

**EFFECT OF INTEREST RATES CHANGES ON FINANCIAL  
PERFORMANCE OF INSURANCE FIRMS; A SURVEY OF LIFE  
INSURANCE POLICY IN KENYA**

**BY**

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## DECLARATION

I declare that this research project is my original work and has not been submitted for examination in any other university.

Signed ..... Date.....

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**Reg. No.: I46/81669/2015**

This research project has been submitted for examination with my approval as the University Supervisor.

Signed ..... Date.....

**PROF. R. SIMWA**

## **ACKNOWLEDGEMENTS**

I wish to extend my profound acknowledgment to the Almighty God for giving me wisdom and understanding to complete this proposal successfully.

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## **DEDICATION**

This project is dedicated to my parents for their love and support. Their encouragement and support has assisted me greatly in completion of this proposal.

## ABSTRACT

Interest rates are one of the economy single strongest influences and have a profound effect on everything from individual investment decisions to job creation, monetary policy and corporate profits. Economic environments have an intense consequence on the growth of the insurance companies. A strong insurance industry promotes a developed contractual saving sector which contributes to a more resilient economy that would be less vulnerable to interest rates and demand shocks while creating a more stable business environment, including macroeconomic stability. The main objective of the study was to establish the effect of interest rates changes on financial performance of insurance firms; A survey of life insurance policy in Kenya. The study will be guided by the following research objectives; to establish the effect of interest rates changes on loan performance of insurance firms in Kenya; to examine the effect of interest rates changes on investment income of insurance firms in Kenya; to assess the effect of interest rates changes on liquidity position of insurance firms in Kenya and to determine the effect of interest rates changes on stock returns of insurance firms in Kenya. The study adopted a descriptive survey design. The target population was licensed insurance firms. The target population was therefore be 43 insurance firms in Kenya. The study targeted the top managers of these insurance firms. The sample size was 115 respondents. Data collected was majority secondary data and was collected using a data sheet. Data was analyzed using descriptive and inferential statistics and presented using tables. The study findings indicated that there was a significant relationship between loan performance and financial performance ( $p=0.009$ ); there was a significant relationship between investment income and financial performance ( $p=0.016$ ); there was a significant relationship between Stock returns and financial performance ( $p=0.003$ ) and there was a significant relationship between Stock returns and financial performance ( $p=0.003$ ). The study concluded that interest rate changes affect performance of assets as it increases the cost of loans charged on the borrowers, regulation on interest rates have far reaching effects on assets non-performance. The study recommended that there is need for government to regulate interest rates as this would help to safeguard borrowers from exploitation by insurance firms.

## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>iii</b>
<b>DEDICATION.....</b>	<b>iv</b>
<b>ABSTRACT.....</b>	<b>v</b>
<b>LIST OF TABLES .....</b>	<b>viii</b>
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.2 Statement of the matter .....	6
1.3 Purpose of the Study .....	8
1.4 Analysis Objectives .....	8
1.5 Analysis Queries .....	8
1.6 Significance of the Study .....	9
1.7 Scope of the Study .....	10
1.8 Conceptual Framework.....	11
<b>CHAPTER TWO: LITERATURE REVIEW.....</b>	<b>12</b>
2.1 Introduction.....	12
2.2 Hypothetical Review.....	12
2.2.1 The Real Theory of Interest .....	12
2.2.2 Loanable Funds Theory of Interest Rates .....	13
2.2.3 Arbitrage Pricing Hypothesis.....	14
2.3 Empirical Review.....	15
2.3.1 Investment Returns .....	15
2.3.2 Loan Performance .....	17
2.3.3 Stock Returns .....	18
2.3.4 Liquidity Position.....	19
2.4 Summary of Literature Review .....	21

<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>23</b>
3.1 Introduction.....	23
3.2 Research Design/Analysis Style .....	23
3.3 Target population .....	23
3.4 Sample Size.....	24
3.5 Description of Research Instruments .....	24
3.6 Validity of Instruments .....	25
3.7 Reliability of Instruments .....	25
3.8 Data Analysis .....	26
<b>CHAPTER FOUR: PRESENTATION, INTERPRETATION &amp; DISCUSSION OF FINDINGS .....</b>	<b>27</b>
4.1 Introduction.....	27
4.2 Descriptive Statistics.....	27
4.3 Specific Objectives .....	30
4.3.1 Loan performance & financial performance.....	31
4.3.2 Investment income & financial performance.....	32
4.3.3 Liquidity Position & financial performance .....	33
4.3.4 Stock returns & financial performance .....	34
<b>CHAPTER FIVE: SUMMARY, CONCLUSIONS &amp; RECOMMENDATIONS</b>	<b>36</b>
5.1 Summary of Findings.....	36
5.2 Conclusions.....	36
5.3 Recommendations.....	37
<b>REFERENCES.....</b>	<b>38</b>
<b>APPENDICES .....</b>	<b>43</b>
<b>APPENDIX I: DATA SHEET .....</b>	<b>43</b>

## LIST OF TABLES

Table 4.1 Descriptive Statistics.....	28
Table 4.2: Results on averaged Loan performance.....	28
Table 4.3: Results on Average Investment income .....	29
Table 4.4: Results on Average Liquidity Position.....	29
Table 4.5: Results on averaged Stock returns.....	30
Table 4.6 Loan performance & financial performance.....	31
Table 4.7 Effect of Investment income & financial performance .....	32
Table 4.2.3 Effect of Liquidity Position on financial performance .....	33
Table 4.2.4 Effect of Stock returns on financial performance.....	34

## LIST OF FIGURES

Figure 1.1 Sensitivity Analysis .....	1
Figure 1.2 Price Earnings vs Risk Free Rates.....	5
Figure 1.3 Conceptual Framework .....	11



# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

“Life insurers area unit exposed to the charge per unit setting as a result of they sell long merchandise whose gift price depends on interest rates (Chen Andmp; Wong, 2014). On an elementary zone, the merchandise settle 2 manifesto for purchasers. Primary manifesto is that policy owners wish protection from extreme monetary repercussion ensuing from either loss of life or exhaustion of monetary resources over time. The second objective is to permit customers to avoid wasting for the long run. As a result of customers area unit expected to get money from their policies years when they need been issued, life insurers face the challenge of finance the policyholders’ regular payments in such the simplest way that the capital area unit accessible to satisfy customers within the far future. This aspect usually leads life firms to take a position in an exceedingly assortment of long properties, systematically bonds. Life firms usually invest mostly in fastened financial gain stocks as a result of most of their burden area unit mostly fastened in size (Previn et al., 2014).”

