

# **INFLUENCE OF INTEREST RATE DETERMINANTS ON THE FINANCIAL PERFORMANCE OF MICRO- MORTGAGE BASED COMMERCIAL BANKS IN MOMBASA COUNTY**

**Patrick Nyaibande Oseko.**

School of Business and Economics, Department of Accounting and Finance, Kenya.

**Dr. Andrew Songoro Nyangau (PhD).**

School of Business and Economics, Department of Accounting and Finance, Kenya.

**2022**

**International Academic Journal of Economics and Finance (IAJEF) | ISSN 2518-2366**

**Received:** 20<sup>th</sup> October 2022

**Published:** 5<sup>th</sup> November 2022

Full Length Research

**Available Online at:** [https://iajournals.org/articles/iajef\\_v3\\_i8\\_26\\_46.pdf](https://iajournals.org/articles/iajef_v3_i8_26_46.pdf)

**Citation:** Oseko, P. N., Nyangau, A. S. (2022). Influence of interest rate determinants on the financial performance of micro-mortgage based commercial banks in mombasa county. *International Academic Journal of Economics and Finance*, 3(8), 26-46.

## **ABSTRACT**

Interest rate can be defined as the price that a one pays for utilizing funds borrowed from a creditor or lender. In particular, the interest rate is the fee that is paid on borrowed assets. The primary objective of this research project was to study the influence of interest rates determinants on the financial performance of micro-mortgage based banks in Mombasa County. Interest rates in Kenya for a long time have been on the increasing trend for the better period of 2011-2015 leading to high profitability and expansion of the branch networks in the banking sector in Kenya. The positive performance of the financial institutions, however, have been at the expense of clients majority of whom are low-income earners further pushing them away from the reach of micro-mortgage services offered by this commercial banks. This has made the services expensive in affordability and further increasing the ratio of non-performing loans and loan provisioning in the financial reports of these banks. The of this study is therefore to determine the influence cost of funds have in financial performance of micro-mortgage finance services among the micro-mortgage based financial institutions in Mombasa County, the influence operating expenses on fiscal performance of micro-mortgage based financial institutions in Mombasa County and the influence that credit risk poses on financial standing of micro-mortgage based financial organizations in Kenya. Interest rate determinants were explored

including the cost of funds, operating expenses and credit risk on the financial performance of these commercial banks. To help establish the concept of interest rates, several theories were explored such as loanable funds theory, classical theory, and liquidity preference theory. The research employed descriptive research design targeting micro-mortgage based commercial banks operating in Mombasa County. Target population was seven (7) micro-mortgages based commercial banks in Mombasa County. Sample size was seven (7) and a census was used to collect secondary data for the period 2011-2015 period. Data was analyzed using regression and correlation model and presented in tables and figures. From the analysis, we reliably inferred that cost of funds had an inverse relationship with the development micro-mortgaged based commercial banks in Mombasa County. High operating expenses negatively influenced the development of those institutions and high credit risk influenced negatively the development of the micro-mortgage based commercial banks in Mombasa County. To address the cost of funds variable, financial institutions should therefore seek funds from sources that are less expensive. Operating expenses should be optimized to maximize profits. Appraisals to be thoroughly subjected to multi-level screening to reduce the potential of NPLs.

## **INTRODUCTION**

Interest rates can be referred to as the price that a one pays for the utilization of funds borrowed from a creditor or lender (Crowley, 2007). They may as well be viewed as "cost of borrowed money". These rates are important to a 'consumerist environment' where they are usually articulated as a ratio rate over one year duration. This rate as a price of money echoes market data relative to the expected variation in the consumer buying power of currency or anticipated price increase in the near future (Ngugi, 2001). A mortgage can be viewed as a security for the performance of an act. Its elements are mortgager, the performer of the act, and it involves the mortgager the holder of the mortgage (Schmudde, 2004). A micro-mortgage facility is a low-cost product that is protected by material property through the use of mortgage notes that provides evidence for the being of the loan and the impediment of that property through the provision of a mortgage which protects the loan.

The main hindrances of micro- mortgage financing identified by banks in a CBK survey in 2011 and 2012 are interest rates and access to long-term finances (CBK, 2012). High-interest rates caused the number of non-performing loans to rise in 2012. The report further says that the propensity for few money making organizations to grant micro-mortgage loans on flexible rate basis might be leading to slow growth in suburban micro-mortgage market in Kenya. (Ngugi, 2004) brought out that interest rates effect on the amount of credit to the economy is largely minimal.

