

**RELATIONSHIP BETWEEN INVESTMENT AND SOLVENCY MARGINS
OF INSURANCE COMPANIES IN KENYA**

BY

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DECLARATION

STUDENT'S DECLARATION

I declare that this project is my original work and has never been submitted for a degree in any other university or college for examination/academic purposes.

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

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DECLARATION

This research project is dedicated to my beloved husband Mr.Ongore Abanja and my children Valery, Abanja, Linda and Nyager for the financial, spiritual and moral support during this study.

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ABSTRACT

Investment is the commitment of a person's fund to derive future income in the form of income, dividend premium, pension benefit, or appreciation, in the value of their capital. Most institutional investors around the globe such as insurance companies invest the money they receive in various sectors in order to receive returns. The most common investment opportunities that are pursued by most of these institutions world over include investment in real estate, equities, treasury bills and bonds, deposits with banks, and certificates of deposits. The objective of the study was to establish the relationship between investment and solvency margins of insurance companies in Kenya. The study was anchored on resource dependency theory, the agency theory, and slack resources theory. This study utilized a descriptive research design to gather and analyse data. In this study, the population consisted 51 insurance companies licensed by Insurance Regulatory Authority (IRA) and that have been in operation during the period 2012 to 2016. The study was facilitated by use of secondary data that was extracted from published financial reports of the insurances, articles and papers. The diagnostic tests for the regression assumptions in this study included test for Normality, Heteroscedasticity, Multicollinearity, Sampling Adequacy and Tests of Independence (Autocorrelation). The data collected was therefore cleaned, coded and systematically organized in a manner that facilitates analysis using the Statistical Package for Social Sciences (SPSS). Quantitative analysis was used through descriptive statistics such as measure of central tendency to generate relevant percentages, frequency counts, mode, and median and mean where possible. Regression analysis was used to determine the relationship between investment and solvency margins of insurance companies. The study found that firm size, government securities, real estate investments, investments in stocks, investment in corporate bonds, investments in certificate of deposits and liquidity are positively and significantly related to solvency margins of insurance companies. The study concluded that firm size was more related to solvency margins of insurance companies followed by government securities then real estate investments then investments in stocks then investment in corporate bonds then investments in certificate of deposits while liquidity had the least relationship with solvency margins of insurance companies. the study recommends that there is need for insurance companies to exercise caution in real estate investments since this may lead to huge losses in case of a global financial crisis that may lead to devaluation of property, that there is need for insurance companies in Kenya to maintain an adequate level of liquidity depends on the institution's ability to efficiently meet both expected and unexpected cash flows and collateral needs without adversely affecting either daily operations or the solvency condition of the institution and that there is need to increase investments into these sectors since they seem to contribute more to the financial performance of the insurance firms.

ABBREVIATIONS

- AKI** - Association of Kenya Insurers
- IRA** - Insurance Regulatory Authority
- IRDA** - Insurance Regulatory and Development Authority
- MIPs** - Medical Insurance Providers
- OECD** - Organisation for Economic Co-operation and Development
- SPSS** - Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Most institutional investors around the globe such as insurance companies invest the money they receive in various sectors in order to receive returns. The most common investment opportunities that are pursued by most of these institutions world over include investment in real estate, equities, treasury bills and bonds, deposits with banks, and certificates of deposits. For instance in the year 2012 alone, most institutional investors invested more than 80% of their portfolio in bonds and equities. However, there seems to be a trend where most organizations are now moving away from bills and bonds and investing in other assets such as real estate. The income earned by the institutions from these investments is largely positive in many countries despite the economic pressures that lead to economic instability in some countries (OECD, 2013).

The study will be anchored on resource dependency theory (Pfeffer & Salancik, 1978), the agency theory (Jensen & Meckling, 1976), slack resources theory (March & Simon, 1958). The resource dependency theory established factors that have significant influence on the level of dependence an organization has on particular resources. The agency theory recommended the office hypothesis in a hypothesis of the firm in view of irreconcilable circumstances between different gatherings, for example, investors, corporate supervisors and indebted individuals. The Slack Resources theory equates an organization to a living organism that struggles to survive amid turbulence from the environment within which it operates. The theory

suggests that slack performs four main functions in an organization. The first function of slack is acts as an inducement to members.

The global insurance industry has suffered a number of incidents since the year 2010 that have led to its dismal performance. Some insurers in specific countries have been affected by natural catastrophes that have forced them to make huge payments in terms of compensation. There is also evidence of sluggish demand for insurance products due to several factors such as the low yields that are provided by insurers to those who invest in insurance products; stiff competition from commercial banks in search of sources of funding as well as the desire among individuals to maintain some level of liquidity to cushion them from adverse economic conditions. Insurers' investment portfolios are also characterized by high levels of debt thus making it difficult for them to earn any reasonable income (Barsuto, Romero & Idris, 2012).

1.1.1 Investments

Investment is the commitment of a person's fund to derive future income in the form of income, dividend premium, pension benefit, or appreciation, in the value of their capital. Examples include purchasing of shares, debentures, post office saving certificates, insurance policies are all investments in the financial sense such investment generates financial assets. Most insurers do not report a separate category of short-term investments but instead include them in cash or investment in securities. Short-term investments include primarily short-term fixed income instruments such as commercial paper and T-bills (Weebly, 2013). These investments are reported at either fair value or amortized historical cost which, due to the short-term nature of the instruments, approximates fair value, long term investments include stocks and bonds

of other companies and real estate. Given the importance of business investment as a determinant of output growth and contributor to aggregate supply, much recent work has focused on the determinants of investment (Aghion, Angeletos, Banerjee & Manova, 2010).

Insurance companies depend on insurance premiums to raise money for their investments. However, it can be noted that most insurers across the globe have been faced with decreasing insurance premiums and this largely affects the level of income they earn since the investments are limited to the amount of money available. There are different types of investments that can be made by firms. Both individuals and companies can have investments. This may include stocks, mutual fund distributions, investment in Government securities, interest-bearing bank accounts, bonds, and other debt instruments. A firm may also opt to invest in rental property or real estate or other assets owned for investment purposes.

1.1.2 Solvency Margins

Dissolvability is the capacity of a budgetary foundation to meet its commitments in case of end of action or liquidation. It alludes to an organization's for some time run money related reasonability and its capacity to cover long haul commitments. Protection is viewed as dissolvable if the aggregate resources surpass add up to liabilities. On the off chance that the aggregate resources are lower than add up to liabilities, the bank confronts an indebtedness chance and is said to be actually wiped out. Bankruptcy chance demonstrates the likelihood of default of an agent Insurance. The dissolvability issue has a tendency to be more long haul than the beforehand

portrayed liquidity issue and verifiably, protection have constantly clutched supports and quit loaning when there is a dissolvability emergency (Mason, 2009).

The term 'solvency edge' came into vogue in the 1970s, in Europe. Till at that point, the main necessity to be fulfilled by a disaster protection organization was that, after the dispersion of overflow, assuming any, the estimation of its benefits ought not be not as much as the estimation of its liabilities. Rather, it was stipulated that the estimation of benefits ought to surpass the estimation of liabilities by a specific edge. This edge was known as the dissolvability edge. No scientific procedure has so far been created to decide the quantum of edge required. The European Union built up an experimental recipe in view of past involvement and the same has now been embraced in India, with a few changes (Harvey, 2012).

The dissolvability of an insurance agency relates to its capacity to pay claims. The dissolvability proportion is a way speculators can gauge the organization's capacity to meet its long haul commitments. A safety net provider is bankrupt if its advantages are not sufficient [over indebtedness] or can't be discarded so as to pay the cases emerging. At the end of the day, it is the additional capital that an insurance agency is required to hold. According to the IRDA (Assets, Liabilities, and Solvency Margin of Insurers) Rules 2000, both life and general insurance agencies need to keep up dissolvability edges. Disaster protection organizations are relied upon to keep up a 150% dissolvability edge. The higher the proportion is the better prepared an organization is to pay off its obligations and get by in the long haul (Weebly, 2013).

All insurance agencies need to pay cases to arrangement holders. These could be present or future cases of strategy holders. Safety net providers are required to set

aside a specific whole to cover these liabilities. These are likewise alluded to as specialized arrangements. Protection, be that as it may, is dangerous business and unanticipated occasions may happen once in a while, bringing about higher cases not expected before. For example, cataclysms like the Mumbai surges, J&K seismic tremor, fire, mishaps of an expansive size, may force a terrible weight on the guarantor. The dissolvability edge is accordingly gone for turning away such an emergency. The motivation behind the additional capital all back up plans are required to keep according to the administrative standards is to ensure arrangement holders against unanticipated occasions (Barsuto, Romero and Idris, 2012).

The dissolvability edge is intended to deal with issues that are generally not expected. It additionally gives breathing room to the chiefs of safety net providers to redress issues and take prudent steps. Be that as it may, regardless of whether an insurance agency bombs additionally relies on the size of the emergency. Normally, an insurance agency with the essential dissolvability edge is not liable to fall flat. Be that as it may, protection Business is dangerous in nature and there can be no undeniable certainty. Occasions, for example, the psychological oppressor assault on the World Trade Center in New York can make sudden liabilities of extreme trouble to foresee and cover. Liabilities can likewise expand complex because of misrepresentation by workers. No protection controller or organization can totally make preparations for misrepresentation, dissolvability edge standards in any case. In any case, such events are uncommon (Weebly, 2013).

1.1.3 Relationship Between Investment and Solvency Margins

Investment plays a very significant role in the solvency of an organization. Organizations invest their resources in order to earn returns that will enable them enhance their financial performance. This is a position that has been confirmed by Loof and Heshmat (2008) who assert that there is a positive relationship between investment and the level of solvency margins achieved by an organization. However, they argue that the effect of investment on the solvency margins of a firm may not be long-lasting but a temporary position that may last for some short time (Weebly, 2013).

Insurance companies are often faced with challenging investment decisions on how best to optimize their portfolios for both general and life insurance lines of business which have unique laws and regulations that govern them. The ultimate goal with these decisions are to maximize shareholder value through profits and at the same time not jeopardize policyholders by allocating too much of the fund into risky assets which may result in the company not being able to meet its future liabilities in the form of insurance claims (Auma, 2013).

Investments help insurance companies diversify their investment risk and ultimate solvency margins which benefit both the shareholders and policyholders in the long-run. Roitberg (2012) notes that the diversified portfolio approach helps companies reduce risk without decreasing the expected rate of return with a lower overall standard deviation of returns. Since the expected return for the portfolio remains the same, the measure of diversification known as the diversification ratio is computed as the ratio of the standard deviation of the weighted entire portfolio of assets to the

standard deviation of the selected property asset. Portfolios therefore affect risk more than they affect returns since their main objective is to eliminate the effects of downside risk associated with investing in a single asset (Auma, 2013).

The rental income and capital appreciation of all the property investments in an insurance company's portfolio are reported as part of the investment income for the respective year. Nissim (2010) notes that insurance companies with large asset bases report higher amounts of investment income compared to insurance companies with smaller asset bases. Property investments owned by companies in Kenya tend to report significantly more income through capital appreciation compared to rental income and as a result the various methodologies used to determine the fair value that the property appreciated by is often under close scrutiny (Komen, 2012).

1.1.4 Insurance Companies in Kenya

The Insurance business in Kenya has 51 players altogether, 28 by and large/here and now protection, 9 in disaster protection and 14 composite organizations. The fleeting protection space is divided with the main 5 organizations controlling 40 % of the market (single biggest piece of the pie of 10. 98% held by Jubilee Insurance; 11 recorded firms represented 27.8% of industry premiums). Be that as it may, the life showcase is thought as the main 5 organizations represent 70 % of premiums. Notwithstanding the above there exists likewise 161 authorized protection specialists, 24 Medical Insurance Providers (MIPs), 3931 protection operators, 2 privately joined re - safety net providers. There are likewise 21 misfortune agents, 2 claims settling operators, 193 misfortune assessors/specialists, 26insurance surveyors, and 8 chance administrators (Kiragu, 2014).

This was influenced conceivable because of springing to up of various organizations in the 1990s because of progression of the economy. In Kenya, it is apparent that protection clients are gathered in the significant towns and the items have stayed extremely conventional after some time. This infers the expansion in the quantity of organizations, forty five (45) in number as toward the finish of 2011, offering Insurance administrations has expanded at a more prominent pace than the quantity of clients looking for the administration prompting serious rivalry (AKI, 2011).

