# The Analysis of Profitability of Kenya`s Top Six Commercial Banks: Internal Factor Analysis

**Susan Moraa Onuonga, PhD**
Kenyatta University
School of Economics
Nairobi, Kenya

## Abstract

*The financial sector plays an important role in the development of the country. For sustainable economic growth, a country must have a strong banking sector. The Kenyan banking sector has experienced several challenges over time. The government has implemented several reforms to enhance growth and competition in this sector. To achieve financial stability and growth, it is important to identify the determinants of performance of the financial sector. This paper aimed at investigating the impact of the internal determinants of profitability of Kenya`s top six commercial banks over the period 2008-2013, This paper used generalized least squares method to estimate the impact of bank assets, capital, loans, deposits and assets quality on banks profitability. This paper used return on assets (ROA) as a measure of profitability. The findings revealed that bank size, capital strength, ownership, operations expenses, diversification do significantly influence profitability of the top six commercial banks. The result suggests that the Kenyan Government should set policies that encourage commercial banks to raise their assets and capital base as this will enhance the performance of the sector. Another implication of the study is that commercial banks need to invest in technologies and management skills which minimize costs of operations as this will impact positively on their growth and survival.*

**Keywords**: Bank *profitability, internal factors, return on assets, Generalized Least Squares method, Kenya*

**JEL Classification:** E44, G21, L8

## 1. Introduction

Commercial banks` performance in Kenya over the last decade has not been impressive. Several reforms have been implemented in the financial sector since 1990s aiming at increasing performance, stability, productivity, financial access and efficiency. However, bank profitability on average has been erratic. In the period 2008-2013, increases in Profits before Tax (PBT) has been below 20% on average terms. In the year 2013 PBT of the Kenyan commercial banks increased by 16.6% as compared to the year 2012 when PBT increased by 20.6%. In the year 2009, PBT of the Kenyan banks increased by 12.9% as compared to the year 2008 when PBT increased by 13.4%.The year 2010 is the only year that PBT increased by around 52 percent. This trend is not impressive given that a lot of reforms have been done to enhance performance of the banking sector. Also there has been a lot of changes in technology and several financial innovations have been developed in Kenya`s financial sector. All these changes have reorganized the banking sector in terms of management, interactions with clients and relationships with other institutions. All these developments are likely to affect banks` performance and their total cost of operations. It is, therefore, important to know the factors that affect bank performance so as to influence policy making and management decisions that can improve profitability in Kenya`s banking sector.

The banking sector is an integral part of the economy. The sector is one of its major drivers. The banking sector is among the sectors under the financial services that is expected to contribute greatly to the realization of Kenya`s Vision 2030 (Republic of Kenya, 2007). An efficient banking sector contributes positively to economic development by promoting capital accumulation through supply of credit. The sector mobilizes and allocates savings, supports trade, helps in diversification and hedging of risk, and contributes to overall economic growth of a country through provision of credit to the private sector (Levin, 1997). For this sector to continue providing these services, it must be stable and be able to make profits from their operations. Besides, the commercial banks are the major transmitters of monetary policies implemented by the Central Bank in the economy (Siddiqui and Shoaib, 2011). With these roles, analyzing the determinants of their profitability is essential and important to the growth of this sector and stability of the economy.

The available literature shows that a lot of studies have been done on the determinants of bank performance. However, in Kenya, they are very few and so far no study has focused on the country`s top six commercial banks. Kiganda(2014) investigated the effects of macroeconomic factors on commercial banks` profitability in Kenya, focusing on only one bank: Equity Bank Limited. The results of the study revealed that macroeconomic factors have no significant role in bank profitability. The same conclusion was made by Ongore and Kusa (2013). However, they found that Board and Management decisions determine commercial banks` performance in Kenya. Moreover, the findings obtained by various studies are not conclusive about the effect of the various determinants on bank performance. This paper fills this knowledge gap by analyzing the impact of the internal profitability determinants on the top six commercial banks in Kenya.