The two categories of micro-mortgage interest rates are the fixed and the variable interest rates. Fixed-rate mortgages are best appropriate intended for environments that are steady that where the probability of price increase in the short-run is between low to middle and the households setting is not anticipating drastic changes. For those cases, the premiums for anticipated price increase coupled with its inconsistency are comparatively small and steady.

In advanced and other unsteady environments where fluctuations in price increase, says the World Bank, fixed-rate mortgages turn out to be either exorbitantly costly or too volatile for financiers to provide such services. Adjustable rate mortgages (ARM's) normally fit well to temperately inflationary settings in that interest charges, costs, and revenues move in tandem with unassertive variations. They pose most challenges when exposed to high-inflation settings characterized by large interest changes and sluggish income change. The report says that (ARM's) are not suitable for unstable or fixed incomes or high inflation economies (World Bank). This raises the question as to what is the influence of interest rates determinants on the development of micro-mortgage funding in Kenya considering our inflationary environment is not stable and the interest rates and income do not move together in terms of changes.

The ARM share has varied substantially in the US in recent times attaining highs of 60-70 percentage ratio during the year 1994 then dropping considerably in later periods. Certainly, the ARM segment is now close to an all-time low: ARMs comprise less than 10% of modern suburban mortgage initiations. Some hypothesis developed to explain this include: household micro-mortgage options in recent years has been greatly attributed to systemic causes relative to the economic predicament of 2008, such as the fall of most secure mortgage markets of all time, whence adjustable-rate mortgages was dominant. Secondly the hypothesis drawn from that scenario was that the calamity triggered family units to develop risk averseness subsequent to the advertising was most significantly accorded to most volatile default rates on current ARMs, and the information of “expense surprise” related with the interest rate reorganization on ARMs. Thirdly another hypothesis drawn is that the short ARM segment has been triggered by the same long-term chronological influences that designed mortgage options in former times, e.g. the term organization rates and its influence on the comparative value of dissimilar kinds of mortgages (Federal Reserve Bank of New York, 2010).

### **Interest Rate**

The interest rate is the percent of principal charged by the lender for the use of its money. The principal is the amount of money lent. Banks pay you an interest rate on deposits because they borrow that money from you. (Amadeo, 2017).

The Kenyan financial regulator i.e. Central Bank’s duties as regards the rates of interest instrument is to establish an immediate authorized rate of interest, which may signal the value at which the liquidity will be made available to the finance structure as a lender of last resort. This rate in Kenya is most commonly referred to as the Central Bank Rate which is mirrored in the CBK overdraft rates.

Price increases steadiness can be applied through a ‘Taylor rule’ whereby interest rates are modified in rejoinder to yield and price increases. In employing interest rates, the regulator which is the central bank, marks a objective price rises rate and then interest rates are driven to change price increases to its envisioned points. Certainly, interest rates are amplified when the rate of inflation is higher than the optimum rate and condensed when price increases is underneath the optimum rate. A discount in the authorized rate, for example, inspires the money-making banks to appropriate money from the Central Bank, thereby growing the amount of money in circulation in the economy. Interest rates echo the overall loaning rate of banks as any other facility in the banks.

## **Development of Micro-Mortgage Financing in Kenya**

The micro-mortgage market comprises of financial organizations which include banks, mortgage and investment institutions, microfinances and the regulatory body. Another player is the investors who take up the loans. The housing or buildings is another important component.

For a long time, the mortgage market has marginalized a huge section of the population due to cost and terms of securing a mortgage facility. As the population of Kenya grows, the need for affordable housing which at the time financial providers in the market were not willing to undertake. However, in 2011, the collaboration between equity bank and Mabati rolling mills in an ambitious plan to provide affordable housing for the poor (micro-mortgage) added impetus to the fact that a new approach ought to have been conceived.

Micro-mortgages play a big role in filling this gap. This is because the micro-mortgages' prospects of mass consumption are massive with potential to reach great stages. For instance the according the European Union countries, the average mortgage debt to GDP level is in the region of 50 percent, whereas in the united states the same levels of 72 percent. As established by the World Bank, the probable proportions of the cumulative share held by the mortgage market is presently approximated to be Ksh 800 billion or \$9.9 billion around thirteen times the current level (World Bank, 2011).