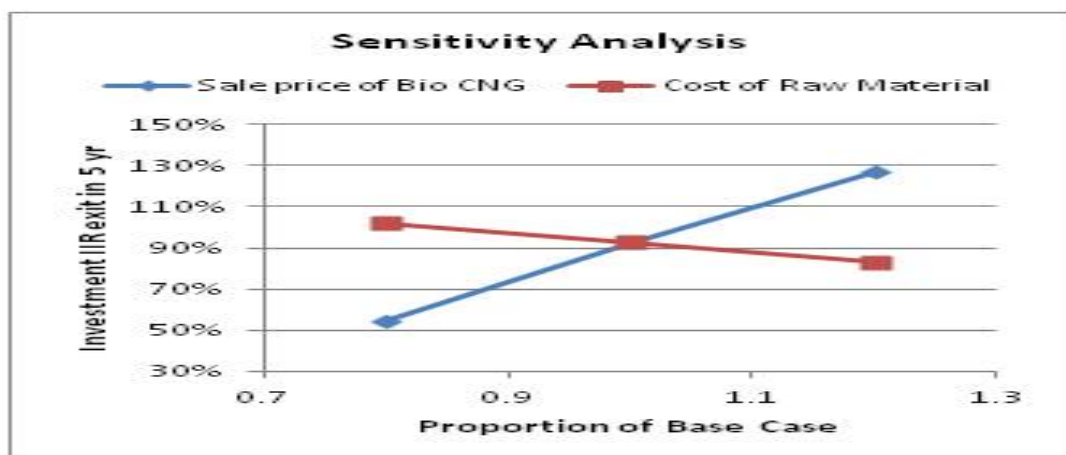


Figure 1.1 Sensitivity Analysis

“Interest rates square measure one in every of the economy single strongest influences (Barquero Andamp; Segura, 2011). They facilitate the formation of capital & have a profound result on everything from individual investment selections to job creation, financial policy & company profits. Rate as a worth of cash reflects market info relating to expected modification within the buying power of cash or future inflation (Ngugi, 2011).

Interest rates square measure elementary to a financier society & square measure commonly conveyed as a proportion estimate over the amount of 1 year. ‘Hanson & Rocha’ (2006) point out on the aspect of forthright taxes, reservoir needs, value of agreement & made financing in process rates of interest. Interest rates affects insurance corporations capability to interact business as high interest rates implies that borrowers of funds square measure being charged high interest rates on loans so decreasing their demand for loanable funds (Barquero Andamp; Segura, 2011). Also, high rates show that savers have gotten low interest rates on their savings & so will cut back the availability of loanable funds, as they will channel their funds to alternative activities; all this affects the performance of economic establishments within the economy (Kashyap Andamp; Jeremy, 2014).”

A basic proportion valuation model

$$r_n = r_i + p_e + ip + lp$$

Assumption letter is that the duplicate for all members within the merchandise, & this can be exact to:

$$r_n = (r^*)_r + rp + lp$$

LET

$r_n$  =nominal rate on an investment given

$r_i$  = the safe come back to capital

$r^*n$  = the rate nominal on a short-run.

$i_p$  = premium risk

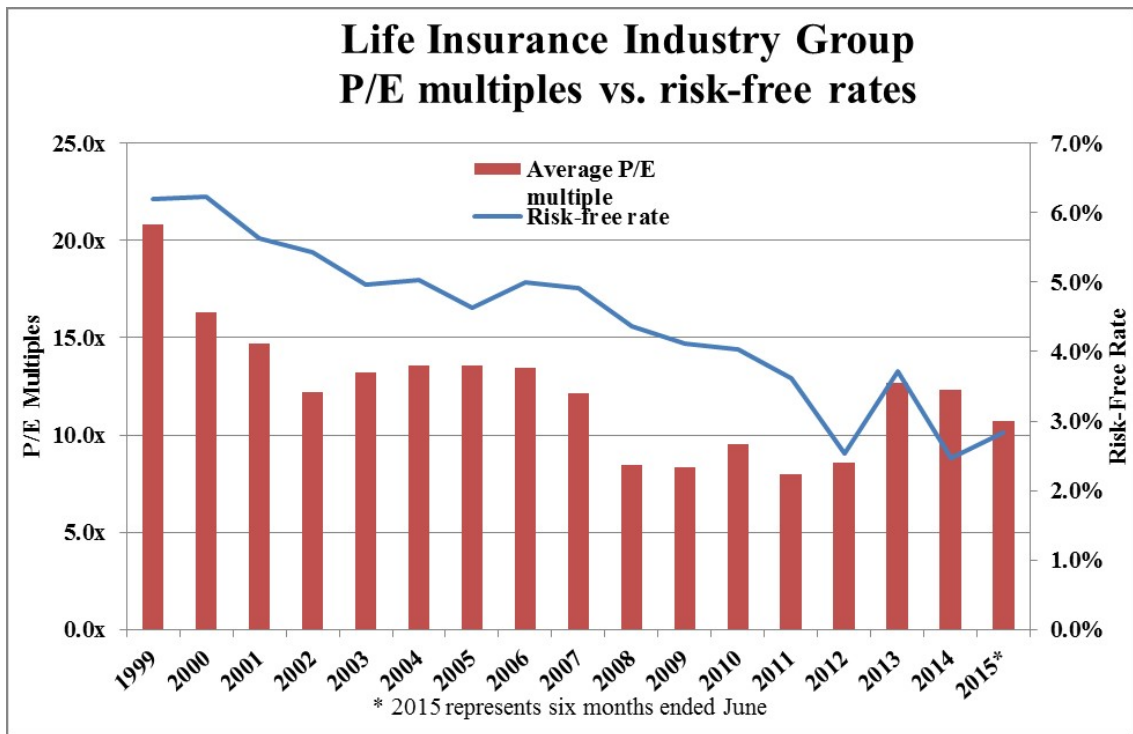
$l_p$  = premium liquidity

“Changes in return rates will have an aftermath reaction on the arithmetic mean of insurance liabilities considerably, & therefore the impact is also therefore complicated that it's terribly troublesome to evaluate. Generally, life firms will conduct risk rate by coordinating the money movements of assets & liabilities (Chen Anadamp; Wong, 2014). But, they even have to think about risk rate from the fixed choices in several product that they sell. Policy offers can use derivatives to mitigate variety of the selection risk. But using of derivatives' to reduce risk is costly/expensive. There is the chance that life insurance firms notice it optimum to travel away them hospitable some rate risk. This risk is additionally lots of apparent once rates of interest move by associate unexpectedly great figure, as went on within the few past years. Changes in interest rates have an effect on a firm's stock value each as a result of they have an effect on the worth of the firm's existing record & since they have an effect on future profit opportunities for the firm (Barquero Andamp; Segura, 2011).”

“Globally, as rates of interest amendment, the values of a life company's assets & liabilities amendment, doubtless revealing the corporate to risk (Pervan et al., 2014). Life companies select valuables to back their liabilities with charge per unit risk in the back of their minds however mightn't prefer to or mightn't be ready to fully balance the charge per unit 'sensitivity of their assets & liabilities' (Chen Andamp; Wong, 2014). This conflict arises partly as a result of valuables with capabilities as

lengthened as those of some insurance accountabilities aren't continually on the market. Moreover, there's an extra complication. Several insurance & rente merchandise have embedded guarantees or hooked up riders that promise policyholders a minimum come over the period of their policies. As interest rates decrease, these guarantees or riders will have an effect on however sensitive these merchandise area unit to charge per unit changes.''

