending in US during recession period of 1990. Diamond and Rajan (2012) on their study on “a theory of Bank Capital” found that create liquidity because deposits are fragile and prone to runs. This is because uncertainly makes deposits excessively fragile, creating a role for outside bank capital. They also found that an abrupt transition to higher capital requirements can lead to a bank run because maturing deposits may exceed what the bank can pledge. Greater bank capital reduces the probability of financial distress but also reduces liquidity creation. The quantity of capital influence the amount that banks can include borrowers to pay.

2.5 Summary of Literature Review

A major issue in finance literature is the influence of financial leverage on financial performance. Two motivations underline the interest on this. On one hand, this issue has some public policy considerations because of its implications on the policies promoting fairness and equity among fund providers. On the other hand, a positive relation between financial leverage and corporate performance would mean that intercompany differences in access to credit result
in competitive advantages. Lane (2009) agrees that a firms financing structure may affect its incentive to generate profit and invest. The studies reviewed however have not addressed the effect of size on the financial performance of deposit taking micro finance institutions and commercial banks in Kenya.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction
This chapter gives a detailed explanation of how the study has been implemented and outlines the problem and the purpose of the study. It acquaints the reader with the problem, including the overall researcher's description of the design which has been adopted in the investigation of the research design, target population, data collection and the methods of data analysis adopted.

3.2 Research Design
This is the overall plan of conducting the study in order to answer the research questions and achieve the objective of the study. The study adopts descriptive research design. Mugenda and Mugenda (2003) describes descriptive research design as a systematic, empirical inquiring into which the researcher does not have a direct control of independent variable as their manifestation has already occurred or because the inherently cannot be manipulated. Inferences about relationships between variables were made, from concomitant variables. The current research design was chosen because the study is not confined to the collection and description of the data, but seeks to determine the existence of certain relationships among the research variables. Hence the design was selected to satisfy the aspect of the study (Mugenda & Mugenda, 2003). The descriptive design as applied in the study was used to establish comparison of financial performance of DTMs and Commercial Banks in Kenya

3.3 Population
Mugenda and Mugenda (2003) define a population as an entire group of individuals, events or objects having a common observable characteristic. The population for this study will be 44 banks and 8 DTMs (Appendix 1).

A census has been adopted due to the fact that the population size is not quite large.

3.4 Data Collection
The data which has been collected for the study includes secondary data. The sources heavily relied upon include academic sources and financial reports of the institutions submitted to
Central Bank of Kenya. Central Bank receives monthly financial statements of 44 banks and 8 DTM s which will relevant for this study. The data considered will be quantitative in nature.

3.5 Data Analysis
Descriptive statistics has been used to analyze the secondary data with Profitability (EBIT) measured by Return on Assets. Data on size includes the capital base of both the DTM s and Commercial banks over the 5 years 2008 to 2012. ANOVA statistics will be used to make comparison of the financial performance of DTM s with the performance of commercial banks. An analytical model has been used to analyze the relationship between the independent and dependent variables.

3.5.1 Analytical Model
The multiple linear regression model of the below form has been used for the study:

\[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e_i \]

Y=Financial Performance as measured by R.O.A

a= a constant

bn = Coefficient of independent variable Xn

\( X_1 \) = Gross Turnover

\( X_2 \) = Total Assets as control variable

\( X_3 \) = Interest expense as control variable

\( e_i \) = Error Term

The Co-efficient of determination \( R^2 \) has been used to determine how well the observed outcomes are replicated by the linear model above.

F Test has been used to test the level of significance of the variables in the study. The dependent and independent variables that will be considered will be as per the profitability and efficiency
formulae applied. ANOVA tests will also be used to show comparison in the trends in the profitability of the banks and DTMs over the 5 years i.e 2008 to 2012.
CHAPTER FOUR
DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction
This chapter presents the data analysis, presentation and interpretation of the study. The study analyzed the effect of size on the financial performance of DTMs and Commercial banks in Kenya. The study considered all 44 banks and 8 DTMs outlined in Appendix I. Secondary data was collected from academic sources and financial reports submitted to the CBK.

4.2 Regression Analysis
In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 20) to code, enter and compute the measurements of the multiple regressions. The study conducted multiple regression analysis on the relationship between the variables.