In Kenya, the central bank authorizes only three types of lenders to engage in this type of business. These include normal banks, with which full authorization is granted, mortgage companies, and the Micro-mortgage organizations. The main financier in Kenya currently is the Kenya Commercial Bank (KCB) subsequent to its acquisition of Savings & Loans, which rests as a KCB subsidiary in terms of mortgage. Generally the 2 main financiers hold over 1/2 the entire micro-mortgage market and thus nine banking institutions (six large, two medium and one small bank) whose total collection of assets exceed Ksh 1 billion (World Bank, 2011).

Interest rates in Kenya are mainly driven by inflation, which affects the value of money; demand and supply of money through sale and purchase of government security in the open market; monetary policy and intervention by the government through setting the central bank lending rate; general economic conditions such as economic booms and slumps ( Ngugi, 2004). Interest rates in the country have also been sensitive to the existing political atmosphere. For instance, the 2007/2008 post-election crisis caused a hike in the weighted average bank lending rates by 1.6% (Ng'etich & Wanjau, 2011).

The value of mortgage portfolio exponentially improved from the lows of Ksh. 90.4 billion in December 2011 to the highs of Ksh. 122.2 billion in December 2012, signifying a progress of Ksh. 31.8 billion or the percentage ration of 35.2. (C.B.K,

2012). From the CBK records, there were 19,177 micro-mortgage facilities in the market in December 2012 rising from 16,029 in December 2011. The typical facility size grew from Ksh. 5.6 million in December 2011 to Ksh. 6.4 million in December 2012. The growth to an extent accredited to a growing in assets prices. The potential in the Kenyan market is far much higher as discussed later and therefore these increases are just a pale representation of the real opportunities of growth.

The increased rates in the beginning of the year 2012 influenced undesirably the micro-mortgage environment with the non-performing loans growing from Ksh. 3.6 Billion in December 2011 to Ksh. 6.9 billion in December 2012. According to a central bank of Kenya survey for 2012 on commercial banks, the interest rates charged on mortgages and micro-mortgages on average was 18 percent and ranged between 11.0 percent - 25.0 percent. Other information collected was that about 85.6% of facilities were on flexible facts include interest rates basis relative to 90% in 2011.

Founded on a standing of mortgage market limitations, financial institutions recognized lack of penetration to long-run financing and high-interest rates as the main obstacles to the development of their mortgage & micro-mortgage assets. However, the 2011 study had recognized high-interest rates as the main impediment with the poor accessibility of long-term financing being rated as the 2nd hindrance. As per the (CBK) annual publication data, 18% was the average rate of interest in 2012 for mortgages; however, the range was very wide i.e. 11% - 25% (C.B.K, 2012). This is a very high variability among the mortgage lenders and indicates some financial institutions are gaining very high profits from this industry. This further explains the un-affordability of mortgages that causes the slow growth of the market in Kenya.

### **Problem statement**

In Kenya, the rate of interest rates has a direct influence on the financial performance of financial institutions vis-a-vis banks. High interest rates lead to the massive growth of commercial bank branch networks over time with increased profitability. As a result, these banks are able to spread to new areas that were not served by mainstream commercial banks (Baum, Mustafa, and Neslihan, 2009).

However, the high rates of interest rates benefits have brought a whole set of challenges from making the services expensive but also leading to increasing in default rates (Non-performing loans) and provisioning for bad debts. The essence of the micro-mortgage services, therefore, is to offer an affordable remedy to a large section of the population that cannot afford the mainstream mortgage services floated by huge and established financial institutions in Kenya. This is largely credited to the interest rates causing direct cash flow effect on consumption to be severely affected. According to the economic survey report of 2011, the central bank rates increased from 8.5% to 11% in 2012. This sets up clients for foreclosures, renegotiation of their interest rates on

existing facilities and reducing the lending rate which hurt consumers in unprecedented proportions (Olingo, Alan K, 2015)

(Mburu, 2014) Analyzed the effect of interest rates on the performance of commercial banks in Kenya. The study objective was to determine the effect of interest rates on the performance of commercial banks in Kenya. This research was based on a sample size of 44 commercial banks that were analyzed quantitatively using multiple regressions to determine profitability and the various interest rates. The study failed to address the various concepts of interest rate determinants including the cost of funds, operating expenses and credit risk and their influence on prevailing interest rates at any given time. This study, therefore, seeks to address the gaps above and explore the influence of interest rate determinants on the financial performance of micro-mortgage based financial institutions in Mombasa County.