“Life companies also are exposed to charge per unit risk through the policy owners behaviour charge per unit surroundings affects them & by policyholders sure as shooting insurance merchandise (Pervan et al., 2014). For instance, fixed-rate annuities will promise a pre-specified come for investments over a doubtless extended amount. Once interest rates area unit terribly low, as they're presently, life insurers will solely create cash on these annuities if they provide policyholders an occasional come. There's less demand for annuities beneath these conditions. Also, several insurance merchandise supply policy owners the choice to fund further contributions at their own discretion or to shut out a consent come for a planned payment. Once interest rates amendment, it's a lot of probably that policyholders can act on these choices (Barquero Andamp; Segura, 2011). for instance, they'll contribute a lot of to associate rente with a high warranted come once interest rates area unit low or surrender associate rente with an occasional come guarantee if interest rates rise considerably.''



**Figure 1.2 Price Earnings vs Risk Free Rates**

“In Africa, several of the product sold-out by insurance corporations square measure sensitive to changes in interest rates (Pervan et al., 2014). Think about a full life scheme, during which the customer makes a collection of mounted payments over time in exchange for the delivery of a bigger mounted payment within the future. Changes in interest rates alter the expectation these days of such future payments. Specifically, a decrease in interest rates causes future payments to hold additional weight & so makes an insurance company’s liabilities larger in magnitude. This is often a key variety of rate of interest risk that has to be managed by the insurance trade. Assessing the rate of interest risk of a life insurer’s liabilities isn't continuously simple. One complicating issue is that a lot of the product offered by life insurers have guarantees, either embedded within the policies or connected as riders.

The foremost common guarantees credit a minimum periodic rate of come back to the policy money worth, making certain that the money worth can grow by a minimum of some minimum proportion every amount. Minimum guarantees square measure usually such once policies square measure sold-out. The guarantees square measure aforementioned to be either within the cash or out of the money betting on however the bonded come back compares with the comeback that might exist if not for the guarantee (Pervan et al., 2014).”

“In Kenya, the insurance trade could be a very important a part of the whole national economy. Insurance corporations give individual & businesses with a broad spectrum money of monetary of economic} security product & contribute to financial mediation, so enhancing a nation’s money & economic step-up. The national economy of AN economy features a robust & recognized correlation with its development. As such, their success suggests that the success of the economy; their failure suggests that failure to the economy (Ansah-Adu, Andoh, & Abor, 2012). In his study, Zarruk (2009), considering risk management by insurance companies, found that risk-averse money establishments operate with a smaller rate of interest unfold than risk-neutral ones, whereas Paroush (2014) explains that risk aversion raises the best rate of interest.”

## **1.2 Statement of the matter**

“A relationship exists among economic science factors & premium receipt within the insurance trade (Chen & Haung, 2011). Insurance companies earn high interest financial gain once interest rates square measure high & on the contrary high interest rates discourage premiums. Economic environments have AN intense consequence on

the expansion of the insurance corporations. A powerful insurance trade promotes a developed written agreement saving sector that contributes to an additional resilient economy that might be less prone to rate of interest & demand shocks whereas making an additional stable business atmosphere, as well as economic science stability. Barajas et al., (2009) command that a key variable for the national economy is that the interest rates on deposits & interest rates on credits. The authors note that once this distinction is massive, it's thought to be AN impediment to the enlargement & development of the money mediation system, since this discourages savers & limits funding to entrepreneurs or investors in loans. Paroush, (2014) explains that risk aversion raises the best rate of interest''

''According to Cheechee & Herbeman, (2012) economic expert use the rate as a very important tool to draw in a lot of saving & therefore the decrease in rate can encourage investors to appear for different investment which will generate a lot of comeback consequently. Economists argue that the rate is that the worth of capital allocation over time. The magnitude of rate unfold varies across countries. It's reciprocally associated with the degree of potency of the money sector that is Associate in nursing consequence of a competitive setting. The character & potency of the money sectors are found to be the key reasons behind variations in unfold in countries across the planet. In economies with weak money sectors, the mediation prices that are concerned in deposit mobilization & channeling them into productive uses, are abundant larger (Jayaraman & Sharma, 2013).''

''Insurance corporations particularly the life insurers are exposed to the rate setting as a result of they sell semi-permanent product whose gift price depends on interest

rates. This study seeks to determine the impact of interest rates changes on money performance of insurance firms; A survey of life assurance policy in African nation.”

### **1.3 Purpose of the Study**

“The main purpose of this study was to determine the impact of interest rates changes on money performance of insurance firms; A survey of life assurance policy in African nation.”

### **1.4 Analysis Objectives**

The study was mostly based on the following objectives;

- to resolve the impact of interest rate changes in loan performance of insurance companies in African nation.
- To look at the blow of rates of interest changes on investment money gain of insurance companies in African nation.
- To assess the impact of interest rates changes on liquidity position of insurance companies in African nation.
- To see the blow of rates of interest changes on security returns of insurance companies in African nation.

### **1.5 Analysis Queries**

- What's the impact of interest rates changes on loan performance of insurance companies in Kenya?
- To what extent do interest rates changes have an effect on investment financial gain of insurance companies in Kenya?



- However do rates of interest changes have an aftermath on the liquidity position of insurance companies in Kenya?
- What's the blow of rates of interest changes on security returns of insurance companies in Kenya?

### **1.6 Significance of the Study**

The research is going to be constructive in understanding the consequence of sensitivity of rates on insurance business therefore it'll assist the institution managers to rigorously arrange & forecast exploitation interest rate changes with a read to confirm money establishments predict performance therefore stay stable to serve their purpose. With a stronger understanding of things touching the performance, money establishments may be allowed to line their rate each for savings, deposits & loan to encourage savings & disposition & this may make sure the growth of the economy.

The findings will be helpful to policy manufacturers within the space of regulation & superintendence. The study can give helpful lessons on however numerous legal, regulative & procedural necessities may impact on the insurance business & finance sector generally as they endeavor to evolve. During this manner, the study findings can supply helpful inputs to advise the review of the policy & legal framework within the future. Investors will use the results obtained from the analysis to create selections on that sectors of the economy to take a position in at totally different levels of interest rates. Policies if created are adequate, there'll be condusive economic progress & this may be mirrored in a vigorous recession.

This study {will also also can|will} be helpful to finance practitioners since the findings of the study will shed a lot of light on the implications of rate unfold on money performance of companies. Academicians & researchers st& to profit from the findings of this study since it'll act as a reference to those inquisitive about this space or different connected topics. It'll conjointly kind a basis for more analysis.

### **1.7 Scope of the Study**

This research targeted to determine the impact of rates of return changes on money consumption of insurance firms; a survey of life assurance policy in African nation. The study tried assessing the impact of interest rates changes on money performance of insurance companies in African nation. It specifically checked out the impact of interest rates changes on loan performance; investment income; liquidity position & on stock returns on money performance of insurance companies in African nation. The study adopted a descriptive survey style & was conducted between the Month of Gregorian calendar month & Gregorian calendar month 2016.

