

**DETERMINANTS OF PROFITABILITY OF INSURANCE
COMPANIES IN KENYA:**

BY

KARUIRU, FRANCIS NJUGUNA



UNIVERSITY OF NAIROBI
JWELER KABETE LIBRARY

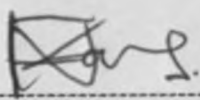
A diagonal stamp with the text 'UNIVERSITY OF NAIROBI' and 'JWELER KABETE LIBRARY'.

MANAGEMENT RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILMENT FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION (MBA), FACULTY OF COMMERCE, UNIVERSITY
OF NAIROBI

NOVEMBER 2005

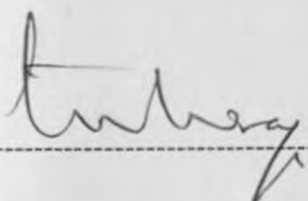
DECLARATION

I, the undersigned, declare that this research project is my original work and has never been submitted to any institution for any award.

Signed  Date 02/11/2005

Francis N. Karuiru
Student

This management research project has been submitted for examination with my approval as the University supervisor

Signed  Date 02/11/2005

Mr. J M Karanja
Lecturer, Department of Accounting
University of Nairobi

DEDICATION

TO:

My wife Mercy, and our children Connie and Ron for their support, love, and encouragement throughout the MBA course.

May God bless you all.

UNIVERSITY OF NAIROBI
JWEE KABETE LIBRARY

ACKNOWLEDGEMENT

I am heartily grateful to various persons and institutions that have contributed to the successful completion of this research project.

Mentioning just a few, my supervisor Mr. Karanja without whose assistance this work would have been very difficult. To all the academic staff and colleagues on the MBA program for their dedication and support without which I would not have succeeded in this work. In this regard I wish to mention Mr. John Njihia a colleague at my place of work and in the MBA class for his support and co-operation as we journeyed together through out the course.

To the office of the Commissioner of Insurance whose reports have contributed immensely to this study is a thing to reckon with.

My family's support, encouragement and provision of conducive environment of study may not be overemphasized.

To all I sincerely say: THANK YOU VERY MUCH!

UNIVERSITY OF NAIROBI
GOWER KABETE LIBRARY

LIST OF ABBREVIATIONS

AKI - Association of Kenyan Insurer's

CEO - Chief Executive Officer

GDP - Gross Domestic Product

GNP - Gross National Product

ICPSK - Institute of Certified Public Secretaries of Kenya

IIK - Insurance Institute of Kenya

IS - Information System

IT - Information Technology

NSE - Nairobi Stock Exchange

PBT - Profit Before Tax

TABLE OF CONTENTS

	Page
DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF ABBREVIATIONS	v
TABLE OF CONTENTS.....	vi
ABSTRACT.....	1
CHAPTER ONE:	2
1.0 INTRODUCTION	2
1.1 Background	2
1.2 Insurance and economic development	3
1.3 STATEMENT OF THE PROBLEM.....	6
1.5 OBJECTIVES OF THE STUDY	7
1.6 SIGNIFICANCE OF THE STUDY.....	7
CHAPTER TWO:	8
2.0 LITERATURE REVIEW	8
2.1 INTRODUCTION	8
2.1.1 Structure of an Insurance Company.....	8
2.1.2 Assesment of Financial Performance.....	9
2.2 DETERMINANTS OF INSURANCE INDUSTRY'S PROFITABILITY.....	11
2.2.1 Type of Insurance I.E. Life or General Insurance	11
2.2.2 Market Share as Measured By Level of Premium Earned.....	14
2.2.3 Classes of Business Transacted	15
2.2.4 Claims Incurred.....	16
2.2.5 Assets and Nature of Investments.....	17
2.2.6 Management Expenses.....	20
2.2.7 Liquidity.....	20
2.3 EXTERNAL FACTORS INFLUENCING INSURANCE COMPANIES' PERFORMANCE.....	22

2.3.1 Political Factors	22
2.3.2 Legal and Regulatory Framework	23
2.3.3 Socio-Economic Factors	24
CHAPTER THREE:	25
3.0 RESEARCH METHODOLOGY	25
3.1 POPULATION	25
3.2 SAMPLING	25
3.3 DATA COLLECTION	25
3.4 DATA ANALYSIS AND MODEL SPECIFICATION	25
3.5 VARIABLES SPECIFICATION	26
CHAPTER FOUR.....	27
4.0 DATA ANALYSIS, INTERPRETATION OF FINDINGS AND DISCUSSION.....	27
4.1 INTRODUCTION	27
4.2 REGRESSION RESULTS	28
4.2.1 Results for Premium achieved on Aviation Insurance.....	28
4.2.2 Results for Premium achieved from Engineering Insurance	28
4.2.3 Results for Premium achieved from Fire Insurance	29
4.2.4 Results For Premium Achieved From Liability Insurance	30
4.2.5 Results for Premium achieved from Marine Insurance	30
4.2.6 Results for Premium achieved from Motor Insurance	31
4.2.7 Results for Premium achieved from Personal Accident Insurance.....	32
4.2.8 Results for Premium achieved from Theft Insurance	32
4.2.9 Results for Premium achieved from Workmen's Compensation Insurance	33
4.2.10 Results for Premium achieved on Miscellaneous class of Insurance	33
4.2.11 Results for Premium achieved from ordinary life assurance	34
4.2.12 Results for Premium achieved on Superannuation	34
4.2.13 Results for management expenses incurred per annum.....	35
4.2.14 Results for claims incurred per annum.	35
4.2.15 Results on outstanding claims at the end of a year.	36
4.2.16 Results on Company Investments at the end of a year.	37
4.2.17 Results on Investments income earned per annum.	37

4.2.18 Results on Company Assets at the end of the year.....	38
CHAPTER FIVE	39
5.0 SUMMARY, CONCLUTIONS, LIMITATIONS AND SUGGESTIONS.....	39
5.1 Summary, Conclusion and Recommendation.....	39
5.2 Limitation of the Study	40
5.3 Suggestions for Further Research	41
APPENDICES	42
APPENDIX I: REFERENCES	42
APPENDIX II: LIST OF INSURANCE COMPANIES STUDIED	45
APPENDIX 4.1 TO 4.18: REGRESSION RESULTS OF ALL INSURANCE COMPANIES STUDIED	46

ABSTRACT

Profitability is the most crucial consideration that businesses make. It is the purpose of this study to identify those factors that determine and influence this vital element in the insurance industry in Kenya. The core question that the study seeks to investigate is why some insurance companies register high levels of profitability than others. The study therefore explores various factors that act as modifiers of profitability in the companies by evaluating their financial performance. Consequently, the researcher delves into the financial performance of the various classes of insurance business by analyzing their financial contribution to their individual companies, thus determining their significance to the profitability of the companies as a whole.

The study focuses a span of ten years (from 1993 to 2002); taking the census of the companies that transacted business consistently within that period. The findings (data) gathered, mainly from the official annual reports published by the Ministry of Finance through the Commissioner of Insurance, is analyzed by regression method to ascertain their contribution to the entire company.

The results of the study indicate that various variables studied affect the different insurance levels of profitability differently. It is however evident that some factors have a significant influence across a wide range of the insurance companies than others. This leads to a conclusion that, on the overall, managers of various businesses need to focus their attention on the identified classes of business due to their significance. These classes of insurance business include Fire, Engineering and Liability as well as Ordinary life for businesses dealing with long-term insurances.

The findings of this study also show that the levels of the assets held in the books of Insurance companies as well as the investments and the resultant investment income have significant influence on the insurance companies profitability. Apart from the normal earnings derived by a company with high level of assets and investments, the confidence that the insuring public has on organizations which are stable and backed by a strong balance sheet may be an added advantage which has a direct contribution on the operations of the core business of the insurance companies, hence level of profitability. The study therefore becomes an important reference work for the players in the insurance industry in their pursuit of achievement of their companies' objectives.

CHAPTER ONE:

1.0 INTRODUCTION

1.1 BACKGROUND

Business firms are ordinarily established to create value for their owners. There are multiple factors that determine company's value and its chance for survival. Such factors include: clear objectives of the firms policies, size of the firm, type of the products, age of the firm, type of ownership, technology, competitiveness and the effectiveness of management decision making among others. Information from a firm's financial accounting records can be used to show how one or more of the above factors has affected performance.

These business facts are applicable to all organizations; Insurance companies included. The investors, management, employees, the government, regulatory agencies and all stakeholders are interested with the financial performance of the companies they relate to. It is for this reason that in the preamble of the Commissioner of Insurance report for the year 2002, the Commissioner noted that, the five-year comparative of the performance by the industry indicate that Insurance industry is growing at a decreasing rate. He suggested that this trend is an indication that the industry has reached saturation stage.

He went on to prescribe restriction on entry of new firms and a move towards mergers; he hoped that merging the small and weak firms would lead to a reversal of the recent trend of firms entering the insurance sector and unceremoniously exiting the market to the disadvantages of the policyholders. He argued that mergers and acquisitions would enable weak firms to increase their resource base and strengthen their operations. He also stressed the need for organizations embracing corporate governance being a significant determinant of how businesses are managed not only to survive in turbulent economic conditions but also to achieve high levels of profitability.

All the stakeholders mentioned above, as well as the general public, express much interest in organizations that are performing well financially. A firm or a sector of the economy, which is performing below the expectation of the various interested parties, is likely to suffer negative publicity, eventually spelling its doom.

In case of the insurance industry the recent reports and analysis in the electronic and print media have not been very positive, an indicator that most people are skeptical of how the industry carries out its business. The industry players on their part indicate that they feel ignored by the policy makers. However it is difficult to understand why such an important sector could be ignored given that it is critical in the development of any economy as witnessed elsewhere both in developed and developing Countries. Furthermore, since the Insurance industry is regulated by the Ministry of Finance (Commissioner of Insurance), it is expected to play a vital role in the financial sector of the economy.

A venture into a study of the insurance industry is therefore increasingly vital to try and elucidate such phenomenon, and consequently fix the sector to its rightful position.

1.2 INSURANCE AND ECONOMIC DEVELOPMENT

Insurance industry continually plays an important role in the development of an economy. It plays two vital roles in the economy namely: ascertaining survival of other businesses and being a major institutional investor. By accepting to bear the financial loss of the insured persons and institutions, insurance provide stability to the individuals, industrial and commercial undertaking. It therefore offers guarantee for survival to other businesses and undertakings. On the other hand, insurance companies as financial institutions accumulate funds that they invest in the economy, in government and in privately owned industrial projects. Insurance is therefore an indicator of social progress. It plays a role of teaching and motivating people to save and invest, thus encouraging responsible family headship and property ownership. Therefore, its position is neither to be overlooked nor its survival be left to chances.

Awori (2002), points out that Insurance is a tool by which individuals and corporations are able to guard against uncertainties facing them in their daily operations. It enables investors to undertake ventures that they would not ordinarily go into due to fear of risks. In addition, insurance is a means by which life policyholders can mobilize long-term savings, for financing investments.

We can therefore rightly observe that a sound or profitable insurance industry is not only good in its own right but also and more important for the success of all other businesses and persons who seek their services. Furthermore, the role of insurance should be perceived beyond the traditional functions of protection and risk transfer. Taking a broader view, the purpose of an insurance industry within a nation is to protect and conserve the wealth of the nation whilst assisting in generating more wealth. All these functions have an ultimate objective of ensuring the social and economic well being of the nation.

Kenya, with her scarce resources, is not only faced with the challenge of stretching the meager resources at her disposal as wide as possible, but she must also find means of increasing it, this is where the insurance industry comes in handy. Insurance is principally concerned with spreading risks, both over a period of time and among persons and organizations. Obviously, the spreading of risks over time means that it will be important especially for life insurers to retain substantial funds, in order to meet future liabilities. Investments are also required by general insurers to cover outstanding claims, unearned premiums, contingency reserves and shareholders' fund. The funds established in this manner by life and general insurance companies have enabled many insurance companies to take their place among the largest institutional investors in Kenya.

Just as it is the case with other service industries, the demand of insurance services in Kenya has increased as the rate of economic growth has increased. Industrialization with concomitant increase in the use of technology brings not only faster rates of economic growth, but new risks as well. The rising personal income associated with economic growth increases the demand for these services in general including life assurance.

Historical evidence reveals that, insurance in its modern form has been practiced for over one thousand years with the earliest business being the marine insurance. By 1961, there were over 140 insurance companies in Kenya, which operated as branches of their parent companies and transacted all classes of insurance. That time, the regulation was less stringent. The most notable regulation during that period was the Insurance Companies' Ordinance Cap.486, enacted in March 1961. The Act required Insurance companies to be incorporated in Kenya or East Africa under the Companies' Act or by the registrar of companies. This move led to a reduction in the number of registered companies. By 1975, for example, there were 40 Insurance companies most of which were foreign, with only seven incorporated locally.

For the past close to fifteen years the insurance industry, as it is the case with many sectors of the Kenyan economy, have been adversely affected by various elements. Investment income has tumbled, as a result of low interest rates, poor and non-performing assets, among others. This has led to depletion of insurer reserves and reduction of solvency margins. Although not backed by concrete evidence, it is widely alleged that a number of insurers are already technically insolvent but cash flows from current premiums have made them remain liquid therefore sustaining them. According to the survey conducted recently The industry concentration ratio (that is, the market share of the largest six or eight players as a percentage of the total) is over 40%. This means that many of the 41 insurance companies in Kenya are unlikely to have the capacity to properly cover against the risks thrown up by our society and economy.

In a paper presented to the Institute of Certified Public Secretaries of Kenya (ICPSK) **Ncheeri S N** observed that insurance industry [in Kenya] is its own worst enemy. He identified some of the inhibitions of the industry as: lack of innovation leading to lack of development of new products, resistance to adopting new ways of doing business (like

operating in partnership with banks, as it is the case in other countries e.g South Africa, Botswana and Zimbabwe. This is also the case in the developed countries of Europe and America), as well as poor claims settlement by the Insurance companies.

He as well identified other setbacks as, professional mediocrity and over concentration on short-term business at the expense of long term insurances. Consequently life insurance penetration level in Kenya is very low in comparison to other countries. This is definitely an indication of a huge untapped potential market. A review of the financial statements of the insurance companies tends to support the above observation. The review show that despite the complaints emanating from the industry players, some companies continue to make profits that is over and above average performance in relation to other sectors of the economy while other insurance companies are barely surviving. A comparative review of the financial performance of all the insurance companies may assist those that are under performing in understandings what they are doing wrong.

The remedy to the various problems reported in this sector therefore have to do with the Insurers re-visiting their internal operations with a view of improving them for higher profitability and growth. The government has a role in augmenting the individual industry's efforts to mend the wayward trends, to ensure efficient service delivery. For example, the minister for Economic Planning and Development has publicly acknowledged the importance of insurance as a means of capital accumulation for spurred national development. The minister for Finance has also announced the proposal to upgrade the office of the Commissioner of Insurance to that of an Insurance Authority.

1.3 STATEMENT OF THE PROBLEM

Insurance company is basically a commercial business that accepts the responsibility of bearing the financial cost of the insured party for the specified insured reality. It has the obligation to meet the cost of the loss incurred or the contractual eventuality of the insuring party. For this reason therefore, the companies must focus on two prime elements in their operations. These factors help them to acquire and maintain credibility to their customers as well as for their own survival in business. These pivotal elements are:

1. The ability to fulfill the anticipated short and long term obligations to the policyholders (where concern on liquidity is crucial) and,
2. The ability to remain in operation as a business to the unforeseen future (perpetuity in business). Here a company focuses on the profitability of its operations.