Under area 41 of Insurance Act CAP 487, Insurance organizations are required to keep up least dissolvability edge. Presently, an Insurer carrying on in Kenya long haul protection business yet not general protection business might keep constantly add up to conceded resources of at the very least his aggregate conceded liabilities and ten million shillings or five for every centum of the aggregate conceded liabilities, whichever is higher while an Insurer carrying on in Kenya general protection business yet not long haul protection business should keep consistently conceded resources of at the very least the total estimation of his conceded liabilities and ten million shillings, or fifteen for every penny of his net premium wage amid his last going before money related year, whichever is the more prominent (AKI report, 2011).

1.2 Research Problem

The basic goals of a company's existence are to maximize shareholders wealth and generate profits. There seems to be a number of challenges facing the global insurance industry such as increasing levels of unemployment and sluggish economic growth and they negatively impact on the growth of the industry. These challenges impact negatively on the investments made by insurance companies and this also has effects

on the solvency margins. People are also reducing the amount of money saved and invested in insurance products due to worsening economic times that force them to retain money for transactionary motives (Barsuto, Romero & Idris, 2012).

The insurance industry is one volatile industry in the financial services sector. It has unique characteristics that make it vulnerable to changes in the operating environment. There seems to be a number of challenges facing the global insurance industry such as increasing levels of unemployment and sluggish economic growth and they negatively impact on the growth of the industry. These challenges impact negatively on the investments made by insurance companies and this also has effects on the financial performance of the insurers (Mason, 2009).

According to the Insurance Regulatory Authority (IRA, 2015), solvency management is a crucial element in supervision of insurance companies. It is therefore important for any insurance institution to not only measure solvency on an ongoing basis but also examine ways of mitigating during distress. Insurance companies hold large amounts of funds that need to be invested prudently. Investment income forms a critical component of an insurance company's income and profit. The commissioner of insurance annual report of indicates that the industry made underwriting losses of Kshs. 453,736,000 for the first quarter of 2017 as compared to Kshs. 166,393,000 for the same period 2016. An analysis of the performance of insurance companies as per the report indicates that most companies made underwriting losses and depended mainly on investment income for profitability and sustainability. The investment activities of insurance companies in Kenya are regulated by the Insurance Act, Cap 487. The Act stipulates the maximum proportion of the total investment that an insurance company can invest in any given asset class. Most insurance companies in

Kenya tend to be conservative in their investment pattern as they aim for long-term stability (AKI report, 2015). Solvency management is a crucial element in supervision of insurance companies. It is therefore important for any insurance institution to not only measure solvency on an ongoing basis but also examine ways of mitigating during distress (IRA, 2015).

Locally, several studies regarding investment and also on solvency have been carried out. For instance, Komen (2012) studied the determinants of solvency margins of insurance companies in Kenya, Muthoni (2012) established the effect of inflation on investment among insurance companies in Kenya, Taiana (2012) looked on extra-financial performance in socially responsible investment. These studies looked at investment and also solvency on different dependent variables such as sales, value added, profit, cash flow, capital structure and employment. Therefore, there exist a gap on the relationship between investment and solvency margins which this study sought to fill this gap by answering the question; what is the relationship between investment and solvency margins of insurance companies in Kenya?

1.3 Research Objectives

The objective of the study was to establish the relationship between investment and solvency margins of insurance companies in Kenya.

1.4 Value of the Study

Insurance companies' managers would benefit from this study to improve on their market share as they would gain knowledge on the relationship between investment and solvency margins would be of value to them.

To the insurance company's regulators, this research work would provide useful information regarding the relationship between investment and solvency margins and hence provide a clear framework on supervision and regulation. It would also benefit the policy makers in creation of a conducive environment to encourage innovations at different levels in the insurance sector.

Theoretically, the study would be helpful to researchers and academicians who seek to develop theories on the relationship between investment and solvency margins that exist between insurance companies. It would help them build up their research work since this study provides a keen look at the investment that influences the solvency margins. Academicians would use this study as source of their study materials especially those that are specializing in insurance studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, theories surrounding the study of the relationship between investment and solvency margins of insurance companies in Kenya are presented. Empirical literature related to relationship between investment and solvency margins of insurance companies is reviewed as presented by various scholars and researchers in both global and local perspectives. This chapter presents the theoretical review, determinants of solvency margins of insurance companies, empirical studies and summary of literature review.

2.2 Theoretical Review

The study was anchored on resource dependency theory, the agency theory, slack resources theory.

2.2.1 Resource Dependency Theory

This theory was developed by Pfeffer and Salancik (1978). Pfeffer and Salancik (1978) established factors that have significant influence on the level of dependence an organization has on particular resources. The first factor relates to overall importance of the resource to the firm; second is the scarcity of the resource. The scarcer a resource is the more dependent the firm becomes. Finally, another factor affecting asset reliance is the opposition between associations for control of that asset. Together, every one of the three of these elements demonstration to impact the level of reliance that an association has for a specific asset. Asset reliance hypothesis

likewise construes that an association's vital alternatives are resolved, as it were, by the earth. Since firms are subject to the earth for assets, they have to institute methodologies that would enable them to obtain these assets. Thusly, the outside condition has just been resolved for these organizations, and they encounter minimal vital decision (Pfeffer and Salancik, 1978).

The defenders of the asset reliance hypothesis trust that the earth is the wellspring of rare assets that are basic to an association's survival. It is the absence of control over these basic assets, as opposed to an absence of data that offers ascend to natural vulnerability. Situations that contain large amounts of assets are seen as less unfriendly to the strength of associations, though those with low levels of assets act to build the force of rivalry among firms. Subsequently, the advocates of this hypothesis additionally contend that so as to diminish the effect of this ecological vulnerability on authoritative execution, it is essential for associations to create and maintain powerful associations with their outer condition (El-Nadi, 2013). Accordingly, this hypothesis is important to this investigation as it clarifies why insurance agencies take part in land's speculation for its survival. Associations must create approaches to misuse these assets, which are additionally being looked for by different firms, with a specific end goal to guarantee their own survival as clarified by this hypothesis.

2.2.2 Agency Theory

Jensen and Meckling (1976) were the main individuals to recommend the office hypothesis in a hypothesis of the firm in view of irreconcilable circumstances between different gatherings, for example, investors, corporate supervisors and indebted individuals. However from that point forward, the fund hypothesis has created both

hypothetically and observationally to permit a more full examination of the issues caused by divergences of enthusiasm amongst investors and corporate chiefs. The Agency hypothesis demonstrates that organization issues emerge on account of the inconceivability of impeccably contracting for each conceivable activity of an operator whose choices influence the two his own particular welfare and the welfare of the chief, Brennan (1995b). The fundamental test that emerges from the office struggle is the manner by which to incite the operator to act to the greatest advantage of the main.

As indicated by McColgan (2001), the extent of each kind of organization struggle will vary starting with one firm then onto the next, as will the viability of administration components in diminishing them. Each sort of administration component can be vital in diminishing the organization expenses of the detachment of proprietorship and control. What is required is a more point by point comprehension of what makes these instruments imperative for a few firms and incapable for others. Administrative familiarities with the danger of takeover maybe prompts entrenchment at bring down levels, as does the conceivably ineffectual market for corporate control in restraining administration.

This hypothesis grounds the comprehension of insurance agencies' interests in government securities and interests in stock as this hypothesis explains irreconcilable situations between different gatherings, for example, investors, corporate chiefs and indebted individuals that association must be set up for it capability and survival.

2.2.3 Slack Resources Theory

The Slack Resources theory was first published by March and Simon (1958). This theory equates an organization to a living organism that struggles to survive amid turbulence from the environment within which it operates. The theory suggests that slack performs four main functions in an organization. The first function of slack is acts as an inducement to members. The second function of slack is to act as a resource for conflict resolution (Tan & Peng, 2003). However some critics of the slack resources theory argue that slack resources are an additional cost to an organization hence an excessive level of slack cannot be tenable by any organization. According to Shaffman et al (1988), organizational slack can be split into absorbed and unabsorbed slack. The latter refers to resources that are currently not committed to any activity hence can easily be redeployed to another activity depending on the environmental requirements. The absorbed slack refers to excess costs in the organization and these are usually very difficult to redeploy (Tan & Peng, 2003).

This theory equates an organization to a living organism that struggles to survive amid turbulence from the environment within which it operates. This is relevant to the study on insurance companies' survival that require them to invest in corporate bonds and certificate deposits that are explained in this study.

2.3 Determinants of Solvency Margins

Investment is a key factor to the solvency margins of insurance companies. In this section real estate investments, investments in government securities, investment in stocks, investment in corporate bonds and investments in certificate of deposits are discussed in light of the solvency margins of insurance companies (Weebly, 2013).

2.3.1 Investments

Investment performance discloses the effectiveness and efficiency of investment decisions. As such, investment performance becomes critical to the financial solidity of and insurer.

2.3.1.1 Real Estate Investments

The gains from real estate investments contribute to the overall investment income of an insurance company. Investment income is one of the two major components which contribute to the overall profit before tax on the income statement of an insurance company with underwriting profit from insurance operations being the other. During periods of low underwriting margin performances, it is essential that the investment income generated through property and other asset classes are sufficient to make up for the underwriting losses for insurance companies. Investment income for these larger firms takes up a larger portion of the overall profits compared to underwriting profits which are generated purely through insurance business (Barsuto, Romero & Idris, 2012).

Insurance companies in Kenya are major investors in land and buildings. They further noted that like other low liquidity investments, investments in real estate are expected to produce higher return. The return from investments in real estate is normally in form of rental income. Investments in real estate have been attractive to insurance companies due to earning stability and the relative low risk of default. The biggest drawback of investment in real estate is the large amount of funds required and the low liquidity of the investment (Megbenu, 1976).

2.3.1.2 Investments in Government Securities

The government occasionally borrows money to finance its expenditure from the domestic market. Investment in government securities is an attractive option to insurance companies in Kenya. The 2000 commissioner of insurance report shows that insurance companies' investments in government securities were 31.29% of the total investments. The securities are considered riskless in terms of liquidity and default risk. Government securities are liquid assets as they can be traded on secondary markets at the stock exchange (Marshall, 1992).

Treasury bills and bonds are the main securities under this category, and are instruments that governments use to borrow funds from the general public. Returns from these assets are higher than that derived from cash and fixed deposits but is lower than that from real estate and equity with an equally lower risk profile. Treasury bills and bonds are considered to be significantly safer investments compared to the other asset classes given that the likelihood of a government running out of money and defaulting on its interest payments are very low since it can print more money or borrow more (Reid, 2014).

2.3.1.3 Investments in Stocks

Ordinary shares Ordinary shares represent ownership position in a company. Ordinary shareholders provide permanent capital and are the legal owners of the company. Ordinary shareholders have a right of control by participation in the appointment of directors and voting company's annual general meetings (Francis, 1994). Kamanda (2001) evaluated the equity portfolios held by insurance companies in Kenya. He

concluded that the equity portfolio of insurance companies in Kenya was poorer than the market portfolio in terms of risk-return trade off (Mason, 2009).

Preference shares normally have a fixed dividend rate. Even when a firm performs exceptionally well, the preferred shareholders still receive the fixed stipulated dividend and all residual earnings go to the ordinary shareholders. A debenture is an unsecured bond. Debentures are relatively risky and normally attract high interest rates. In Kenya, the most common form of debentures are commercial papers (Konzolo, 2001). Debentures are attractive to investors due to the relatively high return and ease with which they can be arranged. The default risk is assumed to be low since only well-established companies issue commercial papers. Debentures also have a relatively short maturity period. In Kenya, relatively few companies issue debentures (Weebly, 2013).

2.3.1.4 Investment in Corporate Bonds

A bond can be defined as a security that is issued with a borrowing arrangement. The borrower or the issuer sells a bond to a lender or the investor for a certain amount of money define bond as a long-term debt security with contractual obligations regarding interest payments and redemption. The intrinsic features of a bond are: the coupon, maturity, its indenture provisions and type of ownership. A variety of features affect bond maturity. These are the provisions that allow the issuer to buy back all or part of its outstanding bonds at a specified call price before maturity of the bond (Solnik & Mcleavey, 2009).