The data collected and analysed covers the period 2008 to 2012.

Regression Analysis for Year 2008

Table 4.1: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.892(a)</td>
<td>.796</td>
<td>.753</td>
<td>.2467</td>
</tr>
</tbody>
</table>

Source: Research Findings

Adjusted $R^2$ is coefficient of determination which informs us of the variation in the dependent variable due to changes in the independent variable. From the findings in Table 1 the value of adjusted $R^2$ was 0.753 an indication that there was variation of 75.3% on financial performance of commercial banks in Kenya and DTMs due to changes in profit before tax, total assets and interest expense at 95% confidence interval. This shows that 75.3% changes in financial performance of commercial banks and DTMs could be as result of changes in profit before tax, total assets and interest expense. R is the correlation co-efficient which shows the relationship between the study variables. From the findings shown in Table 1 there was a strong positive relationship between the study variables as shown by a co-efficient value of 0.892.
Table 4.2: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.344</td>
<td>7</td>
<td>.224</td>
<td>2.213</td>
<td>.012(a)</td>
</tr>
<tr>
<td>Residual</td>
<td>5.175</td>
<td>45</td>
<td>.225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.519</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Findings

From the ANOVA statistics in Table 2 above the processed data, which is the population parameters, had a significance level of 0.012. This denotes the data is ideal for making a conclusion on the population’s parameter as the value of significance (p-value) is less than 5%. The calculated was greater than the critical value ($1.699 < 2.213$).

Table 4.3: Coefficients

<table>
<thead>
<tr>
<th>Mode 1</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Constant</td>
<td>.408</td>
<td>.341</td>
<td>1.208</td>
</tr>
<tr>
<td></td>
<td>Profit Before Tax</td>
<td>.439</td>
<td>.965</td>
<td>.205</td>
</tr>
<tr>
<td></td>
<td>Total Assets</td>
<td>.592</td>
<td>.771</td>
<td>.027</td>
</tr>
<tr>
<td></td>
<td>Interest expense</td>
<td>.684</td>
<td>.557</td>
<td>1.452</td>
</tr>
</tbody>
</table>

Source: Research Findings

From the data in Table 3 above the established regression equation was

$Y = 0.408 + 0.439X_1 + 0.592X_2 + 0.684X_3$

From the above regression equation it was revealed that holding Profit before tax, Total assets, and Interest expense constant zero, financial performance of DTM and Commercial banks in Kenya would be 0.408. Similarly, a unit increase in Profit before tax would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.439. Moreover, a unit increase in Total assets would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.592 while a unit increase in interest expense would lead to increase in financial performance of DTM and commercial banks in Kenya by a factor of 0.684.
**Regression Analysis 2009**

**Table 4.4: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.987(a)</td>
<td>.974</td>
<td>.958</td>
<td>.1456</td>
</tr>
</tbody>
</table>

Source: Research Findings

Adjusted $R^2$ is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the above table, the value of adjusted $R^2$ was 0.958. This is an indication that there was variation of 95.8% on financial performance of commercial banks in Kenya and DTMs due to changes in Profit before tax, Total assets and Interest expense at 95% confidence interval. This shows that 95.8% changes in financial performance of commercial banks and DTMs could be as result of changes in Profit before tax, Total assets and Interest expense. $R$ is the correlation coefficient which shows the relationship between the study variables. From the findings shown in Table 4 above there was a strong positive relationship between the study variables as indicated by a value of 0.987.

**Table 4.5: ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1.164</td>
<td>46</td>
<td>.194</td>
<td>3.600</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>2.737</td>
<td>6</td>
<td>.119</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.901</td>
<td>52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Findings

From the ANOVA statistics in Table 5 above the processed data, which is the population parameters, had a significance level of 0.017. This indicates the data is ideal for making a conclusion on the population’s parameter as the value of significance (p-value) is less than 5%. The calculated was greater than the critical value (1.699 < 3.6).
Table 4.6: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Constant</td>
<td>.533</td>
<td>.471</td>
<td>1.146</td>
</tr>
<tr>
<td>Profit Before Tax</td>
<td>.452</td>
<td>.951</td>
<td>.207</td>
<td>.668</td>
</tr>
<tr>
<td>Total Assets</td>
<td>.143</td>
<td>.190</td>
<td>.007</td>
<td>.121</td>
</tr>
<tr>
<td>Interest expense</td>
<td>.803</td>
<td>.230</td>
<td>.671</td>
<td>1.783</td>
</tr>
</tbody>
</table>