The stakeholders will want to know how the insurance companies have been performing both financially and operationally. Profitability is an indicator or a measure of the company's financial health. High levels of profitability depicts a state of stability and hence the company's ability to meet its obligations to its customers when they fall due. On the other hand poor levels of profitability is an indicator of a company's financial weakness, which results to inability to meet its obligations to its customers. These eventually leads to collapse of the company as witnessed recently in the case of the United Insurance Company to the detriment of all its stakeholders. This study is an attempt to identify the determinants of the insurance companies profitability in view of providing a practical guide to their improvement in performance. The study will therefore try to address the following issues of concern:

1. Why are some insurance companies in Kenya more profitable than others?
2. To what extent are the performance disparities due to variations in management controllable internal factors; and to what extent do environmental related factors influence the performance of these institutions.

1.5 OBJECTIVES OF THE STUDY

This study is envisaged to achieve the following goals: -

1. To establish financial performance of the Kenyan insurance sector during the period 1993 – 2002, focusing on companies' profitability level.
2. Identify the factors influencing company's profitability in the industry

1.6 SIGNIFICANCE OF THE STUDY

The findings in this study are expected to:

1. Provide a comprehensive roadmap material to the profitability of the insurance companies in Kenya and help to:-
 - Form a basis for suggesting policy changes necessary for the Kenyan insurance sector.
 - Serve as vital source of information to the regulatory institution i.e. Offices of the Commissioner of Insurance and the Ministry of Finance.
 - Provide guideline information to learning institution, academicians, researchers and the general public.
2. Provide useful guide to existing and upcoming consultants in the analysis of the industry and its evaluation.
3. Provide additional knowledge to investors on how to analyze the performance of the industry when making investment decisions relying on company's profitability and liquidity.
4. Guide the managers of the insurance companies on the analysis of the profitability of their companies.
5. Become a valuable addition to the existing body of knowledge in the insurance industry in Kenya.

CHAPTER TWO:

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

Insurance industry has been identified as an important sector of the Kenyan economy, as it is to all economies of the world (1.1 above). It is for this reason that various parties, individuals, institutions as well as the government have developed a lot of interest on its operations and performance as discussed in chapter one of this paper. In this chapter, various literary works and studies are examined on the various aspects of the insurance industry as well as its financial performance.

2.1.1 Structure of an Insurance Company

Insurance as an integral business is made up of various components that interact to facilitate its existence and operation. To understand the structure of an insurance company, one need to look at what is contained in its income statement as well as the balance sheet. This forms a strong base of understanding some of the factors, which will be discussed as having an influence on the Insurance Company's profitability.

1. Income statement

A review of an income statement shows that the major components are the premium, claims incurred, management expenses and investment income. The first three items determine whether a company is making underwriting profit or loss while the inclusion of the investment income completes the picture by showing the bottom line of an insurance company, in other words, the Profit Before Tax (PBT).

2. Balance sheet.

According to AM Best's rating, in determining a company's ability to meet its current and ongoing obligation to the policyholders, the most important area to evaluate is its balance sheet's strength. It is the strength of the balance sheet that measures the exposure of the company's surplus to its operating and financial practices. For this reason, it is crucial and important to analyze the company's underwriting, financial and asset leverage while determining the strength of a company's balance sheet.

A balance sheet of an insurance company shows that the main components are the shareholders funds, reserves held to cover the outstanding claims, and on the asset side of the balance sheet the major components are the various investments a company has engaged in. Each of the mentioned variables highlighted for both the income statement as well as the balance sheet will be discussed in detail later in this paper.

Kibiwott (2003), affirms that a well performing insurance industry is not only beneficial to consumers, but also to the economy as a whole. Its vitality is in protecting the existing, and procuring future, wealth of the country. It achieves this end by ensuring the availability of more investment into the local economy, and improvement of the state finances through higher tax incomes directly or indirectly derived from the increased performance of the insurance sector. The companies as well rely on their profitability and liquidity to satisfactorily fulfill this end.

2.1.2 Assessment of Financial Performance

Chesang (2002) defines performance as the ability to sustain income, stability and growth. It is a measurement of relative investment and can be relative to one of the following factors: asset, capital adequacy, liquidity liabilities, number of employees and other size measures.

The interpretation and analysis of financial accounting statements provides a framework for making informed judgments about a firm's financial performance and financial status. However, there are limitations to conventional methods of interpreting financial statements due to problems inherent in accounting practice. These problems undermine the usefulness of financial accounting statements.

Nevertheless, these statements provide the financial accounting information that is disclosed to shareholders and investors and are thus the main source of information for interpretation. It must be stressed, however, that financial statements are by their nature historical and their main use is to monitor the past performance of a company.

Historical information is not suitable for providing performance measurements that are meaningful for decision-making or for predicting future improvements. However, past trends may be used to assist in the prediction of the future financial performance. The two major methods of evaluating financial performance are accounting and market based method.

While accounting has some demerits as discussed above, the main shortcoming which hinders use of market based method in this study is the fact that only two out of all insurance companies in Kenya are listed in Nairobi stock exchange. It therefore becomes difficult to get the necessary information to assess the industry as a whole.

The accounting information is therefore used in this study where ratios have been used as a tool of analysis. Ratios are quantified concepts that allow an entity to be evaluated against peers (likes) and its own historical performance. Ratios can be classified into two, time and snapshot. Time ratios measure period-to-period changes of a single item (e.g. earnings), while snapshot measure a relationship between two items in a single period (e.g. earnings to assets both in a specific year). However, what is important in ratio analysis is the level and trend. For example apart from establishing earnings as, being 20% of assets (level) one would want to know whether that ratio has been on rising or falling (trend) over time.

According to Beaver (1979), ratios can also be classified into normative and descriptive. Normative ratios are those that permit value judgment (e.g. return on assets, net charge-offs to loans and equity formation rate). On the other hand descriptive ratios do not permit immediate value judgment, but will give more information about the kind of entity one is analyzing (e.g. net interest margin, and break-even yield).

To achieve the comparative performance analysis for the Kenyan Insurance sector one must come out with the "mean" ratios of institutions in the same peer group (i.e. those of same in size, operations, locations and or network).

Ratios are also interacting because one ratio can be explained by one or more other ratios. "The point is that, it is essential to relate ratios together in order to make a valid interpretations" (Beaver (1979)).

2.2 DETERMINANTS OF INSURANCE INDUSTRY'S PROFITABILITY.

AM BEST report for year 2004 observes that more than anything else, both the consumers and investors should concern themselves with insurers financial strength and ability to meet ongoing obligation to policyholders. Poor fundamentals not only indicate a poor investment opportunity, but also hinder growth. Nothing is worse than insurance customers discovering that their insurance company might not have the financial stability to payout if it is faced with a large proportion of claims.

In order to review the profitability of an insurance company appropriately, it is critical to identify those factors that are inherent to the company internal operations. These are the factors that the company management has full control over and therefore by making the appropriate strategic decisions, the managers are able to achieve some desired goals, in this case some specified levels of profitability. These factors can therefore be said to be internal in nature and they may include the ones discussed in the sections below: -

2.2.1 Type of Insurance I.E. Life or General Insurance

Insurance business is broadly dividend into two categories; namely, general business also known as short-term business, and life business also known as long-term business. Insurance companies can trade on general or life business. A firm is also allowed to trade on the two lines of business provided they meet the registration requirements. These types of organizations are called composite Insurers.

1. General Business

According to a recent survey on the industry (Kenya Insurance survey, 2004) the Kenyan insurance industry continues to be dominated by short-term insurance business, which contribute 71% of the total gross direct premium written in 2003. The report goes on to indicate that this line of business while experiencing stagnant growth rates, its experiencing a gradual but consistent improvement in both underwriting results and overall profitability since the year 2000. For the five-year period between 1998 and 2003, the short- term insurance industry has shown a cumulative average growth rate of approximately 1 % in inflation adjusted terms compared to the average GDP growth rate of 1.2%.

2. Life Business

Life assurance refers to the business of underwriting or accepting life assurance risks. It is a term interchangeable with insurance but generally used in connection with life business as assurance implies the certainty of an event while insurance imply a possibility (Insurance Act, Cap 487). The main players in the life insurance industry include all the companies that underwrite a risk; the insured i.e the party that transfers its risk to the insurer; Brokers and Agents whose role is to source for business from the insuring public and place it with the insurers in exchange for some commission or fee. Life business is one of the many institutions in the financial system that channel funds from people who save, to those wishing to invest. It is therefore important to determine how well life assurance funds facilitate company's profitability, especially through investment channels.

Timothy (1978) points out that any prudent, conservative investor who attempts to have a long-range personal financial plan will consider life assurance policy. He explains that, life assurance is basic to building a sound financial program. Lack of an adequate life assurance programs can be devastating to the remaining family members should a key member of the family die young. Every individual must carefully examine the positive and negative aspects of life assurance in relation to an overall investment and financial plan.

In contrast to the short-term business, the Kenya long-term insurance industry has enjoyed a real cumulative average growth rate of 8.6% over the past five years, well over the average growth of GDP for the same period of 1.2%. A vast market remains untapped and so there is increasing emphasis by the industry players on sensitizing the general public on the importance of life insurance.

The life insurance industry is driven by two main lines of business i.e. ordinary life and super annuation, which includes group life assurance and deposit administration. According to the report of the Insurance survey conducted in 2004, both lines of business have grown at roughly the same rate over the last five years.

A review of the same survey show that the companies transacting life business, and those dealing with both categories of business are more profitable than those engaging purely on short-term business.

Life insurance also substantially reduces pressure on government programs and many countries recognize this fact by giving tax relief to policyholders (Bashir, 2002). Yet, the Association of Kenya Insurers estimates that, there are between 200,000 and 300,000 life policies in force. (Insurance Survey, 2004). This is a relatively low fraction in a country with 10 million people who are economically active.

According to A Guide to insurance industry in Kenya, which is a publication of the Insurance Institute of Kenya (IIK), life insurance provides a very suitable mechanism of mobilizing domestic savings for economic development. In 1998, Ksh. 4.3billions was collected from life premiums alone that represent about 0.72% of GDP. Yet, the life premium income needs to be raised to about 10-12% of the GDP for it to be in line with other countries like South Africa. However, major impediments to savings in the country have been identified as, low incomes, high taxation, high levels of domestic and foreign debts, low deposit interest rates, resentment and limited diversity of savings instruments. The profitability derived from this line of business is consequently low as compared to other economies of the world. The potential market of life business should be exploited for the benefit of the insurance industry and the Kenyan economy at large.

Awori (2001), moans that, this importance notwithstanding, The insurance market has been shrinking overtime and at a moment the industry is set to experience a spate of mergers at its best, while some players are threatened with being sent into liquidation altogether. Under the current act, companies underwriting non-life business will require a minimum capital of KSh. 100million, while life business would require KSh. 50million. Such required capital is by no means adequate for a company that needs to expand and deliver good service.

Wheatcroft (1991), defines life assurance market as the various insurers that accept long-term assurance risks. So life assurance market denotes people who sell and place risks and the various organizations that regulate the industry. These may be written on an individual or group basis, and include annuity and permanent health insurance business.

Annuities are best managed by life insurance companies, and there is considerable market potential for immediate annuities, particularly among those being paid provident fund benefit. Ombija (1999) observes that an insurance transaction involves two parties, the producer of insurance and the consumer. The former provides a promissory note to the latter in order to pay for insurance of a risk.

2.2.2 Market Share as Measured By Level of Premium Earned

Insurance premium can be referred to as the payment that an insured party pays as a consideration of the guarantee by the insurance companies of settlement or indemnifying the insured in case loss occurs. It is the price of covering or insuring a risk.

The Kenyan insurance industry is highly competitive, and has increasingly been characterized by price undercutting in order to secure business. Additionally, some insurers were established with a view of serving the insurance and pension fund management needs of related parties and/or particular communities. For this reason, the ability to consistently generate increases in revenue, and gain and retain market share is a sign of strong and sustainable business model.

According to Makove (2002), the size of the insurance market can more accurately be measured in terms of the insurance premium paid by the insuring and the assuring public.

There has been a significant growth of gross premiums in Kenya from Kshs 7.8 billion & Kshs 2.3 billion in 1993 to Kshs 18.6 billion & Kshs 7.2 billion in 2002 in life and general insurance business respectively. This growth, if well managed, should translate to increase in levels of profitability. This however has not been the case as the growth in profitability has been minimal, compared to the change on the revenue base. This study therefore endeavours to establish the extent to which the market share as determined by the total premium per insurer has affected the individual company profitability. In year 2002 for example the market average premium was Kshs 534million and only ten (10) companies exceeded this market average this helps to show how existence of many players dilute the insurance market in Kenya. (Makove 2002)

The minister for Finance in his 2004/05 Budget Proposal, proposed to amend section 73 of the Insurance Act to provide for stiffer penalties in cases of premium rebates. It is common place fact that there has been great concern in the business arena, press (in form of documentaries, interviews and commentaries) and to the public in general concerning insurance premium rates which have been driven down due to the cut throat competition among the various insurers in the Kenyan market; to levels where the companies cannot manage to sustain themselves and meet the obligations they guarantee their clients on. That is why it is critical to ensure that the correct premium is always charged to the client commensurate to the level of risk being insured. To achieve the desirable profitability an insurance company must do a careful analysis of risk to ensure they charge the appropriate premium, scrutinize the claims properly to ensure they pay only those claims that are genuine and to invest wisely on high returns investments without jeopardizing the liquidity requirements of the company.

Professionally, underwriters are trained in risk assessment and rating; something that is basic and fundamental because, any underwriter who does not charge the right premium risks insolvency. Insurers should therefore ensure that they charge technically adequate premium. The Insurance Act also requires all underwriters to file their premium rates with the commissioner of insurance.

When people insure, they buy a guarantee or a security. However it is often difficulty for a consumer to assess the financial soundness of an insurer because the companies' annual reports are not public; and even if they were, not many people have the capacity to analyze the accounts. This study becomes crucial as it aims to bring to the fore the aspects which one need to look at while assessing an insurance company.

2.2.3 Classes of Business Transacted

Once an insurance company has decided to trade either as short-term or long-term insurer, the focus then shifts to the classes of businesses transacted. These are the major variables, which determine profitability achieved by the insurance company.

As discussed earlier general insurance forms the bulk of the Insurance business in Kenya accounting for up to 71 % of the total business transacted in year 2002. A review of year 2002 financial returns to the Commissioner of Insurance indicate that Gross Direct Premium income under general insurance business amounted to Kshs. 18.7billion against previous year's Kshs 16.1billion.

The main portfolios of the business were from the following classes: Motor Commercial (Kshs.5.1billion), Motor Private (Kshs. 3.0billion), Fire Industrial (Kshs. 3.0billion) and Personal Accident (Kshs 2.5billion). These classes accounted for 73% of the total Gross Direct Premium written in the market under general insurance business. (Makove2002).

The choice of what classes of business to deal with is a major determinant of the underwriting profits or losses; simply because some categories of business are more risky than others. In the Kenyan market the motor and liabilities classes are considered to be the most risky lines of business while the industrial fire and property classes performance is relatively predictable.

With the introduction of the new public transport rules last year, it was expected that a marked reduction on claims on this line of business would be experienced. While some improvement has been noted, it is clear that the envisaged benefits are yet to accrue

2.2.4 Claims Incurred

The whole purpose of insurance is to provide financial compensation in event of materializing of the insured risk. Underwriting performance is evaluated by taking into consideration the claims incurred as well as the management expenses. These are usually referred to as the loss and expense ratios, the two together form the combined ratio. Loss ratio is influenced by the product mix of an insurer, (In terms of product mix) as discussed above. Consequently, insurers should seek to balance the risks to which they are exposed, and thereby, achieve the lowest possible loss ratio overall in order to achieve profitability. It should be mentioned that the accuracy of this ratio is dependent on the extent to which provisions made for the claims are adequate. It is therefore critical to review both claims incurred and outstanding in order to arrive at the profit of an insurance company in particular and the whole industry in general.

