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An Analysis of Loan Portfolio Management on Organization Profitability: Case of Commercial Banks in Kenya

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Abstract
The banking sector in any economy serves as a catalyst for growth and development. Banks are able to perform this role through their crucial functions of financial intermediation, provision of an efficient payment system and facilitating the implementation of monetary policies. Bank profitability is usually expressed as a function of internal and external determinants. The overall performance and profitability of the banking sector in Kenya has improved tremendously over the last 10 years. The aim of this study was to close the gap in knowledge by investigating profitability determinants within commercial banks in Kenya. The determinants studied were loan portfolio, interest expense, and administration costs and assets value. A descriptive survey design was employed in this study. The population of the study was the management employees working for commercial banks in Kenya. The sample was accessed by use of both stratified and simple random sampling. A questionnaire was used to gather the primary information. The questionnaires were self-administered and were served to the respondents by self-introduction. Research assistants were used to follow up on duly completed questionnaires. Statistical package for social sciences (SPSS) was used to analyse primary data while the SAS v.6 of 2009 was used to analyse the secondary data gathered from the banks. Findings of the study showed that public sector banks and private sector banks were not much affected by increasing or decreasing of interest margin. It can therefore be interpreted that the profitability growth of public and private sector banks are not dependent on fluctuation of interest rate although the foreign banks have the benefit of high return due to increase or decrease in interest margin.
Key Words: Loan portfolio Management on organization profitability, commercial Banks in Kenya

1.0 Background

As financial intermediaries, banks play an important role in the operation of an economy. Banks are the sole providers of funds, and their stability is of paramount importance to the financial system. As such, an understanding of determinants of their profitability is essential and crucial to the stability of the economy (Babalola, 2012). The banking sector in any economy serves as a catalyst for growth and development. Banks are able to perform this role through their crucial functions of financial intermediation, provision of an efficient payment system and facilitating the implementation of monetary policies (Abreu, 2002). The stream of bank failures experienced in the USA during the great depression of the 1940s prompted considerable attention to bank performance. This attention has grown ever since then (Heffernan, 2005).

The recent global financial crisis of 2007/2009, also demonstrated the importance of bank performance both in national and international economies and the need to keep it under surveillance at all times. Aburime (2008) argued that the importance of banks is more pronounced in developing countries because financial markets are usually underdeveloped, and banks are typically the only major source of finance for the majority of firms and are usually the main depository of economic savings (Tobias and Themba, 2011). It is not surprising therefore, that governments over the world, attempt to evolve an efficient banking system, not only for the promotion of efficient intermediation, but also for the protection of depositors, encouragement of efficient competition, maintenance of confidence and stability of the system and protection against systemic risk and collapse (Babalola, 2012)

During the last decades the banking sector has experienced worldwide major transformations in its operating environment. Both external and domestic factors have affected its structure and performance. Despite the increased trend toward bank disintermediation observed in many countries, the role of banks remains central in financing economic activity in general and different segments of the market in particular (Brock and Franken, 2002).

In today's economic environment, achieving improved performance and efficiency in public and private sector banking institutions has been prioritized more than ever before. Banking organizations aim at achieving these with the objective of improving competitiveness, delivering better service, and reducing costs. It is against such a background that organizations around the world have prioritized achieving heightened performance and efficiency with such goals in perspective. To achieve milestones in profitability increments, commercial banks should understand and address the determinants of their profitability. Only when these determinants are understood, can organizations be able to tackle the matter of profits improvement (Demirguc-Kunt and Huizinga, 2000 and Goddard, 2004).

The determinants of profitability are empirically well explored although the definition of profitability varies among studies. Disregarding the profitability measures, most of the banking studies have noticed that the capital ratio, loan-loss provisions, interest rates and expense control are important factors in achieving high profitability. Bank profitability is usually expressed as a function of internal and external determinants. The internal determinants originate from bank accounts (balance sheets and/or profit and loss accounts) and therefore could be termed micro or bank-specific determinants of profitability. According to Babalola (2012), the external determinants are variables that are not related to bank management but reflect the economic and legal environment that affects the operation and performance of financial institutions. Profitability, solvency, and liquidity are the three most important goals of any business; profitability is the most important one. As a goal, profit isn't always understood well. Sometimes it is confused with cash flow. Sometimes it is confused with the highest income or the lowest cost. In rough terms, profitability is income minus expense. Ideally the difference is positive and large.

Administrative/ operating expenses represent an element that is as important as the precedents in determining the level of bank profitability. Controlling operating costs is closely related to the concept of managerial efficiency or productive efficiency. Studies in this regard show a positive relationship between the quality of management and the level of profits. For instance, Athanasoglou *et al.* (2008) found a positive relationship between efficiency and performance of Greek banks. This result is explained by the fact that efficient banks are those able to use their resources appropriately and to reduce costs, resulting in better performance. This result was confirmed by Liu *et al.* (2010) who found a negative relation between cost ratios and revenue performance of Japanese banks (Ahmad and Jamal, 2012).

The capital strength of a bank is of paramount importance in affecting its profitability. A well-capitalised bank is perceived to be of lower risk and such an advantage will be translated into higher profitability. On the other hand, the asset quality, as measured by the loan-loss provisions, affects the performance of banks adversely. Size is used to capture the fact that larger banks are better placed than smaller banks in harnessing economies of scale in transactions to the plain effect that they will tend to enjoy a higher level of profits. Consequently, a positive relationship is expected between size and profits. Bikker and Hu (2002) and Goddard et al. (2004) find size to be positively related to profitability.

The impact of interest rate on bank's profits operates via two main channels of the revenues side. First, a rise in interest rate scales up the amount of income a bank earns on new assets that it acquires. But, the speed of revenue adjustment will be a function of speed of interest rate adjustment. Second, the effect hinges on the amount of loans and securities held. Indeed, in case of rising interest rates, rates on loans are higher than marketable securities so that strong incentives prevail for banks to have more loans rather than buying securities. While Molyneux and Thornton (1992) and Demirgüç-Kunt and Huizinga (1999) indicate a positive relationship between interest rate and bank profitability, Naceur (2003) identifies a negative relationship.