## 1.8 Conceptual Framework

### Independent Variables

### Dependent Variable

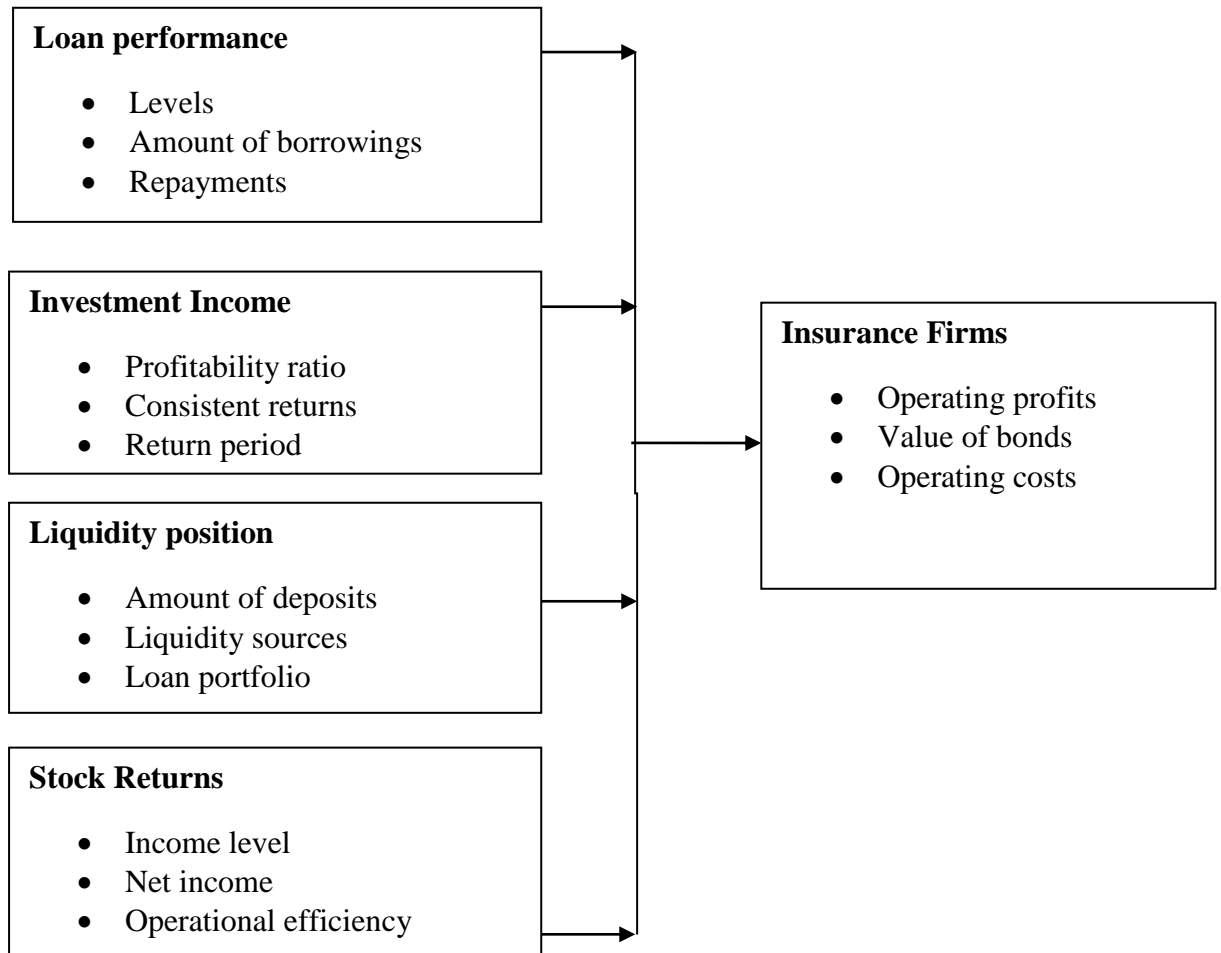


Figure 1.1 Conceptual Framework

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This area presented the hypothetical framework, review of the empirical studies & research gap. It is the reviewed of various studies that are relevant to interest rate changes & insurance firms.

#### **2.2 Hypothetical Review**

There are many hypothesis explaining interest rate effects but this study will be guided by three theories that provided theoretical evidence of various arguments by different scholars & researchers in relation to interest rate changes on insurance industry.

##### **2.2.1 The Real Theory of Interest**

The classical theory was put forward by Keynes (1936). In this theory, the interest is found by the demand of capital & supply of saving, hence when the demand for capital & supply of capital are in equilibrium, we get the rate of interest. The supply of savings I mainly derived from households/saving from the current income, while the demand for capital/investment capital comes mainly from business area/sector.

Household Savings (currently) is equal to the difference between income(current) & consumption expenditures(current). Individuals would rather current over future consumption/ & the payment of interest is a bonus for waiting. We know that the

factors that determine the rate of return/interest are investment capital & savings, (Fredman, 2011).

This theory has been subjected to a number of critics:

- This theory has been based on the assumption that there is full employment & truthfully what we in is underemployment of resources/unemployment.
- Keynes declared the theory as indeterminate. According to him, savings relied on the amount of income(level).If we cannot know the level of income, then we will not know the point of the saving curve, Therefore, if the amount of savings is not known we can't determine the interest rate. Thus we cannot know the Interest rate if we do not know the income level. We also know that it is the rate of interest that will bring a change in the level of income & investment.
- Keynes also stated that interest rate should be resolved by the monetary factors rather than real factor.

### **2.2.2 Loanable Funds Theory of Interest Rates**

Davenport's (1896) theory of the supply of loanable funds in an environment of free banking hypothesizes that the rate of interest are found by credit demand & loanable funds supply. The idea is an approach where the ruling rate of interest in society is pure & simple, conceived as nothing else than the price of loans or credit, determined by supply & demand. It is an improvement of the classical theory of interest. In traditional loanable funds theory as presented in Gregory's (2012) macroeconomics book called Principles of Economics, the amount of loans & credit available for financing investment is constrained by how much saving is available. Saving is the

supply of loanable funds; investment is postulated to be connected to the rate of interest negatively. Lowering households' consumption means increasing savings that via a lower interest increase investment.

Its limitations but area unit that in Keynes's read & later over & another time confirmed by inquiry, it's not such a lot the rate of interest at that corporations will borrow that causally determines the number of investment undertaken, however rather their internal funds, profit expectations & capability utilization. As is typical of most thought economics formalizations & models, there's pretty very little mention of universe phenomena, as an example real cash, credit parceling & also the existence of multiple interest rates, within the loanable funds theory. As emphasized particularly by Minsky (2007) to know & make a case for what proportion investment /loaning /crediting goes on in an economy, it's rather more necessary to concentrate on the operating of economic markets than looking at accounting identities like  $S = Y - C - G$ . The issues we have a tendency to meet on trendy markets these days have a lot of to try to with inadequate money establishments than with the dimensions of loanable funds savings.

### **2.2.3 Arbitrage Pricing Hypothesis**

This theory was developed by Ross (1976) that assumes that assets return relies on several factors i.e. market factors, macro-economic factors & specific factors. It says that the return expected of an investment or a financial asset can be modeled as a linear relationship of various macroeconomic variables or where degree of correlation to changes in each variable is represented by a beta coefficient. The asset value should equal the expected end of period asset value or future discounted cash-flows at the

rate implied by this model. If the asset value changes, arbitrage should bring it back to the line.