According to the Commissioner of Insurance's report (2002), the importance of timely payment of incurred claims cannot be over-emphasized. In year 2002 general insurance business companies incurred net claims of Kshs 7.7billion against net earned premiums of Kshs 13.8billion. The claims ratio for the industry dropped from 59.4% in the previous year to 55.6% in that year. The worst hit classes of business were; liability, Workman's compensation, Motor private, theft and personal Accident with claim ratios of 135.57%, 91.62% 70.34% 67.44% and 65.06% respectively.

It is important to note that in review of insurance companies profitability, a review of one year would not give the right picture. The major reason is that, claims provisions greatly influence the performance of an insurance company. It is for this reason that this research has chosen a period of ten years as an ideal period for evaluating the insurance companies results. It is therefore impossible to consider insurance performance without evaluation of the statistics of the claims settled over the period of the study. This work leaves room therefore for a further research aimed at establishing the efficiency of settlement of claims- because this is the major means of measuring insurance companies' ability to meet its contractual obligation with the insuring public.

2.2.5 Assets and Nature of Investments

There is no difference on the meaning of the term assets or investment as it is generally used in ordinary manner. Insurance Act Cap 487 defines an asset as to include any property, security, item or interest of a person. A review of the growth on the assets held by insurance companies shows a steady growth from Kshs 29.2 billion in 1993 to Kshs 72.3 billion in 2002.

It will be appreciated that most of the assets held by insurance companies are in form of investments. According to Commissioner's report for the year 2002, the total investment of the Insurance Industry at the end of the year amounted to Kshs 58.8 billion compared to Kshs. 53.3billion in the previous year. An analysis of the industry's balance sheet shows that 81.3% of the total assets are in form of investments. Of the total investment, 49.48% and 40.5% were held under long-term business in 2001 and 2002 respectively. Makove (2002).

The Kenyan insurance industry falls under government regulatory framework as specified by The Insurance Act Cap 487. Section 50 of the Act specified the broad classes of investment that these companies can invest in, it also specifies the solvency margins. This is mainly aimed at protecting the insuring public.

The Commissioner of Insurance in liaison with the Ministry of finance gives guidelines on the nature of the approved investments to be undertaken. Not only do they guide on this, they also set floors on the minimum levels of funds to be invested in each of the investment.

This is to protect the policyholder from liquidity problems that may arise if the funds are put into wrong investment channels. Yet, the government leaves the task of determining the composition of the investment to the insurance companies. Insurers derive investment income from the funds not required to immediately settle claims. As not every policy results into claim, investment income forms a key component of an Insurer's profitability. With increased price competition, the impact of inflation and other factors such as fraud and absence of legal maximum on certain categories of claims, many short-term insurers now operate with underwriting losses. Consequently investment income has taken increasing significance for the sustainability of Kenyan insurers. (Insurance survey 2004)

It is therefore evident that in analyzing insurance companies performance the ability of an insurer to achieve high return on the investment portfolio becomes a key consideration. This ability however should take into consideration the need to maintain liquidity at the highest level possible. The liquidity as a determinant of profitability for an insurance company will be discussed separately.

For any economy to flourish, there is a need for a financial system that transfers funds from people who save to people who have productive channels to put them, i.e. to make an investment. (CBK Monthly Economic Review, November 2001). The structure of the financial system is very complex comprising many types of institutions like the banks, insurance companies, and mutual funds among others.

Large funds consisting reserves to cover future obligations are under the custody of insurers. They are invested to produce returns, whose income improves the insurer's overall profitability. This income may also enable insurers under competitive pressure to charge lower rates than it would be the case if it were based on purely underwriting experience. The management of such funds is therefore very important to both the insurer and the policyholders. Availability of such investment also play an important role in the development of national economy.

Theoretical and empirical studies show that the likelihood of bankruptcy is broadly determined by profitability, gearing and liquidity. In practice, a firm fails if the value of its assets falls below the value of its debt, while profits are key determinant of the change in asset value. Good Return On Investments improves the company's profitability and enables it to offer more competitive products to Policyholders in form of higher returns, bonuses or reduced premium rates. Incompetent asset management can cause the collapse of an insolvent company.

Wasow & Hill (1986), argued that economic development couldn't proceed without substantial capital accumulation. Saving rates must be high enough to sustain required investment, and the quality of the investment too must be adequate. Reilly & Brown (1997), note that there is a wide range of investment in which an investor can put his funds depending on his risk and return perceptions. Such investment channels are bank deposits, pension funds, bonds, shares (stocks), derivatives, life assurance policies, mortgage, etc. The choice as applied by the different companies has direct impact on how well a company performs on its investment.

James & Richard (2000), states that, an investment involves current commitment of funds for a period of time, in order to derive future payment that will compensate the investor for the time the funds are committed, the expected rate of inflation and the uncertainty of the future payments. In this respect, one would expect the insurance companies to invest in profitable investment because they are commercial entities with obligation to their respective stakeholders. In Kenya, most insurance companies invest in both tangible and intangible assets. Investment in tangible assets includes freehold properties, leasehold property, quoted equity, unquoted equity, policy loans, debentures, government securities and mortgages. In this respect, one would expect profitability to be a major factor in investment decision.

Investment occurs due to prudent savings. A saving program affords the individual with liquidity for changes in occupation, emergencies and general transaction. The investor must determine which savings channel will give the appropriate balance between liquidity and an acceptable rate of return. The various avenues of investment available to the insurance companies therefore become major determinants of the profitability in the industry.

Gurley and Shaw (1956), asserted that the mobilization of saving resources is as important as their efficient allocation. Financial institutions help in this because in their absence, all economic units have to rely on their own resources and those that they can borrow from their friends and close relatives. They further argue that in such a situation, if the economic units have to maintain a balanced budget, that is each unit has to invest its own savings with no outlets for excess savings, but in most cases, those who are not willing to take risk by undertaking investment are also ready to have the necessary finances, while those who have the funds are either not patient enough to wait for long periods before they reap the rewards of their efforts or do not possess the ability to be entrepreneurs.

In such situation, if each economic unit has to invest its own savings, there is likely to be less savings and inefficient investment in ability, value and attitude towards risk and uncertainties. Insurance companies and other financial institutions come to the aid of the economic units by making investment funds available and make it possible the financing of larger volumes of investment.

In his study Kamanda (2001), observed that there are a few insurance companies that are more objective when choosing shares for inclusion in portfolio and are thereby able to deliver superior portfolios than both the market portfolio and Nairobi Stock Exchange (NSE) portfolio. Majority of insurance companies, however, maintain poorly diversified portfolio and hence, both the market portfolio and the NSE portfolio out-perform the insurance industry. However, the study confirmed that the risk-reform relationship is positive and linear which is consistent with the normal market condition.

2.2.6 Management Expenses

Apart from claims the other major item affecting the insurance business is the Management expenses. These are costs incurred by the companies in the process of running the Insurance business. In the year 2002, total management expenses excluding commissions paid to Brokers and Agents amounted to Kshs. 6.0billion. Management expenses under long term insurance business amounted to Kshs 1.6billion while in general insurance business it amounted to Kshs. 4.4billion. Most companies did not with maximum permitted expenditure levels as set out under section 70 of the Insurance Act and the Tenth Schedule to Regulation 21 of the Insurance Act. This is a resultant of higher rate of growth of expenses than premiums.

2.2.7 Liquidity

Liquidity measures a company's ability to meet its anticipated short and long term obligations to policyholders and other creditors. A company's liquidity depends upon the degree to which it can satisfy its financial obligations by holding cash and investments that are sound, diversified and liquid or through operating cash flow. A high degree of liquidity enables an insurer to meet unexpected needs for cash without the untimely sale of investments or fixed assets, which may result in substantial realized losses due to temporary market conditions and/or tax consequences. (AM Best's Insurance report, 2004)

To measure a company's ability to satisfy its financial obligations without having to resort to selling long-term investments or affiliated assets, one needs to review a company's quick liquidity, which measures the amount of cash and quickly convertible investments that have a low exposure to fluctuations in market value. This will be followed by a review of current liquidity to measure the proportion of a company's total liabilities that are covered by cash and unaffiliated invested assets. Operations and net cash flows are reviewed since they, by themselves, can meet some liquidity needs provided cash flows are positive, large and stable relative to cash requirements. Finally, evaluate the quality, market value and diversification of assets, particularly the exposure of large single investments relative to capital.

The quality and maturity of the assets in a short-term insurer's portfolio are fundamental to the stability of the insurer. Since the timing of payout is difficult to predict insurers must maintain a sufficient proportion of their investments and other assets in a liquid form in order to be in a position to honour claims in a timely manner. Each insurer's capacity in this regard is measured by the claims cover ratio. The ratio measures the relationship between an insurer's net assets (liquid investments plus net current assets). The need for liquidity and desire for high returns on investments has an inverse relationship, this affects the profitability of the company in that, it is only the companies that are able to draw the right balance, or the optimum mix that are able to derive high returns from their investments.

According to AM Best, an American Insurance performance rating firm the key liquidity tests of an insurance company include: -

- 1. Quick Liquidity:** This ratio measures the proportion of net liabilities covered by cash and investments that can be quickly converted to cash. This ratio may indicate a company's ability to settle its outstanding liabilities without prematurely selling long-term investments or to borrow money.
- 2. Current Liquidity:** This ratio measures the proportion of liabilities covered by unencumbered cash and unaffiliated investments. If this ratio is less than 100, the company's solvency is dependent on the collectability of premium and reinsurance balances and the marketability of investments in affiliates.

3. **Overall Liquidity:** This ratio indicates a company's ability to cover net liabilities with total assets. This ratio does not address the quality and marketability of premium balances, other receivables, affiliated investments and other assets.
4. **Operating Cash Flow:** This test measures a company's ability to meet current obligations through the internal generation of funds from insurance operations.

Negative balances may indicate unprofitable underwriting results or low yielding assets.

According to the current Commissioner of Insurance, it is proving almost impossible to bring back to profits any company that has been put under statutory management due to loss of confidence among the consumers: "No policyholder wants to touch, leave alone associate with an insurance firm that has been named as lacking the necessary insurance skills or paying lip-service to corporate governance. (Financial Standards: 29-06-2004).

2.3 EXTERNAL FACTORS INFLUENCING INSURANCE COMPANIES' PERFORMANCE.

Insurance industry, like any other engagement, operate within the ranger environmental dispensation. The environment has a lot of influence on the operations of any organization, eventually modifying its output. In this study we focus on some of the external factors to the insurance companies, which has some effects on a company's profitability.

2.3.1 Political Factors

If "May you live in interesting times" is an ancient Chinese curse, then the Kenyan insurance industry has seriously offended some orient deity. Over the past decade in particular, the industry has to contend with economic recession, unhealthy competitive practices such as rate-cutting, high loss ratios and decreasing premiums in real terms. It is in this period that five insurance companies collapsed including the giant (and once leading) national insurer; Kenya National Assurance Company. Others include; Access, Stallion, Lakestar and the latest, Liberty, which hardly made any impression on the market. (The East African weekly, 3-9 May 2004).

Politics is a major modifier of any endeavor in a given country. For this reason, it is crucial to consider the political dispensation and its implication and influence to the insurance industry, for example, there has been a change of political will to govern and develop the country. It is clear that the institutions are being progressively strengthened, including insurance industry as it has been discussed earlier (1.3 above), whose results are anticipated. Furthermore, the NARC government has introduced performance-based contracts to parastatal heads for the first time in history. (2004 insurance survey)

However, it is also becoming clear that the gains achieved so far are under constant threat arising from political bickering witnessed amongst the NARC partners, as well as the opposition parties regarding constitutional review among other issues. Existence of alleged "official" corruption in both public and private sector, which was the norm with the previous administration as well as appointment of politically-correct persons in key positions which has influence on the businesses.

2.3.2 Legal and Regulatory Framework

Part I Section 2(1) of the Insurance Act, Cap 487 of the laws of Kenya defines insurance business as a business of undertaking liability by way of Insurance (including reinsurance) in respect of any loss of life and personal injury and any loss or damage, including liability to pay damage or compensation, contingent upon the happening of a specified event. It is important to note that, the establishment of a dynamic Insurance industry is, in part, the responsibility of the legislators and the supervisors. It is their role to set conducive environment for healthy development of the insurance industry and to deal with the incidences of market failures and imperfections.

Koima (2003), observes that the externalities (investment) produced by the insurance sector therefore constitute a prime reason for supervision of the sector. In Chile for example, the insurance sector as a whole is the second largest institutional investor of the country. Ombija (1999) asserts that, appropriate regulations geared at channeling the funds towards certain areas of the economy may contribute to the overall economic growth of a country.

This issue is often the case in the context of developing countries where investment money is usually scarce (World Bank 1994). However, it has been argued that imposition of rigid investment rules interfere with insurance companies' ability to maintain the necessary levels of liquidity and security in their investment portfolios.

The basic function of insurance as a means of protection against economic loss has helped it to grow to the sophisticated mechanism that we know today. He further argues that, the fact that the insurance transaction involves two parties, and with many middlemen, like agents and brokers, there is a need for strict regulation to be put in place to ensure smooth running of the sector.

According to the recent survey on the insurance industry weakness in legislation framework and poor corporate governance have contributed to failure of some insurance companies. It is also the cause of existence of excessive players in the industry and some insurance brokers and agents who lack the required professional qualification. The impact of these issues cannot be ignored when considering the performance of the industry.

2.3.3 Socio-Economic Factors

The Association of Kenya Insurers (AKI) CEO, in an interview to *The East African* in May 2004, stated that with 40 Insurance companies and an economy that has stagnated for the past decade, sometimes registering negative growth, the level of competition in the Kenyan insurance market has been intense. This competition has driven premiums down making it almost impossible for most players to make any underwriting profits. With very large number of players, and a market that does not seem to grow, the result is immense competition for the little business available.

James & Richard (2000), note that the issue of performance measurement should be viewed from the wider economic standpoint of overall economic performance. They further observe that since the economy as a whole is a collection of many households or sectors interacting in the market, the well being of the overall economy is measured in a similar way.

The social influence on the performance of the industry cannot be overlooked. The society is currently struggling with the HIV-AIDS scourge and this translates to major economic and social hindrance. Poverty has a great impact to the industry as well. Majority of the Kenyan population survives hand to mouth, and therefore have little (if any) significance to the profitability of the insurance companies. Other factors include general ignorance, popular religious beliefs as well as apathy amongst the majority of the population. They all limit the success of industry's performance.

CHAPTER THREE:

3.0 RESEARCH METHODOLOGY

3.1 POPULATION

The population of interest in this study comprises of all 33 Insurance Companies registered and licensed under "The Insurance Act Chapter 487" and were in existence on 31st December 2002 per the Report of commissioner of insurance for the year 2002 and throughout the period of the study. The period of study is ten years from 1993 to 2002. The choice of 10 years period is considered reasonable because of the shifting nature of some of the variables used. Availability of the data for the study also influenced the choice of the period as was noted by Altman (1968).

3.2 SAMPLING

The study was based on a census of all the 33 Insurance Companies that operated during the entire period of the study (1993 to 2002).

3.3 DATA COLLECTION

The study used secondary data, which was derived mainly from Annual Reports of the commissioner of insurance to the Treasury and Insurance Companies' published financial statements covering the period of the study 1993 to 2002.

3.4 DATA ANALYSIS AND MODEL SPECIFICATION

- **Multiple Regression Technique**

The study used the Multiple Regression Technique in data analysis. Regression analysis is used when a researcher is interested in finding out whether an independent variable predicts changes in a given dependent variable

Multiple regression attempts to determine whether a group of variables together predict a given dependent variable.