An assorted variety of financial specialists cultivates exchanging movement. With such decent variety, it turns out to be more outlandish that distinctive financial

specialists will wind up on a similar side of the market, either as merchants or purchasers. They will probably differ on the credit nature of a backer and in this way be all the more eager to exchange, and they are more averse to require liquidity in the meantime. In Kenya, such decent variety is by all accounts rather restricted. Here the financial specialist base for corporate securities has a tendency to be commanded by government-controlled provident assets, insurance agencies and banks. Once a bond is issued, it ordinarily vanishes into the arrangement of purchase and-hold speculators (Vuong, 1997).

2.3.1.5 Investments in Certificate of Deposits

Financial institutions accept deposits from investors and offer an interest in return. Banks offer various types of products for investments. These include fixed deposit accounts, savings accounts bank deposits are attractive to insurance companies due to their high liquidity and ease of recalling the investment (Megbenu, 1976).

2.3.2 Liquidity

Li (2016) defines Liquidity as “Liquidity means how quickly you can get your hands on your cash. In simpler terms, liquidity is to get your money whenever you need it”. Liquidity is the ability of a safety net provider to pay liabilities, which incorporate working costs and installment for misfortunes/benefits under protection strategies, when due. A financial institution that has a higher investment in current assets has a higher liquidity level. The key ratios used to measure liquidity are the current ratio and the quick ratio. Current ratio is calculated by dividing the total current assets by total current liabilities whereas the quick ratio is computed by deducting inventories

from current assets and dividing the result by current liabilities. The higher the current ratio and the quick ratio, the better the financial position of the business.

According to Ding (2014), the relationship between liquidity and profitability could become positive over the medium and long run, in the sense that a low liquidity would result in a lower profitability due to greater need for loans, and low profitability would not generate sufficient cash flows, thus forming a viscous cycle. In a study done to determine the impact of liquidity and solvency on the profitability of chemical firms in Pakistan, the researchers postulated that liquidity has a positive relationship with profitability whereas solvency has an indirect relationship with the profitability of the chemical firms (Aghion et al., 2010). Li (2016) found that the result for liquidity on solvency is mixed and not significant which indicates that conclusion about the impact of liquidity remains questionable and further research is needed.

2.3.3 Firm Size

The financial health of any organization is influenced by, among other factors, the size or total assets of the firm. As regulators are less likely to liquidate large insurers, it is expected that small insurers are more vulnerable to insolvency (Weebly, 2013). Variables used to measure firm size include total admitted assets.

The monetary strength of any association is affected by, among different variables, the size or aggregate resources of the firm. Factors used to quantify firm size incorporate aggregate premium, add up to conceded resources, and capital and overflow (BarNiv and Hershbarger, 1990). Venture execution uncovers the adequacy and effectiveness of speculation choices. Accordingly, speculation execution winds up plainly basic to the money related steadiness of any back up plan. Exact outcomes

have discovered that speculation execution is contrarily related to bankruptcy rate (Kim et al., 1995) and Kramer (1996).

2.4 Empirical Studies

The number of researchers dealt with the subject of the investment and impact on solvency margins of organizations from several different directions, Loof and Heshmat (2008). Their main objective was to establish whether the relationship that exists between the two variables is that of correlation or causality. The performance variables for the study included sales, value added, profit, cash flow, capital structure and employment. The study findings revealed that there exists a two-way causal relationship mainly temporary in nature. It was further established from the study that some heterogeneity in the firms' investment and performance behavior by their size existed.

A study was also carried out by Taiana (2012) studied extra-financial performance in socially responsible investment. The study focused on 76 large global equity funds in Switzerland. The results from the study confirm that demonstrate the importance of accurate sector and company analysis during the construction and management of the fund. The analysis of the fund's holdings shows a big overlap between securities listed in SRI and non-SRI funds. This is evidence of the wide-scale application of the best-in-class approach to company selection in fund construction practice. As a result, the comparison of SRI versus non-SRI funds is difficult and mostly inconclusive.

Lareefi and Gretha (2008) completed an examination on the money related execution of solidarity stores. The examination included solidarity back which covers the 90/10 reserves, where 10% of assets are put resources into Government - perceived

solidarity organizations, and income sharing assets, where holders acknowledge that all or part of their compensation is given to an association with a social or compassionate reason. The outcomes from the investigation uncover that while solidarity speculation stores offer money related execution that is lower than advertise lists, there is no econometric confirmation of these solidarity supports failing to meet expectations, especially with shared income reserves, contrasted and customary moral assets. While the holders of shared income finance titles acknowledge a lower rate of return exclusively, the supervisors of these assets can seek after indistinguishable execution destinations from regular store directors.

Another examination was led by Ismail (2013) on the determinants of money related execution of Takaful and Insurance Companies in Malaysia. The investigation used the financial aspects worldview in breaking down execution and not behavioral worldview. The investigation of the budgetary execution of the Takaful and insurance agencies was especially noteworthy in perspective of the money related scene that is winding up progressively difficult. The developing number of insurance agencies' disappointments as of late has brought on additional worries on the budgetary dependability of the careful and protection businesses to partners. The discoveries demonstrate that organization's size, careful reliance and dissolvability edge are measurably noteworthy determinants of the monetary execution of the general prudent organizations in Malaysia. For Malaysian general back up plans, all components are measurably noteworthy determinants of money related execution, aside from value returns. As these variables are essential in deciding the Malaysian general prudent and insurance agencies' money related execution, it ought to be promoted to additionally enhance and support the monetary execution.

Schich (2009) additionally completed an investigation on insurance agencies and the money related emergency. The examination tried to build up how the 2008 managing an account emergency that began from the United States of America influenced the budgetary execution of the insurance agencies. The outcomes from the investigation affirmed that insurance agencies were influenced, and in for the most part unfriendly ways. Murungi (2013) likewise did an examination on the connection between macroeconomic factors and money related execution of insurance agencies in Kenya. The money related execution of insurance agencies was measured by Return on Assets processed from the monetary proclamations of the organizations. The other macroeconomic factors were acquired from the figures accessible from the Central Bank of Kenya. The investigation appeared as a clear research plan with an objective populace of 46 insurance agencies that were enrolled by the Association of Kenya Insurers in the year 2013. The discoveries uncover that loan fee, GDP, guarantee proportion and cost proportion were measurably critical in impacting monetary execution of insurance agencies.

Komen (2012) contemplated the determinants of dissolvability edges of insurance agencies in Kenya. The examination configuration was an enumeration overview of all insurance agencies in Kenya. The objective populace was characterized as all insurance agencies, which worked in the protection business from January 2001 to December 2010. Various relapse examinations were completed so as to see their effect on the dissolvability edge of insurance agencies. The multivariate relapse for the back up plans has produced factually huge outcomes predictable with dominant part of the speculations planned on firm-particular elements. The investigation uncovered that four of the seven considered factors were of the anticipated sign.

Liquidity proportion, working edge, joined proportion (cost s and cases proportion) and premium development were of the anticipated sign while development in surplus venture execution and firm size were in opposition to the anticipated outcomes.

2.6 Conceptual Framework

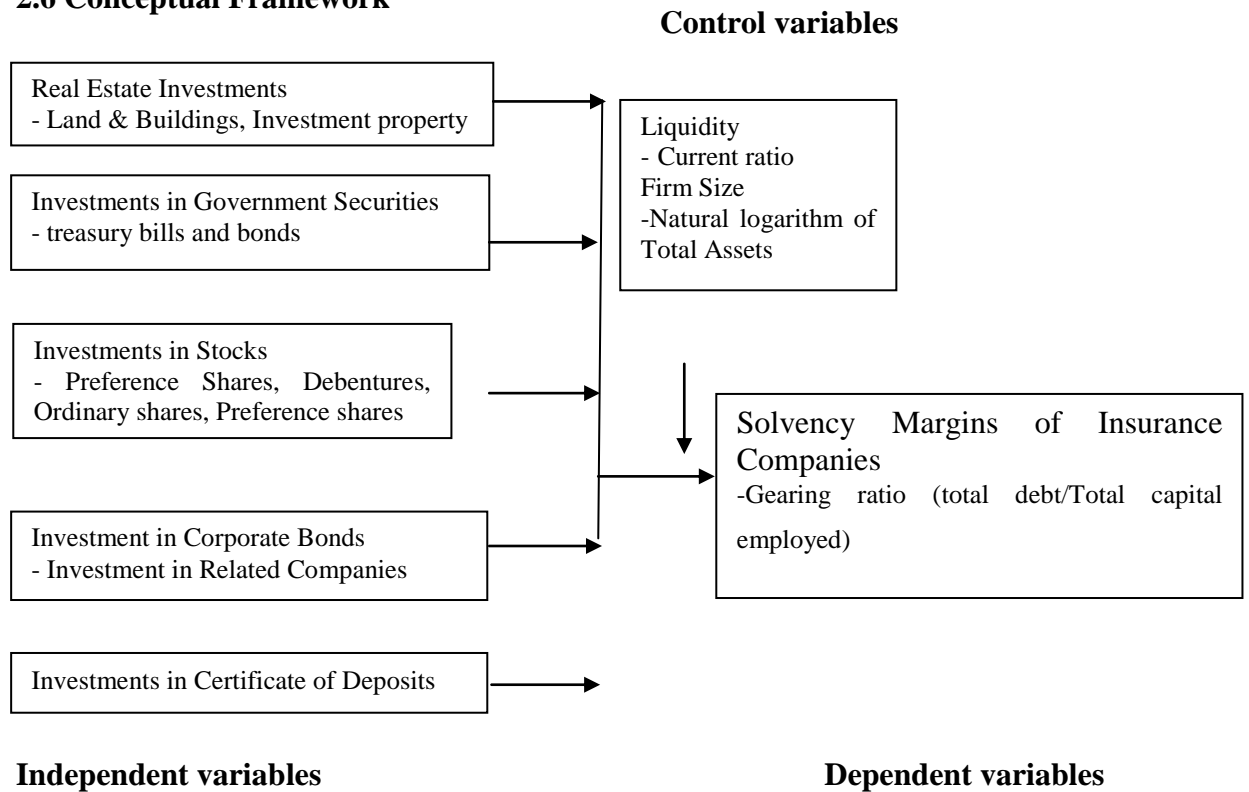


Figure 2. 1: Conceptual Framework

The conceptual framework shows the relationship between the independent variables (real estate investments, investments in government securities, investments in stocks, investment in corporate bonds and investments in certificate of deposits) and the dependent variable (Solvency Margins of Insurance Companies).

2.5 Summary of Literature Review

This chapter has reviewed the literature on the relationship between investment and solvency margins of insurance companies. The study is anchored on resource dependency theory, the agency theory, and slack resources theory. The researchers

have different views on the subject of how the investment affect solvency margins of insurance companies, and while some do not seem to find a direct relationship between investment and solvency margins of insurance companies, most of the studies reviewed are done on general insurance companies. Studies done locally have concentrated on Komen (2012) studied the determinants of solvency margins of insurance companies in Kenya. Murungi (2013) also carried out a study on the relationship between macroeconomic variables and financial performance of insurance companies in Kenya. Taiana (2012) looked on extra-financial performance in socially responsible investment, but not a direct relationship between investment and solvency margins of insurance companies. These studies have not however been extensive on insurance companies. This paper therefore seeks to establish the relationship between investment and solvency margins of insurance companies in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter includes the various stages that was followed to complete the study. The chapter therefore comprise of the following subsections: research design, target population, data collection and data analysis and presentation.

3.2 Research Design

According to Amin (2011), a research design research design alludes to the methodology or method used to gather data, measure and analyze the data. It also implies the relationship among variables or the structure of the problem being addressed. This study utilized a descriptive research design to gather and analyze data. This method was selected as it has many advantages as it showed the real relationship between variables they exist.

3.3 Target Population

In this study, the population consisted 51 insurance companies licensed by Insurance Regulatory Authority (IRA) and that have been in operation during the period 2012 to 2016.

3.4 Data Collection

The study was facilitated by use of secondary data that was extracted from published financial reports of the insurances, articles and papers relating to relationship between investment and solvency margins of insurance companies five-year period

commencing 2012 up to 2016. The secondary data was collected by the use of data collection form designed to record data.

3.5 Diagnostics Tests

The diagnostic tests for the regression assumptions in this study included test for Normality, Heteroscedasticity, Multicollinearity, Sampling Adequacy and Tests of Independence (Autocorrelation).