The objective of this paper is to analyze the role of bank-specific factors on the Kenyan top six commercial banks over the period 2008 to 2013. These banks have a market share of on average above 50% in terms of the overall total assets of commercial banks in Kenya. The paper utilized bank level data over the selected period. The paper used balanced panel data regression analysis to analyze the factors which determine profitability of six Kenya`s top banks in terms of asset base. The paper adds knowledge on the Kenyan banking sector which is important for researchers, the government, general public, the bank owners and other financial institutions and for policy makers. The results will improve on the policies and management practices that enhance banking sector profits.

Organization of the paper is as follows: Section 2 presents the overview of the top six commercial banks in Kenya; Section 3 discusses the determinants of commercial bank performance; Section 4 presents data used in this study and the methodology; Section 5 presents the empirical findings; and, finally Section 6 provides the conclusions of the paper.

## 2. Overview of the Top six Commercial Banks in Kenya

By December 2013, Kenya had one Central Bank as a regulatory authority, 44 banking institutions, 7 representative offices of foreign banks, 9 microfinance banks, 2 credit reference bureaus and 101 forex bureaus. Based on their size (in terms of assets), of the 44 banking institutions, 6 are classified as top six commercial banks. These include: Kenya Commercial Bank Limited, Equity Bank Limited, Barclays Bank (K) Limited, Standard Chartered (K) Limited, Cooperative Bank of Kenya and CFC Stanbic Bank (K) Limited. Table 1, shows the market share of the top six commercial banks in Kenya.

**Table 1: Market Share of the Top Six Commercial Banks in Kenya 2008-2013 (KshMn)**

| Year | Size (%) | Total deposits (%) | Capital Size (%) |
|------|----------|--------------------|--------------------|
| 2013 | 51.37 | 50.20 | 55.4 |
| 2012 | 52.98 | 51.5 | 56.0 |
| 2011 | 54.64 | 51.5 | 55.3 |
| 2010 | 55.60 | 53.5 | 55.4 |
| 2009 | 55.54 | 55.0 | 54.60 |
| 2008 | 58.85 | 56.4 | 55.87 |

Source: Central Bank Of Kenya (various years), Annual Bank Supervision Reports

The information provided in Table 1shows that the top six commercial banks on average command a market share of above 50 percent in terms of size, total deposits, capital size and even profits. From this information, therefore, the stability and soundness of these top Kenya commercial banks is very crucial to the development of Kenyan economy. Their PBT in the period 2008-2013 are seen to be unpredictable as shown in Table 2.

**Table2: The Profits before Tax (PBT) of the Top Six Commercial Banks in Kenya, 2008-2013**

| Year | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|------|------|------|------|------|------|------|
| % increase | 20.56 | 19.18 | 43.22 | 18.71 | 26.72 | 11.72 |

Source:  Central Bank of Kenya, Annual Bank Supervision Reports (various years)

In the year 2009, profits before tax of the top six commercial banks increased by 19.2 percent compared to 20.56% in 2008. PBT increased by 43.22% in the year 2010, which was the best performed in the sample period. The period between 2011 and 2013 has mixed performance. This trend makes the topic interesting to investigate the determinants of profitability of these top Kenyan banks. This paper has attempted to fill this gap.

## 3. Determinants of Bank Profitability

From the literature, bank profitability is measured by: return on assets ( Flamini *et al.*,2009;Oladele*et al.,* 2012),return on equity( Saona, 2011)or the net interest margin (Naceur& Goaied,2008; Naceut & Omran, 2011; Sufian & Habibullah,2009). Bank profits are explained by both internal and external determinants. The empirical findings are not conclusive on the effects of the various variables contained in each category on the performance of commercial banks.

Several theories suggest factors that determine bank profits. The Signaling Theory (Berger, 1995), The Expected Bankruptcy Cost Theory and Risk-return Theory (Olweny and Shipo, 2011), argue that there is a positive relationship between a bank`s profits and its level of capital. The Signaling Theory argues that a higher capital signals positively to the market on the value of the bank. The positive signal provides private information to the bank to enhance capital as the future prospects are good (Berger, 1995).However, Bankruptcy Theory argues that in a situation where bankruptcy costs are unexpectedly high, banks will hold more equity to avoid a period of distress (Berger, 1995). Contrary to the above theories, the Risk Return Theory argues that capital and bank profitability are negatively associated (Saona, 2011, Ommeren, 2011). The Risk Return Theory argues that increasing risks by increasing leverage of the bank leads to higher expected returns. This suggests that if a bank intends to increase its profits by increasing leverage, the equity to asset ratio (capital) has to be reduced.