A typical multiple regression model is of the form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

- Where:
- Y is the dependent variable
 - X_{1-n} are the independent variables
 - β_0 is a constant, the value of Y when all X are zero.
 - β_{1-n} is the regression coefficient or change induced in Y by each X and
 - ϵ is an error term

3.5 VARIABLES SPECIFICATION

- Y Was an Insurance company's annual profit before taxation
- X1 Was annual aviation premium earned.
- X2 Was annual Engineering premium earned.
- X3 Was annual Fire premium earned.
- X4 Was annual Liability premium earned.
- X5 Was annual Marine premium earned.
- X6 Was annual Motor premium earned
- X7 Was annual Personal accident premium earned
- X8 Was annual Theft premium earned
- X9 Was annual Workman's compensation premium
- X10 Was annual Miscellaneous premium
- X11 Was annual Ordinary life premium
- X12 Was annual Superannuation premium
- X13 Was annual Management expenses
- X14 Was annual claims incurred
- X15 Was Claims outstanding at the end of each year.
- X16 Was total Investments at the end of each year
- X17 Was annual Investments income
- X18 Was total Assets at the end of each year.

The data was analysed by use of Statistical Package for Social Sciences (SPSS).

CHAPTER FOUR

4.0 DATA ANALYSIS, INTERPRETATION OF FINDINGS AND DISCUSSION.

4.1 INTRODUCTION

Insurance companies' profitability in Kenya is influenced and determined by various factors. It is these determinants that this study attempts to identify and determine their extent of influence. The data analysis was guided by the research objective (1.5 above). Annual premium earned on each class of insurance has been used. These classes of insurance are, Aviation, Engineering, Fire, Liability, Marine, Motor, Personal Accident, Theft, Workmen's compensation, Miscellaneous insurances, Ordinary life and Superannuation.

The study also used data on annual Management expenses; Insurance claims incurred annually, the annual investment income earned as well as the outstanding balances of Insurance Claims, Investments and Assets at the end of each year.

Using SPSS computer software, Regression analysis was set out between profitability (Y) as measured by Profit Before Tax (PBT) and annual premium on Aviation, Engineering, Fire, Liability, Marine, Motor, Personal Accident, Theft, Workmen's Compensation, Miscellaneous Insurance premium, Premium on ordinary life, Premium on superannuation, annual Management expenses, annual Claims incurred, annual Investment income, and year end data on Investments, Claims and Assets as the independent variables.

The Regression results are as set out in appendix 4.1 to 4.18.

4.2 REGRESSION RESULTS

4.2.1 Results for Premium achieved on Aviation Insurance

The results achieved indicate that out of the thirty-three companies studied, twenty-two did not transact aviation class of insurance. Of the eleven which dealt with aviation, six companies show a positive relationship between aviation premium earned and the company profitability while five depict a negative relationship. The regression result indicates that this variable significantly explains the profitability for three Insurance companies (Table 4.1).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
General Accident Insurance Company Ltd.	-146.933	59.547	-0.741	-2.467	0.057
Insurance Company of East Africa Ltd.	-12.812	5.711	-0.708	-2.243	0.075
Intra Africa Assurance Company Ltd.	424.851	23.757	0.998	17.883	0.036
Occidental Insurance Company Ltd.	-7.332	2.036	-0.901	-3.600	0.037

Note a variable is significant if the P value is less than 0.10

4.2.2 Results for Premium achieved from Engineering Insurance

All the companies studied in this work transacted in this class of business. The regression results for the premiums on Engineering indicate that this variable is significant in eight out of the thirty-three companies. Seventeen companies have the co-efficient depicting a positive relationship while sixteen depict a negative relationship.

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
Gateway Insurance Company Ltd.	0.333	0.126	0.683	2.645	0.029
General Accident Insurance Company	8.902	4.776	0.550	1.864	0.099
Kenyan Alliance Insurance Co. Ltd.	0.477	0.186	0.671	2.561	0.034
Lion of Kenya Insurance Company Ltd.	1.704	0.739	0.632	2.307	0.050
Mercantile Life & General Assurance Ltd.	2.660	1.127	0.641	2.359	0.046
Pan Africa General Insurance Ltd.	7.468	1.959	0.803	3.812	0.005
Phoenix East Africa Insurance Company	-0.888	0.325	-0.695	-2.731	0.026
Standard Assurance Kenya Ltd.	0.631	0.175	0.786	3.597	0.007

Note a variable is significant if the P value is less than 0.10

4.2.3 Results for Premium achieved from Fire Insurance

The findings and analysis of this study indicate that, twenty insurance companies show a positive relationship between premiums earned on fire class of business and the companies' profitability while thirteen companies register a negative relationship. All the thirty-three companies studied, dealt with this class of insurance business. The results show a significant relationship between this class of business and the profitability for nine companies. Table 4.3 below explicate the results (Table 4.3).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.880	0.288	0.734	3.053	0.016
Cannon Assurance (K) Ltd.	2.390	0.551	0.837	4.334	0.002
Gateway Insurance Company Ltd.	0.213	0.070	0.734	3.054	0.016
Geminia Insurance Company Ltd.	0.741	0.175	0.831	4.223	0.003
Kenyan Alliance Insurance Co. Ltd.	0.381	0.105	0.790	3.642	0.007
Lion of Kenya Insurance Company Ltd.	1.177	0.218	0.886	5.401	0.001
Mercantile Life & General Assurance	0.250	0.104	0.649	2.412	0.042
Phoenix East Africa Insurance Company	-0.580	0.228	-0.669	-2.548	0.034
Standard Assurance Kenya Ltd.	0.159	0.059	0.692	2.713	0.027

Note a variable is significant if the P value is less than 0.10

4.2.4 Results For Premium Achieved From Liability Insurance

All the companies subject to this study transacted in this class of insurance. Resultant to this analysis, twenty insurance companies portly a positive relationship of the earned premiums and the companies' profitability. Thirteen companies show a negative relation of the two variables. This class of business significantly explain profitability in case of eight insurance companies. The figure below elucidates these results.

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.374	0.609	0.624	2.256	0.054
Geminia Insurance Company Ltd.	11.706	2.715	0.836	4.312	0.003
Jubilee Insurance Company Ltd.	7.208	3.484	0.590	2.069	0.072
Lion of Kenya Insurance Company Ltd.	1.177	0.218	0.886	5.401	0.001
Madison Insurance Company (K) Ltd.	-0.589	0.304	-0.565	-1.938	0.089
Mercantile Life & General Assurance	9.672	3.608	0.688	2.680	0.028
Pan Africa General Insurance Ltd.	11.900	4.427	0.689	2.688	0.028
Phoenix East Africa Insurance Company	-15.135	5.729	-0.683	-2.642	0.030

Note a variable is significant if the P value is less than 0.10

4.2.5 Results for Premium achieved from Marine Insurance

Regression results of the findings in this class of business indicate that, nineteen companies depict a positive relationship of the premium earned and the companies' profitability. Fourteen of the thirty-three companies show a negative relationship of the two variables. Eight companies indicate significant relationship of the marine insurance and the companies' profitability (Table 4.5).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
Co-operative Insurance Company Ltd.	-11.868	6.249	-0.557	-1.899	0.094
Fidelity Shield Insurance Company Ltd.	0.644	0.305	0.598	2.111	0.068
Gateway Insurance Company Ltd.	0.983	0.404	0.652	2.430	0.041
Geminia Insurance Company Ltd.	1.910	0.359	0.883	5.315	0.001
Kenyan Alliance Insurance Co. Ltd.	1.041	0.260	0.817	4.011	0.004
Mercantile Life & General Assurance	0.815	0.283	0.713	2.875	0.021
The Monarch Insurance Company Ltd.	1.225	0.447	0.696	2.740	0.025
United Insurance Company Ltd.	1.924	0.798	0.649	2.412	0.042

Note: A variable is significant if the P value is less than 0.10

4.2.6 Results for Premium achieved from Motor Insurance

From the findings and their analysis on this class of business, eighteen companies showed a positive relationship between premiums earned and the individual company's profitability. Fifteen companies on the other hand depict a negative relationship while only five indicate significant relationship between profitability and this variable (Table 4.6).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.233	0.394	0.742	3.129	0.014
Kenya Orient Insurance Company Ltd.	0.058	0.020	0.716	2.900	0.020
Lion of Kenya Insurance Company Ltd.	0.749	0.229	0.756	3.270	0.011
Pan Africa General Insurance Ltd.	0.304	0.159	0.561	1.919	0.091
Standard Assurance Kenya Ltd.	0.012	0.006	0.611	2.181	0.061

Note a variable is significant if the P value is less than 0.10

4.2.7 Results for Premium achieved from Personal Accident Insurance

Personal accidents' earned premiums indicate positive relationship to company's profitability in twenty-one companies, while twelve companies depict a negative relation. Six companies however show a significant relationship of the two variables. The table below show these observations.

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.764	0.366	0.594	2.088	0.070
Concord Insurance Company Ltd.	-6.575	2.327	-0.707	-2.826	0.022
Co-operative Insurance Company Ltd.	0.546	0.229	0.645	2.389	0.044
Geminia Insurance Company Ltd.	3.100	0.865	0.785	3.585	0.007
Mercantile Life & General Assurance	0.931	0.082	0.970	11.336	0.000
Standard Assurance Kenya Ltd.	0.099	0.027	0.790	3.649	0.007

Note a variable is significant if the P value is less than 0.10

4.2.8 Results for Premium achieved from Theft Insurance

All the thirty-three companies studied here transacted in this class of business. Eighteen of them showed a positive relationship of the premiums earned and the companies' profits. Fifteen depicted a negative relation while only five companies showed significant relationship of the two variables. The table below (4.8) shows these findings.

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
Concord Insurance Company Ltd.	-1.522	0.791	-0.562	-1.924	0.091
Geminia Insurance Company Ltd.	0.960	0.220	0.839	4.369	0.002
Jubilee Insurance Company Ltd.	1.440	0.703	0.586	2.047	0.075
Lion of Kenya Insurance Company Ltd.	5.344	1.525	0.778	3.503	0.008
Mercantile Life & General Assurance	0.460	0.115	0.818	4.018	0.004

Note a variable is significant if the P value is less than 0.10

4.2.9 Results for Premium achieved from Workmen's Compensation Insurance

Regression results on the findings from this class of insurance indicate that twenty-one companies had a positive relationship of the premiums earned and the profitability of the company. On the other hand, twelve companies show a negative relationship while only four companies depict a significant relationship of the two variables. The table below show these results.

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	16.396	7.411	0.616	2.212	0.058
Geminia Insurance Company Ltd.	1.581	0.430	0.793	3.680	0.006
Lion of Kenya Insurance Company Ltd.	2.647	1.194	0.617	2.216	0.058
Mercantile Life & General Assurance	1.262	0.214	0.902	5.897	0.000

Note a variable is significant if the P value is less than 0.10

4.2.10 Results for Premium achieved on Miscellaneous class of Insurance

This class of insurance represents all the other forms of insurance business that are not specifically classified. The regression analysis results indicate a positive relationship between premiums earned in this business, and the company's profitability in nineteen companies while fourteen show a negative relationship. Only three insurance companies show that this class of business significantly influence profitability as shown below.

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	44.801	12.529	0.784	3.576	0.007
Jubilee Insurance Company Ltd.	7.088	2.318	0.734	3.058	0.016
Mercantile Life & General Assurance	0.180	0.045	0.816	3.994	0.004

Note a variable is significant if the P value is less than 0.10

4.2.11 Results for Premium achieved from ordinary life assurance

The companies that deal with both life and general business operate this class of business. For the purpose of this study, it was therefore applicable to twenty insurance companies. Regression analysis results show a positive relationship of the premiums earned and profitability in eleven companies while nine companies show a negative relationship. Five insurance companies show that this class of insurance significantly influence the companies' profitability (Table 4.11).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.445	0.339	0.834	4.267	0.003
Heritage All Insurance Company Ltd.	66.880	16.695	0.895	4.006	0.016
Insurance Company of East Africa Ltd.	-1.758	0.752	-0.637	-2.340	0.047
Mercantile Life & General Assurance	0.497	0.046	0.968	10.910	0.000
Occidental Insurance Company Ltd.	0.667	0.297	0.648	2.248	0.059

Note a variable is significant if the P value is less than 0.10

4.2.12 Results for Premium achieved on Superannuation

Similar to the premium from ordinary life, the Superannuation class of business relates to the insurance companies dealing with life business. It is therefore applicable to nineteen of the thirty-three insurance companies studied. Ten insurance companies show a positive relationship between the premium earned on Superannuation class of business and the profitability while nine show a negative relationship. Three insurance companies indicate that this variable is significant in determination of the company's profitability (Table 4.12).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.762	0.206	0.794	3.696	0.006
Kenyan Alliance Insurance Co. Ltd.	-0.337	0.085	-0.832	-3.973	0.005
Mercantile Life & General Assurance	0.247	0.038	0.926	6.474	0.000

Note a variable is significant if the P value is less than 0.10

4.2.13 Results for management expenses incurred per annum.

From the regression findings, nineteen insurance companies show a positive relationship between the management expenses incurred and the company's profitability while fourteen show a negative relationship. Six insurance companies show that management expenses significantly influence the company's profitability (Table 4.13).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.151	0.277	0.827	4.158	0.003
Geminia Insurance Company Ltd.	0.501	0.125	0.818	4.022	0.004
General Accident Insurance Company	0.652	0.190	0.772	3.437	0.009
Lion of Kenya Insurance Company Ltd.	2.253	0.544	0.826	4.141	0.003
Mercantile Life & General Assurance	0.198	0.032	0.929	6.134	0.001
Standard Assurance Kenya Ltd.	0.043	0.018	0.648	2.409	0.043

Note a variable is significant if the P value is less than 0.10

4.2.14 Results for claims incurred per annum.

From the regression results, seventeen insurance companies show a positive relationship between the total claims incurred in a year and the company's profitability while sixteen show a negative relationship. Twelve insurance companies indicate that incurred claims significantly influence the company's profitability (Table 4.14).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.794	0.286	0.724	2.774	0.028
Corporate Insurance Company Ltd.	0.805	0.319	0.691	2.527	0.039
General Accident Insurance Company	-0.379	0.136	-0.725	-2.789	0.027
Intra Africa Assurance Company Ltd.	0.150	0.078	0.589	1.927	0.095
Kenindia Assurance Company Ltd.	-1.076	0.415	-0.700	-2.590	0.036
Kenya Orient Insurance Company Ltd.	0.098	0.051	0.593	1.948	0.092
Lion of Kenya Insurance Company Ltd.	0.465	0.148	0.765	3.141	0.016
Mercantile Life & General Assurance	0.108	0.055	0.600	1.985	0.087
Phoenix East Africa Insurance Company	-1.187	0.513	-0.659	-2.317	0.054
Standard Assurance Kenya Ltd.	0.032	0.015	0.634	2.169	0.067
The Monarch Insurance Company Ltd.	0.535	0.127	0.846	4.206	0.004
United Insurance Company Ltd.	0.444	0.136	0.776	3.260	0.014

Note a variable is significant if the P value is less than 0.10

4.2.15 Results on outstanding claims at the end of a year.

The regression results show that for eighteen insurance companies, there is a positive relationship between outstanding claims at the end of a year and the company's profitability while fifteen show a negative relationship. Seven insurance companies indicate that this particular variable is significant in determination of the company's profitability (Table 4.15).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.108	0.035	0.737	3.087	0.015
Concord Insurance Company Ltd.	-0.276	0.131	-0.598	-2.112	0.068
Geminia Insurance Company Ltd.	0.067	0.020	0.769	3.399	0.009
Kenyan Alliance Insurance Co. Ltd.	-0.013	0.007	-0.557	-1.897	0.094
Lion of Kenya Insurance Company Ltd.	0.150	0.033	0.849	4.548	0.002
Mercantile Life & General Assurance	0.042	0.004	0.962	9.301	0.000
Standard Assurance Kenya Ltd.	0.015	0.006	0.668	2.539	0.035