### **Purpose of the study**

To determine the influence of interest rate determinants on the financial performance of micro-mortgage based commercial banks in Mombasa County.

### **Objectives of the study**

- i. To determine the influence of cost of funds on the financial performance of micro-mortgage based commercial banks in Mombasa County.

### **Hypothesis of the study**

**H01** Cost of funds has no significant influence on the financial performance of micro-mortgage finance services in Mombasa County.

## **LITERATURE REVIEW**

### **Cost of funding**

Banks finance their loans, operations, and regulatory requirements using money from a variety of sources. They can obtain long-term funding from the capital markets, in the form of corporate bonds/securities, as well as shorter-term funds from deposits, and very short-term funding (to meet their liquidity needs) from the interbank market or the central bank. (Deloitte, 2014)

On a day to day basis, money is withdrawn as well as deposited in deposit accounts, meaning that if a bank has made loans it will sometimes have less liquidity in its accounts than is required by the central bank. In this case, it will have to borrow, either from the interbank market or from the central bank. The cost of funds is, therefore, some mixture of the deposit rate, the interbank rate, the rate that the central bank

charges, and the rate paid on any corporate bonds (if any have been issued). The importance of each factor depends on the funding structure of individual banks.

Customer deposits have been cited to be the majority source of finance for banks in Kenya, making up 85% of their total liabilities (not including equity). However, the average deposit rate varies from bank to bank, depending on the types of deposit. For instance, the current and savings accounts have lower rates on average than other forms of deposits); the weighted average deposit rate across banks was 6.91% in July 2014 (Deloitte, 2014).

To meet daily liquidity requirements set by the central bank, commercial banks borrow from each other on the interbank market. The interbank market in Kenya only provides funds on an overnight basis and is characterized by limited lines of credit between banks. This has resulted in segmentation in the market, with small banks having less access to interbank funds than large banks. This limits the degree to which it can be used to plan liquidity flows and, combined with the frequent liquidity shortages in Kenya, this has meant that interbank rates are particularly volatile (Deloitte, 2014).

In order to widen the interbank market and make it more active, the CBK has encouraged the use of horizontal repose, where banks would borrow and lend on the basis of collateral, primarily Government securities held at the CBK, as a means of enhancing market liquidity. However, the uptake of this has been low, as the banks do not view the Master Repurchase Agreement governing the interbank market as sufficient to cover the risk of default. A review of this, with a view to promoting wider acceptance and use of the horizontal repo instrument across the industry players, should be explored.

The discount window rate: If banks cannot meet their liquidity needs on the interbank market, they can turn to the CBK to obtain liquidity. This is meant to be a matter of last resort, and as such, the CBK has charged a penalty rate for this service since 2011.

Corporate bond yields: Companies can raise funds by issuing bonds. These generally have a longer maturity-span than deposits, but also tend to have higher interest rates. In Kenya, corporate bonds are not used as frequently as in developed countries, although NIC has recently announced a plan to raise KSh 8bn through corporate bonds. The first tranche of this was for KSh 5 billion, at issued on 21 August 2014 at a rate of 12.5% (Central Bank of Kenya, 2013)

### **Research methodology**

This research employed descriptive design; this is research that comprises surveys and fact discovery inquiries of dissimilar kinds (Kothari, 2004). The method is appropriate for this research due to the fact that it helps in gathering information about the existing

situation of a given event. The objective of the study is also addressed and explores the connection between the key components. Therefore it sought to find out and collect facts in the market and describe the causal linkage between mortgage interest rates and the financial performance of the micro-mortgage financing in Kenya.

Target population comprises of all the items under consideration in any field of enquiry (Kothari, 2004). the area of focused on the micro-mortgage based commercial banking sector. A census of seven banks was conducted. This include; Bank of Africa, NIC bank, Co-op bank, National bank of Kenya, Housing finance corporation, Equity bank limited and Kenya commercial bank. All of them have branch representation in Mombasa County thus my research.

The data obtained was for a period of five years i.e. 2011 to 2015; this is because the period is adequate to observe a trend, it is also reasonable in consideration of the limited research time available needed to carry a more prolonged study.