Other theories that suggest the determinants of bank profitability are the Market Power and Efficiency Structure theories. Market Power suggests that performance of banks is determined by market structure of the industry. While the Efficiency Theory argues that banks earn more profits because they are more efficient in their operations than its competitors ( OLweny and Shipo, 2011). This results to low operational costs leading to high profits (Zouari, 2010)

From the literature, the determinants of bank profitability are divided into two: those which can be controlled by the management, and those which are beyond the control of bank management. The factors that can be controlled by the management are called internal factors while those outside their control are called external factors. The internal determinants of bank profitability reflect the banks` management policies and decisions made on sources and uses of funds, capital, liquidity management and expenses management. This information is usually available on the bank`s balance sheet and in the profit and loss accounts.

The external determinants of bank profits are related to both the economic and legal environment in which the banks operates (Nassreddine, et al, 2013). The environmental factors include market structure, regulation, inflation, interest rates, market growth, and the general economic conditions such as economic booms or recessions (Short, 1979, Bourke, 1989, Molyneux and Thornton, 1992). This means that regression parameters of the bank` profit function will vary over time as economic conditions and legal environment change. This paper focused on the impact of internal factors on the performance of the six top commercial banks in Kenya. The internal factors considered include the capital adequacy, the size of the bank, expenses management and liquidity. One of the indicators of bank`s profitability is capital adequacy of the bank. From the literature, this variable is measured by the ratio of capital and reserves of each commercial bank to total assets or as the ratio of equity to total assets of a bank. Generally banks with high capital ratio, if other factors are constant, will face relatively lower financial difficulties during general financial crisis within the economy and this will translate to high profits. Also well capitalized banks are able to meet the capital requirements set by central bank while the excess can be used to provide loans. In the study of banks profitability for twelve countries selected from Europe, North America and Australia, Bourke (1989) observed a significant positive association between capital adequacy and bank profitability. This means that the higher the capital ratio the more profitable the bank will be. Similar results were obtained by Berger (1995), Anghazo(1997),Obamuyi(2013 )and Ongore and Kusa(2013).

Another indicator of bank profitability is bank size. Bank size accounts for economies and diseconomies of scale ( Naceur &Goaied, 2008). Economics theory argues that if a firm is experiencing economies of scale, then larger firms will operate efficiently and provides their services at lower costs.  Along with this argument, theory of banks suggests that a bank enjoys economies of scale up to a certain level, beyond which they start experiencing diseconomies of scale (Obamuyi, 2013). Empirical results of the relationship between size and profitability are mixed, a risk approach to size suggest that through lower interest rates charged to borrowers, larger banks would will earn  low profits. However, if larger banks control big share of the market in a non-competitive environment, larger banks may earn higher profits through high lending rate, and low deposit rate.

From the literature, size is measured by the natural log of level of assets of the bank. However, size alone may not affect bank profits positively. Studies done so far are not conclusive on the effect of size on bank performance. Various studies have found a positive, some have found negative while some have a non significant relationship between size of the bank and its performance. A study by Boyd and Runkle (1993) found a negative relationship between size and bank performance. This suggests that larger banks obtain lower level of profits than smaller ones. Similar results are found by Saira*et al*., (2011). The negative association is explained by the size itself; large banks may have management issues. Also, large banks may have obtained that level by an aggressive growth strategy which is obtained at the expense of margins and profitability. The findings from Sinkey (1992) and Staikouras and Wood (2003) give mixed results.Sinkey(1992) results indicate that size affects negatively for big firms and positively for smaller banks. The latter study concludes that medium banks earn the highest profits followed by smaller ones. Positive association between size and bank performance are also confirmed by the study done by Flamini et al.,(2009); Bikker & HU (2002). Large banks operate at lower costs because of economies of scale and can raise capital at lower costs. All these, leads to high profits. A few researchers have found that size of the bank has no significant role in determining its performance (Micco, Panizza &Yanez , 2007 and Athanasoglou, Brissimis & Delis , 2008).