3.6 Data Analysis

Data obtained from the field in raw form is difficult to interpret unless it is cleaned, coded and analyzed Mugenda and Mugenda (2003). The data collected was therefore cleaned, coded and systematically organized in a manner that facilitates analysis using the Statistical Package for Social Sciences (SPSS). Quantitative analysis was used through descriptive statistics such as measure of central tendency to generate relevant percentages, frequency counts, mode, and median and mean where possible. In order to make the data more user friendly and attractive to the readers, graphic interactive tables were generated using the computer spread sheet to present the data. Regression analysis was used to determine the relationship between investment and solvency margins of insurance companies

3.6.1 Analytical Model

The following regression model was used to establish the relationship between the variables; $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$

Whereby Y = solvency margins of insurance companies (Gearing ratio [total debt/Total capital employed]).

$$\alpha = \text{Constant}$$

X_1 = Natural logarithm of Real estate investments (Land & Buildings, Investment property)

X_2 = Natural logarithm of Investments in Government securities such as treasury bills and bonds

X_3 = Natural logarithm of Investments in stocks (Preference Shares, Debentures, Ordinary shares, Preference shares)

X_4 = Natural logarithm of Investment in corporate bonds (Investment in Related Companies)

X_5 = Natural logarithm of Investments in certificate of deposits

X_6 = Liquidity (Current ratio = Current assets/ Current liability)

X_7 = Firm Size; this will be Natural logarithm of Total Assets

β_i (i= 1, 2, 3, 4, 5, 6, 7) = Regression Coefficients.

e = Error Term

3.6.2 Test of Significance

The coefficient of determination (R^2) was used to measure the extent to which the variation in solvency margins is explained by the investments variables. F-statistic and t-statistics were also computed at 95% confidence level to test whether there is any significant relationship between the investments and solvency margins of insurance companies.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the information processed from the data collected during the study on the relationship between investment and solvency margins of insurance companies in Kenya. This chapter comprise of the following sub-section; descriptive statistic, inferential statistics and interpretation of the findings and diagnostic tests.

4.2 Descriptive Statistics

This section focus on the general description of the study variables characteristics including the, Mean, standard deviation (Std. Dev), Skewness and Kurtosis.

Table 4. 1: Descriptive Statistics

	Mean		Std. Dev.	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
Solvency margins	.0002	.00004	.00027	2.750	.361	7.753	.709
Real estate investments	9.3612	.07353	.48215	-.958	.361	.874	.709
Investments in Government securities	9.3992	.07515	.49277	-.224	.361	-.932	.709
Investments in stocks	9.0412	.08429	.55272	-1.138	.361	1.082	.709

Investment in corporate bonds	8.0392	.21101	1.38371	-4.879	.361	28.167	.709
Investments in certificate deposits	8.5176	.09727	.63038	-1.121	.365	1.381	.717
Liquidity	.2008	.03341	.21653	2.517	.365	8.460	.717
Firm Size	10.0486	.05612	.36801	-.264	.361	-.278	.709

The results in Table 4.1 showed that solvency margins of insurance companies had a mean score of 0.0002, real estate investments had a mean score of 9.3612, investments in Government securities had a mean score of 9.3992, investments in stocks had a mean of 9.0412, investment in corporate bonds had a mean score of 8.0392 and investments in certificate of deposits had a mean score of 8.5176, liquidity had a mean score of .2008 and firm size had a mean score of 10.0486. Analysis of skewness shows that real estate investments, investments in government securities, investments in stocks, investment in corporate bonds, investments in certificate deposits and firm size are asymmetrical to the left around their mean.

4.3 Inferential Statistics

The study did Pearson correlation analysis and multiple regression analysis to establish the relationship between the study variables.

4.3.1 Correlation Analysis

Pearson's correlations analysis was then conducted at 95% confidence interval and 5% confidence level 2-tailed.

Table 4. 2: Correlation Matrix

		Solvency margins	Real estate investments	Government securities	Investments in stocks	Investment in corporate	Investments in certificate	Liquidity	Firm Size
Solvency margins	Pearson Correlation	1							
	Sig. (2-tailed)								
Real estate investments	Pearson Correlation	.847*	1						
	Sig. (2-tailed)	.047							
Government securities	Pearson Correlation	.858*	.450*	1					
	Sig. (2-tailed)	.000	.002						
Investments in stocks	Pearson Correlation	.764*	.510*	.666*	1				
	Sig. (2-tailed)	.002	.000	.000					
Investment in corporate	Pearson Correlation	.740*	.200*	.252*	.272*	1			
	Sig. (2-tailed)	.009	.000	.003	.038				
Investments in certificate	Pearson Correlation	.669*	.340*	.398*	.516*	.670*	1		
	Sig. (2-tailed)	.0036	.027	.009	.000	.000			
Liquidity	Pearson Correlation	.654*	.228*	.122*	.334*	.297*	.582*	1	
	Sig. (2-tailed)	.005	.046	.043	.031	.000	.000		
Firm Size	Pearson Correlation	.879*	.639*	.772*	.679*	.227*	.508*	.205*	1
	Sig. (2-tailed)	.000	.000	.000	.000	.042	.001	.031	
*. Correlation is significant at the 0.05 level (2-tailed).									

The table above indicates the correlation matrix between the real estate investments, government securities, investments in stocks, investment in corporate, investments in certificate, liquidity, firm size and solvency margins of insurance companies. According to the table, there is a positive relationship between solvency margins of insurance companies and real estate investments, government securities, investments in stocks, investment in corporate, investments in certificate, liquidity and firm size of magnitude 0.847, .858, 0.764, 0.740, 0.669, 0.654 and 0.879 respectively. The positive relationship indicates that there is a correlation between the investment and solvency margins of insurance companies in Kenya.

4.3.2 Regression Analysis

Coefficient of determination shows the degree of change in the dependent variable can be elucidated by the alteration in the independent variables or the percentage of variation in the dependent variable solvency margins of insurance companies that is explained by all the seven independent variables (real estate investments, government securities, investments in stocks, investment in corporate, investments in certificate, liquidity and firm size).

Table 4. 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.874	0.764	0.716	0.018

a. Predictors: (Constant), Real estate investments, Government securities, Investments in stocks, Investment in corporate, Investments in certificate, Liquidity and Firm size

b. Dependent Variable: Solvency margins of insurance companies

The seven independent variables that were studied explain 71.6% of the solvency margins of insurance companies as represented by the adjusted R^2 . This shows that the seven variables contribute 71.6% to the relationship between investment and solvency margins of insurance companies. Thus, additional research should be done to investigate the other (28.4%) factors related to the solvency margins of insurance companies.

4.3.3 ANOVA

ANOVA statistics were also computed to find the fitness of the model in predicting the relationship between the study variables.

Table 4. 4: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	0.042	7	0.006	16.154	.000 ^b
Residual	0.013	35	4E-4		
Total	0.055	42			

a. Predictors: (Constant), Real estate investments, Government securities, Investments in stocks, Investment in corporate, Investments in certificate, Liquidity and Firm size

b. Dependent Variable: Solvency margins of insurance companies

From the ANOVA statistics in table 4.4, the processed data, which are the investment parameters, had a significance level of 0.000 which shows that the data is ideal for making a conclusion on the investment's parameter. The F calculated at 5% Level of significance was 16.154. Since F calculated is greater than the F critical (value = 2.2490), this shows that the overall model was significant that is, there is a significant relationship between investment and solvency margins of insurance companies.

4.3.4 Regression Coefficient

Table 4. 5: Regression Coefficient

Model	Unstandardize d Coefficients		Standardize d Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.564	0.855		2.999	4.96E-03
Real estate investments	0.827	0.293	0.712	2.823	7.81E-03
Government securities	0.838	0.144	0.397	5.819	1.34E-06
Investments in stocks	0.746	0.239	0.802	3.121	3.60E-03
Investment in corporate bonds	0.724	0.278	0.581	2.604	1.34E-02
Investments in certificate of deposits	0.655	0.104	0.459	6.298	3.13E-07
Liquidity	0.614	0.156	0.061	3.936	3.76E-04
Firm Size	0.869	0.154	0.201	5.643	2.28E-06

a. Dependent Variable: Solvency margins of insurance companies

The coefficient of regression in table 4.4 above was used in coming up with the model below:

$$Y = 2.564 + 0.827X_1 + 0.838X_2 + 0.746X_3 + 0.724X_4 + 0.655X_5 + 0.614X_6 + 0.869X_7$$

Whereby

Y= solvency margins of insurance companies, **X₁** = Real estate investments, **X₂** = Investments in Government securities, **X₃**= Investments in stocks, **X₄** = Investment in corporate, **X₅**=Investments in certificate of deposits, **X₆**= Liquidity and **X₇**= Firm Size;

From the model, taking all factors (real estate investments, government securities, investments in stocks, investment in corporate, investments in certificate, liquidity and firm size) constant at zero, solvency margins of insurance companies was 2.564. The data findings also indicates that taking all other independent variables at zero, a unit increase in real estate investments will lead to a 0.827 increase in solvency margins of insurance companies and a unit increase in government securities lead to a 0.838 increase in solvency margins of insurance companies. The study also found that a unit increase in investments in stocks will translate to a 0.746 increase in solvency margins of insurance companies, a unit increase in investment in corporate bonds will lead to 0.724 increase solvency margins of insurance companies and a unit increase in Investments in certificate of deposits will lead to 0.655 increase in solvency margins of insurance companies. The model further indicated that increase in liquidity resulted to 0.614 increase in the solvency margins of insurance companies and that a unit increase in the scores of firm size would lead to 0.869 increases in the scores of solvency margins of insurance companies. As per the model, all the variables were vital as their P- value was less than 0.05.

4.4 Diagnostic Tests for Regression Assumptions

Under this section diagnostic tests for testing the regression assumptions will be presented. These tests include normality, heteroscedasticity, Multicollinearity, sampling adequacy and tests of independence (autocorrelation).

4.4.1 Normality Test

The testing for normality in this study was conducted using Kolmogorov Smirnov test and Shapiro Wilk test.

Table 4. 6: Checking for Normality of the Data

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Real estate investments	0.211	42	0.00	0.931	42	0.00
Government securities	0.211	42	0.00	0.931	42	0.00
Investments in stocks	0.211	42	0.00	0.931	42	0.00
Investment in corporate bonds	0.211	42	0.00	0.931	42	0.00
Investments in certificate of deposits	0.211	42	0.00	0.931	42	0.00
Liquidity	0.211	42	0.00	0.931	42	0.00
Firm Size	0.211	42	0.00	0.931	42	0.00

Thus, Table 4.32 indicates that using both tests of normality, which is Kolmogorov Smirnov test and Shapiro-Wilk tests, the p-value for both tests, is less than 0.05, thus the study rejected H_0 and a conclusion was made that data on both the dependent and the independent factors were normally distributed and as a result it helps to predict dependent variables.

4.4.2 Heteroskedasticity Test

In the classical linear regression model, one of the basic assumptions is Homoskedasticity assumption that states as the probability distribution of the disturbance term remains same for all observations. That is the variance of each u_i is the same for all values of the explanatory variable. However, if the disturbance terms do not have the same variance, this condition of non-constant variance or non-homogeneity of variance is known as heteroscedasticity.

Table 4. 7: Heteroskedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	9.4	1.086		.00	1.000
	Real estate investments	.000	.115	.000	.00	1.000
	Government securities	.000	.106	.000	.00	1.000
	Investments in stocks	.000	.154	.000	.00	1.000
	Investment in corporate bonds	.000	.105	.000	.00	1.000
	Investments in certificate of deposits	.000	.108	.000	.00	1.000
	Liquidity	.000	.143	.000	.00	1.000
	Firm Size	.000	.109	.000	.00	1.000

Accordingly, in order to detect the heteroscedasticity problems, Breusch-Pagan or Cook- Weisberg test was utilized in this study. This test states that if the p-value is significant at 95 confidence interval, the data has heteroscedasticity problem, whereas if the value is insignificant (greater than 0.05), the data has no heteroscedasticity problem. Thus, as shown in table above all the four variables (real estate investments, government securities, investments in stocks, investment in corporate, investments in certificate, liquidity and firm size) p-value of 1 which is greater than 0.05 hence implying that they had no heteroscedasticity problem.

4.4.3 Test for Multicollinearity

The study utilized Collinearity Statistics to find out whether the independent variables are adequately correlated to show a substantial causal correlation.

