

**STRATEGIC INTELLIGENCE SYSTEMS AND  
PERFORMANCE OF THE INSURANCE INDUSTRY IN  
KENYA**

**BENARD ONYANGO AJWANG**

**DOCTOR OF PHILISOPHY**

**(Business Administration)**

**JOMO KENYATTA UNIVERSITY OF  
AGRICULTURE AND TECHNOLOGY**

**2016**

**Strategic Intelligence Systems and Performance of the Insurance  
Industry in Kenya**

**Benard Onyango Ajwang**

**A Thesis Submitted in Partial Fulfillment for the Degree of Doctor of  
Philisophy in Business Administration in the Jomo Kenyatta University  
of Agriculture and Technology**

**2016**

## DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

Signature..... Date.....

**Benard Onyango Ajwang**

This thesis has been submitted for examination with our approval as University Supervisors:

Signature..... Date.....

**Dr. P. Karanja Ngugi, (PhD)**

**JKUAT, Kenya**

Signature..... Date.....

**Dr. Kennedy Ogollah, (PhD)**

**UoN, Kenya**

Signature..... Date.....

**Dr. George Orwa, (PhD)**

**JKUAT, Kenya**

## **DEDICATION**

To my wife and children for their sacrifice and support during my studies.

## **ACKNOWLEDGEMENT**

I wish to acknowledge my supervisors Dr. Karanja Ngugi, Dr. Kennedy Ogollah and Dr. George Orwa for the encouragement, guidance, constant follow-ups and suggestions for the improvement of this research proposal. Special thanks are also due to all my lecturers, friends and those who have contributed in one way or another in my entire learning period.

Further my Chairman, Board of Directors, Insurance Training and Education Trust Mr. Tom Mulwa, my family members and relatives for their unwavering support and encouragement. I also thank my colleagues at the College of Insurance for their encouragement, advice and support during my studies. Last but not least, special thanks goes to the almighty God for the immeasurable kindness and good health that has brought me this far.

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## **ABBREVIATIONS AND ACRONYMS**

<b>AKI</b>	:	Association of Kenya Insurers
<b>BI</b>	:	Business Intelligence
<b>CI</b>	:	Competitive Intelligence
<b>IC</b>	:	Intellectual Capital
<b>IS</b>	:	Information Systems
<b>KM</b>	:	Knowledge Management
<b>SI</b>	:	Strategic Intelligence
<b>IRA</b>	:	Insurance Regulatory Authority
<b>IT</b>	:	Information Technology
<b>MIP</b>	:	Medical Insurance Providers
<b>GDP</b>	:	Gross Domestic Product
<b>CS</b>	:	Customer Satisfaction
<b>FDI</b>	:	Foreign Direct Investments
<b>WTO</b>	:	World Trade Organization
<b>PD&amp;D</b>	:	Product Design & Development
<b>IFRS</b>	:	International Financial Reporting Standards
<b>KBV</b>	:	Knowledge Based View

**SERVQUAL:** Service Quality

**FM** : Frequency Modulation

**SPSS** : Statistical Package for Social Sciences

**ANOVA:** Analysis of Variance

**SIS** : Strategic Information Systems

**RBV** : Resource Based View

## OPERATIONAL DEFINITION OF TERMS

- Business Intelligence:** this is the set of techniques and tools for the transformation of raw data into meaningful and useful information for business analysis purposes (Chugh & Grandhi, 2013).
- Competitive Intelligence:** is the action of defining, gathering, analyzing, and distributing intelligence about products, customers, competitors, and any aspect of the environment needed to support executives and managers making strategic decisions for an organization (Barnea, 2010).
- Information Systems:** this comprises of the collection of hardware, software, data, people and procedures that work together to produce quality information (Simon, 2013).
- Intelligence:** intelligence is information that is analyzed, interpreted, and infused with developed implications (Rosenberg, 2015).
- Knowledge Management:** is the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical & strategic requirements; it consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge (Bray, 2013)