The sampling size for this study was 7 micro-mortgages based commercial banks operating in Mombasa County. Data was collected mainly through secondary sources. Secondary sources included; sample bank's financial reports, central bank reports, economic journals, and statistical publications available in research firms. Secondary data was based on available financial records for the selected period i.e. Five years spanning from 2011 to 2015.

## **RESULTS AND DISCUSSION**

### **Introduction**

This chapter contains secondary data findings from the research conducted. This is aimed at improving research on the subject matter to enable comparative analysis data processing which entails coding and presentations in form of tables to aid in the examination and analysis.

### **Cost of funds**

#### **Debt**

From the data collected below, NBK acquired the most expensive sources of funds i.e. debt standing at 251,860 (million). These can be attributed to their suboptimal performance over the years thus less attractive and risky in the investors view. HFCK came in second place their cost amounting to 231,520 million shillings. Co-operative bank came in third place registering 211,300 in cost of debt followed closely by NIC bank at fourth place registering an amount of 181,513. KCB closed fifth with 171,450 million in repayment cost which can be understood from their massive pool of assets.

Equity bank came in sixth place and lastly BoA with only 111,678 in cost of debt acquired. It is important to note that institutions that are large in terms of asset portfolio had less challenges in comparison with the less established. This is in agreement with Otuori (2013) who studied the influence of exchange rate determinants on the performance of commercial banks in Kenya. It's also consistent with Bergan (2010) who studied the relationship between quality of the portfolio and the size of institutions in Bolivia.

*Table 1: Debt growth table*

<b>Institution</b>	<b>cost of funds Ksh. (Millions)</b>	<b>% Change</b>
Bank of Africa	111678.00	3.8%
NIC	181513.00	12.70%
Cooperative bank	211300.00	8.72%
National bank of Kenya	251860.00	16.09%
HFCK	231520.00	9.81%
Equity bank limited	131026.00	11.36%
KCB	171450.00	4.89%

*Source: Researcher, 2018*

## **Equity**

(Shubita, 2012) Suggest that firms with high profits depend heavily on equity as their main financing option. This can readily be established from the table below where KCB bank which is the among the most stable banks in East Africa scored the best in terms of equity mobilization standing at 157,400,701.00. Equity bank came in second place posting an amount of 74,060,513.00 as equity from its shareholders. Co-op bank came third place registering 36,800.745. NIC bank came in fourth place with an amount of 17,631,000. NBK took fifth place and closely followed by HFCK that posted 11,854,000 and 11,290,000 respectively. BoA scored least in equity accumulation standing at 7,800,121.00. This findings show that the bigger the institution the higher the confidence and thus easy to accumulate capital.

*Table 2: Equity*

<b>Institution</b>	<b>Equity finance "000"</b>
Bank of Africa	Ksh. 7,800,121.50
NIC	Ksh. 17,631,000.00
Co-operative bank	Ksh. 36,800,745.00
National bank of Kenya	Ksh. 11,854,000.85
HFCK	Ksh. 11,290,000.00
Equity bank limited	Ksh. 74,060,513.00
KCB	Ksh. 157,400,701.00

*Source: Researcher, 2017*

## **Financial performance**

Financial performance and financial profitability are frequently used as interchangeable terms, (Burkhadt, 2013) .With the increasing number of analyses and research papers referencing financial performances, there is a need to have basic understanding of definition of financial performance and its various measures. Measurement of financial performance of any firm is crucial in deciding the strategies to be formulated to ensure that the firm is in the right path. This is particularly important in order to establish if a firm is making losses which if they become consistent may lead a firm to depleting its capital base.

The traditional measures are similar to those used by other firms which include Return on Assets (ROA) which is the net income for the year divided by the total assets. The other measure is Return of Equity (ROE) which is the internal performance measure of shareholder's value and this is the most famous measure of financial performance

### **Return on Assets (ROA)**

Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings.

Commercial bank of Africa scored best in this category being able to generate 24.6% earnings from invested assets. This means in a nutshell that out of every shilling invested 0.24 is earned which is optimal. Co-op bank came in second place with 18.42% earnings and NIC bank in third place with a 13.42%. Equity bank came in fourth place with earnings of 12.67% of invested assets. KCB and NBK followed one another closely at fifth and sixth place of 10.65% and 9.45% consecutively. HFCK scored least under this category with a meagre 3.25%.