Note a variable is significant if the P value is less than 0.10

4.2.16 Results on Company Investments at the end of a year.

From the regression findings, twenty-three insurance companies show a positive relationship between the total investments at end of the year and profitability of the company while ten insurance companies show a negative relationship. Eight of the insurance companies studied show that the value of the total investments at year end significantly influence the profitability of the insurance company (Table 4.16).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.079	0.024	0.757	3.279	0.011
Gateway Insurance Company Ltd.	0.013	0.005	0.656	2.456	0.040
Geminia Insurance Company Ltd.	0.066	0.012	0.897	5.726	0.000
General Accident Insurance Company	0.069	0.035	0.571	1.966	0.085
Kenyan Alliance Insurance Co. Ltd.	-0.013	0.005	-0.705	-2.808	0.023
Lion of Kenya Insurance Company Ltd.	0.110	0.019	0.900	5.835	0.000
Mercantile Life & General Assurance	0.042	0.004	0.962	9.301	0.000
Standard Assurance Kenya Ltd.	0.031	0.012	0.670	2.553	0.034

Note a variable is significant if the P value is less than 0.10

4.2.17 Results on Investments income earned per annum.

From the regression results, twenty-five insurance companies show a positive relationship between the annual investment income and the company's profitability while eight insurance companies show a negative relationship. The results further show that nine insurance companies profitability is significantly influenced by investment income earned (Table 4.17).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
Blue Shield Insurance Company Ltd.	2.816	0.927	0.835	3.037	0.039
Cannon Assurance (K) Ltd.	0.555	0.186	0.727	2.991	0.017
Co-operative Insurance Company Ltd.	0.468	0.128	0.791	3.661	0.006
Gateway Insurance Company Ltd.	0.013	0.005	0.656	2.456	0.040
Geminia Insurance Company Ltd.	0.754	0.114	0.920	6.634	0.000
Mercantile Life & General Assurance	0.553	0.163	0.923	3.394	0.077
Phoenix East Africa Insurance Company	1.240	0.272	0.850	4.557	0.002
Standard Assurance Kenya Ltd.	0.532	0.280	0.557	1.897	0.094
UAP Provincial Insurance Company Ltd.	1.451	0.374	0.808	3.876	0.005

Note a variable is significant if the P value is less than 0.10

4.2.18 Results on Company Assets at the end of the year.

From the regression results, nineteen insurance companies show a positive relationship between total assets at the end of each year and the company's profitability while fourteen show a negative relationship. The results further show that total assets at end year significantly influence profitability of seven insurance companies (Table 4.18).

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
Blue Shield Insurance Company Ltd.	2.816	0.927	0.835	3.037	0.039
Cannon Assurance (K) Ltd.	0.555	0.186	0.727	2.991	0.017
Co-operative Insurance Company Ltd.	0.468	0.128	0.791	3.661	0.006
Gateway Insurance Company Ltd.	0.013	0.005	0.656	2.456	0.040
Geminia Insurance Company Ltd.	0.754	0.114	0.920	6.634	0.000
Mercantile Life & General Assurance	0.553	0.163	0.923	3.394	0.077
Phoenix East Africa Insurance Company	1.240	0.272	0.850	4.557	0.002
Standard Assurance Kenya Ltd.	0.532	0.280	0.557	1.897	0.094
UAP Provincial Insurance Company Ltd.	1.451	0.374	0.808	3.876	0.005

Note a variable is significant if the P value is less than 0.10

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS, LIMITATIONS AND SUGGESTIONS.

5.1 SUMMARY, CONCLUSION AND RECOMMENDATION

Different companies exhibit varied characteristics. This work has ventured into these disparities and has realized how they cause differences in realization of the profitability of respective companies. Yet, the factors determining profitability also vary from one company to another. It may be derived from the study that, there is positive relationship between the studied factors and the profitability of the insurance companies. Though the magnitude of this relationship differs from one company to another, it is evident that each variable impacts differently to the profits of the individual insurance company. This study has identified the factors, which significantly affect profitability for each of the insurance company. This forms an important base of making decisions and policies on a company's performance.

The findings provide important indicators of how various insurance companies operate and what they need to focus on in order to attain higher profitability levels. Conclusions may be arrived at that may be helpful to the management, directors, shareholders and the policy makers in the insurance industry. It is noted that the various factors affect the respective insurance companies differently as shown by the varying nature of the significance levels of the variables studied. One may therefore conclude that, individual insurance companies must focus on the specific variables which significantly affect or influence the profitability of their companies with a view of ensuring that this factors are aligned properly with the companies strategies of achieving the desired levels of profitability per the company's objectives.

From the findings of this study, it can be concluded that some classes of insurance business influence the individual companies performance more than the others. The study has identified Fire, Engineering and liability classes as well as the ordinary life class for the insurance transacting long-term insurance, in this area.

The managers of the insurance companies therefore need to closely monitor these areas of operations because they are bound to have a significant effect on the levels of profitability of their companies. Further, the study also leads to conclusion that management expenses and claims requires stringent monitoring and control as they contribute significantly to the insurance companies operations and profitability. Management of the various insurance companies must ensure that the business is operating within its means, as these two factors are a major drain to the profitability. Investments and the resultant investments income have a major significance to the insurance companies profitability. The managers must therefore ensure that they maintain high levels of assets and productive investments. This is vital because the investment income does not only act as a cushion against operations shortfall, but it is a major determinant of the profitability of the insurance companies by its own right.

5.2 LIMITATION OF THE STUDY

The reports from the Commissioner of insurance contributed greatly to the completion of this study. However; their authority notwithstanding, reliance on them exhibits major setbacks to the holistic view of the insurance companies and the industry as a whole. They are mainly reported in accounting methods and so, the dependence on them is reliance on accounting data alone. This transfers the difficulties encountered in accounting reporting to this endeavour. Consequently problem of low levels of disclosure is a major limitation to this study and may result in distorting the actual picture.

Insurance industry is an open organization and therefore, it is subject to various external factors in their operations. A major limitation to this study is to establish the quantitative contribution to the performance of the industry and individual companies. Most notable elements include political and social factors that greatly determine and influence the operations of the companies. Yet, these aspects are immeasurable quantitatively.

5.3 SUGGESTIONS FOR FURTHER RESEARCH

This study has led to identification of areas that requires further research. The study focused on all Insurance companies on operation consistently for a period of ten years from 1993 to 2002. A further research may be conducted based on specified clusters of insurance companies of for example similar sizes, line of operations, period in existence among other groupings. This will help in arriving at conclusions on profitability of insurance companies focusing on specific conditions of each group.

In this study emphasis was focused on the internal factors determining profitability of the insurance companies. Further research may focus on both internal and external factors affecting the profitability of the insurance companies in Kenya. A further research may be done to focus on both qualitative as well as quantitative measures of profitability and performance.

UNIVERSITY OF NAIROBI
JAMES KARIKATE LIBRARY

APPENDICES

APPENDIX I: REFERENCES

- Angima, C.B (1987) **“Adequate Life Assurance in Kenya”**. Unpublished MBA Research Paper, University of Nairobi.)
- Awori, H.W (2000), **“Guide to Insurance Industry in Kenya”**, a publication of the Insurance Institute of Kenya.
- Bashir (2002) **“Benefits of Insurance in Economic Development”**, The Insurance Journal.
- Beaver, H.W Journal of Accounting Research pg 77-111, (1966) **“Financial Ratios Predictors of Failure”** Research on Accounting Selected Studies.
- Brealey, R & Myer, S (1984) **Principles of Corporate Finance** 2nd Ed. Tien Publishers
- Chesang, C.J (2002) **“Merger Restructuring and Financial Performance of Commercial Banks in Kenya”**; MBA project.
- Gurley, G.J & Shaw, E.S **Journal of Finance, The.** (May 1956) **“Financial Institutions and Savings Investment Process.**
- Insurance Survey 2004.** A publication of the Insurance Institute of Kenya in conjunction with KPMG Kenya.
- James & Richard (2000) **Economics; Private & public** 2nd ed. Harcourt College Publishers.
- Kamanda, N.S (2001) **“Empirical Evaluation of Equity Portfolio Held by Insurance Companies in Kenya”**.
- Kasali, A.S (1996) **“Development of Life Business in Africa”**. Seminar Paper Presented at the Institute of Kenya Annual Conference (November 1996)

- Kibiwott, K.A (2003) **“A study on the Challenges in the Regulation of the Insurance Industry in Kenya”**. Un published MBA project University of Nairobi.
- Kogi, S.K (2003) **“Analysis of the Discriminants Corporate Failure Prediction Model Based on Stability of Financial Ratios”**, Unpublished MBA project University of Nairobi.
- Koima A.K (2003), **“Study on the Challenges on the Regulation of the Insurance Industry in Kenya”**. Unpublished MBA project University of Nairobi.
- Kilonzo, B.M (2003) **“Relationship Between Financial Structure And Performance of Micro and Small Enterprises in Nairobi, Kenya, The”**
- Kimura J (2002). **“The role of the Professionals in the dynamics of the Industry”**
Unpublished paper presented at N.U.I.S.A seminar on 28th June 2002 at College of Insurance, Nairobi Kenya.
- Magbenu, T.F (1976) **“Portfolio Holding Of Insurance Companies in Kenya”**. Unpublished MBA Research Paper University of Nairobi.
- Makove (2002) Report of the Commissioner of Insurance to the Ministry of Finance for the year 2002.
- McFarlane, F (1984) **Harvard Business Review**, (May- June 1984) **“Information Technology Changes the Way You Compete”**
- Nyamai, C.M (1989) **“The Structure and Growth of the Banking Industry in Kenya”**. Unpublished MBA Research Paper. University of Nairobi.
- Nyamai, F.K (2002) **“The significant of Life Assurance Fund as Mobilizers of Savings in Kenya”**. Unpublished MBA project. University of Nairobi.

Ombija, A.G (1999) "**Determinants of Motor Insurance Profitability in Kenya**". Unpublished MBA Research Paper. University of Nairobi.

Otieno, O.L (1987) **The Accountant Journal** "*Ratio-Strengths and Weaknesses*"

Outroville, J.F (1998) **Theory and Practice of Insurance**. 4th ed. College Publishers.

Palepu, G.K: Bernard, V.L. and Healy P.M. '**Business analysis and valuation**' Cincinnati, Ohio; South Western, 1996

Pandey, I. M; (1999) **Financial Management** 8th edition Vikas publishing House PUT Ltd

Reports of the Commissioners of insurance to the Treasury for the years 1993-2002.

Timothy, E.J (1978) **Investment Principles** 3rd ed. Booksellers Publications

Wasow, B & Hill, R.D 1986 **The Insurance Industry in Economic Development** 2nd edition, New York; University Press.

Wheatcroft, R.J (1991) **Life Assurance, Practice & Administration**. 2nd ed. Business Publications.

APPENDIX II: LIST OF INSURANCE COMPANIES STUDIED

Insurance Company

American Life Insurance Company (K)
Apollo Insurance Company Ltd.
Blue Shield Insurance Company Ltd.
British American Insurance Co. (K) Ltd.
Cannon Assurance (K) Ltd.
Concord Insurance Company Ltd.
Co-operative Insurance Company Ltd.
Corporate Insurance Company Ltd.
Fidelity Shield Insurance Company Ltd.
First Assurance Company Ltd.
Gateway Insurance Company Ltd.
Geminia Insurance Company Ltd.
General Accident Insurance Company
Heritage All Insurance Company Ltd.
Insurance Company of East Africa Ltd.
Intra Africa Assurance Company Ltd.
Jubilee Insurance Company Ltd.
Kenindia Assurance Company Ltd.
Kenya Orient Insurance Company Ltd.
Kenyan Alliance Insurance Co. Ltd.
Lion of Kenya Insurance Company Ltd.
Madison Insurance Company (K) Ltd.
Mercantile Life & General Assurance
Occidental Insurance Company Ltd.
Pan Africa General Insurance Ltd.
Phoenix East Africa Insurance Company
Royal Insurance Company of East Africa
Standard Assurance Kenya Ltd.
Tausi Insurance Company Ltd.
The Monarch Insurance Company Ltd.
Trident Insurance Company Ltd.
UAP Provincial Insurance Company Ltd.
United Insurance Company Ltd.

APPENDIX 4.1 TO 4.18: REGRESSION RESULTS OF ALL INSURANCE COMPANIES STUDIED

Appendix 4.1

Aviation Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
Apollo Insurance Company Ltd.	0.049	0.411	0.042	0.118	0.909
Cannon Assurance (K) Ltd.	9.808	9.248	0.372	1.061	0.324
Concord Insurance Company Ltd.	-12.198	21.822	-0.368	-0.559	0.632
Corporate Insurance Company Ltd.	0.009	0.548	0.005	0.016	0.988
General Accident Insurance Company	-146.933	59.547	-0.741	-2.467	0.057
Insurance Company of East Africa Ltd.	-12.812	5.711	-0.708	-2.243	0.075
Intra Africa Assurance Company Ltd.	424.851	23.757	0.998	17.883	0.036
Kenindia Assurance Company Ltd.	8.685	61.449	0.050	0.141	0.891
Occidental Insurance Company Ltd.	-7.332	2.036	-0.901	-3.600	0.037
Pan Africa General Insurance Ltd.	0.722	0.999	0.586	0.723	0.602
Phoenix East Africa Insurance Company	-1.180	1.307	-0.304	-0.903	0.393

Appendix 4.2
Engineering Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.613	1.173	0.437	1.375	0.206
Apollo Insurance Company Ltd.	-1.201	1.607	-0.255	-0.747	0.476
Blue Shield Insurance Company Ltd.	0.774	18.207	0.015	0.042	0.967
British American Insurance Co. (K) Ltd.	-4.019	6.017	-0.317	-0.668	0.541
Cannon Assurance (K) Ltd.	-0.091	0.453	-0.071	-0.202	0.845
Concord Insurance Company Ltd.	-1.187	2.296	-0.180	-0.517	0.619
Corporate Insurance Company Ltd.	-0.084	0.452	-0.066	-0.186	0.857
Fidelity Shield Insurance Company Ltd.	0.323	0.809	0.140	0.399	0.700
First Assurance Company Ltd.	-0.206	0.711	-0.102	-0.289	0.780
Gateway Insurance Company Ltd.	0.333	0.126	0.683	2.645	0.029
Geminia Insurance Company Ltd.	3.665	3.402	0.356	1.077	0.313
General Accident Insurance Company	8.902	4.776	0.550	1.864	0.099
Heritage All Insurance Company Ltd.	-8.459	13.295	-0.219	-0.636	0.542
Insurance Company of East Africa Ltd.	1.136	7.786	0.052	0.146	0.888
Intra Africa Assurance Company Ltd.	-0.935	0.707	-0.424	-1.323	0.223
Jubilee Insurance Company Ltd.	1.632	1.811	0.303	0.901	0.394
Kenindia Assurance Company Ltd.	4.103	4.261	0.322	0.963	0.364
Kenya Orient Insurance Company Ltd.	-0.572	0.569	-0.335	-1.006	0.344
Kenyan Alliance Insurance Co. Ltd.	0.477	0.186	0.671	2.561	0.034
Lion of Kenya Insurance Company Ltd.	1.704	0.739	0.632	2.307	0.050
Madison Insurance Company (K) Ltd.	-0.020	0.552	-0.013	-0.037	0.971
Mercantile Life & General Assurance	2.660	1.127	0.641	2.359	0.046
Occidental Insurance Company Ltd.	0.516	0.500	0.343	1.032	0.332
Pan Africa General Insurance Ltd.	7.468	1.959	0.803	3.812	0.005
Phoenix East Africa Insurance Company	-0.888	0.325	-0.695	-2.731	0.026
Royal Insurance Company of East Africa	0.218	0.213	0.341	1.026	0.335
Standard Assurance Kenya Ltd.	0.631	0.175	0.786	3.597	0.007
Tausi Insurance Company Ltd.	-0.461	1.013	-0.159	-0.455	0.661
The Monarch Insurance Company Ltd.	-0.907	0.977	-0.312	-0.929	0.380
Trident Insurance Company Ltd.	1.271	0.918	0.440	1.384	0.204
UAP Provincial Insurance Company Ltd.	-0.627	2.747	-0.080	-0.228	0.825
United Insurance Company Ltd.	-4.104	18.165	-0.080	-0.226	0.827