**Strategic Intelligence:** this is the process of gathering the right amount of information and insights needed so that management teams and decision makers and their organizations can avoid unpleasant surprises by anticipating change and decrease their response time (Michael, 2015)

## **ABSTRACT**

Changes and challenges that have occurred in the past two decades have forced a radical shift in the basic foundations of how business is conducted. Internal, as well as external forces have forced organizations to constantly monitor their surrounding environment in order to create an awareness of opportunities and threats to allow them to survive in their competitive environment. The objective of this study was to identify the relationship between Strategic Intelligence, Strategic Information ship and performance of the Insurance Industry in Kenya. In this study, qualitative and quantitative data collection techniques were used. The study chose positivism because of the belief that the influence of Strategic Intelligence on the organization performance constructs as pertaining in Kenya's insurance industry can be examined objectively through the use of established theoretical frameworks and structured instruments to assess and analyze it, upon which generalizations can be made from the findings. The target population of the study was 306 senior management employees and 711 middle management employees both totaling to 1017. The sample size was 278 which constituted 27% of the target population. Descriptive research design was employed in this study. The data used were both primary and secondary. The primary data were collected using self administered questionnaires and structured interviews. For the secondary data, the information was obtained from internal company information of the insurance companies, annual financial reports of the companies, annual reports of Association of Kenya Insurers and the Insurance Regulatory Authority. The study found that product value, product awareness, product satisfaction, service quality and financial prudence have a positive and a significant influence on the organization performance. In addition, the study found that strategic information system has a moderating effect on the aggregation of strategic intelligence and the performance of the insurance industry in Kenya. Based on the findings, the study concluded that strategic intelligence leads to improved gross total premiums (income). In addition it leads to an increased total assets and also growth in insurance profit. Based on the findings and conclusion, the study recommend that insurance firms have a clear focus on expense ratio, claims and net income so as to

improve on their organization performance. Product value is one of the contributory factors to performance of insurance firms. For any insurance organization that wants to grow and maintain its market share, the study recommends for product awareness campaigns. Renewal ratio, coverage ratio and growth ratio are critical components of product awareness. The study further recommends that insurance firms emphasize on satisfaction of the customers since the study found out that product satisfaction has a positive effect on performance. From the findings and conclusion, the study finally recommends that insurance firms to offer proper and quality services to the customer. The quality of customer service have proven to be the yard stick of determining whether companies will retain and get new customer or lose them. From this study the policy makers will be able to know how well to incorporate strategic intelligence and Strategic Information System in the sector and how effectively to ensure full participation. To the scholars in insurance industry and overall financial sector, the study will provide a source of reference, literature review and basis upon which further studies can be developed. Finally understanding the extent in which Strategic Intelligence and Strategic Information Systems as utilized in the insurance industry in Kenya including identifying the benefits and/or challenges that are experienced by implementing and using Strategic Intelligence and Strategic Information Systems as an input to the Strategic Management process and what value Strategic Intelligence adds in the decision making process.

## **CHAPTER ONE**

### **INTRODUCTION**

This chapter introduced the background of the study highlighting the concepts of strategic intelligence, strategic information systems and performance of the insurance industry in Kenya. It also presents the statement of the problem, the research objectives and the research questions. Finally, the justification, scope and limitation of the study were discussed.

#### **1.1 Background of the Study**

A sound knowledge of business, relevant markets, customers and competition are essential factors for any successful organization. Increasing complexity and uncertainty nationwide demand that businesses and governments continue to improve their ability to understand and anticipate change. In the past, companies made significant investments in strategic intelligence (SI) solutions in order to gather, analyze and share this information with top-level executives and decision makers. Recent events and experiences suggest that the true driver of success comes from putting information and insight into the hands of many different users (IBM, 2010).