Table 4. 8: Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
	Real estate investments	.529	1.892
	Government securities	.332	3.009
	Investments in stocks	.435	2.299
	Investment in corporate bonds	.865	1.156
	Investments in certificate of deposits	.643	1.554
	Liquidity	.725	1.380
	Firm Size	.269	3.718

Based on the coefficients output, the VIF values for all the seven variables were less than 10 implying that there was no Multicollinearity symptoms.

4.4.4 Sampling Adequacy

The validity of study's variables was tested by checking the sampling adequacy. This enabled the study in identification of the items which were appropriate for factorial analysis. The test findings show that the scales had values above the threshold of 0.7.

Table 4. 9: Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

Factors	KMO Test	Bartlett's Test of Sphericity			Determinan t
		Approx. Chi-Square	df	Sig.	
Real estate investments	.802	510.767	43	.000	0.034
Government securities	.759	382.052	43	.000	0.018
Investments in stocks	.825	622.734	43	.000	0.006
Investment in corporate bonds	.853	848.872	43	.000	0.024
Investments in certificate of deposits	.838	312.761	43	.000	0.031
Liquidity	.959	432.053	43	.000	0.018
Firm Size	.725	522.738	43	.000	0.046

The sampling adequacy was assessed using the Bartlett's Test of sphericity which analyzes if the samples are from populations with equal variances produced p-values less than .05 ($p < .005$). Since the Bartlett's test significances were less than 0.05 further indicates an acceptable degree of sampling adequacy (sample is factorable).

4.4.5 Autocorrelation Test

If the errors are correlated with one another, it would be stated that they are 'serially correlated'. A test of this assumption is therefore conducted. The first test was Durbin-Watson which is shown in the regression output of the model.

Table 4. 10: Durbin-Watson test

Model	Durbin-Watson
1	1.238

As per this test expressed in table 4.35, the value of Durbin-Watson for the model is 1.238 which is far from 2. Thus, the null hypotheses were rejected for the model so there is a problem of autocorrelation.

4.5 Interpretation of the Findings

From the regression model, the study found out that, real estate investments, government securities, investments in stocks, investment in corporate, investments in certificate, liquidity and firm size were significantly and positively relationship to solvency margins of insurance companies. The study concluded that the intercept was 2.564 for all years.

The seven independent variables that were studied (real estate investments, government securities, investments in stocks, investment in corporate, investments in certificate, liquidity and firm size) explain a substantial 71.6% of the solvency margins of insurance companies as represented by adjusted R^2 (0.716). This consequently means the seven variables add to 71.6% of the relationship between investment and solvency margins of insurance companies, while other factors not studied in this research contributes 24.4% of the relationship between investment and solvency margins of insurance companies. This is in agreement with Barsuto, Romero and Idris (2012) who did a study on the relationship between investment and solvency margins of insurance companies in Kenya. The results showed that there was a

positive relationship between investment and solvency margins of insurance companies in Kenya.

The data findings indicated that real estate investments had coefficient of 0.827 meaning that real estate investments was positively and significantly related to the solvency margins of insurance companies in Kenya. This is contrary to Megbenu (1976) who argue that the biggest drawback of investment in real estate is the large amount of funds required and the low liquidity of the investment.

The study findings also showed that government securities had a coefficient of 0.838 which meant that it was positively related to the solvency margins of insurance companies in Kenya. This conforms to arguments by Reid (2014) that treasury bills and bonds are considered to be significantly safer investments compared to the other asset classes given that the likelihood of a government running out of money and defaulting on its interest payments are very low since it can print more money or borrow more.

The study also found the coefficient of investments in stocks was 0.746 implying that relationship between solvency margins of insurance companies and investments in stocks was positive and significant. This is in line with Kamanda (2001) who evaluated the equity portfolios held by insurance companies in Kenya and concluded that the equity portfolio of insurance companies in Kenya was poorer than the market portfolio in terms of risk-return trade off.

The study also established that investment in corporate bonds had a coefficient of 0.724 meaning that investment in corporate bonds was positively and significantly related to solvency margins of insurance companies in Kenya. This concurs with

Vuong (1997) that financial specialist base for corporate securities have a tendency to be commanded by government-controlled provident assets, insurance agencies and banks. Once a bond is issued, it ordinarily vanishes into the arrangement of purchase and-hold speculators.

The study established that investments in certificate of deposits had a coefficient of 0.655 meaning that there was a positive and significant relationship between investments in certificate of deposits and solvency margins of insurance companies in Kenya. This is similar to Megbenu (1976) that fixed deposits accounts, savings accounts bank deposits are attractive to insurance companies due to their high liquidity and ease of recalling the investment.

The study established that liquidity had a coefficient if 0.614 meaning that there was a positive and significant relationship between liquidity and solvency margins of insurance companies in Kenya. This is in agreement with Ding (2014) that the relationship between liquidity and profitability could become positive over the medium and long run, in the sense that a low liquidity would result in a lower profitability due to greater need for loans, and low profitability would not generate sufficient cash flows, thus forming a viscous cycle.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary, conclusion and recommendations of the main findings on the relationship between investment and solvency margins of insurance companies in Kenya. This chapter puts forward the summary of the findings, conclusions of the study, recommendations of the study, limitation of the study and suggestions for further studies.

5.2 Summary

Solvency margins can be determined by investments, liquidity as well as the size of the firm. The study sought to establish the relationship between investment and solvency margins of insurance companies in Kenya. The study employed a descriptive research design. The population of interest for this study was 51 insurance companies licensed by Insurance Regulatory Authority (IRA) and that have been in operation during the period 2012 to 2016, thus it was a census survey. The study applied secondary data which is extracted from published financial reports of the insurances, articles and papers relating to relationship between investment and solvency margins of insurance companies five-year period commencing 2012 up to 2016. The data collected were thus cleaned, coded and analytically organized in a method that facilitates analysis using the Statistical Package for Social Sciences (SPSS). So as to test the relationship between the variables the inferential tests including the regression analysis was used. The study found that the seven variables contribute to 71.6% the relationship between investment and solvency margins of insurance companies. From

the study results and discussion, the study concludes that there was a positive and significant relationship between investment and solvency margins of insurance companies in Kenya. The conclusion is that investments had a positive and vital impact on solvency margins of insurance companies in Kenya. The study recommended that there is need for insurance companies to exercise caution in real estate investments since this may lead to huge losses in case of a global financial crisis that may lead to devaluation of property. The study also recommended that there is need to increase investments into these sectors since they seem to contribute more to the financial performance of the insurance firms.

5.3 Conclusions

The study concluded that real estate investments had coefficient of 0.827, meaning that real estate investments was positively and significantly related to the solvency margins of insurance companies in Kenya. This is contrary to Megbenu (1976) who argue that the biggest drawback of investment in real estate is the large amount of funds required and the low liquidity of the investment.

The study concludes that government securities were positively related to the solvency margins of insurance companies in Kenya. This conforms to arguments by Reid (2014) that treasury bills and bonds are considered to be significantly safer investments compared to the other asset classes given that the likelihood of a government running out of money and defaulting on its interest payments are very low since it can print more money or borrow more.

The study also concluded that the coefficient of investments in stocks was 0.746 implying that relationship between solvency margins of insurance companies and

investments in stocks was positive and significant. This is in line with Kamanda (2001) who evaluated the equity portfolios held by insurance companies in Kenya and concluded that the equity portfolio of insurance companies in Kenya was poorer than the market portfolio in terms of risk-return trade off.

The study also concluded that investment in corporate bonds had a coefficient of 0.724 meaning that investment in corporate bonds was positively and significantly related to solvency margins of insurance companies in Kenya. This concurs with Vuong (1997) that financial specialist base for corporate securities have a tendency to be commanded by government-controlled provident assets, insurance agencies and banks. Once a bond is issued, it ordinarily vanishes into the arrangement of purchase and-hold speculators.

The study concluded that investments in certificate of deposits had a coefficient of 0.655 meaning that there was a positive and significant relationship between investments in certificate of deposits and solvency margins of insurance companies in Kenya. This is similar to Megbenu (1976) that fixed deposits accounts, savings accounts bank deposits are attractive to insurance companies due to their high liquidity and ease of recalling the investment.

The study concluded that liquidity had a coefficient if 0.614 meaning that there was a positive and significant relationship between liquidity and solvency margins of insurance companies in Kenya. This is in agreement with Ding (2014) that the relationship between liquidity and profitability could become positive over the medium and long run, in the sense that a low liquidity would result in a lower

profitability due to greater need for loans, and low profitability would not generate sufficient cash flows, thus forming a viscous cycle.

5.4 Recommendations for Policy and Practice

The study established that real estate has the highest level of investment among the insurance companies in Kenya. There is need for insurance companies to exercise caution in real estate investments since this may lead to huge losses in case of a global financial crisis that may lead to devaluation of property.

There is need for insurance companies in Kenya to maintain an adequate level of liquidity depends on the institution's ability to efficiently meet both expected and unexpected cash flows and collateral needs without adversely affecting either daily operations or the solvency condition of the institution. There is need for insurance companies in Kenya to increase their short term assets it was revealed that increase in banks liquidity positively influence the solvency of the insurance companies.

It was also established that investments in real estate, deposits with financial institutions and Government securities are positively related to solvency margins of insurance companies. There is need to increase investments into these sectors since they seem to contribute more to the financial performance of the insurance firms.

It is also important to have different regulations for life and general insurance companies as each operates under different constraints and requires more specific management and regulatory structures. Thus, insurance regulation is an evolving process and there is need to be flexible, as there will be continuing changes in the environment and insurance market. Therefore, recent changes of risk-based regulation approach as opposed to compliance of insurance companies in Kenya is welcome.

5.5 Limitations of the Study

The major limitations of this study with relative to data availability, the data was tedious to collect and compute as it was in its very raw form. Due to lack of standardization of financial statements from various insurance companies in Kenya, data computation was made even harder. In addition, time and resources allocated to this study could not allow the study to be conducted as deeply as possible in terms of other predictor variables for solvency margins in insurance companies.

Most insurance companies operated as composite despite being categorized as Long term or General. The unavailability of data for pure Life and General Companies affected the analysis of solvency due to the varying nature of the insurance companies in terms of operations, investment activities, vulnerabilities, and duration of liabilities.

Lastly, the study focused on financial statements data at the firm level and did not take into consideration the qualitative information from each insurance company. Qualitative assessment can be an important addition to the process of better assessing an insurer's financial conditions. Window dressing of the financial statements could be a potential problem in this study.

5.6 Suggestions for Further Research

There is need to carry out a research to establish the factors that explain 28.4% of the variance on the solvency margins of insurance companies in Kenya since the studies so far conducted are not comprehensive enough.

It will also be important to carry out a study to establish the reason behind the popularity of investment in real estate, certificates of deposits and investment in Government securities among the insurance companies.

Also, further research should be carried on market/ economic factors. This is because a good understanding economic condition under which an insurance company operates is valuable.