“Charging a value a minimum of as high because the competitive value (reservation price) will increase the market price of the corporate. Charging a cheaper price would scale back the company’s market price. Thus, money models & money costs square measure among the key things of knowledge that insurers ought to have at their disposal once creating money selections regarding tariff schedules, insurance contract terms, among others. Though many various specific forces will influence the comeback of a person stock, the inner & external factors tend to wipe out in massive & well distributed portfolio. Insurance firms square measure companies & insurance policies is understood as specific kinds of money instrument or contingent claim so it's natural to use money models to insurance evaluation, (Cummins, 2007)’’.

“The hypothesis will facilitate the insurance firms to prefer if a security is overvalued or undervalued so avoid creating losses. It grants managers powerfulness to do out if their portfolios square measure set blank to bound internal or external factors that will have an effect on the money performance of establishments.’’

## **2.3 Empirical Review**

### **2.3.1 Investment Returns**

“Grace & Hotchkiss (2005) show that GDP is -vely associated with premium & interest rates have a reverse impact on the underwriting profits: Demirguc-Kunt & Huizinga (2009) argue that monetary intercession directly affects the come back on savings & investment, & that the distinction between these 2

reflects the margins of intercession, while not deed aside dealing prices & taxes. Therefore, Infobahn interest margin may be taken as associate degree potency indicator in resource allocation during a monetary system; this can be the motivation for the authors to research however the legal system, the structure of the national economy & monetary laws have an effect on the charge per unit unfold. This research includes tax indicators & a decent a part of the variables area unit weighted by GDP per capita to check whether or not the country's development level additionally matters.’’

‘‘Grace & Hotchkiss (2005) show that GDP is -vely related to premium & interest rates have a reverse effect on the underwriting profits: Demirguc-Kunt & Huizinga (2009) argue that financial intermediation directly affects the return on savings & investment, & that the difference between these two reflects the margins of intermediation, without leaving aside transaction costs & taxes. Therefore, the net interest margin can be interpreted as an efficiency indicator in resource allocation in a financial system; this is the motivation for the authors to investigate how the tax system, the structure of the financial system & financial regulations affect the interest rate spread. This study includes tax indicators & a good part of the variables are weighted by GDP per capita to test whether the country's development level also matters.’’

Akotey & Amoah (2012) researched on determinants of performance of life assurance firms in Ghana. The findings revealed life insurers have been incurring underwriting losses which detract from their financial performance. The high underwriting losses as the results showed is due to overtrading, high claims payments & high managerial



expenses. The study further showed that gross written premiums & total assets have a negative effect on investment income. This is evidenced in the low levels of investment income in the industry. The study concluded that Life insurers' financial performance was measured by three parameters: investment income, underwriting profit & overall sales profitability. These parameters capture the key operations of life insurers.

### **2.3.2 Loan Performance**

Garman & Grable (2012) explored on the sequence of interest rates on financial act of agricultural firms in Amsterdam, Holl &. Secondary data was used & using a five year trend between 2008-2013. Data was analyzed using a regression model & When the interest rates were low clients borrowed more money to make investments since the cost of borrowing was low. The results of the analysis show that there is an inverse correlation between rates of interest & financial act of the firm. Gaganis & Doumpos (2012) approximated the achievement of non-life insurance firms & establish that macroeconomic indicators i.e. GDP, growth, inflation & income inequality sway the performance of firms.

Njoroge (2013) studied the relation between rates of interest & money performance/act of companies listed at the NSE (Nairobi Securities Exchange). The study covered 5 years from 2008 to 2012 inclusive & therefore the analysis was supported already collected information (secondary) gathered from printed money statements of the companies & publications by the CBK (Central Bank of Kenya). Causative analysis style was used to assess the character of the relation between rates of interest & money performance/act of companies listed at the NSE (Nairobi

Securities Exchange). Regression test/analysis was used to assess the attributes of the connection. Results obtained from study indicated a not necessary positive relation between rates of interest & money performance. However, different factors that influence money performance got to be thought of & increased so considerably advance the money performance/act of these companies. Thus study is critical to the govt. in setting interest rates applicable to influence the extent of borrowing & disposal to encourage economic development.

### **2.3.3 Stock Returns**

Pervan et al (2014) investigated how insurance companies in Macedonia performed & according to the findings of panel analysis regarding the determinants of profitability, it was revealed that expense ratio, claim ratio, Size of the insurer, internal factors like leverage, staff & external factors like economic growth, & inflation have statistically significant influence on insurers' performance. Usually the overall profitability is a summation of the investment income & the underwriting profit. That is the investment income must complement the underwriting profit towards the enhancement of the overall profitability of a life insurance company.

Nduati (2013) desired to study the effect of interest spread on financial performance, his survey was based on Kenya commercial banks. In his study he targeted a population of forty three banks in Kenya. He analyzed his data using the regression analysis/test. From his study, we get to see that there is a positive relation between financial performances (ROA) of commercial banks in Kenya rate of interest spread. Again from his research we get to learn that the financial performance of banks in Kenya were significantly influenced by external variables & internal variables. The

research advocated that there is urgency for government to handle rates of interest since this will help to secure borrowers from profiteering by commercial banks.

#### **2.3.4 Liquidity Position**

Gavin (2010) examined the factors poignant banking sector charge per unit unfold in Republic of Kenya. He adopted a quantitative & descriptive analysis style on a sample of fifteen business banks in The Republic of Kenya which accounted for eighty fifth of all the loans distributed between 2012 & 2009. The research used secondary information & located out that intermediary potency is stricken by bank market share of overheads, assets, & come on assets, liquidity & market share of loans & a fraction of non-interest financial gain to total financial gain. There's proof of capital adequacy magnitude relation, treasury bills rate & therefore the discount rate also having a major impact on change per unit spreads. The research couldn't realize proof to support the impact of market share of deposits, inflation & money reserve ratios on banking change per unit spreads. The study wraps up that the bank-specific factors are the foremost vital factors influencing change per unit spreads of economic banks in Republic of Kenya than political economy factors. It reveals that there are 2 sorts of spread; one determined by banking company capacity to mobilize funds at a lower prices & one influenced determined by high non-operational prices (overheads).

Ngetich & Wanjau (2011) sought to determine the consequences of rate unfold on the amount of Non-Performing Assets in industrial banks in The Republic of Kenya. This research adopted a descriptive analysis style on a sample of forty three industrial banks in The Republic of Kenya operative by 2008. The research used questionnaires to gather information/data from primary information sources & secondary

information, gathered from Bank oversight Report, to reinforce the first information findings. The Research used each qualitative techniques & quantitative in information analysis to the link between the rate unfold spread & loan non-performance. The study over that rate unfold have an effect on playacting assets in banks because it will increase the price of loans charged on the borrowers, laws on interest rates have so much reaching effects on assets non-performance, for such laws confirm the rate unfold spread in banks & conjointly facilitate mitigate ethical hazards attendant Non-Performing Assets. The study counseled that industrial banks in Republic of Kenya ought to assess their purchasers & charge rates of interest consequently as ineffective interest rate policy will increase the amount of interest rates & consequently Non-Performing Assets.

Mlachila & Chirwa (2012) set out to review on money reforms & rate unfold within the business bank in Nyasal . The research investigated the impact of economic sector reforms on rate spreads within the business banking industry in Nyasal. The research used seven business banks in Nyasal half-dozen deposit taking establishments. Mistreatment various definitions of spreads, their test showed that spreads hyperbolic considerably following easing, & panel regression results suggested that the determine high spreads will be attributed to high monopoly power, high reserve necessities, high financial institution discount rate & high inflation.