Strategic Intelligence is the action of gathering, analyzing, and applying information about products, domain constituents, customers, and competitors for the short term and long term planning needs of an organization (Brandenburger & Nalebuff, 2006). Strategic Intelligence (SI) is both a process and a product. The process of collecting, storing and analyzing information about the strategic arena results in the actionable output of intelligence ascertained by the needs prescribed by an organization. A more focused definition of SI regards it as the organizational function responsible for the early identification of risks and opportunities in the market before they become obvious (Cobb, 2009). This definition focuses attention on the difference between dissemination of widely available information (such as market statistics, financial reports, newspaper

clippings) performed by functions such as libraries and information centers, and Strategic intelligence, which is a perspective on developments and events, aimed at yielding a Strategic edge. Companies in today's world compete on analytics. The conscious management of information has gained more managerial focus than ever, because the bottleneck of organizational success is no longer financial capital or raw materials or other physical resources, but knowledge assets (Pirttimäki, 2007). Furthermore, the sheer speed whereby a global economy operates today necessitates a fast and easy access of the management to operative information, which can be used to evaluate performance metrics, understand customer behavior and forecast market trends (Hedgebeth, 2007).

By implementing SI, the organization can learn from the data already gathered into their operational systems, turn that information into strategic knowledge and stay ahead of the competition within their industry sector (Ramakrishna, 2012). Consequently, by taking advantage of superior intellectual resources both human and IT – one can exploit and develop its traditional resources better than its rivals do (Dijaw & Sharma, 2011). As companies today are forced to utilize information more effectively than before, advanced SI and analytics tools have become a prerequisite for competitive advantage.

The amount of information available for users increases slower than the number of business decisions that should have thorough information support (Popovic, 2010). SI initiatives cannot thus be deployed without a business case. The haphazard implementation of SI projects without prioritization or proper specifications from business can lead to overlapping and therefore partly redundant project outcomes.

Strategic Intelligence, as an academic term, is rather young even if the underlying business activities related to gathering market data and analyzing industry structure have existed already since 1960's, but systematic use of intelligence in strategic decision making has been of academic interest from not until 1990's Pirttimäki et al. (2007). The strategic alignment of IT strategy has been abundantly researched (Avison *et al.*, 2004;

Coleman & Papp, 2006; Hirschheim & Sabherwal, 2008), but less attention has been paid on the development of SI strategy, or in other words on the strategy that discusses information management, data warehousing and information usage in relation to each other. Data warehousing strategies are often systems implementation related and focus on technical attributes (Sen & Sinha, 2007), however, the development of overall information management strategy supporting strategic decision-making requires a link to business objectives and to business activities besides the technical solutions.

Performance of an organization is the outcome of activities of individuals and units of the organization. Except for the external influences on individual behavior and personal traits, organizations can either influence or control all factors affecting the performance of individuals and units through formal and informal means (Davenport, 2006). Some of the formal means of controlling units' activities are structure, operating manuals, standard operating procedures, charters, and budgets. Greater influence on individuals can be exercised informally through communication, work culture, management style. An effective control over the performance requires insurance companies to operate the organization divisions and subdivisions. Within each division or subdivision, there can be units responsible for separate activities.

One satisfactory way of ensuring better performance of units is delegation of profit responsibility to units at the lowest possible level (Ranjan, 2008). The insurance industry is part of immune and repair systems of an economy. Successful operation of the industry sets impetus for other industries and development of an economy. This research focuses on performance management system in insurance corporations in general, based on the principles of performance management in service organizations. It is a theoretical attempt to suggest key performance indicators and success factors for performance management in insurance companies. Output or performance of insurance company depends on the effectiveness of such policies. Insurance corporations formulate and revise the policies from time to time to ensure that the performance of the managers is in the best interest of the organization (Pirttimäki, 2007).