Source: Research Findings

From the data in the above table the established regression equation was

\[ Y = 0.533 + 0.452 X_1 + 0.143 X_2 + 0.803X_3 \]

From the above regression equation it was revealed that holding Profit before tax, Total assets, and Interest expense constant zero the financial performance of DTM\s and Commercial banks in Kenya would be 0.533. This indicates that a unit increase in Profit before tax would lead to increase in financial performance of DTM\s and Commercial banks in Kenya by a factors of 0.452. Similarly, a unit increase in Total assets would lead to increase in financial performance of DTM\s and commercial banks in Kenya by a factor of 0.143. Moreover, a unit increase in Interest expense would lead to increase in financial performance of DTM\s and commercial banks in Kenya by a factor of 0.803.

Regression Analysis 2010

Table 4.7: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.927(a)</td>
<td>.859</td>
<td>0.841</td>
<td>.2582</td>
</tr>
</tbody>
</table>

Source: Research Findings

Adjusted R\(^2\) is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in table 7 the value of adjusted R\(^2\) was 0.841 an indication that there was variation of 84.1% on financial performance of commercial banks in Kenya and DTM\s due to changes in Profit before tax, Total assets and
Interest expense at 95% confidence interval. This shows that 84.1% changes in financial performance of commercial banks and DTMs could be as result of changes in Profit before tax, Total assets and Interest expense. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by a determined value of 0.927.

**Table 4.8: ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>2.112</td>
<td>3</td>
<td>.352</td>
<td>4.181</td>
<td>.037(a)</td>
</tr>
<tr>
<td>Residual</td>
<td>3.220</td>
<td>49</td>
<td>.140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.332</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Findings

From the ANOVA statistics in Table 8 above, the processed data, which is the population parameters, had a significance level of 0.037 which is a pointer that the data is ideal for making a conclusion on the population’s parameter as the value of significance (p-value ) is less than 5%. The calculated was greater than the critical value (1.699 < 4.181).

**Table 4.9: Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.417</td>
<td>.984</td>
<td>1.101</td>
<td>.297</td>
</tr>
<tr>
<td>Profit Before Tax</td>
<td>.695</td>
<td>.441</td>
<td>.093</td>
<td>.927</td>
</tr>
<tr>
<td>Total Assets</td>
<td>.737</td>
<td>.537</td>
<td>.334</td>
<td>1.079</td>
</tr>
<tr>
<td>Interest expense</td>
<td>.480</td>
<td>.258</td>
<td>.681</td>
<td>1.247</td>
</tr>
</tbody>
</table>

Source: Research Findings

From the data in the above table the established regression equation was

\[ Y = 0.417 + 0.695 X_1 + 0.737 X_2 + 0.480X_3 \]

From the above regression equation it was revealed that holding Profit before tax, Total Assets, and Interest expense constant zero financial performance of DTMs and Commercial banks in
Kenya would be 0.417. Thus, a unit increase in Profit before tax would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.695. Moreover, a unit increase in Total assets would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.737. Also, a unit increase in Interest expense would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.480.

**Regression Analysis 2011**

**Table 4.10: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.892(a)</td>
<td>.795</td>
<td>.734</td>
<td>.1934</td>
</tr>
</tbody>
</table>

Source: Research Findings

Adjusted $R^2$ is co-efficient of determination which is a pointer of the variation in the dependent variable due to changes in the independent variable. From the findings in Table 10 the value of adjusted $R^2$ was 0.734 an indication that there was variation of 73.4% on financial performance of commercial banks in Kenya and DTM and Interest expense at 95% confidence interval. This shows that 74.5% changes in financial performance of commercial banks and DTM could be as result of changes in Profit before tax, Total assets and Interest expense. $R$ is the correlation coefficient which shows the relationship between the study variables. As is indicated from the findings above there was a strong positive relationship between the study variables as shown by a value of 0.892.