One of the important internal factors that can be picked from income statement that affects bank profitability is the amount of expenses incurred during the bank operations within a certain period of time. This is what is referred to us efficiency from the efficiency theory. Efficient management of bank resources has implications on its performance. It is expected that high bank expenses will lead to lower bank profits. Such negative relationship has been supported by various studies (Bourke 1989, Jiang et al 2003, Obamuyi 2013), suggesting that profitable banks operate at lower costs. However, this variable gives mixed results as shown by other studies. Molyneux and Thornton (1992) found that expenses impact positively on profits. They propose that high profits earned by firms in a regulated industry may be appropriate in the form of higher salary and wage expenditure. Their findings support the efficiency wage theory, which states that the productivity of employees increase with the wage rate. The positive association between profitability and expenses was also observed in a study done in Tunisia (Naceur, 2003), and in Malaysia (Guru et al., 2002). The argument is that banks are able to transfer their high costs of operation to depositors and borrowers.

Supplying loans to the public, especially the private sector, is one of the major businesses of commercial banks. Loans are one of the major sources of income, especially interest income. In the studies done this variable is mostly measured as the ratio of loans to assets. Bank loans generate income through interest rates .Hence they affect banking sector profits positively. However, research findings contradict each other on the role of bank loans on bank performance. The study by Abreu and Mendes (2000) gives evidence of a positive association between loan ratio and bank profitability. The studies by Bashir and Hassan (2003) and Staikouras and Wood (2003) contradict the above results by arguing that higher loans impact negatively on bank profits. This latter study argues that banks with non -loan assets are more profitable than those with more loans. The study by Saira et al (2011) found that loans non-significantly affect bank performance.

Other researchers argue that the ratio of loans to assets is a proxy for credit risk (Miller &Noulas, 1997; Naceur& Omran, 2010). According to traditional role of banks, they are intermediaries between the surplus and deficit sectors of the economy. Since the lending rate is usually more than the deposit rate, when more deposits are transformed into loans, the higher the interest margin and profits would expect. Therefore, the higher is the ratio, the higher is the number of loans given out and this increases the default (credit risk). To cater for high credit risk, banks usually increase their margins on interest on loans which increase the NIM and bank profits.

Control is another internal determinant of bank performance. Bank performance differs according to ownership. Privately owned banks generally do better than publicly owned banks. Nationalised banks grant riskier loans and have bad solvency ratios than the privately owned banks. (Barth, Caprio & Levine, 2004).Micco, Panizza and Yanez ( 2007) found that the type of control on a bank has an impact on bank performance.

Degree of diversification is another internal factor that affects performance. In the literature this variable is measured as the ratio of non-interest income related to loans on operating income. The findings from various studies are varied. Dietrich and Wanzenried (2011) found a positive association between the degree of diversification and bank performance. The findings of the study by Barros, Ferreira and Williams (2007) revealed that diversification has a negative impact on bank performance. They argue that the more diversified banks are less likely to be successful and more likely not to perform well.

Bank performance can also be determined by the amount of deposits. There are no many studies which have taken this variable into account. Bank deposits can enhance profits since they are less expensive as compared to borrowed money. However managing large deposits can attract large costs in terms of expertise which may end up reducing bank performance. Kunt and Huizinga (1999) found that deposits affect bank profits negatively due to large costs incurred in their management.

From the literature, it is observed that the impact of the various internal determinants of bank`s performance are not conclusive. The methods used in the previous work mainly include the pooled regression and fixed estimation methods. Panel data usually suffers from the problem of autocorrelation or heterosecedaticity. To minimize these problems this paper estimated the panel model by use of generalized Least Squares method. Also, so far, no study has focused on the top six commercial banks in Kenya. These banks are the major drivers of Kenya`s banking sector. Therefore, it is worth to carry out a research focusing on these commercial banks. The following section discusses the data sources and research methodology used in this paper.