### **1.1.1 The Concept of Strategic Intelligence**

Strategic intelligence is defined as the capacity to adapt to changing circumstances, as opposed to blindly continuing on a path when all the signals in the competitive environment suggest a need for change (Blanding, 2012). Strategic intelligence is distributed throughout the organization. It is important because it creates more value than the competition over time, which will attract more investments, which will lead to sustainable competitive advantage in the long run. Therefore, companies will develop the capacity to continue to fulfill their constituencies' obligations on the long run, and not simply the short run. By regularly reviewing their strategies, companies can continue to develop, adapt and change. The three main dimensions of intelligence include: Tactical, operational and strategic. Tactical intelligence is a base level that provides critically analyzed information. Mid-level managers utilize operational intelligence to guide and direct actions (Lehane, 2011). Strategic intelligence can be considered to be a specific form that addresses any issue at the level of breadth and detail necessary to describe threats, risks and opportunities in a way that helps determine programs and policies (McDowell, 2009).

The importance of dissemination of intelligence is a critical component of influencing decision makers, which will in turn promote better informed decisions regarding priorities and resources (Ratcliffe, 2003). Knowledge is a commodity and intelligence is the output. Knowledge is power, therefore, integrating value added knowledge can only strengthen an organization and its decision making processes. Good planning must be preceded by good analysis and strategic intelligence is a particularly appropriate tool for this purpose (McDowell, 2009). Where resources and appropriately skilled staff are available, the use of an integrated intelligence function may serve the many needs of an organization and the competencies of managers in setting and guiding the direction and achieving the intended outcomes (Lehane, 2011).

The value of strategic intelligence can be seen through the improvement of the capabilities which in turn affects the competencies of managers and workers to learn about changes in their business environment. It gives them the ability to communicate their insights which in turn will increase the information available to all organizational members, thereby increasing the "Intelligence quotient" of all organization managers and members (Kim & Tham, 2009). The identification and utilization of the most important factors of a strategic intelligence framework greatly enhances global corporate decision making and result in competitive advantage and constant innovation within the South African business environment (Kruger, 2011).

### **1.1.2 Strategic Information Systems**

Strategic information systems (SIS) are information systems that are developed in response to corporate business initiative. They are intended to give competitive advantage to the organization. They may deliver a product or service that is at a lower cost, that is differentiated, that focuses on a particular market segment, or is innovative. Strategic information management (SIM) is a salient feature in the world of information technology (IT). In a nutshell, SIM helps businesses and organizations categorize, store, process and transfer the information they create and receive. It also offers tools for helping companies apply metrics and analytical tools to their information repositories, allowing them to recognize opportunities for growth and pinpoint ways to improve operational efficiency (Patel, 2009).

Many systems do not provide the necessary capabilities that all users require such as adapting to rapidly changing environments, scalability, and real-time decision making. In order to make the required decisions, users must sift through increasing amounts of information, while maintaining production efficiency. Information processing theory, from cognitive physiology discusses limitations to the amount of information received, processed, and remembered. Organizations have invested in information systems in order to increase information processing capabilities and drive performance. Companies



need streamlined access and analysis of the underlying information in order to make operational decisions. Strategic organizations sought to improve efficiency through faster and better informed decision making, and looked to technology to enhance strategic and tactical results to improve time to market, connectivity, integration, and visibility into their business. New generations of technology savvy users and executives were finding ways to utilize previously untapped information (Davenport, 2007; Ranjan, 2008). IS are becoming more critical to organizations.

DeLone and McLean (2003) add service quality as another measure of IS effectiveness. This is added in response to the changing IS roles of information provider and service provider, and the view of end-users as customers. This allows focusing not only on products but also services of IS area. Applied from marketing measures, the service quality dimensions include reliability, responsiveness, assurance and empathy. The measures apply regardless of whether the IS support occurs through an existing IS department, new unit, or external organization (DeLone *et al.*, 2003).