1.1 Commercial Banking Sector in Kenya

There are currently 43 commercial banks in the country, 1 mortgage finance company, 6 deposit taking microfinance institutions, 4 representative offices of foreign banks, 112 foreign exchange bureaus and 2 credit reference bureaus. As at the end of March 2012, there was KES 2.1 trillion held as assets in the Kenyan banking Sector with loans and advances of about KES 1.2 trillion. The deposit base stood at KES 1.6 trillion and the profit before tax of the sector in general stood at KES 24.7 billion as at 31st March 2012. As at the end of March, the number of customer deposit accounts stood at 14.36 million while the loan accounts stood at 2.032 million accounts (Central Bank of Kenya, 2012)

Comparatively, the banking sector's aggregate balance sheet expanded by 5% in the quarter from KES 2 trillion in December 2011 to KES 2.1 trillion in March 2012. Gross loans and advances in the sector grew from KES 1.19 trillion in December 2011 to KES 1.24 trillion, about to 4.2% in growth. Deposits were the main source of funding for the banking sector. The deposit base rose by 4.7% from KES 1.49 trillion in December 2011 to KES 1.56 trillion in March 2012, the growth attributed to branch expansion, increased remittances and receipts from exports. The banking sector's recorded pre-tax profit of KES 24.7 billion for the quarter was a 5.4% decrease from the KES 26.1 billion recorded in the quarter ending in December 2011. Total income in the year stood at KES 88.4 billion in the first quarter of 2012, an 8.9% increase in income from the KES 81.2 billion registered in the fourth quarter of 2011 (CBK,2012).

Central Bank of Kenya expects the banking sector to sustain its growth momentum largely driven by adoption of cost effective delivery channels and increased presence of Kenyan banks in the East African Community partner states and South Sudan. The risks of inflation and the resulting high interest rates are expected to reduce in the course of the year (CBK, 2012).

According to Themba (2011) the overall performance and profitability of the banking sector in Kenya has improved tremendously over the last 10 years. Despite the overall good picture a critical analysis indicates that, not all banks are profitable. The huge profitability enjoyed by the large banks vis-a-avis the small and a medium

bank indicates that there are some significant factors that influence the performance of commercial banks. Flamini *et al* (2009) and other several studies have shown that bank profitability is determined by bank-specific factors and industry specific factors.

1.2 Statement of the Problem

The focus on the determinants of profitability for the banking sector of a specific country is underscored by virtue of the fact that most countries have a bank-based financial system. As financial intermediaries, banks play an important role in the operation of an economy. This is particularly true in the case of Kenya, where banks have over time played an increasing role as the providers of funds, particularly to all sectors of the economy, including the informal sector. Their stability is of paramount importance to the financial system. As such, an understanding of determinants of their profitability is essential and crucial to the stability of the economy. The empirical literature on determinants of bank profitability is extensive. Most of the banking studies; Goaied (2001); Naceur (2003); Athanasoglou *et al.,* (2005) and Aburime (2008), have noticed that the operating expenses, loan provisions, asset value (capital ratios) and interest rates are important factors in achieving high profitability

Tobias and Themba (2011) and Ravallion (2009) recommend for more detailed country specific studies on what influences bank profitability and performance. Commercial banks in Kenya are known to record high levels of profitability even when other segments of the business sector perform dismally, hence the need for this study.

2.0 LITERATURE REVIEW

2.1 Loan Portfolio and Profitability of Commercial Banks

It is needless to emphasize that one of the principal activities of commercial banks in is to grant loans to borrowers. Loans are among the highest yielding assets a bank can add to its balance sheet, and they provide the largest portion of operating revenue. In this respect, the banks are faced with liquidity risk since loans are advanced from funds deposited by customers. Hamisu, (2011) notes that credit creation involves huge risks to both the lender and the borrower. The risk of a trading partner not fulfilling his or her obligation as per the contract on due date or anytime thereafter can greatly jeopardize the smooth functioning of bank's business. On the other hand, a bank with high credit risk has high bankruptcy risk that puts the depositors in jeopardy.

In a bid to survive and maintain adequate profit level in this highly competitive environment, banks have tended to take excessive risks. But then the increasing tendency for greater risk taking has resulted in insolvency and failure of a large number of the banks. However, the higher the volume of loans extended the higher the interest income and hence the profit potentials for the commercial banks. At this point, it is also worth noting that banks with a high volume of loans will also be faced with higher liquidity risk. Thus, the commercial banks need to strike a balance between liquidity and profitability (Devinaga, 2010).

Owojori *et al* (2011) highlighted that available statistics from liquidated banks in Nigeria clearly showed that inability to collect loans and advances extended to customers and directors or companies related to directors/managers was a major contributor to the distress of the liquidated banks. At the height of the distress in 1995, when 60 out of the 115 operating banks were distressed, the ratio of the distressed banks' non-performing loans and leases to their total loans and leases was 67%. The ratio deteriorated to 79% in 1996; to 82% in 1997; and by December 2002, the licenses of 35 of the distressed banks had been revoked. At the time, the banking licenses were revoked, some of the banks had ratios of performing credits that were less than 10% of loan portfolios (Hamisu, 2011).