## 4. Data Source and Research Methodology

This paper utilized the most recent balanced panel data of the top six commercial banks in Kenya. The data set covers a period of six years from 2008 to 2013, involving all the top six commercial banks in Kenya (Kenya Commercial Bank Limited, Equity Bank Limited, Barclays Bank (K) Limited, Standard Chartered (K) Limited, Cooperative Bank of Kenya and CFC Stanbic Bank (K) Limited). These banks dominate the banking sector with asset base of more than 50% of the total assets in the sector. The data was sourced from the Central Bank of Kenya Annual Supervision Reports, Kenya Economic Surveys and World Development Indicators. Descriptive analysis was done to show the means of the data. Correlation analysis was done so as to select the variables which entered in the econometrics model and also check for multicolliearity of the data. The model used balanced panel data and was estimated by use of the Generalized Least Squares (GLS) method so as to reduce autocorrelation and heteroscedasticity of the data.

Panel data set have several advantages over the usual cross-sectional or time series data (Hsiao, 2003, 2005, 2006; Plasmans, 2006). Panel data are more efficient with respect to random sampling and ease of identification, reduce collinearity among explanatory variables and are better for aggregation as the aggregation may vary over time (Plasmans, 2006). Similarly, Hsiao (2005) has indicated that an important advantage of panel data is that it allows for control for the impact of omitted variables, and contains information on the inter-temporal dynamics. Wei and Liu (2001), argues that panel data takes into account the effects of individual heterogeneity. Panel data also increases efficiency of the econometric estimators.

There are three estimation procedures used in panel data sets: pooled OLS (common constant method), fixed-effects (FE), or random effects (RE) estimations. If the assumption holds that the unobservable individual bank-specific effects are not very different, pooled OLS estimations are the most simple and efficient method. The FE estimations allow for the unobservable bank heterogeneity. The FE allows for different constants for each bank. However, the use of a fixed-effects model will eliminate the time-invariant hidden bank features that affect profitability, and will make FE estimations less efficient than the RE estimation counterpart. Like the FE model, RE estimations take into consideration the unobservable bank heterogeneity effects, but incorporate these effects into the error terms, which are assumed to be uncorrelated with the explanatory variables. In the RE constants for each bank are taken as random parameters hence incorporated in the error term. However, the Hausman specification test (1978) guides the choice of the appropriate Panel data model either fixed effects method or Random effects model.

Panel regression analysis was done using the following econometrics model:

$$\pi_{it} = \beta_0 + \sum_{k=1}^{k} \gamma_k X_{kit} + v_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 1$$

$$v_{it} = \alpha_i + e_{it}$$

The intercept $\beta_0$ represents the mean value of all cross-sectional intercepts. Where, $\alpha_i$ are bank specific effects assumed to be random. In GLS the error terms and the independent variables are uncorrelated. The dependent variable $\pi_{it}$= represents Return on Assets (ROA) which is a proxy for profitability of bank i in period t.

It was estimated as ratio of net income to total assets. It shows the bank`s ability to utilize the bank resources to generate profits. Xit represents independent variables (ASS, KASS, OWN,OPCASS, LASS, NRY) discussed below.

Size (ASS): The total assets determine the size of the bank. In most of the studies reviewed, assets are used as proxy for bank size. They account for size related economies and diseconomies of scale. In this paper, assets were converted to natural logarithm in order to be consistent with other ratios in the model. The study expected size to have a positive effect on bank profits.

Capital adequacy (KASS): The size of capital of the bank is another explanatory variable included in the paper. KASS variable was measured as total capital divided by total assets. This variable measures the safety and soundness of the bank. A bank with high level of capital is assumed to handle any financial risks which come by with ease as compared to one with low levels of capital. Capital adequacy was expected to have a positive impact on bank profitability.

Ownership (OWN): Ownership was measured by a dummy D= 1, if locally owned, and 0 otherwise. From the literature bank performance differs according to ownership. It was expected that foreign ownership to increase the profits of banks holding other factors constant.

One of the major businesses of banks is to supply loans both the private sector and the government. Commercial banks generate interest income from the loans supplied. This variable (LLASS) was measured by the ratio of the total loans to total assets of each bank in each year. It was expected that there is positive association between loans and profits of the banks.