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APPENDICES

Appendix I: Secondary data Collection sheet

	2012	2013	2014	2015	2016
Real estate investments					
Investments in government securities,					
Investment in stocks, investment in					
Corporate bonds					
Investments in certificate of deposits					
Current assets					
Current liability					
Total assets					
Total debt					
Total capital					

**Appendix II: List of insurance companies registered with IRA as at 31st
December 2016**

1. A P A Insurance Limited
2. AAR Insurance Kenya Limited
3. Africa Merchant Assurance Company Limited
4. AIG Kenya Insurance Company Limited
5. Amaco Insurance Limited
6. Apollo Life Assurance Limited
7. British-American Insurance Company (Kenya) Limited
8. Cannon Assurance Limited
9. Capex Life Assurance Company Limited
10. CFC Life Assurance Limited
11. CIC General Insurance Limited
12. Continental Reinsurance Limited
13. Corporate Insurance Company Limited
14. Direct line Assurance Company Limited
15. East Africa Reinsurance Company Limited
16. Fidelity Shield Insurance Company Limited
17. First Assurance Company Limited
18. G A Life Assurance Limited
19. Gateway Insurance Company Limited
20. Geminia Insurance Company Limited
21. ICEA LION General Insurance Company Limited
22. Intra Africa Assurance Company Limited

23. Invesco Assurance Company Limited
24. Kenindia Assurance Company Limited
25. Kenya Orient Insurance Limited
26. Kenya Reinsurance Corporation Limited
27. Liberty Life Insurance Limited
28. Madison Insurance Company Kenya Limited
29. Mayfair Insurance Company Limited
30. Mercantile Insurance Company Limited
31. Metropolitan Life Insurance Kenya Limited
32. Occidental Insurance Company Limited
33. Old Mutual Life Assurance Company Limited
34. Pacis Insurance Company Limited
35. Pan Africa Life Assurance Limited
36. Phoenix of East Africa Assurance Company Limited
37. Pioneer Assurance Company Limited
38. Prudential Life Insurance Limited
39. Real Insurance Company Limited
40. Resolution Insurance Company Limited
41. Saham (formerly Mercantile)
42. Shield Assurance Company Limited
43. Takaful Insurance of Africa Limited
44. Tausi Assurance Company Limited
45. The Heritage Insurance Company Limited
46. The Jubilee Insurance Company of Kenya Limited

47. The Kenyan Alliance Insurance Company Limited
48. The Monarch Insurance Company Limited
49. Trident Insurance Company Limited
50. UAP Insurance Company Limited
51. Xplico Insurance Company Limited

Appendix III: Secondary Data used in the Study

Real estate investments

Real estate investments	2012	2013	2014	2015	2016
AAR INSURANCE KENYA	0	44250 0	0	0	0
AFRICAN MERCHANT ASSURANCE		17500 0	49750 0		0
AIG INSURANCE COMPANY		85000 0	60000 0	510000	51000 0
ALLIANZ INSURANCE COMPANY	33575 0	5202	94300 0	600000	0
APA INSURANCE COMPANY	78500 0	99798 0			12250 00
BRITAM INSURANCE COMPANY	0	14183 26	26000 0	116000 0	42271
CANNON ASSURANCE COMPANY	92319 1	0	13200 00		0
CIC GENERAL INSURANCE COMPANY	16350 0	56500 0		266000	26600 0
CONTINENTAL REINSURANCE	10324 52	42300 0	67500 0	144000 0	0
CORPORATE INSURANCE COMPANY	49250 0		29400 0		80000 0
DIRECT LINE ASSURANCE COMPANY	30300 0		11358 09	780000	20665 50
EAST AFRICARE INSURANCE COMPANY	21600 0	20660 9	10410 00	118540 0	78000 0
FIDELITY SHIELD INSURANCE COMPANY	91250 0	96730 0	16150 00	765000	11217 66
FIRST ASSURANCE COMPANY	91344 6	85970 4	24432 90	127579 5	13850 00
GA GENERAL INSURANCE COMPANY	10369 00	16795 86	13840 00	132500 0	13960 70
GATEWAY INSURANCE COMPANY	74131 7	11804 00	74076 2	138084 3	97300 0
GEMINIA INSURANCE COMPANY LIMITED	93290 8	74103 9	12000 0	111670 0	14563
HERITAGE INSURANCE COMPANY	18000 0	14700 0	23550 00	973000	26400 00
ICEA LION GENERAL INSURANCE COMPANY	32371 42	21675 00	39080 0	145000	29426 0
INTRA-AFRICA ASSURANCE COMPANY	21950 0	36270 0	12568 36	259000 0	11784 80
INVESCO ASSURANCE COMPANY	26706 7	11548 28		288660	
JUBILEE INSURANCE COMPANY	0	17454 45		117848 0	
KENINDIA ASSURANCE COMPANY	13748 21	49847 8	19035 92		10944 68

KENYA ORIENT INSURANCE COMPANY	33728 2	53708 92	49579 3	102286 8	
KENYA REINSURANCE CORPORATION	48850 00	17500 0	60518 92	429152	42915 2
MADISON INSURANCE COMPANY	10257 34	54088 3	19200 0	672500 0	74380 00
MAYFAIR INSURANCE COMPANY	11900 0	0	56792 8	567000	71200 0
MERCANTILE INSURANCE COMPANY	30012 6	40000 0	44000 0	404913	43497 4
OCCIDENTAL INSURANCE COMPANY	19000 0	68855 9	76006 0	441683	49100 0
PACIS INSURANCE COMPANY	37000 0	0	0	709000	73000 0
PHOENIX OF EAST AFRICA ASSURANCE COMPANY	18800 0		0		
PIONEER GENERAL INSURANCE	16330 7				
REAL INSURANCE COMPANY	0	36270 0			
SAHAM INSURANCE COMPANY	12097 2				
SANLAM INSURANCE COMPANY	20064 5				27003 1
RESOLUTION HEALTH INSURANCE COMPANY	0			21,100	13758 49
TAKAFUL INSURANCE OF AFRICA	20622 71		22094 5		
TAUSI ASSURANCE COMPANY	59000		14828 62	1,255,8 49	
THE KENYAN ALLIANCE INSURANCE COMPANY			27577 5	1,255,8 49	
THE MONARCH INSURANCE COMPANY			15764 33	409,02 5	37651 8
TRIDENT INSURANCE COMPANY				1,716,3 99	17163 99
UAP INSURANCE COMPANY			34527 00	3,582,7 00	36367 00
XPLICINSURANCECOMPANY	25627 00		77300	19,200	58650 0

Investments in Government securities

Government securities	2012	2013	2014	2015	2016
AAR INSURANCE KENYA	21700 0	277,07 6	33249 1	605408	1,223,0 00
AFRICAN MERCHANT ASSURANCE	24256 83	217,00 0	21200 0	368711	490,08 6
AIG INSURANCE COMPANY	15963 42	1,952,1 61	21632 62	242445 8	2,619,5 27
ALLIANZ INSURANCE COMPANY	38119 0	3,399,9 95	33324 67	50345	97,520

APA INSURANCE COMPANY	16946 89	1,720,2 92	20298 75	444924 1	6,548,1 44
BRITAM INSURANCE COMPANY	10271 72	384,84 7	37965 7	451143 4	3,914,5 43
CANNON ASSURANCE COMPANY	10797 2	1,209,8 45	11960 66	360480	553,28 8
CIC GENERAL INSURANCE COMPANY	97078 7	75,085	17019 6	127249 4	2,110,1 20
CONTINENTAL REINSURANCE	33369 0	106,90 0	10440 0	295466	470,64 1
CORPORATE INSURANCE COMPANY	17889 2	1,080,5 41	91597 7	169900	169,55 0
DIRECT LINE ASSURANCE COMPANY	44163 2	575,31 3	46117 0	101063 3	972,05 5
EAST AFRICARE INSURANCE COMPANY	18220 0	176,43 3	19599 2	928007	1,473,6 67
FIDELITY SHIELD INSURANCE COMPANY	37250 0	419,85 4	41787 8	233628	234,75 1
FIRST ASSURANCE COMPANY	73830 5	901,14 7	77784 5	794294	826,80 6
GA GENERAL INSURANCE COMPANY	15795 22	169,95 0	23450 0	137327 8	2,050,7 72
GATEWAY INSURANCE COMPANY	15531 59	417,50 0	45900 0	207959	
GEMINIA INSURANCE COMPANY LIMITED	25320 0	1,396,8 45	12639 20	495200	817,20 0
HERITAGE INSURANCE COMPANY	75000	2,537,3 22	29553 30	143256 3	2,662,6 02
ICEA LION GENERAL INSURANCE COMPANY		221,20 0	23020 0	301376 4	4,100,6 55
INTRA-AFRICA ASSURANCE COMPANY	19059 33	190,00 0	18200 0	222450	227,14 6
INVESCO ASSURANCE COMPANY	84365 4	2,436,1 89	25130 31	189000	176,00 0
JUBILEE INSURANCE COMPANY	21294 1	819,92 1	85149 2	352674 6	2,961,4 18
KENINDIA ASSURANCE COMPANY	39476 51	162,66 7	17458 0	107998 2	2,208,8 64
KENYA ORIENT INSURANCE COMPANY	10810 4	6,726,3 74		171288	170,45 3
KENYA REINSURANCE CORPORATION	14391 6	82,762		763347 7	9,463,7 37
MADISON INSURANCE COMPANY	20036 8	289,29 2		227263	576,24 7
MAYFAIR INSURANCE COMPANY	15124 9	230,63 7		429352	430,26 8
MERCANTILE INSURANCE COMPANY	63447 3	642,25 7	61531 60	650593	1,056,6 75
OCCIDENTAL INSURANCE COMPANY	19154 9	151,57 0	11040 3	145570	156,95 5
PACIS INSURANCE COMPANY	13200 0	141,00 0	33489 3	258000	517,50 0

PHOENIX OF EAST AFRICA ASSURANCE COMPANY	21839 1		64075 8		30,000
PIONEER GENERAL INSURANCE	53294 2		15157 0		372,55 9
REAL INSURANCE COMPANY	95006		13850 0		419,14 4
RESOLUTION HEALTH INSURANCE COMPANY	39321		25456 1	130,36 6	
SAHAM INSURANCE COMPANY	28985 3		14585 9	330,31 0	
SANLAM INSURANCE COMPANY	37000		24635 6		
TAKAFUL INSURANCE OF AFRICA	61524 0		31969	85,026	224,80 0
TAUSI ASSURANCE COMPANY			58334 6	800,03 4	32,547
THE KENYAN ALLIANCE INSURANCE COMPANY			15000 0	174,78 4	374,56 4
THE MONARCH INSURANCE COMPANY			10134 3	137,55 1	171,17 5
TRIDENT INSURANCE COMPANY			28945 0	253,54 9	249,06 1
UAP INSURANCE COMPANY			19260 09	2,715,0 40	3,399,9 86
XPLICOINSURANCECOMPANY			90000	80,000	80,000

Investment in stocks

	2012	2013	2014	2015	2016
AAR INSURANCE KENYA	0	894,526	2013412	0	0
AFRICAN MERCHANT ASSURANCE		726,356	541378		20,370
AIG INSURANCE COMPANY		418,539	204762		
ALLIANZ INSURANCE COMPANY	591572	1,271,632	726264		
APA INSURANCE COMPANY	1429034	349,760	990747	52027	1,488,887
BRITAM INSURANCE COMPANY	174880	99,943	832369	20594	414,284
CANNON ASSURANCE COMPANY	135359	1,821,599	76205	303423	251,758
CIC GENERAL INSURANCE COMPANY	377906	361,644	1326440	19125	356,222
CONTINENTAL REINSURANCE	2194693	183,138	131612		35,344
CORPORATE INSURANCE COMPANY	191603	1,022,407	17745	1524	1,259
DIRECT LINE ASSURANCE COMPANY	1337229		312350	226532	118,372
EAST AFRICARE INSURANCE COMPANY	2157019	2,294,741	1468657	111599	75,508
FIDELITY SHIELD INSURANCE COMPANY	347288	233,468	150465	110110	90,590
FIRST ASSURANCE COMPANY	1365276	1,815,927	1312494	49288	33,626
GA GENERAL INSURANCE COMPANY	264590	724,967	756893	383094	343,998
GATEWAY INSURANCE COMPANY	552704	268,753	819635	885	132,563
GEMINIA INSURANCE COMPANY LIMITED	1070480	781,408	820653	159713	97,826
HERITAGE INSURANCE COMPANY	571178	620,373	270223	161577	755,877
ICEA LION GENERAL INSURANCE COMPANY	154405	441,276	263904	815582	58,786
INTRA-AFRICA ASSURANCE COMPANY	159528	185,307	165860	64112	2,580
INVESCO ASSURANCE COMPANY	279339	290,930	1139242	2501	1,339,466
JUBILEE INSURANCE COMPANY	864102	904,929	505889	1858547	46,148
KENINDIA ASSURANCE COMPANY	226386	606,927	68293	72003	5,922
KENYA ORIENT INSURANCE COMPANY	118947	75,646	1067006	5081	1,830,479
KENYA REINSURANCE CORPORATION	23971	1,162,5	14065	25534	9,992

	71	21	7	87	
MADISON INSURANCE COMPANY	49447 8	111,15 9	10394 16	8837	164,94 8
MAYFAIR INSURANCE COMPANY	10742 0	695,25 0	17100 0	22635 2	95,961
MERCANTILE INSURANCE COMPANY	47486 0	219,88 5	28101	11123 4	1,182
OCCIDENTAL INSURANCE COMPANY	23733 8	147,66 8	51021	1603	159,12 5
PACIS INSURANCE COMPANY	41119	35,881	60000 0	26549 4	
PHOENIX OF EAST AFRICA ASSURANCE COMPANY	82045	66,159	56934 0		
PIONEER GENERAL INSURANCE	15366				30,543
REAL INSURANCE COMPANY				35749	558
SAHAM INSURANCE COMPANY			30228 2		
SANLAM INSURANCE COMPANY			15475 9	16914 8	
RESOLUTION HEALTH INSURANCE COMPANY	23390 2		55799 5	25583	
TAKAFUL INSURANCE OF AFRICA	36577 4				
TAUSI ASSURANCE COMPANY	23819		21460 5	16914 8	184,92 5
THE KENYAN ALLIANCE INSURANCE COMPANY	26452 1		61122 1	25583	21,122
THE MONARCH INSURANCE COMPANY	2020		58334		
TRIDENT INSURANCE COMPANY			61427	6034	5,113
UAP INSURANCE COMPANY	44922		12854 87	22738 05	1,386,3 29
XPLICOINSURANCECOMPANY	20149 4		21410 8		