2.2 Interest Expense and Profitability of Commercial Banks

Interest expenses and interest income, affect net interest income and hence bank profitability. In view of this, interest rates have also been considered as determinants of bank profitability in most bank research. Furthermore, local monetary policies and supply and demand conditions affect interest rates. When interest rates fluctuate as result of changes in monetary policy or general economic conditions, commercial banks usually encounter a comparative change in the rate of return they earn on their assets. This occurs because banks hold many assets of relatively short maturity, and the rates booked on short-period loans fluctuate quickly when interest rates fluctuate. The only components of a banks' investment portfolio that will not encounter rapidly falling yields when interest rates decrease are specifically: consumer loans, fixed-rate, mortgage loans, rates on bank credit card loans, business term loans, long period investment securities, real assets, such as rental offices in the bank building. Consequently, even the longer -period components of a bank's assets portfolio are susceptible to yield declines when market interest rates fall, although their yields fall more gradually than short-period yields (Devinaga, 2010).

The interest rate spread is defined as the ratio of net interest income (banks interest income – banks interest expenses) to total assets3. This mark-up reflects the bank's interest profitability that covers the cost of intermediation which, according to the industrial organization point of view, is the difference between the price of bank intermediation and the cost of its output. In fact, this margin should reflect a bank specific component,

an information premium for assessing and monitoring investments, market structure and a premium for managing risks Alicia et al (2007).

English (2002) examines the impact of risk arising from interest rate changes on bank interest margin. His results obtained for a panel of international banks from ten industrialized countries suggest that commercial banks were able to manage their exposure to the volatility of yield curve. Therefore, changes in rates did not have consequences on bank interest margin level.

2.3 Administrative costs and Profitability of Commercial Banks

According to Ahmad and Jamal, (2012), administrative/ operating expenses represent an element that is as important as the other determinants herein in determining the level of bank profitability. Controlling operating costs is closely related to the concept of managerial efficiency or productive efficiency. Operating expenses are defined in the OECD Bank Bulletin (1987), as including all expenses relating to the ordinary and regular banking business other than interest expenses, fee and commission expenses, provisions, income taxes and computer programming and equipment maintenance costs. Thus, operating costs comprises all expenses related to the use of physical and labor factors. Since these expenditures are management controllable expenses, and if controlled properly, can contribute positively to the generation of operating revenue (Devinaga, 2010).

Administrative expenses as percent of total assets may have a positive or negative impact on profits. Lack of competence in expenses management in a bank eventually results in poor profitability for the bank. When administrative costs are managed properly, an increase in expenses will increase the interest margin of a bank and raise income. Negativity in administration costs could also indicate a bank's inability to pass its expenses to customers because of the competition. If the bank fails to pass on the cost to the consumers, the profitability of the bank will be at a higher chance of decreasing (Ahmad and Jamal, 2012).

2.4 Asset Value and Profitability of Commercial Banks

A bank's revenue is basically generated from its assets. However, it is worth nothing that not all assets generate revenue. Thus, the assets of a bank can basically be classified as income or revenue generating and non-income generating. The evaluation of assets quality undoubtedly is a very important task for every bank. Real life experience shows that low quality assets are the most common reason of bank bankruptcy. Thus, by continuously evaluating the quality of its assets, it is possible to forecast the sustainability of the bank and timely avert a lot of problems (Nazir, 2010).

An important prerequisite for the stability and profitability of a bank is the management of the structure of bank assets. Therefore, it is the aim of every bank's management to optimize the structure of assets (and liabilities) with regard to the bank's specific business policy, and which determine its profit, as well as with regard to an evaluation of the level of risk, which the bank is willing to bear, or respectively against which it has created against sufficient reserves. An optimum structure of a bank's balance sheet ensures the maximization of a bank's profit at the level of risk borne. The role of ordering the structure of assets is to manage the net interest margin, mitigate the risk of interest rate changes, where presently these are one of the most serious risks to which commercial banks are exposed (Liu *et al,*2010).

The sensitivity of assets to interest rate changes is an important issue. This sensitivity enables a bank to change the structure of its assets so as to minimize the negative effect of a change in interest rates, or, conversely, to exploit positive changes fully. Assets sensitive to interest rate changes include those reaching maturity in the near future, assets with re-pricing, and a part of assets that are amortized over a defined time period (Athanasoglou*et al.*2008).

Chijoriga (1997), cited in Xuezhi et al, (2012) noted that poor asset quality resulted in banking failure. Asset quality in terms of credit risk results into the non-repayments of loans hence lower interest revenue but better asset quality in terms of the lower percentage of non-performing loans results into higher profitability (Xuezhi, 2012). Poor asset quality should reduce profitability in as far as it limits the bank's pool of loanable resources. Such a priori is generally confirmed in developed countries5 but not always in emerging countries. Brock and Suarez (2000), for example, show a negative relationship between bank spreads and NPLs over total loans for most Latin American banking systems. They argue that this is due to distortions caused by inadequate regulation that allow banks to report misstated loan losses. How to account appropriately for asset quality is an issue across many countries' banking systems.

2.5 Research Gaps

Literature shows that profitability within the banking sector is subject to various determinants; key among them being asset value, loans portfolio, asset quality and interest expense. It emerges that these key determinants play a vital role in profit maximization within various banking institutions around the world. This study covered the four composite variables with the aim of establishing their effect on profitability on Kenyan commercial Banks.

3.0 RESEARCH METHODOLOGY

3.1 Research Design

A descriptive survey design was utilized in this study. Orodho (2003) describes a descriptive survey design as a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. It can be used when collecting information about peoples' attitudes, opinions, habits or any other social issues while Sekaran & Bougie (2011) says that a descriptive study is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation.