Appendix 4.3
Fire Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.880	0.288	0.734	3.053	0.016
Apollo Insurance Company Ltd.	0.157	0.262	0.208	0.600	0.565
Blue Shield Insurance Company Ltd.	6.259	5.143	0.395	1.217	0.258
British American Insurance Co. (K) Ltd.	-0.037	0.725	-0.023	-0.051	0.961
Cannon Assurance (K) Ltd.	2.390	0.551	0.837	4.334	0.002
Concord Insurance Company Ltd.	-0.749	0.602	-0.402	-1.243	0.249
Co-operative Insurance Company Ltd.	0.487	0.315	0.479	1.544	0.161
Corporate Insurance Company Ltd.	-0.020	0.499	-0.014	-0.041	0.968
Fidelity Shield Insurance Company Ltd.	0.432	0.253	0.517	1.707	0.126
First Assurance Company Ltd.	-0.001	0.020	-0.022	-0.063	0.951
Gateway Insurance Company Ltd.	0.213	0.070	0.734	3.054	0.016
Geminia Insurance Company Ltd.	0.741	0.175	0.831	4.223	0.003
General Accident Insurance Company	-0.118	0.953	-0.044	-0.124	0.905
Heritage All Insurance Company Ltd.	-0.799	1.521	-0.183	-0.525	0.614
Insurance Company of East Africa Ltd.	0.951	1.770	0.187	0.537	0.606
Intra Africa Assurance Company Ltd.	0.626	0.772	0.275	0.810	0.441
Jubilee Insurance Company Ltd.	0.244	0.299	0.277	0.814	0.439
Kenindia Assurance Company Ltd.	-0.717	0.834	-0.291	-0.859	0.415
Kenya Orient Insurance Company Ltd.	0.076	0.105	0.248	0.725	0.489
Kenyan Alliance Insurance Co. Ltd.	0.381	0.105	0.790	3.642	0.007
Lion of Kenya Insurance Company Ltd.	1.177	0.218	0.886	5.401	0.001
Madison Insurance Company (K) Ltd.	-0.083	0.208	-0.140	-0.400	0.699
Mercantile Life & General Assurance	0.250	0.104	0.649	2.412	0.042
Occidental Insurance Company Ltd.	-0.088	0.141	-0.215	-0.622	0.551
Pan Africa General Insurance Ltd.	0.370	0.507	0.249	0.728	0.487
Phoenix East Africa Insurance Company	-0.580	0.228	-0.669	-2.548	0.034
Royal Insurance Company of East Africa	0.126	0.273	0.162	0.463	0.656
Standard Assurance Kenya Ltd.	0.159	0.059	0.692	2.713	0.027
Tausi Insurance Company Ltd.	0.002	0.159	0.004	0.012	0.991
The Monarch Insurance Company Ltd.	0.085	0.191	0.155	0.445	0.668
Trident Insurance Company Ltd.	-0.111	0.370	-0.106	-0.301	0.771
UAP Provincial Insurance Company Ltd.	-0.194	0.773	-0.089	-0.251	0.808
United Insurance Company Ltd.	-1.448	2.091	-0.238	-0.693	0.508

Appendix 4.4

Liability Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.374	0.609	0.624	2.256	0.054
Apollo Insurance Company Ltd.	-0.473	1.411	-0.118	-0.336	0.746
Blue Shield Insurance Company Ltd.	-21.290	65.947	-0.113	-0.323	0.755
British American Insurance Co. (K) Ltd.	7.831	25.218	0.153	0.311	0.772
Cannon Assurance (K) Ltd.	21.304	14.749	0.455	1.444	0.187
Concord Insurance Company Ltd.	-13.242	7.687	-0.520	-1.723	0.123
Co-operative Insurance Company Ltd.	2.945	4.398	0.230	0.670	0.522
Corporate Insurance Company Ltd.	-0.649	3.485	-0.066	-0.186	0.857
Fidelity Shield Insurance Company Ltd.	3.913	3.673	0.352	1.065	0.318
First Assurance Company Ltd.	5.291	6.734	0.268	0.786	0.455
Gateway Insurance Company Ltd.	0.126	0.181	0.239	0.696	0.506
Geminia Insurance Company Ltd.	11.706	2.715	0.836	4.312	0.003
General Accident Insurance Company	20.343	16.008	0.410	1.271	0.240
Heritage All Insurance Company Ltd.	-10.941	16.969	-0.222	-0.645	0.537
Insurance Company of East Africa Ltd.	-2.166	2.865	-0.258	-0.756	0.471
Intra Africa Assurance Company Ltd.	8.133	13.330	0.211	0.610	0.559
Jubilee Insurance Company Ltd.	7.208	3.484	0.590	2.069	0.072
Kenindia Assurance Company Ltd.	-7.909	18.746	-0.148	-0.422	0.684
Kenya Orient Insurance Company Ltd.	1.218	2.131	0.198	0.572	0.583
Kenyan Alliance Insurance Co. Ltd.	4.822	4.257	0.372	1.133	0.290
Lion of Kenya Insurance Company Ltd.	1.177	0.218	0.886	5.401	0.001
Madison Insurance Company (K) Ltd.	-0.589	0.304	-0.565	-1.938	0.089
Mercantile Life & General Assurance	9.672	3.608	0.688	2.680	0.028
Occidental Insurance Company Ltd.	0.736	4.403	0.059	0.167	0.871
Pan Africa General Insurance Ltd.	11.900	4.427	0.689	2.688	0.028
Phoenix East Africa Insurance Company	-15.135	5.729	-0.683	-2.642	0.030
Royal Insurance Company of East Africa	1.545	2.875	0.187	0.537	0.606
Standard Assurance Kenya Ltd.	3.953	3.350	0.385	1.180	0.272
Tausi Insurance Company Ltd.	-1.812	2.921	-0.214	-0.620	0.552
The Monarch Insurance Company Ltd.	2.211	7.095	0.110	0.312	0.763
Trident Insurance Company Ltd.	-0.204	3.149	-0.023	-0.065	0.950
UAP Provincial Insurance Company Ltd.	-0.834	3.507	-0.084	-0.238	0.818
United Insurance Company Ltd.	-13.982	21.090	-0.228	-0.663	0.526

Appendix 4.5

Marine Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	-2.686	4.707	-0.198	-0.571	0.584
Apollo Insurance Company Ltd.	0.169	0.550	0.108	0.307	0.767
Blue Shield Insurance Company Ltd.	-14.819	9.282	-0.492	-1.597	0.149
British American Insurance Co. (K) Ltd.	-1.089	1.215	-0.409	-0.896	0.421
Cannon Assurance (K) Ltd.	2.804	4.100	0.235	0.684	0.513
Concord Insurance Company Ltd.	-1.207	0.761	-0.489	-1.587	0.151
Co-operative Insurance Company Ltd.	-11.868	6.249	-0.557	-1.899	0.094
Corporate Insurance Company Ltd.	0.266	0.287	0.311	0.925	0.382
Fidelity Shield Insurance Company Ltd.	0.644	0.305	0.598	2.111	0.068
First Assurance Company Ltd.	0.989	0.799	0.401	1.237	0.251
Gateway Insurance Company Ltd.	0.983	0.404	0.652	2.430	0.041
Geminia Insurance Company Ltd.	1.910	0.359	0.883	5.315	0.001
General Accident Insurance Company	-0.603	1.185	-0.177	-0.509	0.625
Heritage All Insurance Company Ltd.	1.561	10.634	0.052	0.147	0.887
Insurance Company of East Africa Ltd.	0.819	0.840	0.326	0.976	0.358
Intra Africa Assurance Company Ltd.	0.179	0.943	0.067	0.190	0.854
Jubilee Insurance Company Ltd.	1.230	0.905	0.433	1.359	0.211
Kenindia Assurance Company Ltd.	-1.481	2.121	-0.240	-0.699	0.505
Kenya Orient Insurance Company Ltd.	0.215	0.177	0.395	1.218	0.258
Kenyan Alliance Insurance Co. Ltd.	1.041	0.260	0.817	4.011	0.004
Lion of Kenya Insurance Company Ltd.	-1.147	0.686	-0.509	-1.672	0.133
Madison Insurance Company (K) Ltd.	2.287	2.599	0.297	0.880	0.405
Mercantile Life & General Assurance	0.815	0.283	0.713	2.875	0.021
Occidental Insurance Company Ltd.	0.442	0.336	0.422	1.316	0.225
Pan Africa General Insurance Ltd.	-0.130	0.686	-0.067	-0.190	0.854
Phoenix East Africa Insurance Company	-0.488	2.189	-0.078	-0.223	0.829
Royal Insurance Company of East Africa	-0.021	0.158	-0.047	-0.132	0.898
Standard Assurance Kenya Ltd.	-1.234	0.910	-0.432	-1.356	0.212
Tausi Insurance Company Ltd.	-0.198	0.276	-0.246	-0.718	0.493
The Monarch Insurance Company Ltd.	1.225	0.447	0.696	2.740	0.025
Trident Insurance Company Ltd.	0.266	0.306	0.294	0.870	0.409
UAP Provincial Insurance Company Ltd.	-0.545	1.366	-0.140	-0.399	0.700
United Insurance Company Ltd.	1.924	0.798	0.649	2.412	0.042

Appendix 4.6

Motor Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.233	0.394	0.742	3.129	0.014
Apollo Insurance Company Ltd.	0.036	0.132	0.095	0.270	0.794
Blue Shield Insurance Company Ltd.	-0.033	0.261	-0.044	-0.126	0.903
British American Insurance Co. (K) Ltd.	-1.350	1.444	-0.423	-0.935	0.403
Cannon Assurance (K) Ltd.	-0.026	0.048	-0.183	-0.527	0.612
Concord Insurance Company Ltd.	-0.039	0.166	-0.083	-0.235	0.820
Co-operative Insurance Company Ltd.	0.076	0.045	0.509	1.673	0.133
Corporate Insurance Company Ltd.	-0.178	0.225	-0.269	-0.790	0.452
Fidelity Shield Insurance Company Ltd.	-0.066	0.052	-0.410	-1.270	0.240
First Assurance Company Ltd.	0.116	0.105	0.362	1.098	0.304
Gateway Insurance Company Ltd.	-0.010	0.012	-0.294	-0.870	0.410
Geminia Insurance Company Ltd.	0.107	0.110	0.327	0.977	0.357
General Accident Insurance Company	-0.179	0.198	-0.304	-0.904	0.392
Heritage All Insurance Company Ltd.	-0.301	1.110	-0.095	-0.271	0.793
Insurance Company of East Africa Ltd.	0.127	0.856	0.053	0.149	0.885
Intra Africa Assurance Company Ltd.	-0.073	0.178	-0.144	-0.412	0.691
Jubilee Insurance Company Ltd.	0.288	0.164	0.528	1.756	0.117
Kenindia Assurance Company Ltd.	-0.311	0.662	-0.164	-0.470	0.651
Kenya Orient Insurance Company Ltd.	0.058	0.020	0.716	2.900	0.020
Kenyan Alliance Insurance Co. Ltd.	-0.047	0.099	-0.165	-0.472	0.650
Lion of Kenya Insurance Company Ltd.	0.749	0.229	0.756	3.270	0.011
Madison Insurance Company (K) Ltd.	-0.099	0.104	-0.321	-0.959	0.366
Mercantile Life & General Assurance	0.049	0.050	0.324	0.970	0.360
Occidental Insurance Company Ltd.	0.023	0.040	0.202	0.583	0.576
Pan Africa General Insurance Ltd.	0.304	0.159	0.561	1.919	0.091
Phoenix East Africa Insurance Company	-0.120	0.440	-0.096	-0.273	0.792
Royal Insurance Company of East Africa	0.101	0.207	0.169	0.486	0.640
Standard Assurance Kenya Ltd.	0.012	0.006	0.611	2.181	0.061
Tausi Insurance Company Ltd.	0.039	0.085	0.160	0.459	0.658
The Monarch Insurance Company Ltd.	0.199	0.142	0.445	1.404	0.198
Trident Insurance Company Ltd.	0.145	0.202	0.247	0.720	0.492
UAP Provincial Insurance Company Ltd.	-0.062	0.296	-0.073	-0.208	0.840
United Insurance Company Ltd.	0.087	0.145	0.207	0.597	0.567

Appendix 4.7
Personal Accident Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.764	0.366	0.594	2.088	0.070
Apollo Insurance Company Ltd.	0.021	0.057	0.133	0.378	0.715
Blue Shield Insurance Company Ltd.	1.338	13.296	0.036	0.101	0.922
British American Insurance Co. (K) Ltd.	0.095	0.094	0.336	1.009	0.342
Cannon Assurance (K) Ltd.	-1.419	2.173	-0.225	-0.653	0.532
Concord Insurance Company Ltd.	-6.575	2.327	-0.707	-2.826	0.022
Co-operative Insurance Company Ltd.	0.546	0.229	0.645	2.389	0.044
Corporate Insurance Company Ltd.	-0.579	1.349	-0.150	-0.430	0.679
Fidelity Shield Insurance Company Ltd.	0.143	0.227	0.218	0.630	0.546
First Assurance Company Ltd.	0.276	0.594	0.162	0.464	0.655
Gateway Insurance Company Ltd.	0.280	0.194	0.453	1.439	0.188
Geminia Insurance Company Ltd.	3.100	0.865	0.785	3.585	0.007
General Accident Insurance Company	4.221	2.591	0.499	1.629	0.142
Heritage All Insurance Company Ltd.	-1.183	1.220	-0.324	-0.970	0.361
Insurance Company of East Africa Ltd.	0.127	0.856	0.053	0.149	0.885
Intra Africa Assurance Company Ltd.	0.091	0.072	0.409	1.267	0.241
Jubilee Insurance Company Ltd.	0.008	0.371	0.008	0.022	0.983
Kenindia Assurance Company Ltd.	-1.914	2.112	-0.305	-0.906	0.391
Kenya Orient Insurance Company Ltd.	-0.289	0.225	-0.414	-1.285	0.235
Kenyan Alliance Insurance Co. Ltd.	-0.076	0.081	-0.315	-0.938	0.376
Lion of Kenya Insurance Company Ltd.	1.602	1.685	0.319	0.951	0.370
Madison Insurance Company (K) Ltd.	-0.013	0.067	-0.071	-0.201	0.845
Mercantile Life & General Assurance	0.931	0.082	0.970	11.336	0.000
Occidental Insurance Company Ltd.	0.009	0.783	0.004	0.012	0.991
Pan Africa General Insurance Ltd.	0.062	0.166	0.132	0.376	0.716
Phoenix East Africa Insurance Company	0.026	0.515	0.018	0.050	0.961
Royal Insurance Company of East Africa	-0.208	0.811	-0.090	-0.256	0.804
Standard Assurance Kenya Ltd.	0.099	0.027	0.790	3.649	0.007
Tausi Insurance Company Ltd.	-0.057	1.097	-0.018	-0.052	0.960
The Monarch Insurance Company Ltd.	-0.083	0.163	-0.177	-0.510	0.624
Trident Insurance Company Ltd.	0.806	0.755	0.353	1.067	0.317
UAP Provincial Insurance Company Ltd.	-0.168	0.451	-0.131	-0.373	0.719
United Insurance Company Ltd.	0.087	0.145	0.207	0.597	0.567