Today Insurance companies are living in a complex and turbulent environment. New technological risks, climate changes and abundance of risks with catastrophic nature are the source of unpredictability for these companies. One important source of sustainability in this arena is learning and knowledge sharing. In the Insurance industry and its competitive environment, every person, or system constantly is trying to achieve better conditions for their performance thereby gaining a larger share of the market and ultimately increase their profitability (Yu *et al.*, 2009). Initially seen as a support function, information systems department's importance has increased as the business environment has grown more dynamic and the power to collect, assess, and disseminate information has expanded. Properly implemented information systems have become an even more valuable strategic resource, one that any organization can use to improve its competitive advantage. Information systems departments are rapidly becoming strategic partners with other business functions and integral to the general success of the organization (Boudreau, Loch, Robey, & Straud, 1998)

### **1.1.3 Industry Performance**

Industry performance comprises the actual output or results of an industry as measured against its intended output. Insurance company's profitability is measured by measuring premium and investment income, underwriting results and overall operating performance (Kearney, 2010). The business model for insurance companies can be reduced to a simple equation. Profit is equal to earned premium plus investment income, plus commission receivable minus incurred loss, minus underwriting expenses. Insurers make money in two ways; first, through underwriting the process through which insurers select the risks to insure and decide how much in premiums to charge for accepting those risks and secondly, by investing the premiums they collect from insured parties (Mburu, 2011). The most complicated aspect of the insurance business is the underwriting of policies. Using a wide assortment of data, insurers predict the likelihood that a claim will be made against their policies and price products accordingly. To this end, insurers use actuarial science to quantify the risk they are willing to assume and the premium they will charge to undertake the risk. However Association of Kenya Insurers (AKI) sets the minimum rate below which insurers are not allowed to charge as premium (Kipkurui, 2011).

Insurance companies also earn investment income on their investments. This is the amount invested out of money collected in form of insurance premium but has not been paid out as claims. The insurers start investing insurance premiums as soon as they are collected and continue to earn interest on them until claims are paid out. This means that insurance companies are exposed to default risks on premium that remain uncollected. The overall financial performance can be measured by calculating the return on asset. This ratio is computed by dividing net profit by average total assets of a company. This ratio looks at the ability of a company to utilize its assets to gain a net income (Kearney, 2010).

Another determinant of insurance performance is premium growth and market share. However premium growth is not always a positive indicator of the insurer's success. Premium growth should be achieved by underwriting new policies rather than depending on insurance rate increases (Han, 2010). Market share is measured as a percentage of the individual company's contribution towards Gross Written Premium (GWP) for a particular market. In year 2011, 30% of Life Insurance Business companies (7 out of 23) controlled more than 80% of Life business while 30% of General Insurance Business underwriters (11 out of 37) controlled more than 65% of General Insurance Business (AKI, 2012).

Customer satisfaction is another measure of insurance performance. Insurance companies should undertake periodic surveys to determine the satisfaction levels of their customers. Satisfied customers usually return to renew their policies, share their experience with other people and are willing to pay a premium for the privilege of insuring with a particular insurer (Hague & Hague, 2009). They further suggested that the cost of keeping a customer is only one tenth of winning a new one. Therefore, when a customer is won companies should hang on them. Customer needs are evolving and dynamic. This calls for continuous improvement of the current products and coming up with other innovative products to remain competitive and satisfy their customers. Strategy implementation plays a critical role in enhancing performance of companies in the insurance industry.

Barney (1991) formalized a comprehensive theoretical framework from the resources based perspective. According to Barney (1991), firms can be conceptualized as bundles of resources (and capabilities) that are heterogeneously distributed among firms and are imperfectly mobile. The differences in resource endowments across firms over time, thereby allows for a resource-based competitive advantage leading to better performance. The resources must be valuable to enable a firm to conceive or implement strategies that improve its effectiveness and efficiency. If resources are rare, the firm can implement a unique value-creating strategy among its current and potential competitors.

The key to inhibit competitors' ability to obtain or duplicate the competitive advantage exists in the characteristics of company's resources, namely valuable, rare, imperfectly imitable and causal ambiguous. The Resource Based View (RBV) has emerged as one of the most widely accepted theoretical perspectives and a large number of studies adopting RBV have been carried out in relation to industry performance rapidly diffused throughout the strategy literature (Crook, 2008; Priem & Butler 2001). Researchers have begun to analyse the cumulative results for validating the applicability of Resource Based View. Perhaps the three most prominent assessments are (Barney & Arian, 2001; Newbert, 2007; Crook, 2008).