Investments in Corporate bonds

Corporate bonds	2012	2013	2014	2015	2016
AAR INSURANCE KENYA	44,69 6	34,77 5		1089 77	107,5 95
AFRICAN MERCHANT ASSURANCE			27309		16,36 2
AIG INSURANCE COMPANY	20,71 7	22,96 9		2184 3	
ALLIANZ INSURANCE COMPANY	97,79 2	136,0 74	19141		
APA INSURANCE COMPANY	45,43 9	33,67 3	48659 2		280,2 78
BRITAM INSURANCE COMPANY	56,59 3	41,63 9	35289	1531 3	519,7 56
CANNON ASSURANCE COMPANY	14,26 2	8,706		5178 86	29,67 2
CIC GENERAL INSURANCE COMPANY			48166	3247 4	235,8 28
CONTINENTAL REINSURANCE	19,53 2	20,99 8			65,26 5
CORPORATE INSURANCE COMPANY				6529 6	
DIRECT LINE ASSURANCE COMPANY			376,4 82		358,8 46
EAST AFRICARE INSURANCE COMPANY	66,93 5	68,30 9		3676 22	
FIDELITY SHIELD INSURANCE COMPANY			76792		56,22 9
FIRST ASSURANCE COMPANY	71,37 1	62,76 9	30935 0	6648 1	269,5 15
GA GENERAL INSURANCE COMPANY	40,21 6	259,6 70	15000	2915 02	24,30 0
GATEWAY INSURANCE COMPANY			24300	1500 0	190,7 70
GEMINIA INSURANCE COMPANY LIMITED	72,84 8	8,500	26337 5	2430 0	264,9 48
HERITAGE INSURANCE COMPANY	22,73 9	147,0 85	28299 0	1923 49	
ICEA LION GENERAL INSURANCE COMPANY	316,0 28	291,5 76		3038 02	
INTRA-AFRICA ASSURANCE COMPANY					21,47 7
INVESCO ASSURANCE COMPANY			13757 0	2259 92	52,78 0
JUBILEE INSURANCE COMPANY	260,4 00	270,9 04			5,252
KENINDIA ASSURANCE COMPANY			5247	5248	487,9 23
KENYA ORIENT INSURANCE COMPANY	26,03 5	5,245	41913 4	4941 46	16,58 4
KENYA REINSURANCE CORPORATION	52,15	141,8		2338	111,3

	1	46		8	80
MADISON INSURANCE COMPANY			11216 4	1294 77	11,18 3
MAYFAIR INSURANCE COMPANY	34,83 0	26,77 0	18574	3486 4	
MERCANTILE INSURANCE COMPANY	111,1 63	102,4 76			
OCCIDENTAL INSURANCE COMPANY	12,16 7	22,28 8			
PACIS INSURANCE COMPANY			35000		
PHOENIX OF EAST AFRICA ASSURANCE COMPANY					5247
PIONEER GENERAL INSURANCE			5247		
REAL INSURANCE COMPANY	116,2 06	270,9 04			
SAHAM INSURANCE COMPANY					55,79 6
SANLAM INSURANCE COMPANY	48,44 2	5,245	88402	7212 9	15,00 0
RESOLUTION HEALTH INSURANCE COMPANY	26,28 1	141,8 46		8086 9	56,76 9
TAKAFUL INSURANCE OF AFRICA					
TAUSI ASSURANCE COMPANY	28,78 5	26,77 0	25650	2749 6	28,42 2
THE KENYAN ALLIANCE INSURANCE COMPANY	26,78 4	102,4 76			
THE MONARCH INSURANCE COMPANY	25,10 6	22,28 8		2500 0	23,75 0
TRIDENT INSURANCE COMPANY				5791 90	807,7 24
UAP INSURANCE COMPANY			27500		
XPLICOINSURANCECOMPANY			46814 1		

Investments in Certificate of Deposits

	2012	2013	2014	2015	2016
AAR INSURANCE KENYA		211,79 0	22875	49054	294,75 5
AFRICAN MERCHANT ASSURANCE		28,168	4786		13,398
AIG INSURANCE COMPANY				18996	49,074
ALLIANZ INSURANCE COMPANY	1754	118,73 8	71555		21,125
APA INSURANCE COMPANY	2781 48	494,24 0	34589 8		233,92 1
BRITAM INSURANCE COMPANY	1719 0	148,18 7	74390	31125 8	763,54 9
CANNON ASSURANCE COMPANY	7129	868,67 0	44154 2	57207 7	68,390

CIC GENERAL INSURANCE COMPANY	6884		15893 4	63348	481,79 8
CONTINENTAL REINSURANCE			13456	44898 1	-
CORPORATE INSURANCE COMPANY	161	78,186	12275 5		14,739
DIRECT LINE ASSURANCE COMPANY	2430 6		75874 5	7279	90,442
EAST AFRICARE INSURANCE COMPANY		285,90 9	23067 9	10214 2	298,57 0
FIDELITY SHIELD INSURANCE COMPANY		34,709	55017 7		66,922
FIRST ASSURANCE COMPANY	5815	207,70 0	10810 06	45101	47,111
GA GENERAL INSURANCE COMPANY		187,76 0	16497 2	61084	342,14 1
GATEWAY INSURANCE COMPANY	1438 55	7,251	25820 2	28690 7	1,179
GEMINIA INSURANCE COMPANY LIMITED	4043		86313 4	10763	35,669
HERITAGE INSURANCE COMPANY		3,722	79950 3	1156	267,90 7
ICEA LION GENERAL INSURANCE COMPANY	3946	256,56 3	30085	57122	38,171
INTRA-AFRICA ASSURANCE COMPANY	5845 6	3,975	87567	26667 9	454,27 6
INVESCO ASSURANCE COMPANY	6882 9	485,26 9		34531	364,90 1
JUBILEE INSURANCE COMPANY			26753 8	47728 9	47,605
KENINDIA ASSURANCE COMPANY		218,14 8	1515	38111 5	158,20 1
KENYA ORIENT INSURANCE COMPANY	2604	2,165	14966 0	1061	1,569,3 30
KENYA REINSURANCE CORPORATION		67,444	12418 58	14061 9	145,45 9
MADISON INSURANCE COMPANY		1,025,4 03	71323	13071 88	17,859
MAYFAIR INSURANCE COMPANY	3524	38,993	1891	11524 4	101,84 8
MERCANTILE INSURANCE COMPANY		2,970		9335	71,723
OCCIDENTAL INSURANCE COMPANY			65861	29320	39,264
PACIS INSURANCE COMPANY	1935 0		20709	53503	
PHOENIX OF EAST AFRICA ASSURANCE COMPANY		56,886	60667	50152	279,54 4
PIONEER GENERAL INSURANCE	1043 53	21,866			33,017
REAL INSURANCE COMPANY	9773				11,739
SAHAM INSURANCE COMPANY	1135 8		14956 7	19777 5	50,601

SANLAM INSURANCE COMPANY	7849 7				52,187
RESOLUTION HEALTH INSURANCE COMPANY	8400		56093	38842	
TAKAFUL INSURANCE OF AFRICA			1756	1064	
TAUSI ASSURANCE COMPANY			65373	56164	61,022
THE KENYAN ALLIANCE INSURANCE COMPANY			39380	33885	45,097
THE MONARCH INSURANCE COMPANY			9520	23662	5,345
TRIDENT INSURANCE COMPANY			21194 3	27073 0	338,46 7
UAP INSURANCE COMPANY			9397	11074	5,556
XPLICOINSURANCECOMPANY					

Current liabilities

	2012	2013	2014	2015	2016
AAR INSURANCE KENYA		543,10 3	37757 8	25219 0	483,02 3
AFRICAN MERCHANT ASSURANCE		183,86 6	22086 5		269,50 2
AIG INSURANCE COMPANY		736,31 7	63767 8	25146 2	640,82 1
ALLIANZ INSURANCE COMPANY	11726 1	513,05 7	72626 3	58439 8	70,168
APA INSURANCE COMPANY	36670 8	162,56 4	26261 1	23161	804,05 7
BRITAM INSURANCE COMPANY	26423 6	211,53 2	24314 5	70431 5	950,25 2
CANNON ASSURANCE COMPANY	15649 5	826,31 3	15651 2	63421 4	378,15 9
CIC GENERAL INSURANCE COMPANY	67902 9	107,67 6	19318 1	26601 9	634,53 9
CONTINENTAL REINSURANCE	30459 8	96,210	13209 6	52887 4	150,12 5
CORPORATE INSURANCE COMPANY	62418	78,929	55476	23600 9	101,79 7
DIRECT LINE ASSURANCE COMPANY	59939			19007 0	88,060
EAST AFRICARE INSURANCE COMPANY	59681 2	725,37 7	75874 5	94176	1,074,0 53
FIDELITY SHIELD INSURANCE COMPANY	17918 5	199,64 4	23067 9	11267 38	103,24 5
FIRST ASSURANCE COMPANY	33601 0	658,32 3	55017 7	14286 4	687,74 8
GA GENERAL INSURANCE COMPANY	49220	828,54 6	10810 06	55238 2	1,458,7 70
GATEWAY INSURANCE COMPANY	21540 6	100,67 7	16497 2	12656 52	265,25 9
GEMINIA INSURANCE COMPANY	40398	216,75	25820	21825	619,08

LIMITED	6	0	2	8	3
HERITAGE INSURANCE COMPANY	32428 9	257,67 3	86313 4	28971 8	1,264,6 25
ICEA LION GENERAL INSURANCE COMPANY	85965 1	641,86 8	79950 3	72271 6	66,415
INTRA-AFRICA ASSURANCE COMPANY	34111	36,997	30085	69631 0	176,63 8
INVESCO ASSURANCE COMPANY	48062	100,14 7	87567	62695	1,490,7 83
JUBILEE INSURANCE COMPANY	38173 7	1,888,5 96	14782 14	83415	2,434,3 52
KENINDIA ASSURANCE COMPANY	22097 2	1,824,5 57	19692 87	17077 49	264,68 3
KENYA ORIENT INSURANCE COMPANY	19900 6	163,31 5	32870 6	37881 52	576,77 4
KENYA REINSURANCE CORPORATION	68009 0	1,098,7 29	29933 3	17621 4	184,50 6
MADISON INSURANCE COMPANY	12575 8	77,913	97750	73583 9	472,55 3
MAYFAIR INSURANCE COMPANY	12509 8	328,12 3	46878 4	12244 1	248,58 6
MERCANTILE INSURANCE COMPANY	11038 0	19,594	28907 4	43109 7	186,25 0
OCCIDENTAL INSURANCE COMPANY	76655	259,10 7	85603	25011 7	78,979
PACIS INSURANCE COMPANY	95366	98,795	16889 3	12867 4	22,538
PHOENIX OF EAST AFRICA ASSURANCE COMPANY	56885	80,257	64796 5	17016 0	2,964,9 93
PIONEER GENERAL INSURANCE	79378			36684 8	
REAL INSURANCE COMPANY	12234 9			20202 9	251,66 5
SAHAM INSURANCE COMPANY	61792		15679 5	20079 2	207,99 3
SANLAM INSURANCE COMPANY	21638		12072 6	12976 1	274,28 9
RESOLUTION HEALTH INSURANCE COMPANY			14132 2	24013 9	101,57 4
TAKAFUL INSURANCE OF AFRICA	84117		62410	12976 1	
TAUSI ASSURANCE COMPANY	59198		18341 0	24013 9	700,60 9
THE KENYAN ALLIANCE INSURANCE COMPANY	16483 77		55882	64681	81,744
THE MONARCH INSURANCE COMPANY			18463 3	26606 4	425,22 4
TRIDENT INSURANCE COMPANY			11833 69	92953 7	1,790,4 48
UAP INSURANCE COMPANY			16394 7	30336 5	341,37 4