Ndichu (2014) commenced to ascertain the impact of rate unfold & on the money performance of DTMB (Deposit Taking Microfinance Banks) in Republic of Kenya. The analysis study used descriptive analysis design & embraced systematic sampling technique on choosing the four DTMBs in Republic of Kenya out of the nine existing

within the country. Secondary information were analyzed & conferred inform of tables & figures to supply a transparent image of however, interest rates unfold contribute within the success or failure of the DTMB business. Findings showed that as charge per unit unfold accrued he money performance of DTMBs reduced therefore, rates of interest unfold negatively have an effect on the money performance of DTMBs in African Nation. From the analysis findings, the charge per unit unfold contribute sufficient margins for microfinance banks to continue operative within the market. The researcher worker so, counseled that the micro-finance banks' management/administration be each proactive & reactive in harmonizing those components that have an influence on interest rates unfold so as to cushion their establishments from any money shocks.

#### **2.4 Summary of Literature Review**

From the above literature review, both industry specific as well as Macro-economic variables have an effect on financial performance & possibly insurance companies in Kenya. The findings were supported by Wensheng, Kitty, Leung & Chang (2013) concluded that a change in the domestic interest rate will affect profits. From the literature review most insurance companies are charging a high risk premium due to increasing trend in interest rates. Industry specific as well as Macro-economic variables have an effect on insurance companies' performance. The study by Gavin, (2010) couldn't realize proof to back the clash/impact of market share of deposits, inflation & money reserve ratios on banking charge per unit spread. The research concludes that the bank-specific factors square measure the foremost important factors influencing charge per unit spreads of economic banks in Republic of Kenya than economic science factors.

Nduati (2013) in his research project acknowledged that charge per unit unfold have an effect on performance of assets in banks because it will increase the value of loans charged on the borrowers. Ndichu, (2014) all over that as charge per unit unfold increased the money performance of Deposit Taking Microfinance Banks In Republic of Kenya (DTMBs) bated therefore, interest rates unfold negatively have an effect on the money performance of DTMBs in Republic of Kenya. Results that Njoroge (2013) obtained from his study indicated a not important +ve relationship between rates of interest & money performance.

The review of literature clearly found a pursuit gap in Kenya as most of the studies targeting the results of rates on alternative monetary establishments like business banks & microfinance establishments with less stress to the result of interest rate on momentary performance of Insurance Corporation. Several researchers conclude that the high interest rate charged is because the result of unskillfulness within the finance sector whereas alternative studies worn out the world had targeted on 3 to four variables in numerous sectors; this current study therefore narrows the gap by establishing how financial performance of insurance industry relate specifically with interest rate.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter deals with the analysis methodology within the study. This includes the analysis style, target population, sampling, information assortment, & information analysis.

#### **3.2 Research Design/Analysis Style**

This is a basic analysis on the premises of a case study. The survey may be a non-experimental, descriptive analysis methodology. It's the gathering of knowledge from a standard cluster through interviews or the appliance of questionnaires to a stratified sample of that cluster. This style was most well-liked as a result of terribly giant samples square measure possible, creating the results statistically vital even once analyzing multiple variables. Surveys square measure helpful in describing the characteristics of an oversized population. In addition, high responsibility is straightforward to get by presenting all subjects with an even stimulation that ensures that observer sound judgment is greatly eliminated (Mugenda & Mugenda, 2009).

#### **3.3 Target population**

The target population for this study comprised the forty six insurance corporations in African nation (Kenya) (Appendix III). The respondents were the highest level management of those corporations.

### **3.4 Sample Size**

Sampling is that the method of choice of acceptable range of subjects from an outlined population (Kothari, 2008). This study used systematic sampling methodology. Mugenda & Mugenda (2009) contend that a tenth sample is accustomed represent a population. However, they argued that the bigger the sample, the more representative of the population it is. In this case, 50% of the insurance companies were selected & it is from these that the respondents were drawn. From each insurance company, two top management & three lower level managers were randomly selected. This gave a total of 115 respondents.

### **3.5 Description of Research Instruments**

The study used secondary data instruments, in this case document analysis to collect data on both independent & dependent variables for analysis. The study used secondary data sources of a six year period from 2010-2015 based on the availability & accessibility of data. Secondary data is information that has previously been collected that is utilized by a person other than the one who collected the data (Mugenda & Mugenda, 2013). The secondary information was obtained from the CBK (Central Bank of Kenya), World Bank, AKI (Association of Kenya Insurers), Insurance regulatory Authority (IRA), the financial statements electronic journals & websites belonging to the target insurance companies to help evaluate their financial performance. This helped the researcher to get quantified data that was helpful in drawing conclusions & giving recommendations. Secondary data on insurance companies were collected over a period of five years from the inspected/audited annual reports & accounts of the bothered insurance company in order to provide a good period for analysis.



### **3.6 Validity of Instruments**

Validity points to the extent to that Associate in Nursing empirical live adequately reflects the important that means of the topic below investigation (Babbie, 2005). To make sure the information non heritable was valid during this study the document analysis was pretested & corrected consequently.

In order to specify & verify the content validity of the analysis instrument, the man of science consulted consultants from the finance department whose critique was accustomed improve the document analysis to make sure that the instruments were viable to gather information from the supposed space. The researcher's supervisors checked the document analysis for its general content, content validity & conscientiousness. Supported their comments, the document analysis was changed & therefore the necessary review & changes were created. Content validity could be a non-statistical form of validity that involves "the systematic examination of the take a look at content to work out whether or not it covers a proportional sample of the domain to be measured (Anastasi Anamp; Urbina, 2007).Content validity requires the use of recognized subject matter experts to evaluate whether test items assess defined content & more rigorous statistical tests than does the assessment of validity.

### **3.7 Reliability of Instruments**

Reliability is the consistency of the research instrument. To ensure reliability of the research instrument, the document analysis that was used. The test retest method was used to ascertain the reliability of the secondary data sources. In this case the document analysis was examined for consistency & amended several times where the data to be captured was not clear.

### **3.8 Data Analysis**

Data were appropriately coded for ease of use with Statistical Package for Social Sciences (SPSS). Descriptive statistics enabled the researcher to meaningfully describe a distribution of scores or measurements using a few indices or statistics (Kothari, 2008). The qualitative data was analyzed through content analysis. For the quantitative data, the responses were coded, tallied & their frequencies & percentages identified. For the qualitative data, similar responses were coded & tallied after which deductions were made.

A regression model was used for data analysis & the study used six variables to establish the relationship between interest rate changes & sensitivity of insurance companies in Kenya. Data obtained from secondary data was analyzed using statistical package for social sciences (SPSS). The results obtained from the model were represented in tables & figures to aid in analysis.