Barney and Arian (2001) assessed the studies adopting RBV using a qualitative method and concluded that the overall results are consistent with resource-based expectations. By calculating the percentage of significance tests supporting the notion that strategic resources shape performance, Newbert (2007) has received only modest support overall. This approach has some important limitations Crook *et al.* (2008), including not considering statistical artifacts and significant level of the supporting effects. To overcome these limitations, Crook *et al.* (2008) used meta-analysis to study 125 RBV related research and found RBV's empirical base offers strong support for the assertion that firm performance is enhanced to the extent that they possess strategic resources.

The Dynamic Capability Approach (DCA) proposes that the traditional elements of business success in previous models maintaining incentive alignment, owning tangible assets, controlling costs, maintaining quality, optimising inventories are necessary but not sufficient for sustained superior performance in changing environments (Teece, 2007). The real sources of a sustainable competitive advantage are dynamic capabilities, which 'integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece, 1997). Dynamic capabilities lie at the core of organisational success (and failure). Even when a firm possesses VRIN resources but does not deploy dynamic capabilities, the firm's superior returns may be short lived if and when the environment changes (Wu, 2010).

#### **1.1.4 Evolution of the Insurance Industry**

Insurance is the equitable transfer of the risk of a loss, from one entity to another in exchange for payment. It is a form of risk management primarily used to hedge against the risk of a contingent, uncertain loss (Hansell, 1996). An insurer, or insurance carrier, is a company selling the insurance; the insured, or policyholder, is the person or entity buying the insurance policy. The amount of money to be charged for a certain amount of insurance coverage is called the premium. Risk management, the practice of appraising and controlling risk, has evolved as a discrete field of study (Vaughan, 2003).

The modern insurance industry is the result of a development process the roots of which lead back as far as to the origins of the idea of insurance in the antiquity. In the legislative bill of the Babylonian king Hammurabi of the year 1750 BC, one can identify specific rules regarding financial arrangements of salesmen protecting them against losses of their caravans due to robberies. In the economy of the Greek empire around the year 200 BC, owners of merchant vessels could receive a loan before set the sails, which they had to return in case the vessels arrived safely in the harbor. 400 years later, the first life insurance was introduced in the Roman Empire. In middle Europe, the first contractual arrangements similar to today's insurance practice can be found in the so-called Kapitulare of the German emperor Charlemagne in the year 779. In this legislative bill, the mutual financial support of craft and trade cooperatives in case of fire accidents is described (Oyuke, 2012).

#### **1.1.5 The Global Perspective of Insurance Industry**

The global insurance industry finally emerged from the combination of financial turmoil and economic uncertainty of the economic meltdown. In Asia-Pacific, rising individual wealth and aging populations are influencing revenue growth. Latin America continued to offer substantial growth potential to insurers. In the United States, Europe and Canada, many insurers have rebuilt their capital positions hence poised for growth. All in all, the industry appears at the threshold of brighter times ahead (IRA, 2014).

As per Swiss Re's latest sigma study (2014), the global insurance industry gained momentum, even though the economic environment improved only marginally. Total direct premiums written were up 3.7% to USD 4,778 billion after having stagnated the previous year. The life sector returned to positive growth, with premiums up 4.3% after a 1.8% decline in 2013, and non-life premium growth accelerated to 2.9% from 2.7%. A notable feature of the renewed momentum across the insurance industry was a significantly stronger performance in the advanced markets.