3.2 Population

All employees of the banking sector in Kenya formed the population of this study. The target population was 13,042 employees who were on the roll by end of the year 2012 as stated by the central bank of Kenya supervision report of 2012. However due to the location of the researcher and logistical challenges, the accessible population was those employees in senior management and middle management ranks located in Nairobi. Borg and Gall, (2007) describe a target population as all the elements that meet certain criteria for inclusion in a study and it consists of all members of a real or hypothetical set of people, events or objects from which a researcher wishes to generalize the results of their research; while accessible population consists of all the individuals who realistically could be included in the sample

3.3 Sampling

Two sampling techniques were employed in this study i.e. stratified sampling and simple random sampling. Stratified sampling was employed to group the bank employees into two groups of senior management and middle management. The two groups were arrived at because this study required employees who had detailed knowledge of the bank and its operations. Simple random sampling was done within each stratum to be able to serve the questionnaires to the employees. As at 31st December 2012, the accessible population of this study had 13,042 management employees broken down as 7,021 in senior management and 6,021 in middle management cadre. This size of a population is defined by Mugenda & Mugenda (2003) as a large population because it has more than ten thousand employees. The sample of the study was therefore determined using a formula recommended by Mugenda & Mugenda (2003) for getting the minimum sample size from a large population.

$$n=Z^2*p*(1-p)/d^2$$

Where:

n = sample size determined by formula
Z = normal distribution of Z score which is normally fixed at 1.96
p = proportion of units in the sample size possessing the variables under study which is normally set at 50% (0.5)
d = significance level of 0.05

Once the formula is substituted with values then the sample size will be 384

$$n= \frac{(1.96)^2*(0.5)(0.5)}{(0.05)^2}= 384$$

However this study targeted 400 respondents above the minimum sample size of a large population.

Table1: Sample Matrix

Strata	Population	Percentage	Sample Size
Senior Management	7,021	54	215
Middle Management	6,021	46	185
Total	**13,042**	**100**	**400**

Source: Researcher 2013

3.8 Data Processing and Analysis

According to Hyndman (2008), data processing involves translating the answers on a questionnaire into a form that can be manipulated to produce statistics. This involves coding, editing, data entry, and monitoring the whole data processing procedure. The main aim of checking the various stages of data processing was to produce a file of data that was error free as possible.

After data was obtained through questionnaires and secondary sources, it was prepared for analysis by editing, handling blank responses, coding, categorizing and keyed into SPSS (Statistical Package for Social Sciences) computer software for analysis, and the information generated by the SPSS was used to make generalizations and conclusions of the study. F-test, t-test were used to check the level of significance while a multiple regression model was also used to test the significance of the influence of the dependent variable. The multiple regression Model was presented as below:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

Where:

i. Y = the value of the dependent variable
ii. $\{\beta_i; i=1,2,3,4,5\}$ = The coefficients representing the various independent variables.
iii. $\{X_i; i=1,2,3,4,5\}$ = Values of the various independent (covariates) variables.
iv. *e* is the error term which is assumed to be normally distributed with mean zero and constant variance.

Y = Profitability of Commercial banks in Kenya
X_1 = Loan Portfolio
X_2 = Interest Expense
X_3 = Administrative Costs
X_4 = Asset Base/Value

Using SPSS, the regression model was tested on how well it fitted the data. The significance of each independent variable was also tested. Fisher distribution test called F-test was applied. It refers to the ratio between the model mean square divided by the error mean square. F-test was used to test the significance of the overall model at a 5 percentage confidence level. The p-value for the F-statistic was applied in determining the robustness of the model. The conclusion was based on the basis of p value where if the null hypothesis of the beta is rejected then the overall model would be significant and if null hypothesis is accepted the overall model would be insignificant. In other words if the p-value was less than 0.05 then it was concluded that the model was significant and had good predictors of the dependent variable and that the results were not based on chance. If the p-value was greater than 0.05 then the model would not be significant and could not be used to explain the variations in the dependent variable.

Similarly the t-test statistic was used to test the significance of each individual predictor or independent variable and hypothesis. The p-value for each t-test was used to make conclusions on whether to fail to accept or fail to reject the null hypotheses. The benchmark for this study for failure to reject or failure to accept the null hypothesis was a level of significance of 5 Percentage

4.0 DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter provides data presentation and interpretation of the results of the data analysis from the collected data in a systematic way. It provides demographic information of the respondents and the statistical analysis of the information collected, reflecting each study objective. This study focused on the differences in profitability between domestic and foreign banks; the sample was split into three sub-samples according to their ownership. This is followed by the interpretation and discussion of the findings.

4.1 Reliability Analysis

The table2 below shows the results of the reliability analysis, mean and standard deviation (SD).

Table2: Reliability Analysis

	Component	No. of Items	Cronbach's Alpha	Mean	S.D
1	Loan Portfolio	6	0.71	3.79	0.81
2	Interest Expense	5	0.69	3.84	0.87
3	Administration Costs	5	0.72	3.66	0.93
4	Asset Value	5	0.77	4.11	0.84

Source: Researcher, 2013

Table 2 shows that the reliability that exists is somehow acceptable where the Cronbach's alpha lies between 0.69 and 0.77. One component has Cronbach's alpha less than 0.7 which indicate that the respondents are very acquainted on how the interest expense issues directly relate to the profitability index of the banks. It can also be on the account of how the bankers understand the interest expense element and thus not very clear to them how the four items have been related to the adduced profitability influence.

For the purpose of this study the banks were distributed into three categories. As shown in the table 3 below.

Table3: Categorization of Banks by Type

Banking Classification Type	Number	Representative Bank in the Study
Public Banks (Government Ownership)	2	1. National Bank of Kenya 2. Consolidated Bank
Private and Domestic Control	4	1. Kenya Commercial Bank, 2. Cooperative Bank of Kenya, 3. Equity Bank, 4. Family Bank
Foreign Control Ownership	2	1. Standard Chartered Bank 2. Barclays Bank
Totals	8	