**Table 4.11: ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>2.232</td>
<td>6</td>
<td>0.372</td>
<td>3.132</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>7.567</td>
<td>46</td>
<td>0.329</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9.799</td>
<td>52</td>
<td>0.329</td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Findings
From the ANOVA statistics in Table 11 above the processed data, which is the population parameters, had a significance level of 0.047 which underlined the data being ideal for making a conclusion on the population’s parameter as the value of significance (p-value ) is less than 5%. The calculated was greater than the critical value (1.699 < 3.132) an indication that in Profit before tax, Total assets, Interest expense were significantly influencing financial performance of DTM and Commercial banks in Kenya. The significance value was less than 0.05 is an indication that the model was statistically significant.

Table 4.12: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.297</td>
<td>.453</td>
<td></td>
<td>2.165</td>
</tr>
<tr>
<td>Profit Before Tax</td>
<td>.238</td>
<td>.160</td>
<td>.198</td>
<td>1.479</td>
</tr>
<tr>
<td>Total Assets</td>
<td>.233</td>
<td>.128</td>
<td>.245</td>
<td>1.834</td>
</tr>
<tr>
<td>Interest expense</td>
<td>.239</td>
<td>.145</td>
<td>.008</td>
<td>.065</td>
</tr>
</tbody>
</table>

Source: Research Findings

From the data in the above table the established regression equation was

\[ Y = 0.297 + 0.238 X_1 + 0.233X_2 + 0.239 X_3 \]

From the above regression equation it was revealed that holding Profit before tax, Total Assets, Interest expense constant zero financial performance of DTM and Commercial banks in Kenya would be 0.297. This is a pointer that a unit increase in Profit before tax would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factors of 0.238. Also, a unit increase in Total assets would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.233 and a unit increase in interest expense of would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.239.
Regression Analysis 2012

Table 4.13: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.908(a)</td>
<td>.824</td>
<td>.801</td>
<td>.2372</td>
</tr>
</tbody>
</table>

Source: Research Findings

Adjusted $R^2$ is coefficient of determination which is a pointer toward the variation in the dependent variable due to changes in the independent variable. As can be seen from the findings in the above table the value of adjusted $R^2$ was 0.801. This is an indication that there was variation of 80.1% on financial performance of commercial banks in Kenya and DTMs due to changes in Profit before tax, Total assets and Interest expense at 95% confidence interval. This shows that 80.1% changes in financial performance of commercial banks and DTMs could be as result of changes in Profit before tax, Total assets and Interest expense. R is the correlation coefficient which shows the relationship between the study variables. This value from the findings above there was a strong positive relationship between the study variables as shown by a calculated value of 0.908.

Table 4.14: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1.164</td>
<td>5</td>
<td>.194</td>
<td>3.600</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>2.737</td>
<td>47</td>
<td>.119</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.901</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Findings

From the ANOVA statistics in table above the processed data, which is the population parameters, had a significance level of 0.017. This is an indication that the data is ideal for making a conclusion on the population’s parameter as the value of significance (p-value) is less than 5%. The calculated was greater than the critical value (1.699 < 3.600).
Table 4.15: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.287</td>
<td>.544</td>
<td>.256</td>
<td>.803</td>
</tr>
<tr>
<td></td>
<td>.270</td>
<td>.415</td>
<td>.194</td>
<td>.601</td>
</tr>
<tr>
<td></td>
<td>.115</td>
<td>.986</td>
<td>.049</td>
<td>.152</td>
</tr>
<tr>
<td></td>
<td>.389</td>
<td>.871</td>
<td>.712</td>
<td>2.030</td>
</tr>
</tbody>
</table>

Source: Research Findings

From the data in the above table the established regression equation was

\[ Y = 0.287 + 0.270 \times X_1 + 0.115 \times X_2 + 0.389X_3 \]

From the above regression equation it was revealed that holding Profit before tax, Total Assets, and Interest expense constant zero financial performance of DTM and Commercial banks in Kenya would be 0.287. This is interpreted as a unit increase in Profit before tax would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.270. Moreover, a unit increase in Total assets would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.115. Also, a unit increase in interest expense would lead to increase in financial performance of DTM and Commercial banks in Kenya by a factor of 0.389.

4.3 Interpretation of Findings

From the findings on the Adjusted R squared, the study pointed out that there was variation of financial performance of Commercial banks in Kenya and DTM due to changes in Profit before tax, Total Assets and Interest expense in Kenya. The study also revealed that Profit before tax, Total Assets and Interest expense were among the major factors influencing the profitability of Commercial banks in Kenya.