## CHAPTER FOUR

### PRESENTATION, INTERPRETATION & DISCUSSION OF FINDINGS

#### 4.1 Introduction

The data that was collected from IRA reports was analyzed & interpreted; the data collected have been consistent from 2011 to 2015. The study sampled 115 respondents but managed to collect data from 106 respondents. This therefore created a response rate of 92.2%. According to Mugenda & Mugenda (2003) a 50% response rate is adequate, 60% good & above 70% rated very well. This also collaborates Bailey (2000) assertion that a response rate of 50% is adequate, while a response rate greater than 70% is very good. This implies that based on this assertion; the response rate which in this case was 92.2% was excellent. The chapter analyzes the variables involved in the study. Data was analyzed using descriptive & inferential statistics. Descriptively, the study employed frequencies, percentages, means & standard deviations while inferentially the study employed correlation was used to test the research hypotheses. The study findings were as follows;

#### 4.2 Descriptive Statistics

Descriptive statistics are used to describe the basic features of the data in study, giving simple summaries about the sample & the measures.

Table 4.1 presents the descriptive statistics & the distribution of the variables considered in this research: loans performance, investment income, liquidity position & stock returns. The descriptive statistic considered was minimum, maximum, mean & standard deviation. Mean was used to establish the average value of the data;

standard deviation gave the dispersion in the data. The study findings were as represented below;

**Table 4.1 Descriptive Statistics**

Descriptive Statistics					
Variables	N	Minimum	Maximum	Mean	Std.
Loan performance	106	0.32	1.56	0.529	0.16203
Investment income	106	11.0	24.2	14.738	3.33647
Liquidity position	106	32.0	85.0	53.6	17.365
Stock returns	106	10165	79839	2.69E+04	17529.43
Valid N (list wise)	106				

**Table 4.2: Results on averaged Loan performance**

Firms	YEARS					
	2010	2011	2012	2013	2014	2015
<b>A</b>	0.36	0.36	0.45	0.42	0.56	0.72
<b>B</b>	0.47	0.49	0.51	0.54	0.56	0.63
<b>C</b>	0.42	0.43	0.45	0.47	0.5	0.51
<b>D</b>	0.32	0.33	0.41	0.46	0.48	0.51
<b>E</b>	0.38	0.39	0.4	0.41	0.42	0.43
<b>F</b>	0.54	0.58	0.61	0.63	0.64	0.65
<b>G</b>	0.42	0.43	0.44	0.45	0.46	0.48
<b>H</b>	0.36	0.36	0.45	0.42	0.56	0.57
<b>I</b>	0.46	0.48	0.51	0.52	0.54	0.56
<b>J</b>	0.63	0.64	0.65	0.67	0.68	0.71
<b>K</b>	0.46	0.48	0.5	0.51	0.53	0.54
<b>L</b>	0.48	0.51	0.52	0.54	0.56	0.58
<b>M</b>	0.38	0.42	0.43	0.44	0.45	0.46
<b>Mean</b>	<b>0.4369</b>	<b>0.4538</b>	<b>0.4869</b>	<b>0.4985</b>	<b>0.5339</b>	<b>0.5654</b>

SOURCE: IRA (2015)

**Table 4.3: Results on Average Investment income**

<b>Firms</b>	<b>YEARS</b>					
	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>A</b>	13.6	13.9	13.8	14.4	15.2	15.5
<b>B</b>	15.2	15.3	15.4	15.9	16.3	16.5
<b>C</b>	13	13.4	13.6	13.8	14.2	14.7
<b>D</b>	11	11.4	11.6	11.9	12.3	12.5
<b>E</b>	12.1	12.5	12.4	12.6	12.9	13
<b>F</b>	21.3	21.8	21.9	22.3	22.4	22.6
<b>G</b>	12.4	12.6	12.9	13.2	13.3	13.4
<b>H</b>	11.5	11.9	12.3	12.5	12.8	12.1
<b>I</b>	11.9	12.3	12.5	12.8	13.2	13.7
<b>J</b>	22.4	22.6	22.7	23.1	23.4	23.6
<b>K</b>	12.1	12.4	12.6	12.8	13	13.2
<b>L</b>	12.5	12.6	12.9	13.2	13.5	13.8
<b>M</b>	12.4	12.4	12.6	12.8	13	13.2
<b>Mean</b>	<b>13.95</b>	<b>14.24</b>	<b>14.4</b>	<b>14.72</b>	<b>15.04</b>	<b>15.2154</b>

**SOURCE: IRA (2015)**

**Table 4.4: Results on Average Liquidity Position**

<b>Firms</b>	<b>YEARS</b>					
	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>A</b>	56	57	58	59	60	62
<b>B</b>	77	78	80	83	82	84
<b>C</b>	58	59	60	63	64	65
<b>D</b>	38	39	39	40	41	43
<b>E</b>	34	35	35	35	35	36
<b>F</b>	78	78	79	79	79	80
<b>G</b>	35	35	35	36	36	36
<b>H</b>	39	39	40	41	43	43
<b>I</b>	40	41	43	43	43	44
<b>J</b>	79	79	79	80	81	81
<b>K</b>	43	43	44	44	44	45
<b>L</b>	43	35	35	35	36	36
<b>M</b>	32	35	35	34	34	34
<b>Mean</b>	<b>50.154</b>	<b>50.231</b>	<b>50.923</b>	<b>51.692</b>	<b>52.153</b>	<b>53</b>

**Table 4.5: Results on averaged Stock returns**

<b>Firms</b>	<b>YEARS</b>					
	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>A</b>	21456	22345	22720	22900	23740	23970
<b>B</b>	19000	19900	20200	20900	21700	21990
<b>C</b>	18019	31765	32894	33672	35354	36567
<b>D</b>	15134	15324	15456	15672	15876	16132
<b>E</b>	16354	16619	16892	17236	17465	17634
<b>F</b>	50448	51783	52347	53669	54678	56786
<b>G</b>	10873	10373	10956	11343	11454	11674
<b>H</b>	16479	16533	16638	16788	16818	16972
<b>I</b>	17234	17393	17933	18333	18453	18527
<b>J</b>	74235	74335	75382	76288	77729	78921
<b>K</b>	17024	17234	17444	17654	17864	18074
<b>L</b>	17934	18156	18400	18672	18725	18982
<b>M</b>	10165	10332	10499	10666	10833	11000
<b>Mean</b>	<b>23411.9</b>	<b>24776.3</b>	<b>25212.4</b>	<b>25676.4</b>	<b>26206.8</b>	<b>26709.9</b>

### 4.3 Specific Objectives

In this section, the researcher sought to answer the specific objectives of the study. The study objectives were to; establish the effect of interest rates changes on loan performance of insurance firms in Kenya; examine the effect of interest rates changes on investment income of insurance firms in Kenya; assess the effect of interest rates changes on liquidity position of insurance firms in Kenya & to determine the effect of interest rates changes on stock returns of insurance firms in Kenya. The stud results were as follows;

### 4.3.1 Loan performance & financial performance

The study sought to establish the effect of interest rates changes on loan performance of insurance firms in Kenya. The study results were as follows;

**Table 4.6 Loan performance & financial performance**

<b>Correlations</b>		Loan performance	Financial performance
<b>Loan performance</b>	Pearson Correlation	1	-0.123*
	Sig. (2-tailed)		0.009
	N	106	106
<b>Financial performance</b>	Pearson Correlation	-0.123*	1
	Sig. (2-tailed)	0.009	
	N	106	106

**Source: IRA (2015)**

The study findings indicated that there was a significant relationship between loan performance & financial performance ( $p=0.009$ ). This implies that loan performance influences financial performance. Interest rate changes affect performance of assets as it increases the cost of loans charged on the borrowers, regulation on interest rates have far reaching effects on assets non-performance.