*Table 4: ROA*

<b>Name of Institution</b>	<b>Average ROA</b>
CBA KCB	24.6%
Cooperative bank	18.42%
NIC	13.42%
HFCK	3.25%
Equity bank	12.67%
KCB	10.65%

*Source: Researcher, 2018*

### **Return on Equity (ROE)**

Return on equity (ROE) is a measure of how profitable a company is relative to book value shareholders equity. Roe is very important in performance measurement in gauging the magnitude of income generated from investments.

KCB registered an impressive performance managing to generate 32.6 income from investment activities. Equity bank came in second place with 28.50% being realized as income and HFCK third place with a 24.40% margin. NBK took fourth place registering an income of 16.70% and closely followed by 15.80% of NIC bank. CBA and Co-op bank scored least in this category realizing a net income of 12.50 and 11.90% from investing activities.

*Table 5: Return on Equity*

<b>Name of Institution</b>	<b>Average ROE</b>
KCB	32.60
Equity bank limited	28.50
HFCK	16.70
NBK	16.70
NIC	15.80
CBA	12.50
Coop bank	11.90

*Source: Researcher, 2017*

### **Testing hypothesis I**

As presented in Table below, the specific variables influencing the performances of micro-mortgage based commercial banks with a minimum of 95% confidence level. The below results where F statistic is 4.785 give an 11.6 significance level thus leads to the rejection of Hypothesis **H0<sub>1</sub>** that cost of funds has no significant influence on the financial performance of micro-mortgage financial services in Mombasa County. This hypothesis can be rejected with 95% confidence level.

*Table 6: Hypothesis I*

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean square</b>	<b>F</b>	<b>Sig.</b>
Regression	3.1817	2	1.591	4.785	11.6
Residual	9.569	5	0.0638		
Total	12.7507	7			

*Source: (Researcher, 2018)*

### **Regression Analysis**

Regression analysis was employed using the MS-EXCEL tool in arriving at a final result that aided the scientific comprehension of the relationship between interest rates and micro-mortgage funding in the country

Table 3: Regression table

SUMMARY OUTPUT							
<i>Regression Statistics</i>							
Multiple R	0.499547534						
R Square	0.249547739						
Adjusted R Square	0.149487437						
Standard Error	0.79867372						
Observations	18						
<i>ANOVA</i>							
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>		
Regression	2	3.181710169	1.590855084	2.493973484	0.116124279		
Residual	5	9.568195658	0.637879711				
Total	7	12.74990583					
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i> <i>Upper 95.0%</i>
Intercept	0.321991812	0.24043147	1.339224903	0.200438552	-0.190475735	0.83445936	-0.19047574 0.834459358
Cost of Funds	-0.722321766	0.9041733	-0.798875355	0.43683	-2.649521536	1.204878	-2.64952154 1.204878004
Operating expenses-		0.413121	-	0.1248	-	2.1625	- 1.1014320
Credit risk	-	0.01232	-	0.4125	-	1.0327	- 0.3212053
NPL	0.147174898	0.195600106	1.719328792	0.0272215502	-0.035277621	0.001962742	-0.03527762 0.67017417

Source: Researcher, 2018

From the results above the inference drawn is that the relationship between cost of funds.

and development of micro-mortgage based commercial banks in the country is indirectly proportional meaning that the relationship is an inverse of the other.  $\beta_1$  that is -0.722 and  $\beta_2$  0.147 shows that NPLs and the development of the micro-mortgage market have a lean relationship. Value P which is the degree of reliability on the provided data at 20% shows that there is a likelihood that the results were coincidental. From the results we can also infer that independent variables by themselves substantially project an accurate prediction of the development of micro-mortgage funding as shown by coefficient  $R^2=0.25$ . This means that only 25% of micro-mortgage financing can sufficiently be explained by other variables.

## **CONCLUSION AND RECOMMENDATIONS**

### **Introduction**

This chapter entails summarization of the conclusions reached at and the interpretation of the consequent results.

### **Conclusion**

From the findings, interest rate determinants have a direct impact on interest rates which in return have an inverse relationship to the development of the micro-mortgage market. Lower rates will provoke higher growth and the reverse is true. NBK sourced funds that were very expensive in settlement i.e. contingent costs like interest, processing and set up fees. On the same note HFCK scored less favorably by meeting a lot of costs relative to debt financing. Equity financing was not substantial to neutralize the costs of the funds. Cost of funds as a variable is very instrumental in determining the financial performance of a financial institution either negatively or positively. Financial institutions should therefore strive to source for funds that are cheap to enable them realize margins that are significant to guarantee smooth running. Non debt sources are the cheapest in this regard and thus allowing the institution to reduce liabilities. BoA has shown above does have a good standing in particular and other banks should emulate.