The study further revealed that the data in use is ideal for making a conclusion on the influence of Profit before tax, Total Assets and interest expense on Financial Performance of Commercial Banks and DTM. Moreover, the study revealed that changes in Profit before tax, Total Assets, and interest expense were significantly influencing financial performance of Commercial banks and DTM in Kenya as is in the equations outlined below:
The established regression analysis for year 2008 was
\[ Y = 0.408 + 0.439X_1 + 0.592X_2 + 0.684X_3 \]
The established regression analysis for year 2009 was
\[ Y = 0.533 + 0.452X_1 + 0.143X_2 + 0.803X_3 \]
The established regression analysis for year 2010 was
\[ Y = 0.417 + 0.695X_1 + 0.737X_2 + 0.480X_3 \]
The established regression analysis for year 2011 was
\[ Y = 0.297 + 0.238X_1 + 0.233X_2 + 0.236X_3 \]
The established regression equation for year 2012 was
\[ Y = 0.287 + 0.270X_1 + 0.115X_2 + 0.389X_3 \]

From the analysis of the regression equations above, the study revealed that changes in Profit before tax, Total assets and Interest expense had positive effects on the financial performance of commercial banks and DTMs in Kenya. The findings of this study concur with findings of Glenn and Wayne (2007), whereby it was found that there exists a positive relationship between home purchase lending in lower-income neighbourhoods and profitability. They also found that lenders who are active in lower-income neighbourhoods and with lower-income borrowers appear to be as profitable as other home purchase lenders.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
From the analysis of the data collected, the discussions, conclusion and recommendations below were made. The responses arrived at were based on the objectives of the study. The researcher had intended to study the effect of size on the financial performance of DTM and Commercial banks in Kenya.

5.2 Summary
The objective of the study was to determine the effect of size on the Financial Performance of DTM and Commercial banks in Kenya.

From the findings on the Adjusted R², the study revealed that there was variation of financial performance of DTM and Commercial banks in Kenya with regard to Profit before tax, total Assets and interest expense. The study also revealed that Profit before tax, Total assets and Interest expense were the major factors influencing the financial performance of DTM and Commercial banks in Kenya. From the findings on the correlation analysis, the study revealed that there was a strong relationship between Profit before tax, Total assets and Interest expense on the financial performance of DTM and Commercial banks.

The study further revealed that the data is ideal for making a conclusion on the influence of Profit before tax, Total assets and Interest expense and shareholders funds on financial performance of DTM and Commercial banks in Kenya. The study revealed that Profit before tax, Total assets and Interest expense were significantly influencing financial performance of DTM and Commercial banks.
5.3 Conclusion
From the findings arrived at, using the regression equations obtained, the study revealed that size has an effect on financial performance of DTM's and Commercial banks in Kenya.

The study further revealed that Total assets were positively related to the financial performance of DTM's and Commercial banks in Kenya. This is an indication that a banks’ or DTM's size positively affects its financial performance. In this case, size is measured using Total assets.

Large Commercial banks are perceived to have bigger market shares. It is assumed that with a greater customer base and prudent management techniques comes increased Profit before tax. The large customer base is an indication of size and this affirms the conclusion that Profit before tax as a measure of size has an effect on the financial performance of DTM's and Commercial banks in Kenya.

5.4 Recommendations for policy
The study recommends that there is need for DTM's and Commercial banks to increase their size. This is due to the revelation that size positively impacts on the financial performance of DTM's and Commercial banks by increasing their market share. This results into increased Profit before tax and ultimately improved financial performance.

There should be a government push to convert Micro finance institutions into DTM's. This will enable the deposits of customers to be secured as well as access to a wider pool of capital. Moreover, it will result into improved financial performance.

There is need for DTM's and Commercial banks in Kenya to finance their assets by either capital or debt. A strong capital structure provides the backbone to withstand financial crises and offers depositors a better safety net in times of bankruptcy and distressful macroeconomic conditions.

5.5 Limitations of the study
Secondary data was collected from the DTM's and Commercial bank financial reports and academic sources. The study was also limited to the degree of precision of the data obtained
from the secondary sources. Whilst the data was verifiable as it came from the Central Bank publications, it nonetheless was not immune to these shortcomings.