These findings are in line with findings by Nduati (2013) who sought to determine the effect of interest spread on Kenya commercial banks financial performance. He found out that internal & external variables are significance to influencing financial performance of Kenya banks. The study found that interest rate spread affect performance of assets in banks as it increases the cost of loans charged on the

borrowers, regulation on interest rates have far reaching effects on assets non-performance.

#### 4.3.2 Investment income & financial performance

The study sought to examine the effect of interest rates changes on investment income of insurance firms in Kenya. The study findings were as shown below;

**Table 4.7 Effect of Investment income & financial performance**

<b>Correlations</b>		Investment	Financial performance
		income	
<b>Financial performance</b>	Pearson Correlation	1	0.873
	Sig. (2-tailed)		0.016
	N	106	106
<b>Investment income</b>	Pearson Correlation	0.873	1
	Sig. (2-tailed)	0.016	
	N	106	106

**Source: IRA (2015)**

The study findings indicated that there was a significant relationship between investment income & financial performance ( $p=0.016$ ). This implies that investment income influences financial performance.



This findings are in line with findings by Demirguc-Kunt & Huizinga (2009) argue that interest changes directly affects the return on savings & investment, & that the difference between these two reflects the margins of intermediation, without leaving aside transaction costs & taxes. Therefore, the net interest margin can be interpreted as an efficiency indicator in resource allocation in a financial system; this is the motivation for the authors to investigate how the tax system, the structure of the financial system & financial regulations affect the interest rate spread.

### 4.3.3 Liquidity Position & financial performance

The study sought to assess the effect of interest rates changes on liquidity position of insurance firms in Kenya. The study findings were as shown below;

**Table 4.2.3 Effect of Liquidity Position on financial performance**

<b>Correlations</b>			
		Liquidity position	Financial performance
<b>Liquidity</b>	Pearson	1	0.778*
	Sig. (2-tailed)		0.028
<b>position</b>	N	106	106
<b>Financial</b>	Pearson	0.778*	1
	Sig. (2-tailed)	0.028	
<b>performance</b>	N	106	106

**Source: IRA (2015)**

The study findings revealed that there was a significant relationship between Liquidity Position & price-earning (P=0.028). This implies that liquidity position influences the price-earning. Different financial institutions have different liquidity, high liquid institutions should charge low interest rate on funds lends in order to attract more borrowers & interest rate on savings should be low in order to discourage savings. This would mean that interest rate spread on highly liquid financial institutions should be comparatively more than low ones. Financial performance on

comparatively high liquid institutions should be better than low liquid institutions as supported by (Rochon & Vernengo, 2011).

#### 4.3.4 Stock returns & financial performance

The study sought to determine the effect of interest rates changes on stock returns of insurance firms in Kenya. The study findings were shown below;

**Table 4.2.4 Effect of Stock returns on financial performance**

<b>Correlations</b>			
		Stock returns	Financial performance
<b>Stock returns</b>	Pearson Correlation	1	0.459
	Sig. (2-tailed)		0.003
	N	106	106
<b>Financial performance</b>	Pearson Correlation	0.459	1
	Sig. (2-tailed)	0.003	
	N	106	106

**Source: IRA (2015)**

The study findings indicated that there was a significant relationship between Stock returns & financial performance ( $p=0.003$ ). This implies that stock returns influence the financial performance. This implies that any firm generates a stream of future cash flows & the stock price of that firm is equal to the present value of all expected future cash flows discounted at the appropriate discount rate. Interest rates affect stock prices through two primary channels. First, movements in interest rates have a direct effect on the discount rate used in equity valuation. Second, interest rate changes affect firms' expectations about future cash flows by altering the cost of financing, mainly in the highly indebted companies. Consequently, it is expected that interest rates will be a significant determinant of stock prices.

In this regard, according to survey evidence by Graham & Harvey (2001), interest rate risk is ranked by U.S. firm managers as the second most relevant financial risk factor, only behind credit risk. The relationship between interest rate fluctuations & the market value of companies has received a great deal of attention in the literature, although much of this research has focused on financial institutions as a large proportion of income & expenses of these firms directly depend on interest rates. Nevertheless, interest rate variations may be also important for non-financial corporations, principally through their effect on the borrowing costs & the value of financial assets & liabilities held by these companies. The classical ordinary least squares (OLS) regression has been the most common approach used in the literature to assess the relation between changes in interest rates & stock returns.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS & RECOMMENDATIONS

#### 5.1 Summary of Findings

The study findings indicated that there was a significant relationship between loan performance & financial performance ( $p=0.009$ ). This implies that loan performance influences financial performance. The study findings indicated that there was a significant relationship between investment income & financial performance ( $p=0.016$ ). This implies that investment income influences financial performance.

The study findings indicated that there was a significant relationship between Stock returns & financial performance ( $p=0.003$ ). This implies that stock returns influence the financial performance. This implies that any firm generates a stream of future cash flows & the stock price. The study findings indicated that there was a significant relationship between Stock returns & financial performance ( $p=0.003$ ). This implies that stock returns influence the financial performance.

#### 5.2 Conclusions

The study concluded that interest rate changes affect performance of assets as it increases the cost of loans charged on the borrowers, regulation on interest rates have far reaching effects on assets non-performance. The study concluded that interest changes directly affects the return on savings & investment, & that the difference between these two reflects the margins of intermediation, without leaving aside transaction costs & taxes. The net interest margin can be interpreted as an efficiency indicator in resource allocation in a financial system.

Different financial institutions have different liquidity, high liquid institutions should charge low interest rate on funds lends in order to attract more borrowers & interest rate on savings should be low in order to discourage savings. This would mean that interest rate spread on highly liquid financial institutions should be comparatively more than low ones.

The study concluded that any firm generates a stream of future cash flows & the stock price of that firm is equal to the present value of all expected future cash flows discounted at the appropriate discount rate. Interest rates affect stock prices through two primary channels. First, movements in interest rates have a direct effect on the discount rate used in equity valuation. Second, interest rate changes affect firms' expectations about future cash flows by altering the cost of financing, mainly in the highly indebted companies.

### **5.3 Recommendations**

The study recommended that there is need for government to regulate interest rates as this would help to safeguard borrowers from exploitation by insurance firms. The study recommended that insurance firms in Kenya should assess their clients & charge interest rates accordingly as ineffective interest rate policy can increase the level of interest rates & consequently non-performing assets.

Insurance firms' management should be both proactive & reactive in harmonizing those elements that have an influence on interest rates spread in order to cushion their institutions from any financial shocks.

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## APPENDICES

### APPENDIX I: DATA SHEET

Insurance firm		2011	2012	2013	2014	2015
<b>Interest Rate</b>	<b>Variable</b>					
	Investments					
	Loans					
	Liquidity					
	Stock Returns					
	Investments					
	Loans					
	Liquidity					
	Stock Returns					
	Investments					
	Loans					
	Liquidity					
	Stock Returns					
	Investments					
	Loans					
	Liquidity					
	Stock Returns					
	Investments					
	Loans					
	Liquidity					
	Stock Returns					