Source: Researcher, 2013

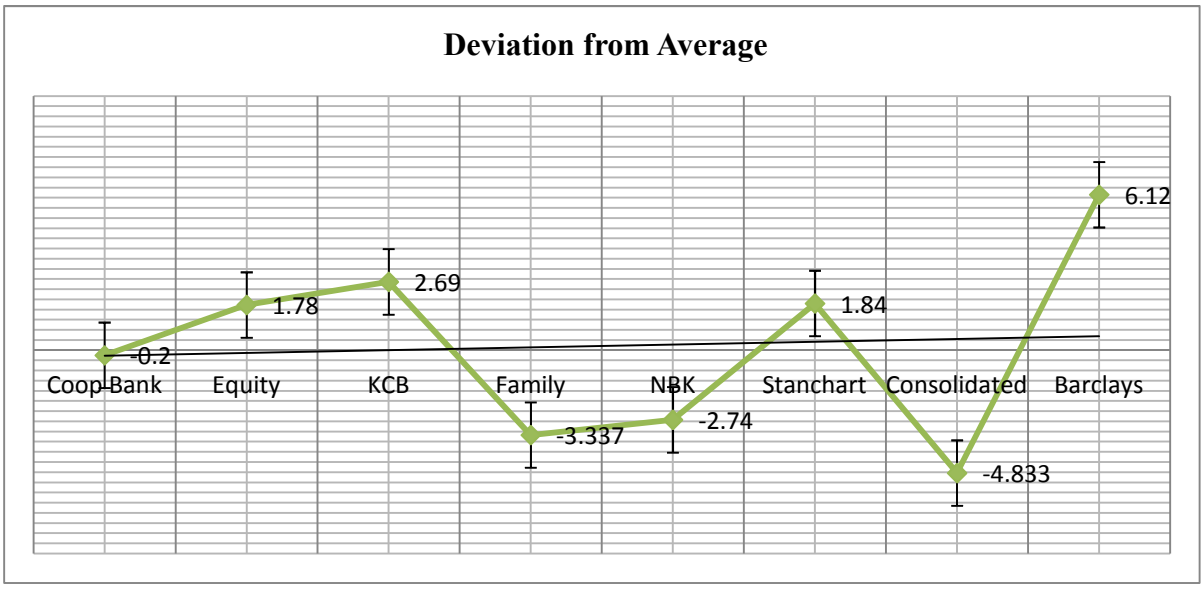
4.2 Pre-Tax Profit

The table4 below shows the pre-tax profit in Billion Shilling for a period of 4 years from 2009 to 2012.

Table 4: Pre-tax Profit in Billion Shillings for the Banks Sampled

	2009	2010	2011	2012	Average
Coop Bank	3.359	3.756	5.771	6.363	4.81
Equity	5.022	5.278	4.04	12.83	6.79
KCB	5.985	6.67	7.18	10.98	7.7
Family	0.29	0.3426	0.518	0.5225	0.418
NBK	1.8	2.16	2.677	2.447	2.27
Stanchart	4.72	6.73	7.682	8.26	6.85
Consolidated	0.085	0.117	0.258	0.247	0.177
Barclays	8	9	13.5	14.01	11.13
Totals	29.261	34.054	41.63	55.66	160.61
Mean	3.657	4.256	5.203	6.957	5.02

Source: Researcher, 2013



Source: Researcher: 2013

Findings show that the private banks and the foreign banks are high above the average score except for family bank which lower capital base pooled for all banks while the public (government owned banks) have got greater deviations from the mean.

Findings show that the movable assets like land and building do not contribute much to profits if they have not engaged in serious economic activities were 56 Percentage. The buildings and land might appreciate but the rate of appreciation might not be commensurate to the depreciation of assets in them. It was not direct to the respondents how the buildings, land and fittings influence profits as they only consolidate the financial position of the bank. The current financial assets are easier to manipulate to improve the profit range and sales.

Customer Preference to Specific Banks in Kenya

The empirical findings for the first sub-sample show different results from those of the entire sample in the table 4.8a. The deposit growth shows a positive relationship with profitability of private sector banks which is indicative of the fluctuation in deposit affected the profitability of private banks not foreign and public banks. Thus the deposits (Private Sector) received by banks could be a source of increasing profits. For instance in specificity is Equity Bank growth attributed to the many low economic segment population who deposit in small amounts but the numbers bring in the volumes. Therefore this factor has a positive effect only for private sector and it does not show that receiving more deposits improve foreign banks Return on Equity (ROE) and Return on

Asset (ROA). It may be interpreted that the deposit growth ratio is not a profitability determinant for foreign banks in the Kenyan market.

4.3 Determinants (Bank specific) of Foreign Sector Vs Domestic Sector for Bank's ROE

The empirical findings for the first sub-sample show different results from those of the entire sample in the table 5. The deposit growth shows a positive relationship with profitability of private sector banks which is indicative of the fluctuation in deposit affected the profitability of private banks not foreign and public banks. Thus the deposits (Private Sector) received by banks could be a source of increasing profits. For instance in specificity is Equity Bank growth attributed to the many low economic segment population who deposit in small amounts but the numbers bring in the volumes. Therefore this factor has a positive effect only for private sector and it does not show that receiving more deposits improve foreign banks Return on Equity (ROE) and Return on Asset (ROA). It may be interpreted that the deposit growth ratio is not a profitability determinant for foreign banks in the Kenyan market.

4.4 Durbin Watson Test (Auto Correlation)

Findings show that there is no autocorrelation present up-to 6th lag. The factors presented above are not commutatively in a direct relationship.

Table 5: Durbin Watson Test (Auto Correlation)

		Order				
	1	2	3	4	5	6
DW	2.0122	2.1321	2.1128	1.6454	1.6715	1.7074
Pr<DW	(0.3618)	(0.4747)	(0.7102)	(0.3438)	(0.4215)	(0.6591)
Pr>DW	(0.6382)	(0.5253)	(0.2898)	(0.2898)	(0.5785)	(0.3709)

Source: Researcher, 2013

4.5 Multi-Collinearity Diagnosis

The table 6 has presented the summarized the value of tolerance, variance inflation factor, Eigen value and condition index. The largest value of variance inflation factor (VIF) is 6.821 which are below 10 meaning there is no Multi-Collinearity in the established model. The values of Tolerance is also greater than 0.1.