The study was also limited to establishing the effect of size on the financial performance of DTM and Commercial banks in Kenya.

The study was based on a five year study period from the year 2008 to 2012. A longer duration of the study would have captured periods of various economic significances such as booms and recessions. This may have given a longer time focus hence given a broader dimension to the matter being investigated.

Various authors have postulated that there are other qualitative factors that determine the financial performance of any institution and DTM and Commercial banks are not immune. These factors include, but are not limited to, quality of staff, corporate governance, political climate among others. The inability to quantify these factors in the model proved to be a shortcoming.

5.5 Areas for further research
The study recommends that a study should be undertaken on the qualitative factors affecting the financial performance of both DTM and Commercial banks in Kenya.

The study recommends a study to be undertaken to establish the reasons behind the failure of MFIs’ to convert to DTM. This is in lieu of the fact that the government enacted the Microfinance Act (2006) to encourage the conversion.
REFERENCES


Letenah Ejigu, (2000) *Performance analysis of a sample microfinance institutions of Ethiopia*
University Business School, Panjab University, Chandigarh, India. E-mail: etalem2000@yahoo.com. Accepted 20 May, 2009


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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
<th>Commercial Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tier III</strong></td>
<td>Comprises of banks with a balance sheet of less than</td>
<td>23. Habib A.G. Zurich&lt;br&gt;24. Victoria Commercial Bank</td>
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<tr>
<td>Kenya Shillings 10 billion</td>
<td>25. Credit Bank</td>
<td></td>
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<tr>
<td>---------------------------</td>
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</tr>
<tr>
<td></td>
<td>26. Habib Bank (K) Ltd</td>
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<td></td>
<td>27. Oriental Commercial Bank</td>
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<tr>
<td></td>
<td>28. K-Rep Bank</td>
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<td></td>
<td>29. ABC Bank</td>
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<td></td>
<td>30. Development Bank of Kenya</td>
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<td></td>
<td>31. Middle East Bank</td>
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<td></td>
<td>32. Equatorial Commercial Bank</td>
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<td>33. Trans-National Bank</td>
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<td></td>
<td>34. Dubai Bank</td>
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<td></td>
<td>35. Fidelity Commercial Bank</td>
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<td></td>
<td>36. City Finance Bank</td>
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<td>37. Paramount Universal Bank</td>
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<td>38. Giro Commercial Bank</td>
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<td>39. Consolidated Bank</td>
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<td></td>
<td>40. Guardian Bank</td>
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<td></td>
<td>41. Southern Credit Bank</td>
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<tr>
<td></td>
<td>42. Gulf African Bank</td>
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<tr>
<td></td>
<td>43. First Community Bank</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Comprises of banks with a balance sheet of more than Kenya Shillings 50 billion</th>
<th>1. Co-operative Bank of Kenya</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Kenya Commercial Bank</td>
</tr>
<tr>
<td></td>
<td>3. Equity Bank</td>
</tr>
</tbody>
</table>

**Source:** The Banking Survey 2010
Letter of Introduction

The Effect of Size on the Financial Performance of DTMs and Commercial Banks in Kenya

Dear Sir/Madam,
Name of Organisation
Address

My name is Calvin Oyugi. I am a graduate student in the University of Nairobi School Of Business. I am conducting a research study as part of the requirements of my degree in Business Administration and I would like to ask for your co-operation. This study is self-sponsored. I am studying the effect of size on the Financial Performance of DTMs and Commercial Banks in Kenya. Although you probably will not benefit directly from this study, we hope that others in the community and academia will be able to understand the effect of size on Financial Performance of DTMs and Commercial Banks. This research may also spur additional interest in this field of study leading to additional research as it is an area with immense potential.

With kind regards,

Calvin Oyugi
Nairobi
Data Collection Sheet

Date: ..........................
Institution: ..........................  Filed Returns: …Y/N..........................

<table>
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<tr>
<th>Year/Parameter</th>
<th>2008 ‘000</th>
<th>2009 ‘000</th>
<th>2010 ‘000</th>
<th>2011 ‘000</th>
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<tr>
<td>Profit Before Tax</td>
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<td>Total Assets</td>
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<tr>
<td>Interest Expense</td>
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