### **Recommendations**

A number of factors influencing the micro-mortgage can really be addressed with reasonable amount of effort. Cost of funds can be addressed with incentives from CBK for instance bank rates adjustments. Additional banks should source for cheaper and more reliable sources of finance that can enable them to be competitive in the market place. Investment from individual shareholders will be most appropriate and debt to equity ratio to be congruent to industrial average.

### **Areas for further research**

With the introduction of devolution of central government to county governments, it will be prudent to study the influence of devolution on the development of the micro-mortgage market. Another area that needs to be explored is the effect of infrastructure on the development of micro-mortgage market. Currently most development is concentrated in urban and sub-urban areas.

### **REFERENCES**

- Aguko, J. (2012). Analysis of the factors influencing mortgage financing in Kenya a case of housing finance company of Kenya. *University of Nairobi Repository*, 59.
- Amadeo, K. (2017). Interest Rates and how they work.
- Burkhadt, W. (2013). *Financial performance in modern world*.
- Central Bank of Kenya. (2013). *Bank surveillance report*. Nairobi: Central Bank of Kenya.
- Crowley, J. (2007). *Interest Rate Spreads in English-Speaking African Countries*. IMF.
- Deloitte. (2014). *An analysis of Economic and competitive factors influencing Kenyan interest rates*. Nairobi: Deloitte consulting limited.
- Emanuel Moench, J. V. (2010). *Why Is the Market Share of Adjustable Rate Mortgages So Low?* New York: FEDERAL RESERVE BANK OF NEW YORK.
- J., A. (2010). Analysis of the factors influencing mortgage finance in Kenya.
- Kenya, C. B. (2012). *Bank Supervision Annual Report 2012*. Nairobi: Central Bank of Kenya.
- Kenya, C. B. (2012). *Bank surveillance Report*. Nairobi.
- Keynes, J. M. (2003, April 16). *The General Theory of Employment, Interest, and Money*. Adelaide, Adelaide, Australia.
- Kothari, C. R. (2004). *Research Methodology Methods and Techniques*. New Delhi : NEW AGE INTERNATIONAL (P) LIMITED, PUBLISHERS.
- Loïc Chiquier, M. L. (2009). *Housing Finance Policy in Emerging Markets*. Washington DC: The International Bank for Reconstruction and Development/The World Bank.
- Mburu, I. N. (2014, October 1). Effect of interest rates on financial performance of commercial banks. Nairobi, Nairobi, Nairobi. Retrieved 2016

- Ng'etich Joseph Collins, K. W. (2011). The effects of interest rate spread on the level of non-performing assets: A case of commercial banks in Kenya. *International Journal of Business and Public Management*, 8.
- Ngugi, R. (2004). *Understanding interest rates structure in Kenya*. Nairobi: Kenya Institute for Public Policy Research and Analysis.
- Ngugi, R. W. (2001). *An empirical analysis of interest rate spread in Kenya*. Nairobi: African Economic Research Consortium.
- Njongoro, J. N. (2013). *The effect of mortgage interest rate on the growth of mortgage financing in kenya*. Nairobi: University of Nairobi Repository.
- Olingo, Alan K. (2015). Business Daily. *The East african*, 1-2.
- Olweny, T. ( 2011). Modelling Volatility of Short-term Interest Rates in Kenya. *International Journal of Business and Social Science* , 15.
- Rubio, M. (2008). *Fixed and Variable-Rate Mortgages, Business Cycles and Monetary Policy*. Boston.
- Schmudde, D. A. (2004). *A Practical Guide to Loans and Liens*. United Sates of America: Ali-Aba.
- Shubita, A. (2012). *Procedia Economics & Finance*. *Procedia Economics & Finance*.
- Stefan Gerlach, W. P. (2004). *Bank Lending and Property Prices in Hong Kong*. Hong Kong: Hong Kong Monetary Authority.
- The World Bank. (2011). *Developing Kenya's Mortgage Market*. Washington DC : The International Bank for Reconstruction and Development / The World Bank.
- Wessels, W. J. (2000). *Business & Economics*. North Carolina: Barron's.