Table 6 Multi-collinearity Diagnosis

Variables	Tolerance (Tol)	Variance Inflation factor	Eigen value	Condition Index
Capital to Asset Ratio	0.694	1.441	0.485	4.107
Provision to Total loan Ratio	0.536	1.867	0.245	5.782
Cost Income Ratio	0.194	5.159	0.011	27.300
Liquid Asset Ratio	0.174	5.759	0.009	30.388
Deposit Growth Ratio	0.229	4.362	0.005	40.258
Gross Domestic Product	0.147	6.821	0.002	62.833
Inflations	0.204	4.907	0.001	126.32

Source: Researcher, 2013

4.6 Ordinary Least Square Estimation (ROE)

The capitalization level has lost its significant (negative) effect on ROE for public and private sector both. While that very less but significant for foreign banks profitability (ROE). This could be interpreted in many ways. Firstly, it could be because bank capital is more costly for domestic banks than foreign banks. Secondly, it may suggest that foreign banks have better capability in increasing their earnings when increasing their equity. Thirdly, it could be due to the fact that foreign banks have lower capitalization than domestic banks, hence less profit.

Finding indicated that Net interest Margin were a positive and significant effect on ROE for foreign sector, and this gave an assumption that if banks have certain monopoly power, they will realize higher profits. In the category of the public sector banks and private sector banks, they were not much affected by increasing or decreasing of interest margin. It can therefore be interpreted that the profitability growth of public and private sector banks are not dependent on fluctuation of interest rate although the foreign banks have the benefit of high return due to increase or decrease in interest margin.

The findings indicated that the Cost Income has a negative impact on ROE of public and foreign sector Banks but a positive or insignificant impact on ROE of private sector banks. It can therefore be said that foreign and public sector banks that are not able to control their expenses and realize lower profits. As for the private sector banks have an upper hand in controlling the cost factor and enhancing the profitability margin. Going by the empirical result of literature that Liquidity ratio does improves domestic private bank's profitability, which suggests that investing in government securities is profitable for domestic banks. This may be due to the fact that foreign banks have access to other markets and better opportunities to invest their funds abroad. But the inferences show that the liquidity ratio is not significant for any sectors profitability. The findings could also be

interpreted that foreign banks have less investment opportunities in the Kenyan market for short term period because the findings are for 4 years only.

Table 7 presents the results for OLS estimation for Return on Equity for banks in the last 4 years.

Table 7 Ordinary Least Square Estimation (For ROE)

Variables	**Parameter Estimation**		
	Public Sector	Private Sector	Foreign Sector
Capital to Asset Ratio	0.014	-0.99	0.095*
CI 95%	[-0.065; 0.093]	[-0.245; 0.048]	[-0.014; 0.205]
p-value	(0.712)	(0.171)	(0.048)
Provision to Total Loan Ratio	-011	026	026
CI 95%	[-0.101 ;0.078]	[-0.326 ;0.378]	[-0.030 ;0.060]
p-value	(.790)	(.875)	(.083)
Net Interest Margin	.068	.162	.517*
CI 95%	[-0.237 ; 0.372]	[-0.267 ; 0.591]	[0206 ; 0.829]
p-value	(.643)	(.433)	(.003)
Cost Income Ratio	-.299*	018	-0.809*
CI 95%	[-0.594 ; -0.003]	[-0.212 ; -0.249]	[-1.114 ; -0.504]
p-value	(.048)	(.867)	(.000)
Liquidity Asset Ratio	-0.884	2.471	0.109
CI 95%	[-1.834 ; 0.067]	[-.127 ; 5.070]	[-.475 ; .694]
p-value	(.066)	(.061)	(.696)
Deposit Growth Ratio	-0.362	1.737*	-0.189
CI 95%	[-1.111 ;0.388]	[-0.017 ;3.491]	[-.625 ;.248]
p-value	(.320)	(.042)	(.372)
Gross Domestic Product	2.307*	0.170	0.044
CI 95%	[0.935 ;3.679]	[2.235 ;2.576]	[-1.331 ;1.419]
p-value	(.003)	(.882)	(.947)
Inflations	-0.510	0.731	-1.289**
CI 95%	[-1.401; 0.381]	[-1.920; 0.459]	[-2.401;-0.176]
p-value	(0.241)	(0.210)	(0.26)
R^2	.887	.838	.955

Source: Researcher, 2013

**Significant at the 0.05 level*

***Significant at the 0.01 level*

4.6 Ordinary Least Square Estimation (For ROA)

Table 8, presents findings on Public and Private Sector Banks with domestic or foreign controlled Banks. This classification allows for the detection of the effect of foreign investment on domestic banks' ROA. The findings showed that return from assets was not much influenced on foreign banks profitability but the return on equity was the source of generating the profitability growth. By comparison with private sector banks, most of the variables influenced on Banks ROA except Cost Income Ratio and Provision to total loan.

Table 8, showed that only one determinant (Capital Adequacy) is similar among private and foreign sector banks in increasing ROA. The R-squared of the foreign sector banks are high as compared to private and public sector banks. The results are also shown by looking at the foreign ownership variables that has no effect. According to Ali (2005), Return on Asset (ROA) is not influenced on all sectors of Banks in Lebanon Banking Industry. This factor is instrumental in differentiating banks according to their ROE; it is incapable of separating them according to their ROA

Table 8: Ordinary Least Square Estimation (For ROA)