Appendix 4.8

Theft Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.892	2.549	0.254	0.742	0.479
Apollo Insurance Company Ltd.	0.666	0.402	0.506	1.658	0.136
Blue Shield Insurance Company Ltd.	0.998	3.406	0.103	0.293	0.777
British American Insurance Co. (K) Ltd.	-4.090	2.104	-0.697	-1.944	0.124
Cannon Assurance (K) Ltd.	-0.076	0.217	-0.123	-0.351	0.735
Concord Insurance Company Ltd.	-1.522	0.791	-0.562	-1.924	0.091
Co-operative Insurance Company Ltd.	0.195	0.170	0.376	1.146	0.285
Corporate Insurance Company Ltd.	-0.108	0.098	-0.365	-1.109	0.299
Fidelity Shield Insurance Company Ltd.	1.008	0.631	0.492	1.597	0.149
First Assurance Company Ltd.	0.479	0.731	0.226	0.656	0.530
Gateway Insurance Company Ltd.	0.132	0.134	0.329	0.987	0.353
Geminia Insurance Company Ltd.	0.960	0.220	0.839	4.369	0.002
General Accident Insurance Company	-0.060	1.357	-0.016	-0.044	0.966
Heritage All Insurance Company Ltd.	-10.878	7.359	-0.463	-1.478	0.178
Insurance Company of East Africa Ltd.	0.786	2.897	0.096	0.271	0.793
Intra Africa Assurance Company Ltd.	0.094	0.865	0.039	0.109	0.916
Jubilee Insurance Company Ltd.	1.440	0.703	0.586	2.047	0.075
Kenindia Assurance Company Ltd.	-1.507	1.986	-0.259	-0.759	0.469
Kenya Orient Insurance Company Ltd.	0.262	0.199	0.422	1.317	0.224
Kenyan Alliance Insurance Co. Ltd.	-0.348	1.357	-0.090	-0.257	0.804
Lion of Kenya Insurance Company Ltd.	5.344	1.525	0.778	3.503	0.008
Madison Insurance Company (K) Ltd.	-0.643	0.700	-0.309	-0.918	0.385
Mercantile Life & General Assurance	0.460	0.115	0.818	4.018	0.004
Occidental Insurance Company Ltd.	0.022	0.267	0.030	0.084	0.935
Pan Africa General Insurance Ltd.	0.574	1.240	0.162	0.463	0.656
Phoenix East Africa Insurance Company	0.456	1.391	0.115	0.328	0.751
Royal Insurance Company of East Africa	0.004	0.742	0.002	0.006	0.995
Standard Assurance Kenya Ltd.	-0.370	0.503	-0.252	-0.737	0.482
Tausi Insurance Company Ltd.	-0.057	1.097	-0.018	-0.052	0.960
The Monarch Insurance Company Ltd.	-1.666	1.294	-0.414	-1.288	0.234
Trident Insurance Company Ltd.	-0.500	1.008	-0.173	-0.496	0.633
UAP Provincial Insurance Company Ltd.	-0.059	1.994	-0.011	-0.030	0.977
United Insurance Company Ltd.	-2.742	5.082	-0.187	-0.540	0.604

Appendix 4.9

Workmen's Compensation

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	16.396	7.411	0.616	2.212	0.058
Apollo Insurance Company Ltd.	0.654	0.355	0.546	1.843	0.103
Blue Shield Insurance Company Ltd.	-5.451	8.196	-0.229	-0.665	0.525
British American Insurance Co. (K) Ltd.	-2.262	3.229	-0.331	-0.701	0.522
Cannon Assurance (K) Ltd.	1.920	1.770	0.358	1.085	0.310
Concord Insurance Company Ltd.	-0.906	0.598	-0.472	-1.515	0.168
Co-operative Insurance Company Ltd.	1.303	0.904	0.454	1.441	0.187
Corporate Insurance Company Ltd.	3.503	2.835	0.400	1.235	0.252
Fidelity Shield Insurance Company Ltd.	-0.132	0.329	-0.140	-0.400	0.700
First Assurance Company Ltd.	0.267	0.573	0.163	0.466	0.653
Gateway Insurance Company Ltd.	0.350	0.321	0.359	1.088	0.308
Geminia Insurance Company Ltd.	1.581	0.430	0.793	3.680	0.006
General Accident Insurance Company	1.590	1.381	0.377	1.151	0.283
Heritage All Insurance Company Ltd.	-3.204	6.303	-0.177	-0.508	0.625
Insurance Company of East Africa Ltd.	0.786	2.897	0.096	0.271	0.793
Intra Africa Assurance Company Ltd.	-0.026	0.409	-0.023	-0.064	0.951
Jubilee Insurance Company Ltd.	2.009	1.146	0.527	1.754	0.118
Kenindia Assurance Company Ltd.	-1.596	1.526	-0.347	-1.046	0.326
Kenya Orient Insurance Company Ltd.	0.451	0.268	0.511	1.683	0.131
Kenyan Alliance Insurance Co. Ltd.	3.269	2.305	0.448	1.418	0.194
Lion of Kenya Insurance Company Ltd.	2.647	1.194	0.617	2.216	0.058
Madison Insurance Company (K) Ltd.	-0.108	0.582	-0.065	-0.186	0.857
Mercantile Life & General Assurance	1.262	0.214	0.902	5.897	0.000
Occidental Insurance Company Ltd.	0.050	0.253	0.069	0.197	0.849
Pan Africa General Insurance Ltd.	1.314	3.383	0.136	0.388	0.708
Phoenix East Africa Insurance Company	0.943	1.029	0.308	0.916	0.386
Royal Insurance Company of East Africa	-1.477	1.411	-0.347	-1.047	0.326
Standard Assurance Kenya Ltd.	0.275	0.365	0.257	0.753	0.473
Tausi Insurance Company Ltd.	-0.103	0.249	-0.145	-0.415	0.689
The Monarch Insurance Company Ltd.	1.005	0.591	0.515	1.700	0.127
Trident Insurance Company Ltd.	-0.313	0.432	-0.248	-0.725	0.489
UAP Provincial Insurance Company Ltd.	2.240	3.718	0.208	0.603	0.563
United Insurance Company Ltd.	-5.246	7.224	-0.249	-0.726	0.488

Appendix 4.10

Miscellaneous Insurances

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	44.801	12.529	0.784	3.576	0.007
Apollo Insurance Company Ltd.	0.316	0.617	0.178	0.512	0.623
Blue Shield Insurance Company Ltd.	5.586	18.297	0.107	0.305	0.768
British American Insurance Co. (K) Ltd.	-0.808	11.583	-0.035	-0.070	0.948
Cannon Assurance (K) Ltd.	0.352	0.798	0.154	0.441	0.671
Concord Insurance Company Ltd.	-1.333	1.021	-0.419	-1.306	0.228
Co-operative Insurance Company Ltd.	-1.382	3.244	-0.149	-0.426	0.681
Corporate Insurance Company Ltd.	-0.324	0.466	-0.239	-0.696	0.506
Fidelity Shield Insurance Company Ltd.	-0.795	0.549	-0.456	-1.448	0.186
First Assurance Company Ltd.	-0.184	1.629	-0.040	-0.113	0.913
Gateway Insurance Company Ltd.	0.201	0.127	0.489	1.586	0.151
Geminia Insurance Company Ltd.	11.593	8.413	0.438	1.378	0.205
General Accident Insurance Company	3.425	2.678	0.412	1.279	0.237
Heritage All Insurance Company Ltd.	-28.324	28.125	-0.335	-1.007	0.343
Insurance Company of East Africa Ltd.	-4.679	19.992	-0.082	-0.234	0.821
Intra Africa Assurance Company Ltd.	0.069	0.516	0.048	0.135	0.896
Jubilee Insurance Company Ltd.	7.088	2.318	0.734	3.058	0.016
Kenindia Assurance Company Ltd.	-2.325	10.714	-0.077	-0.217	0.834
Kenya Orient Insurance Company Ltd.	0.365	0.273	0.428	1.340	0.217
Kenyan Alliance Insurance Co. Ltd.	9.000	5.272	0.517	1.707	0.126
Lion of Kenya Insurance Company Ltd.	-0.875	5.585	-0.055	-0.157	0.879
Madison Insurance Company (K) Ltd.	0.128	0.625	0.072	0.205	0.843
Mercantile Life & General Assurance	0.180	0.045	0.816	3.994	0.004
Occidental Insurance Company Ltd.	0.082	0.161	0.177	0.508	0.625
Pan Africa General Insurance Ltd.	6.085	4.610	0.423	1.320	0.223
Phoenix East Africa Insurance Company	1.084	11.283	0.034	0.096	0.926
Royal Insurance Company of East Africa	-1.699	1.155	-0.486	-1.471	0.185
Standard Assurance Kenya Ltd.	0.275	0.365	0.257	0.753	0.473
Tausi Insurance Company Ltd.	0.223	0.735	0.107	0.304	0.769
The Monarch Insurance Company Ltd.	-1.274	2.034	-0.216	-0.626	0.548
Trident Insurance Company Ltd.	0.070	0.136	0.178	0.512	0.622
UAP Provincial Insurance Company Ltd.	-8.085	7.763	-0.346	-1.042	0.328
United Insurance Company Ltd.	-1.424	0.926	-0.478	-1.538	0.163

UNIVERSITY OF NAIROBI
JMWER KABETE LIBRARY

Appendix 4.11**Ordinary Life Insurance**

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.445	0.339	0.834	4.267	0.003
Apollo Insurance Company Ltd.	-0.374	3.180	-0.042	-0.118	0.909
Blue Shield Insurance Company Ltd.	2.480	2.501	0.331	0.992	0.350
British American Insurance Co. (K) Ltd.	0.036	0.039	0.306	0.910	0.389
Cannon Assurance (K) Ltd.	-0.092	0.323	-0.101	-0.286	0.782
Co-operative Insurance Company Ltd.	-2.441	3.031	-0.291	-0.805	0.447
Corporate Insurance Company Ltd.	0.248	0.787	0.111	0.315	0.761
Fidelity Shield Insurance Company Ltd.	0.649	0.555	0.405	1.171	0.280
Geminia Insurance Company Ltd.	0.118	0.225	0.181	0.522	0.616
Heritage All Insurance Company Ltd.	66.880	16.695	0.895	4.006	0.016
Insurance Company of East Africa Ltd.	-1.758	0.752	-0.637	-2.340	0.047
Jubilee Insurance Company Ltd.	0.243	0.207	0.384	1.175	0.274
Kenindia Assurance Company Ltd.	-3.474	2.782	-0.404	-1.249	0.247
Kenyan Alliance Insurance Co. Ltd.	-1.667	1.370	-0.520	-1.217	0.291
Madison Insurance Company (K) Ltd.	-0.055	0.053	-0.342	-1.030	0.333
Mercantile Life & General Assurance	0.497	0.046	0.968	10.910	0.000
Occidental Insurance Company Ltd.	0.667	0.297	0.648	2.248	0.059
Pan Africa General Insurance Ltd.	-0.075	0.107	-0.241	-0.703	0.502
Standard Assurance Kenya Ltd.	-46.679	8.004	-0.986	-5.832	0.108
United Insurance Company Ltd.	23.464	51.667	0.306	0.454	0.694

Appendix 4.12

Superannuation Insurance

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.762	0.206	0.794	3.696	0.006
Apollo Insurance Company Ltd.	0.282	0.252	0.367	1.117	0.296
Blue Shield Insurance Company Ltd.	-1.721	4.097	-0.206	-0.420	0.696
British American Insurance Co. (K) Ltd.	0.036	0.061	0.219	0.595	0.571
Co-operative Insurance Company Ltd.	0.021	0.086	0.090	0.240	0.817
Corporate Insurance Company Ltd.	0.890	1.367	0.224	0.651	0.533
Fidelity Shield Insurance Company Ltd.	0.229	0.836	0.103	0.274	0.792
Geminia Insurance Company Ltd.	0.845	1.498	0.310	0.564	0.612
Heritage All Insurance Company Ltd.	-1.134	1.568	-0.264	-0.723	0.493
Insurance Company of East Africa Ltd.	0.068	0.094	0.247	0.721	0.492
Jubilee Insurance Company Ltd.	0.065	0.088	0.250	0.730	0.486
Kenindia Assurance Company Ltd.	-0.485	0.515	-0.316	-0.943	0.373
Kenyan Alliance Insurance Co. Ltd.	-0.337	0.085	-0.832	-3.973	0.005
Madison Insurance Company (K) Ltd.	-0.063	0.065	-0.327	-0.977	0.357
Mercantile Life & General Assurance	0.247	0.038	0.926	6.474	0.000
Pan Africa General Insurance Ltd.	-0.114	0.119	-0.321	-0.958	0.366
Standard Assurance Kenya Ltd.	-0.133	0.089	-0.832	-1.499	0.374
The Monarch Insurance Company Ltd.	-9.421	7.836	-0.570	-1.202	0.316
United Insurance Company Ltd.	-21.849	23.856	-0.467	-0.916	0.427

Appendix 4.13

Management Expenses

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	1.151	0.277	0.827	4.158	0.003
Apollo Insurance Company Ltd.	0.063	0.056	0.371	1.129	0.292
Blue Shield Insurance Company Ltd.	0.000	0.000	-0.102	-0.291	0.778
British American Insurance Co. (K) Ltd.	0.061	0.087	0.243	0.709	0.499
Cannon Assurance (K) Ltd.	0.013	0.137	0.034	0.095	0.927
Concord Insurance Company Ltd.	-0.379	0.354	-0.354	-1.070	0.316
Co-operative Insurance Company Ltd.	0.088	0.067	0.421	1.314	0.225
Corporate Insurance Company Ltd.	0.890	1.367	0.224	0.651	0.533
Fidelity Shield Insurance Company Ltd.	0.052	0.107	0.170	0.489	0.638
First Assurance Company Ltd.	0.082	0.174	0.165	0.473	0.649
Gateway Insurance Company Ltd.	0.009	0.016	0.201	0.581	0.577
Geminia Insurance Company Ltd.	0.501	0.125	0.818	4.022	0.004
General Accident Insurance Company	0.652	0.190	0.772	3.437	0.009
Heritage All Insurance Company Ltd.	-0.848	1.380	-0.212	-0.615	0.556
Insurance Company of East Africa Ltd.	0.419	0.563	0.254	0.743	0.478
Intra Africa Assurance Company Ltd.	0.041	0.114	0.127	0.362	0.727
Jubilee Insurance Company Ltd.	0.087	0.121	0.247	0.721	0.492
Kenindia Assurance Company Ltd.	-1.053	0.891	-0.386	-1.182	0.271
Kenya Orient Insurance Company Ltd.	0.000	0.051	-0.002	-0.005	0.996
Kenyan Alliance Insurance Co. Ltd.	-0.052	0.044	-0.382	-1.169	0.276
Lion of Kenya Insurance Company Ltd.	2.253	0.544	0.826	4.141	0.003
Madison Insurance Company (K) Ltd.	-0.083	0.069	-0.390	-1.196	0.266
Mercantile Life & General Assurance	0.198	0.032	0.929	6.134	0.001
Occidental Insurance Company Ltd.	0.002	0.073	0.009	0.026	0.980
Pan Africa General Insurance Ltd.	-0.013	0.030	-0.155	-0.443	0.670
Phoenix East Africa Insurance Company	-0.369	0.236	-0.484	-1.563	0.157
Royal Insurance Company of East Africa	-0.096	0.139	-0.238	-0.693	0.508
Standard Assurance Kenya Ltd.	0.043	0.018	0.648	2.409	0.043
Tausi Insurance Company Ltd.	-0.033	0.192	-0.061	-0.174	0.866
The Monarch Insurance Company Ltd.	-0.047	0.116	-0.142	-0.407	0.695
Trident Insurance Company Ltd.	-0.018	0.244	-0.026	-0.074	0.942
UAP Provincial Insurance Company Ltd.	-0.236	0.300	-0.269	-0.789	0.453
United Insurance Company Ltd.	0.778	0.566	0.437	1.373	0.207