Expenses management is another determinant of a bank`s profits. Banks that are efficient in managing their expenses, holding other factors constant, earn high profits. Therefore, it is expected that expenses and profits are negatively associated. This may not always be true because in cases where there are high expenditures due to a lot of businesses done, the bank can still increase the returns. In this paper expenses management was measured by the ratio of total operating expenses to total assets (OPCASS).

Diversification (NRY) is another internal factor identified from the literature. This variable was measured as a ratio of non-interest income to total operating income of each bank. This variable was expected to impact positively on bank profits. Section 5 presents the empirical findings of this research.

## 5. *Empirical Results*

This section provides the empirical results of this paper. Both descriptive and correlation analysis were done. Econometrics analysis was also done using balanced panel data based on model 1.Based on the Hausman test, the RE model was preferred and estimated by use of Generalized Least Squares method. The results are presented in Tables 3, 4 and 5, respectively. Table 3 presents the descriptive statistics of the bank`s internal determinants of performance of the top six commercial banks in Kenya in the period 2008-2013.

**Table 3: Descriptive Results**

| Variables | Mean | S.dev | Min | Max |
|-----------|------|-------|-----|-----|
| ROA | 0.05 | 0.016 | 0.014 | 0.077 |
| ASS | 11.97 | 0.36 | 11.25 | 12.50 |
| KASS | 0.16 | 0.04 | 0.07 | 0.25 |
| OPCASS | 0.14 | 0.15 | 0.041 | 0.55 |
| LLASS | 0.56 | 0.12 | 0.13 | 0.76 |
| NRY | 0.40 | 0.05 | 0.33 | 0.55 |

During the study period 2008-2013, the six top commercial banks ROA averaged 5%. As the Table shows the average capital asset ratio in the sample period is 15, which is quite high. The ratio of operating costs to assets averaged 14 % in the sample period. This ratio is quite high, suggesting that the costs of operations are not managed well. Table 5 shows correlation analysis results.

Correlation analysis was done to determine the association among variables and also to detect multicollinearity in the data. The results are presented in Table4.

**Table 4: Correlation Analysis of the Internal Determinants of Profits**

|        | ROA    | ASS   | KASS  | OPCASS | LLASS | NRY  |
|--------|--------|-------|-------|--------|-------|------|
| ROA    | 1.000  |       |       |        |       |      |
| ASS    | 0.431  | 1.00  |       |        |       |      |
| KASS   | 0.765  | 0.192 | 1.00  |        |       |      |
| OPCASS | -0.134 | 0.404 | 0.027 | 1.00   |       |      |
| LLASS  | 0.20   | 0.472 | 0.064 | 0.411  | 1.00  |      |
| NRY    | -0.43  | -0.45 | -0.53 | -0.29  | -0.48 | 1.00 |

From the correlation coefficients presented in the Table above, there is no serious multicollinearity among the variables. Profitability of the sample banks are strongly associated (0.77) with their capital strength and moderately correlated with the rest of the independent variables. Table 5 presents the GLS regression results using ROA as the dependent variable.

**Table 5: Generalized Least Square Estimates, Dependent Variable: Return on Assets (ROA)**

| Variable | Coefficient | Z | |
|----------|-------------|---------|----------------------|
| ASS      | 0.014       | 3.75*** | Wald chi2(6)=222.23  |
| KASS     | 0.31        | 10.31***| Prob>chi2=0.000      |
| OWN      | -0.013      | -5.20***| Overall $R^2$=0.88   |
| OPCASS   | -0.02       | -2.37***|                      |
| LLASS    | 0.02        | 1.90*   |                      |
| NRY      | 0.023       | 0.92    |                      |
| Constant | -0.17       | -3.63   |                      |

*** Significant at 1 %, ** significant at 5%. * Significant at 10%

The overall regression is statistically significant with p value of chi$^2$=0.000. The coefficient of multiple determinations (0.88) also supports this result, which suggests that 88% the variations of ROA are explained by the changes in the independent variables. This significance suggests that the bank size, capital strength, ownership, expenses, loans and non-interest income are important in determining the profitability of the top Kenyan banks. The diagnostics also confirms that the model estimated is good. There is no autocorrelation and heteroscedasticity of the data.