Variables	Parameter Estimation		
	Public Sector	Private Sector	Foreign Sector
Capital to Asset Ratio CI 95% p-value	-0.002 [-.012 ; 0.009] (.708)	0.010* [-0.020 ; 0.001] (.037)	0.275* [0.262;0.289] (.000)
Provision to Total Loan Ratio CI 95% p-value	0.03 [-0.009 ;0.015] (.580)	0.013 [-0.010 ;0.036] (.246)	0.02 [-0.004 ;0.008] (.468)
Net Interest Margin CI 95% p-value	.015 [-0.025 ; 0.056] (.431)	.033* [-0.005 ; 0.061] (.026)	.035 [-.003 ;0.074] ***(.069)***
Cost Income Ratio CI 95% p-value	-.056* [-0.095 ; -0.017] .008	006 [-0.010 ; -0.021] 0.440	-.096* [-.134 ; -.058] 0.000
Liquidity Asset Ratio CI 95% p-value	-0.85 [-0.212 ; 0.042] 0.172	0.311 [.140 ; 0.483] 0.002	-0.051 [-.123 ;.022] 0.155
Deposit Growth Ratio CI 95% p-value	-.007 [-0.107 ;0.093] (.884)	.211* [0.095 ;0.327] (.002)	-.045 [-0.099 ;.009] (.098)
Gross Domestic Product CI 95% p-value	0.302* [-0.119;0.485] (.003)	-0.094 [-0.253 ;0.065] (.229)	0.179* [0.009 ;.349] (.041)
Inflations CI 95% p-value	.003 [-0.116 ; 0.121] (.962)	-.014 [-0.092;0.065] (.718)	-.014 [-.229 ;.046] (177)
Adj *R*2	0.879	0.832	0.995

Source: Researcher, 2013

*Significant at the 0.05 level

4.10 Determinants (Macroeconomic variables) of Foreign Sector Vs Domestic Sector for Bank's Performance

The macroeconomic variable GDP is not affected for foreign banks on ROE but affected the ROA of foreign banks. As for the private sector banks, there was limited influence from GDP growth in host market. It showed that in growth of GDP, the return from equity of foreign banks increased or decreased because they brought their equity in the market for investment from their parent country. But in case of private sector banks the result showed that there was no relationship between ROE/ROA of Private Sector and the macroeconomic factor of country. This may be evidence that although the foreign banks operate in the Kenyan market, they are less influenced by its macroeconomic conditions as compared to domestic banks.

5.0 SUMMARY, CONCLUSION AND INTERPRETATION

5.1 Summary of findings

The primary data findings indicate that the four determinants of profitability were actually real. The loan portfolio had a direct influence on the profitability of the banks. Non-performing loans and the new loans had different impact on the profitability of the bank. The interest expense was rated highly as a factor that works to reduce the profits. All the parameters under this were highly rated. The administration costs especially salary overheads were utterly blamed on reducing profitability. The depreciation of assets and the provisions was seen as a dent to profitability of any bank. However, it was also noted that the size of bank by asset value does not per se translate to higher profitability but it is a key fact for profitability efficiency. On account of customer preferences, the banks that had high mention were mostly Equity bank, Cooperative Bank, Kenya Commercial Bank, Family Bank and the Barclays bank. Overall accessibility to the banks, reliability of the ATMs, the presence of variety of products and fast and efficiency in banking was rated 56 Percentage, 28 Percentage, 26 Percentage and 22 Percentage respectively. Financial stability was also considered a key component of choice at 17 Percentage.

The increase in deposit showed a positive relationship with profitability of private sector banks. It can therefore be said of the fluctuation in deposit affected the profitability of private banks not foreign and public banks. In private sector banking, the deposits received could be a source of profits growth. Therefore, this factor had a

positive effect only for private sector and it does not show that receiving more deposits improve foreign banks Return on Equity (ROE) and Return on Asset (ROA), because it is more pronounced in the private banks. Findings give an indication that the deposit growth ratio is not a profitability determinant for foreign banks in the Kenyan market.

Cost Income has a negative impact on ROE of public and foreign sector Banks but a positive or insignificant impact on ROE of private sector banks as shown by the findings. It can therefore be said that foreign and public sector banks that are not able to control their expenses and realize lower profits. The R-squared of the foreign sector banks are relatively higher than that of private and public sector banks. Inferentially, the results project that in Kenyan banking context the foreign banks ROA determinates are serrate and domestic banks ROA determinants.

Private sector banks have limited influence from the GDP in the Kenyan market. This in essence means that in growth of GDP, the return from equity of foreign banks could be increase or decrease because they brought their equity in the market for investment from their parent country. But in case of private sector banks the result shows that there is no relationship exists between ROE/ROA of Private Sector and the macroeconomic factor of country. The findings give evidence that although the foreign banks operate in the Kenyan market, they are less influenced by its macroeconomic conditions as compare to domestic banks because there major parts of investment portfolio are depended on abroad. The result also found that the Inflation affects foreign banks more than domestic ones.

5.2 Conclusion

This study sought to analyse whether profitability measures were associated with increments or decline on loan portfolio, interest expense, administrative cost, and asset value at the organizational level. The study makes several contributions to the literature. In doing so, this study provides the first reliable evidence of the association of the four indicator factors on financial performance at the organizational level.

In the second section the research analysed the profitability differences and determinants of commercial banks of Kenyan Banking Industry for the year 2009 to 2012 (annually). It analysed the influence of macro-economic indicator (inflation and GDP) on foreign and domestic banking sector of Kenya. The empirical findings report indicated that the profitability determinants of foreign banks were different from domestic banks. This research also shows the better capability in explaining the variability of domestic banks' profitability (ROE and ROA) than foreign ones, which may be deduced to mean that foreign banks operating in a market were not only affected by the conditions in market, but also by other factors that could be related to their home markets. As a deductive conclusion it can be said that local controlled commercial banks in Kenyan were more profitable than foreign controlled ones as far as the profit volumes are concerned which is reflected in their yearly earnings per share but the foreign controlled commercial banks in Kenya, as a whole are more capital efficient as compared to the local controlled commercial banks subject to few exceptions. From the findings, it can be concluded that control over non-performing assets, operating expenses, provision and contingencies were major areas of concern for the management of public sector banks.