Appendix 4.14**Claims incurred**

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.794	0.286	0.724	2.774	0.028
Apollo Insurance Company Ltd.	0.026	0.065	0.151	0.404	0.699
Blue Shield Insurance Company Ltd.	-0.005	0.256	-0.008	-0.021	0.984
British American Insurance Co. (K) Ltd.	0.170	0.313	0.201	0.542	0.605
Cannon Assurance (K) Ltd.	-0.050	0.205	-0.091	-0.241	0.816
Concord Insurance Company Ltd.	-0.292	0.172	-0.540	-1.697	0.133
Co-operative Insurance Company Ltd.	0.138	0.074	0.576	1.863	0.105
Corporate Insurance Company Ltd.	0.805	0.319	0.691	2.527	0.039
Fidelity Shield Insurance Company Ltd.	-0.154	0.104	-0.488	-1.477	0.183
First Assurance Company Ltd.	0.024	0.115	0.078	0.207	0.842
Gateway Insurance Company Ltd.	-0.022	0.024	-0.327	-0.915	0.390
Geminia Insurance Company Ltd.	0.213	0.121	0.554	1.763	0.121
General Accident Insurance Company	-0.379	0.136	-0.725	-2.789	0.027
Heritage All Insurance Company Ltd.	-1.225	1.078	-0.395	-1.136	0.293
Insurance Company of East Africa Ltd.	0.524	0.689	0.276	0.760	0.472
Intra Africa Assurance Company Ltd.	0.150	0.078	0.589	1.927	0.095
Jubilee Insurance Company Ltd.	0.007	0.012	0.198	0.535	0.609
Kenindia Assurance Company Ltd.	-1.076	0.415	-0.700	-2.590	0.036
Kenya Orient Insurance Company Ltd.	0.098	0.051	0.593	1.948	0.092
Kenyan Alliance Insurance Co. Ltd.	-0.013	0.036	-0.136	-0.363	0.727
Lion of Kenya Insurance Company Ltd.	0.465	0.148	0.765	3.141	0.016
Madison Insurance Company (K) Ltd.	0.000	0.006	0.019	0.049	0.962
Mercantile Life & General Assurance	0.108	0.055	0.600	1.985	0.087
Occidental Insurance Company Ltd.	-0.027	0.050	-0.203	-0.549	0.600
Pan Africa General Insurance Ltd.	-0.072	0.308	-0.088	-0.233	0.822
Phoenix East Africa Insurance Company	-1.187	0.513	-0.659	-2.317	0.054
Royal Insurance Company of East Africa	-0.108	0.124	-0.315	-0.878	0.409
Standard Assurance Kenya Ltd.	0.032	0.015	0.634	2.169	0.067
Tausi Insurance Company Ltd.	-0.073	0.080	-0.325	-0.910	0.393
The Monarch Insurance Company Ltd.	0.535	0.127	0.846	4.206	0.004
Trident Insurance Company Ltd.	-0.018	0.244	-0.026	-0.074	0.942
UAP Provincial Insurance Company Ltd.	-0.320	0.333	-0.342	-0.962	0.368
United Insurance Company Ltd.	0.444	0.136	0.776	3.260	0.014

Outstanding Claims at end of the year

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.108	0.035	0.737	3.087	0.015
Apollo Insurance Company Ltd.	0.028	0.016	0.518	1.714	0.125
Blue Shield Insurance Company Ltd.	0.065	0.081	0.274	0.806	0.443
British American Insurance Co. (K) Ltd.	0.012	0.012	0.332	0.995	0.349
Cannon Assurance (K) Ltd.	-0.005	0.029	-0.056	-0.159	0.877
Concord Insurance Company Ltd.	-0.276	0.131	-0.598	-2.112	0.068
Co-operative Insurance Company Ltd.	0.037	0.021	0.532	1.775	0.114
Corporate Insurance Company Ltd.	0.067	0.107	0.218	0.631	0.546
Fidelity Shield Insurance Company Ltd.	-0.004	0.023	-0.065	-0.183	0.859
First Assurance Company Ltd.	-0.002	0.065	-0.012	-0.032	0.975
Gateway Insurance Company Ltd.	0.005	0.005	0.294	0.869	0.410
Geminia Insurance Company Ltd.	0.067	0.020	0.769	3.399	0.009
General Accident Insurance Company	0.095	0.082	0.380	1.163	0.278
Heritage All Insurance Company Ltd.	-0.151	0.178	-0.287	-0.848	0.421
Insurance Company of East Africa Ltd.	0.025	0.024	0.351	1.059	0.321
Intra Africa Assurance Company Ltd.	0.022	0.021	0.338	1.016	0.339
Jubilee Insurance Company Ltd.	0.013	0.010	0.424	1.325	0.222
Kenindia Assurance Company Ltd.	-0.109	0.096	-0.375	-1.143	0.286
Kenya Orient Insurance Company Ltd.	0.031	0.023	0.433	1.358	0.212
Kenyan Alliance Insurance Co. Ltd.	-0.013	0.007	-0.557	-1.897	0.094
Lion of Kenya Insurance Company Ltd.	0.150	0.033	0.849	4.548	0.002
Madison Insurance Company (K) Ltd.	-0.014	0.010	-0.425	-1.329	0.221
Mercantile Life & General Assurance	0.042	0.004	0.962	9.301	0.000
Occidental Insurance Company Ltd.	0.010	0.021	0.170	0.488	0.638
Pan Africa General Insurance Ltd.	-0.021	0.022	-0.317	-0.945	0.372
Phoenix East Africa Insurance Company	-0.169	0.280	-0.209	-0.604	0.562
Royal Insurance Company of East Africa	-0.094	0.121	-0.265	-0.776	0.460
Standard Assurance Kenya Ltd.	0.015	0.006	0.668	2.539	0.035
Tausi Insurance Company Ltd.	-0.011	0.036	-0.113	-0.321	0.756
The Monarch Insurance Company Ltd.	-0.030	0.413	-0.037	-0.074	0.945
Trident Insurance Company Ltd.	-0.042	0.035	-0.389	-1.196	0.266
UAP Provincial Insurance Company Ltd.	-0.057	0.077	-0.253	-0.740	0.480
United Insurance Company Ltd.	0.150	0.081	0.546	1.842	0.103

Appendix 4.16

Total Investments at end of the year

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.079	0.024	0.757	3.279	0.011
Apollo Insurance Company Ltd.	0.024	0.016	0.470	1.506	0.170
Blue Shield Insurance Company Ltd.	0.080	0.082	0.326	0.977	0.357
British American Insurance Co. (K) Ltd.	0.019	0.015	0.400	1.236	0.252
Cannon Assurance (K) Ltd.	-0.004	0.025	-0.061	-0.173	0.867
Concord Insurance Company Ltd.	0.193	0.350	0.191	0.551	0.597
Co-operative Insurance Company Ltd.	0.029	0.018	0.498	1.625	0.143
Corporate Insurance Company Ltd.	0.050	0.074	0.233	0.678	0.517
Fidelity Shield Insurance Company Ltd.	0.019	0.026	0.247	0.721	0.491
First Assurance Company Ltd.	-0.018	0.057	-0.120	-0.320	0.758
Gateway Insurance Company Ltd.	0.013	0.005	0.656	2.456	0.040
Geminia Insurance Company Ltd.	0.066	0.012	0.897	5.726	0.000
General Accident Insurance Company	0.069	0.035	0.571	1.966	0.085
Heritage All Insurance Company Ltd.	-0.085	0.139	-0.210	-0.606	0.561
Insurance Company of East Africa Ltd.	0.027	0.019	0.450	1.425	0.192
Intra Africa Assurance Company Ltd.	0.028	0.032	0.292	0.863	0.413
Jubilee Insurance Company Ltd.	0.017	0.010	0.495	1.611	0.146
Kenindia Assurance Company Ltd.	-0.073	0.098	-0.254	-0.744	0.478
Kenya Orient Insurance Company Ltd.	0.001	0.006	0.082	0.231	0.823
Kenyan Alliance Insurance Co. Ltd.	-0.013	0.005	-0.705	-2.808	0.023
Lion of Kenya Insurance Company Ltd.	0.110	0.019	0.900	5.835	0.000
Madison Insurance Company (K) Ltd.	-0.013	0.012	-0.360	-1.092	0.307
Mercantile Life & General Assurance	0.042	0.004	0.962	9.301	0.000
Occidental Insurance Company Ltd.	0.031	0.031	0.335	1.006	0.344
Pan Africa General Insurance Ltd.	-0.006	0.024	-0.082	-0.233	0.822
Phoenix East Africa Insurance Company	-0.076	0.063	-0.394	-1.213	0.260
Royal Insurance Company of East Africa	0.044	0.096	0.161	0.462	0.656
Standard Assurance Kenya Ltd.	0.031	0.012	0.670	2.553	0.034
Tausi Insurance Company Ltd.	0.002	0.034	0.018	0.052	0.960
The Monarch Insurance Company Ltd.	-0.059	0.070	-0.392	-0.852	0.442
Trident Insurance Company Ltd.	0.032	0.043	0.252	0.737	0.482
UAP Provincial Insurance Company Ltd.	-0.040	0.071	-0.197	-0.568	0.586
United Insurance Company Ltd.	0.142	0.087	0.499	1.628	0.142

Appendix 4.17

Total Investment Income

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	-0.123	0.228	-0.188	-0.541	0.603
Apollo Insurance Company Ltd.	0.332	0.387	0.290	0.857	0.416
Blue Shield Insurance Company Ltd.	2.816	0.927	0.835	3.037	0.039
British American Insurance Co. (K) Ltd.	0.048	0.700	0.040	0.069	0.949
Cannon Assurance (K) Ltd.	0.555	0.186	0.727	2.991	0.017
Concord Insurance Company Ltd.	1.222	0.680	0.536	1.797	0.110
Co-operative Insurance Company Ltd.	0.468	0.128	0.791	3.661	0.006
Corporate Insurance Company Ltd.	0.463	0.404	0.376	1.147	0.285
Fidelity Shield Insurance Company Ltd.	0.078	0.251	0.109	0.309	0.765
First Assurance Company Ltd.	-0.298	0.384	-0.482	-0.777	0.518
Gateway Insurance Company Ltd.	0.013	0.005	0.656	2.456	0.040
Geminia Insurance Company Ltd.	0.754	0.114	0.920	6.634	0.000
General Accident Insurance Company	-0.036	0.720	-0.017	-0.049	0.962
Heritage All Insurance Company Ltd.	-2.734	1.543	-0.531	-1.771	0.114
Insurance Company of East Africa Ltd.	0.699	1.223	0.198	0.572	0.583
Intra Africa Assurance Company Ltd.	0.492	0.307	0.493	1.603	0.148
Jubilee Insurance Company Ltd.	0.485	0.277	0.526	1.751	0.118
Kenindia Assurance Company Ltd.	-0.073	0.098	-0.254	-0.744	0.478
Kenya Orient Insurance Company Ltd.	-0.017	0.430	-0.014	-0.039	0.970
Kenyan Alliance Insurance Co. Ltd.	0.046	0.084	0.189	0.546	0.600
Lion of Kenya Insurance Company Ltd.	0.843	0.633	0.426	1.333	0.219
Madison Insurance Company (K) Ltd.	0.647	0.558	0.379	1.159	0.280
Mercantile Life & General Assurance	0.553	0.163	0.923	3.394	0.077
Occidental Insurance Company Ltd.	-0.118	0.395	-0.105	-0.299	0.773
Pan Africa General Insurance Ltd.	0.459	0.366	0.405	1.254	0.245
Phoenix East Africa Insurance Company	1.240	0.272	0.850	4.557	0.002
Royal Insurance Company of East Africa	0.013	0.677	0.007	0.019	0.986
Standard Assurance Kenya Ltd.	0.532	0.280	0.557	1.897	0.094
Tausi Insurance Company Ltd.	0.181	0.311	0.202	0.584	0.575
The Monarch Insurance Company Ltd.	0.409	0.459	0.300	0.891	0.399
Trident Insurance Company Ltd.	-0.082	0.304	-0.095	-0.269	0.795
UAP Provincial Insurance Company Ltd.	1.451	0.374	0.808	3.876	0.005
United Insurance Company Ltd.	3.436	4.286	0.273	0.802	0.446

Appendix 4.18

Total Assets at end of the year

Insurance Company	B	Std. Error	Beta	T-Value	P-Value
American Life Insurance Company (K)	0.068	0.021	0.755	3.260	0.012
Apollo Insurance Company Ltd.	0.015	0.011	0.439	1.382	0.204
Blue Shield Insurance Company Ltd.	0.055	0.065	0.285	0.840	0.425
British American Insurance Co. (K) Ltd.	0.000	0.002	-0.001	-0.003	0.998
Cannon Assurance (K) Ltd.	-0.013	0.020	-0.220	-0.637	0.542
Concord Insurance Company Ltd.	-0.149	0.064	-0.633	-2.315	0.049
Co-operative Insurance Company Ltd.	0.468	0.128	0.791	3.661	0.006
Corporate Insurance Company Ltd.	0.018	0.049	0.126	0.360	0.728
Fidelity Shield Insurance Company Ltd.	0.002	0.020	0.036	0.101	0.922
First Assurance Company Ltd.	0.000	0.034	0.001	0.002	0.998
Gateway Insurance Company Ltd.	0.003	0.003	0.357	1.083	0.311
Geminia Insurance Company Ltd.	0.043	0.007	0.905	6.027	0.000
General Accident Insurance Company	0.059	0.033	0.539	1.812	0.108
Heritage All Insurance Company Ltd.	-0.075	0.114	-0.225	-0.652	0.532
Insurance Company of East Africa Ltd.	0.027	0.018	0.472	1.514	0.168
Intra Africa Assurance Company Ltd.	0.019	0.020	0.319	0.950	0.370
Jubilee Insurance Company Ltd.	0.006	0.008	0.281	0.828	0.432
Kenindia Assurance Company Ltd.	-0.064	0.074	-0.291	-0.859	0.415
Kenya Orient Insurance Company Ltd.	0.014	0.014	0.330	0.989	0.352
Kenyan Alliance Insurance Co. Ltd.	-0.011	0.006	-0.524	-1.742	0.120
Lion of Kenya Insurance Company Ltd.	0.096	0.018	0.887	5.434	0.001
Madison Insurance Company (K) Ltd.	-0.008	0.008	-0.309	-0.918	0.386
Mercantile Life & General Assurance	0.025	0.002	0.977	12.188	0.000
Occidental Insurance Company Ltd.	0.007	0.014	0.185	0.534	0.608
Pan Africa General Insurance Ltd.	-0.005	0.015	-0.119	-0.339	0.743
Phoenix East Africa Insurance Company	-0.052	0.052	-0.334	-1.001	0.346
Royal Insurance Company of East Africa	-0.057	0.050	-0.370	-1.127	0.292
Standard Assurance Kenya Ltd.	0.001	0.000	0.756	3.263	0.011
Tausi Insurance Company Ltd.	-0.006	0.023	-0.086	-0.244	0.813
The Monarch Insurance Company Ltd.	-0.068	0.052	-0.604	-1.313	0.281
Trident Insurance Company Ltd.	-0.006	0.022	-0.091	-0.257	0.803
UAP Provincial Insurance Company Ltd.	-0.028	0.047	-0.210	-0.609	0.560
United Insurance Company Ltd.	0.090	0.060	0.470	1.504	0.171