XPLICOINSURANCECOMPANY					
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Current Assets

	2012	2013	2014	2015	2016
AAR INSURANCE KENYA		211,790	22875	49054	294,755
AFRICAN MERCHANT ASSURANCE		28,168	4786		13,398
AIG INSURANCE COMPANY				18996	49,074
ALLIANZ INSURANCE COMPANY	1754	118,738	71555		21,125
APA INSURANCE COMPANY	278148	494,240	345898		233,921
BRITAM INSURANCE COMPANY	17190	148,187	74390	311258	763,549
CANNON ASSURANCE COMPANY	7129	868,670	441542	572077	68,390
CIC GENERAL INSURANCE COMPANY	6884		158934	63348	481,798
CONTINENTAL REINSURANCE			13456	448981	-
CORPORATE INSURANCE COMPANY	161	78,186	122755		14,739
DIRECT LINE ASSURANCE COMPANY	24306		758745	7279	90,442
EAST AFRICARE INSURANCE COMPANY		285,909	230679	102142	298,570
FIDELITY SHIELD INSURANCE COMPANY		34,709	550177		66,922
FIRST ASSURANCE COMPANY	5815	207,700	1081006	45101	47,111
GA GENERAL INSURANCE COMPANY		187,760	164972	61084	342,141
GATEWAY INSURANCE COMPANY	143855	7,251	258202	286907	1,179
GEMINIA INSURANCE COMPANY LIMITED	4043		863134	10763	35,669
HERITAGE INSURANCE COMPANY		3,722	799503	1156	267,907
ICEA LION GENERAL INSURANCE COMPANY	3946	256,563	30085	57122	38,171
INTRA-AFRICA ASSURANCE COMPANY	58456	3,975	87567	266679	454,276
INVESCO ASSURANCE COMPANY	68829	485,269		34531	364,901
JUBILEE INSURANCE COMPANY			267538	477289	47,605
KENINDIA ASSURANCE COMPANY		218,148	1515	381115	158,201
KENYA ORIENT INSURANCE COMPANY	2604	2,165	149660	1061	1,569,330

KENYA REINSURANCE CORPORATION		67,444	12418 58	14061 9	145,45 9
MADISON INSURANCE COMPANY		1,025,4 03	71323	13071 88	17,859
MAYFAIR INSURANCE COMPANY	3524	38,993	1891	11524 4	101,84 8
MERCANTILE INSURANCE COMPANY		2,970		9335	71,723
OCCIDENTAL INSURANCE COMPANY			65861	29320	39,264
PACIS INSURANCE COMPANY	1935 0		20709	53503	
PHOENIX OF EAST AFRICA ASSURANCE COMPANY		56,886	60667	50152	279,54 4
PIONEER GENERAL INSURANCE	1043 53	21,866			33,017
REAL INSURANCE COMPANY	9773				11,739
SAHAM INSURANCE COMPANY	1135 8		14956 7	19777 5	50,601
SANLAM INSURANCE COMPANY	7849 7				52,187
RESOLUTION HEALTH INSURANCE COMPANY	8400		56093	38842	
TAKAFUL INSURANCE OF AFRICA			1756	1064	
TAUSI ASSURANCE COMPANY			65373	56164	61,022
THE KENYAN ALLIANCE INSURANCE COMPANY			39380	33885	45,097
THE MONARCH INSURANCE COMPANY			9520	23662	5,345
TRIDENT INSURANCE COMPANY			21194 3	27073 0	338,46 7
UAP INSURANCE COMPANY			9397	11074	5,556

Total equity

	2012	2013	2014	2015	2016
AAR INSURANCE KENYA		345,501	49473 0	77992 3	998,16 8
AFRICAN MERCHANT ASSURANCE		859,734	98150 0		1,526, 192
AIG INSURANCE COMPANY		1,357,7 02	18480 04	14310 96	1,903, 585
ALLIANZ INSURANCE COMPANY		3,806,9 11	47406 85	18419 41	972,39 4
APA INSURANCE COMPANY	68605 1	2,282,5 96	20382 97	10363 69	5,263, 018
BRITAM INSURANCE COMPANY	25240 27	1,384,6 52	72315 0	48838 88	2,914, 958
CANNON ASSURANCE COMPANY	15420 36	2,775,3 11	37876 92	24928 76	332,81 0
CIC GENERAL INSURANCE COMPANY	11473 02	445,718	59287 7	77077 2	3,988, 408
CONTINENTAL REINSURANCE	10688 28	685,905	80556 0	41836 90	805,51 2
CORPORATE INSURANCE COMPANY	23604 12	672,018	72552 8	65066 8	926,73 4
DIRECT LINE ASSURANCE COMPANY	63165 2		20851 55	94434 2	
EAST AFRICARE INSURANCE COMPANY	65458 1	1,684,2 32	10681 56	84953 0	92456 8
FIDELITY SHIELD INSURANCE COMPANY	15261 87	934,093	17384 09	23504 02	24937 53
FIRST ASSURANCE COMPANY	90220 8	1,390,8 10	23448 23	10988 83	11672 66
GA GENERAL INSURANCE COMPANY	11090 49	1,625,6 05	10105 27	23393 63	22284 89
GATEWAY INSURANCE COMPANY	68197 7	867,552		25298 29	28433 12
GEMINIA INSURANCE COMPANY LIMITED	96337 8	1,168,4 68	13570 99	26990 5	16680 84
HERITAGE INSURANCE COMPANY	14022 79	1,785,4 50	20695 88	15828 24	25246 81
ICEA LION GENERAL INSURANCE COMPANY	18653 84	2,992,3 96	34850 87	20864 87	34707 93
INTRA-AFRICA ASSURANCE COMPANY	25350 31	708,897	73698 0	35029 24	82306 0
INVESCO ASSURANCE COMPANY	63238 0	343,348	37466 2	79497 6	34414 4
JUBILEE INSURANCE COMPANY	40129 7	15,019, 043	54565 32	42552 0	55524 85
KENINDIA ASSURANCE COMPANY	31097 79	5,585,6 62	15803 53	63769 29	25782 15
KENYA ORIENT INSURANCE COMPANY	12962 10	1,497,1 32	13230 02	23122 16	89240 3
KENYA REINSURANCE	43767	22,910,	17414	13463	20641

CORPORATION	6	663	661	43	444
MADISON INSURANCE COMPANY	12210 525	1,266,5 11	71555 7	18817 713	10619 37
MAYFAIR INSURANCE COMPANY	10860 29	2,547,5 56	11895 88	10260 11	18230 95
MERCANTILE INSURANCE COMPANY	61003 0	736,363			10547 34
OCCIDENTAL INSURANCE COMPANY	43932 7	2,063,5 91	89748 3	16533 23	91017 3
PACIS INSURANCE COMPANY	42460 2	1,625,5 21	77698 2	10132 94	10628 04
PHOENIX OF EAST AFRICA ASSURANCE COMPANY	55869 2	2,077,4 36	16412 50	68888 8	63002 9
PIONEER GENERAL INSURANCE	44526 3		58491 6	15652 50	48791 3
REAL INSURANCE COMPANY	13870 13				47483 4
SAHAM INSURANCE COMPANY	68573 8		54958 8	19903 5	
SANLAM INSURANCE COMPANY	63533 9		45193 5	46286 6	50636 6
RESOLUTION HEALTH INSURANCE COMPANY	30994 5		48417 7	54239 7	49704 9
TAKAFUL INSURANCE OF AFRICA	29113 9		88040 1	99303 9	10972 41
TAUSI ASSURANCE COMPANY	18590 88		14398 36	15523 08	13262 86
THE KENYAN ALLIANCE INSURANCE COMPANY	44319 2		41955 0	44021 1	39678 9
THE MONARCH INSURANCE COMPANY	48595 52		21228 81	22137 65	21931 08
TRIDENT INSURANCE COMPANY			88147 06	77861 84	76478 71
UAP INSURANCE COMPANY			48278 5	97322 6	10645 06
XPLICOINSURANCECOMPANY			80234 692		90019 211

Total Debts

	2012	2013	2014	2015	2016
AAR INSURANCE KENYA	11726 1	543,10 3	37757 8	25219 0	48302 3
AFRICAN MERCHANT ASSURANCE	36670 8	183,86 6	22086 5		26950 2
AIG INSURANCE COMPANY	26423 6	736,31 7	63767 8	25146 2	64082 1
ALLIANZ INSURANCE COMPANY	15649 5	513,05 7	72626 3	58439 8	70168
APA INSURANCE COMPANY	67902 9	162,56 4	26261 1	23161	80405 7
BRITAM INSURANCE COMPANY	30459 8	211,53 2	24314 5	70431 5	95025 2
CANNON ASSURANCE COMPANY	62418	826,31 3	15651 2	63421 4	37815 9
CIC GENERAL INSURANCE COMPANY	59939	107,67 6	19318 1	26601 9	63453 9
CONTINENTAL REINSURANCE	59681 2	96,210	13209 6	52887 4	15012 5
CORPORATE INSURANCE COMPANY	17918 5	78,929	55476	23600 9	10179 7
DIRECT LINE ASSURANCE COMPANY	33601 0			19007 0	88060
EAST AFRICARE INSURANCE COMPANY	49220	1,603,6 52		45000 0	11536 52
FIDELITY SHIELD INSURANCE COMPANY	21540 6	1,229,9 83	84922 1	11267 38	10324 5
FIRST ASSURANCE COMPANY	40398 6	830,61 2	24729 5	14286 4	68774 8
GA GENERAL INSURANCE COMPANY	32428 9	2,011,1 52	55017 7	55238 2	14587 70
GATEWAY INSURANCE COMPANY	85965 1	1,265,6 52	10810 06	12656 52	
GEMINIA INSURANCE COMPANY LIMITED	34111	485,42 1	16759 6	21825 8	26716 3
HERITAGE INSURANCE COMPANY	48062	908,80 1	25917 1	28971 8	61908 3
ICEA LION GENERAL INSURANCE COMPANY	91394 5	2,458,4 57	86313 4	72271 6	17357 41
INTRA-AFRICA ASSURANCE COMPANY	44809 7	762,72 5	12785 45	69631 0	66415
INVESCO ASSURANCE COMPANY	21505 0	379,05 3	30085	62695	31635 8
JUBILEE INSURANCE COMPANY	13867 24	1,888,5 96	87567	15384 1	14907 83
KENINDIA ASSURANCE COMPANY	15543 0	1,824,5 57	14782 14	17077 49	25353 91
KENYA ORIENT INSURANCE COMPANY	12509 8	163,31 5	19692 87	38694 03	37199 0
KENYA REINSURANCE CORPORATION	19170	1,098,7	32870	28930	57677

	3	29	6	7	4
MADISON INSURANCE COMPANY	10628 3	77,913	29933 3	73583 9	18450 6
MAYFAIR INSURANCE COMPANY	24059 3	328,12 3	97750	13103 6	47255 3
MERCANTILE INSURANCE COMPANY	56885	19,594	46878 4	46342 5	
OCCIDENTAL INSURANCE COMPANY	15247 6	259,10 7	28907 4	25116 1	24858 6
PACIS INSURANCE COMPANY	60318 9	98,795	85603	12867 4	18625 0
PHOENIX OF EAST AFRICA ASSURANCE COMPANY	14515 1	80,257	16889 3	17016 0	78979
PIONEER GENERAL INSURANCE	27700		64796 5		22538
REAL INSURANCE COMPANY	36904				29649 93
SAHAM INSURANCE COMPANY	45183 9				25166 5
SANLAM INSURANCE COMPANY	59198		15679 5	36684 8	20799 3
RESOLUTION HEALTH INSURANCE COMPANY	16483 77		12072 6	20202 9	31428 9
TAKAFUL INSURANCE OF AFRICA			14132 2	20079 2	15225 6
TAUSI ASSURANCE COMPANY		353,04 8	62410	18412 3	75740 3
THE KENYAN ALLIANCE INSURANCE COMPANY		941,52 6	18341 0	29514 7	81744
THE MONARCH INSURANCE COMPANY		376,89 1	55882	64681	48193 9
TRIDENT INSURANCE COMPANY		546,62 0	18463 3	31728 1	17904 48
UAP INSURANCE COMPANY		2,107,7 29	11833 69	92953 7	34137 4
XPLICOINSURANCECOMPANY		1,270,9 11	16394 7	30336 5	24911 32