From the results, the significant determinants of the profitability of the top six Kenya banks are size which was measured by total assets, capital strength which was measured by the ratio of capital to assets, ownership, loans to assets and operating costs. The size of the banks as measured by natural log of total assets has a significant positive (0.014) effect on Kenyan top bank profitability over the period 2008 to 2013.This is could be due to economies of scale which large banks enjoy in their operations. The positive effect agrees with the expectation of the paper. The result suggest that 1% increase in the size of the banks raises profits by 0.014%.These results are consistent with previous research ( Lipunga, 2014,Flamini *et al.*, 2009). The result  support the economies of scale under the Market Power theory. Larger banks make efficiency gains that can be captured as higher earnings due to the fact that they do not operate in very competitive markets.

As expected, capital strength impacts positively (0.31) on Kenyan top banks` profitability in the period 2008-2013.Among the explanatory variables, capital was found to have the largest impact on the changes in profits. This impact was significant at 1 percent. The coefficient (0.31) means that 1% increase in capital of the banks leads to 0.31% increase in profits. The results are similar to Obamuyi (2013) and Bourke (1989) who argue that the positive relationship between bank profitability and size of capital is due to the fact that well capitalized banks access funds cheaply and can invest in better quality assets. The results suggest that the top commercial banks in Kenya can improve their profits if they are well capitalized. Banks with large capital are able to diversify their investments and are able to stand strong even during general financial crisis in the country. Such banks are strong in attracting more funds at cheaper rates which enhance their liquidity position (Obamuyi, 2013). The final impact is that such banks will have more funds to give out in form of credit at lower lending rates of interest. This will increase their profits, if other factors remain constant. The positive relationship also confirms the bankruptcy costs and signaling theories.

As expected increases in bank operation expenses reduce (-0.02) bank profitability of the top Kenyan banks in the sample period. This effect was statistically significant at 1 percent. With 1% increase in operations cost, profits of the top Kenyan commercial banks decrease by 0.02%.The results are consistent with the work of Nsambu(2014).However these results are contrary to other research findings. Molyneux and Thornton (1992) and Naceur (2003) found that bank operation expenses are positively associated with high profits. The results for this paper, implies that poor expenses management explains the poor performance of commercial banks in Kenya. Managing expenses well will improve the performance of the top six banks in Kenya.

Ownership is another determinant of profits of the top six Kenya`s commercial banks in the period 2008 to 2013. Being foreign owned was found to  increase profits of the top six commercial banks in the period of study. This could be due to advanced technology imported from their mother banks in abroad, the asset backup and superior managerial skills.

As expected, loans to assets ratio was also found to be positively associated with bank performance.  The results suggest that when this ratio increases by 1 %, profits increase by 0.02 per cent. This result was significant at 10 percent.

Diversification impacted profits positively as expected. However, the coefficient of diversification was found non-significant in determining profits of the top six commercial bank of Kenya.

## *6. Conclusions*

This paper investigated the effects of internal determinants of profitability on Kenya`s top six commercial banks over the period 2008 to 2013. The study used secondary panel data obtained from the Central Bank of Kenya publications, the Kenya Economic Surveys and World Bank development indicators. The regression analysis was done using the Generalized Least Squares method.

The findings revealed that bank size, capital strength, bank operation expenses, ownership, and the ratio of loans to assets are the major significant determinants of the profitability of the top six Kenya commercial banks. The top six commercial banks are still benefiting from economies of scale. They need to set policies than can increase their assets as this has potential of increasing their performance. The results also confirmed that improvement in capital strength of commercial banks leads to higher profits. Ownership significantly determines performance of the top six Kenya`s commercial banks. Foreign ownership enhances profitability of commercial banks. Locally owned  banks need to adopt the skills and technologies used by foreign owned banks to enhance their profits. Bank operation expenses significantly reduce bank profits. This suggests that there is possibility for these commercial banks to increase their profits by putting more effort on proper costs control and operating efficiency. This can be achieved by finding ways of optimal utilization of bank resources during production of banking products and services. The results seem to suggest that government policies in Kenya should encourage commercial banks to raise their assets and capital base. Commercial banks need to invest on efficient management and in technologies that reduce costs of operations in order to enhance their performance. These results are very important to the commercial banks in Kenya, if they have to survive and grow.

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