5.3 Recommendation

To strengthen the position of commercial Banks, the public sector banks must strive to greatly enhance efficiency through a control over shrinking spread, increasing non-interest income, and maximizing business per employee and per branch, etc. Technology up gradation, provision of better service quality, inculcating customer driven work culture, mental revolution among the staff of public sector banks, use of modern risk management practices are also the most sought after steps that are needed to ensure the sustainable level of profit and its growth.

5.4 Suggestion for Further Studies

The field of banking offers researchers wide areas of study. The differential functional areas of foreign and domestic banks, Measure of efficiency differences and their determinants, Study on religious inclined banking platforms such as Islamic Banking System of Foreign and Local Banks in Kenya, Specialized banking approaches like Investment and Mortgages, Women based banking, Youth tailored accounting, Asset financing are a emerging frontier areas of study.

REFERENCES

Abreu, M. Mendes, V (2002). Commercial Bank Interest Margins and Profitability: Evidence from E.U. Countries, Working Paper Series, Porto.

Aburime, T Uche, C.U. (2008) "Impact of Share Capitalization on Bank Profitability in Nigeria".*European Journal of Scientific Research*, 19 (3), 438-452.

Aburime, U. (2008). Determinants of Bank Profitability: Company-Level Evidence from Nigeria (Online). October 2008. Available from: http://ssrn.com/abstract = 1106825. [Accessed: 10 June 2010]

Ahmad Salloum, Jamal Hayek (2012), Analysing the Determinants of Commercial Bank Profitability in Lebanon,

International Research Journal of Finance and Economics Issue 93 (2012)

Ali A (2005), *Domestic banks and foreign banks profitability and differences and their determinants*, Case business school city of London.

Alicia Garcia-Herrero, Sergio Gavilá and Daniel Santabárbara, (2007), what explains the low profitability of chinese banks? JEL classification: G21, G28

Allen, L., (1988), Determinants of bank interest margins: A note, Journal of Financial and Quantitative Analysis, vol. 23, 231-235.

Angbazo, L., (1997), Commercial bank interest margins, default risk, interest-rate risk,
Off -balance sheet banking. Journal of Banking and Finance, vol. 21, 55-87.

Angelini, P and Cetorelli, N (2003): The effects of regulatory reform on competition in banking industry, *Journal of Money, Credit and Banking,* 35 (5), pp. 663-684.

Athanasoglou,P Brissimis, Delis M.D (2005), Bank-Specific, Industry-Specific and Macroeconomic Determinants of Bank Profitability *of Greece Working Paper*, No.25.

Athanasoglou, P Brissimis, Delis M (2008), "Bank specific, industry specific and macroeconomic determinants of bank profitability". *Journal of International Financial Markets, Institutions and Money*, 18(2), 121-136.

BabalolaYisauAbiodun, (2012), The Determinants of Bank's Profitability in Nigeria, *Journal of Money, Investment and Banking* Issue 24 (2012)

Barajas, A., Steiner, R. and Salazar, N. (1999) "Interest Spreads in Banking in Colombia 1974 – 96". *IMF Staff Papers*, 46, 196-224.

Basel Committee on banking Supervision (1999): "*Principles for the Management of Credit Risk",* CH – 4002 Basel, Switzerland Bank for International Settlements.

Berger A. (1995) "The Relationship of Capital, Earnings in the Banking sector". *Journal of Money, Credit and Banking*, Vol. 27, 404-431.

Brock P, L. Suarez (2000), "Understanding the Behaviour of Bank Spreads in Latin America," *Journal of development Economics* 63, 113-134.30

Bikker, J.A. and H. Hu (2002), Cyclical Patterns in Profits, Provisioning and Lending of Banks and Procyclicality of the New Basle Capital Requirements, *BNL Quarterly Review*, 221, pp. 143-175.

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

Chijoriga, M.M. (1997), *An Application of credit score and financial distress prediction models to commercial banks' lending: The case of Tanzania*. phd thesis, wuwein university.

Clemence R. V and F.S Doody (1966), The Schumpeterian System. A. M Kelly: New York

Demirgüç-Kunt, A. and Huizinga, H. (1999) "Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence". *World Bank Economic Review*, Vol. 13 (2), pp. 379-408.

DevinagaRasiah (2010), Theoretical Framework of Profitability as Applied to Commercial Banks in Malaysia *European Journal of Economics, Finance and Administrative Sciences,* Issue 19

Gieseche, K., (2004),: 'Credit risk modeling and valuation: an introduction', *Cornell University, Credit Risk: Models and Management, Vol. 2, London*

Goddard, J., Molyneux, P. and Wilson, J.O.S. (2004) "The Profitability of European Banks: A Cross-Sectional and Dynamic Panel Analysis". *Manchester School*, 72 (3), 363-381.

Hamisusuleimankargi, 2011, credit risk and the performance of nigerian banks, Ahmadu Bello University, Zaria – Nigeria

Harry M. Markowitz (1991). Portfolio Selection: Effcient Diversification of Investments. Blackwell, second edition, 1991(Originally published in 1959.).

Ho, T., Saunders, A., (1981), Determinants of bank interest margins: Theory and empirical evidence, Journal of Financial Economics, vol. 9, 47-73.

IyiolaOmisoreMunirat Yusuf and Nwufo Christopher .I, (2012),The modern portfolio theory as an investment decision tool, *Journal of Accounting and Taxation* Vol. 4(2), pp. 19-28, March 2012

Jan Fagerberg, (2008), A guide to Schumpeter Centre for Technology, Innovation and Culture (TIK), University of Oslo, Norway

John Cantwell (2001), Innovation, Profits and Growth: Schumpeter and Penrose, University of Reading

Themba Mamba Shipho, Tobias Olweny, (2011) effects of banking sectoral factors on the profitability of commercial banks in kenya, Economics and Finance Review Vol. 1(5) pp. 01 – 30

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