**Table 1.1: Premium Insurance Density and Penetration**

	Ranking by premium volume		Life premiums		Non-life premiums		Total premiums		Insurance	Insurance
		2014	USD bn	Change* vs 2013	USD bn	Change* vs 2013	2014	vs 2013	density (USD)	penetration
<b>Advanced markets</b>			2233	3.8%	1707	1.8%	3939	2.9%	3666	8.2%
United States	1		528	-2.5%	752	2.6%	1280	0.4%	4017	7.3%
Japan	2		372	3.3%	108	0.8%	480	2.7%	3778	10.8%
United Kingdom	3		235	0.5%	116	1.7%	351	0.9%	4823	10.6%
France	5		173	6.5%	98	1.0%	271	4.5%	3902	9.1%
Germany	6		118	2.3%	136	1.3%	255	1.8%	3054	6.5%
Italy	7		145	22.7%	49	-3.0%	195	15.0%	3078	8.6%
South Korea	8		102	6.3%	58	1.9%	160	4.7%	3163	11.3%
<b>Emerging markets</b>			422	6.9%	417	8.0%	839	7.4%	136	2.7%
Latin America and Caribbean			75	3.3%	113	4.7%	188	4.1%	304	3.1%
Brazil	13		45	5.4%	40	6.5%	85	5.9%	422	3.9%
Mexico	25		13	1.4%	15	-1.4%	27	-0.1%	220	2.1%
Central and Eastern Europe			20	-2.1%	50	-1.2%	70	-1.5%	218	1.9%
Russia	27		3	18.9%	23	-0.3%	26	1.5%	181	1.4%
Emerging Asia			275	9.9%	190	14.6%	466	11.8%	126	3.1%
China	4		177	13.4%	151	17.4%	328	15.2%	235	3.2%
India	15		55	1.0%	15	4.8%	70	1.8%	55	3.3%
Middle East and Central Asia			12	4.2%	37	7.2%	49	6.4%	142	1.6%
United Arab Emirates	42		2	12.4%	7	10.3%	9	10.8%	974	2.2%
Africa			46	1.6%	23	1.8%	69	1.6%	61	2.8%
<b>World</b>			2655	4.3%	2124	2.9%	4778	3.7%	662	6.2%

Source: Swiss Re's sigma study (2014)

### 1.1.6 The Insurance industry in Kenya

There were 46 operating insurance companies as at the end of 2014. 25 companies wrote non-life insurance business only, 13 wrote life insurance business only while 11 were composite (both life and non-life). There were 198 licensed insurance brokers, 29

medical insurance providers (MIPs) and 5,155 insurance agents. Other licensed players included 133 investigators, 108 motor assessors, 25 loss adjusters and 24 insurance surveyors. (AKI, 2014).

**Table 1.2: Insurance Industry Players in Kenya**

No.	Regulated Entity	Number licensed
1	Insurance Companies	46
2	Reinsurance Companies	3
3	Insurance Brokers	198
4	Reinsurance Brokers	4
5	Medical Insurance Providers	29
6	Insurance Investigators	133
7	Motor Assessors	108
8	Insurance Agents	5155
9	Insurance Surveyors	24
10	Loss Adjusters	25
11	Claims Settling Agents	2
12	Risk Managers	8

Source: Insurance Regulatory Authority 2014

The penetration of insurance in Kenya is estimated at 2.92%. Emerging risks such as Micro-insurance, oil and gas and initiatives such as adoption of alternative distribution channels (bancassurance) and use of technology will improve insurance penetration level in Kenya.

In Kenya, insurance companies have been spreading their foothold in the region covering EAC, COMESA and SADC. This has been necessitated by insured's in Kenya with interests in manufacturing, tourism, transport and communication, building and construction across the region to be covered by the same insurer. Insurers have found it necessary to establish offices across East, Central and to a certain extent Southern

African. Many Kenyan insurance companies have also taken advantage of growth opportunities and ease of doing business in Rwanda and lack of local insurance companies in Southern Sudan. Mergers and Acquisitions have also played key role in the expansion (AKI, 2014).

### **1.1.7 Performance Measures in the Insurance Industry**

In analyzing insurance firms, this study measured the performance relative to other firms in the industry. The financial ratios used include return on equity, return on assets, expense to premium ratios, net income ratio, average cost per claim. Non-financial measures will include agent performance, customer's satisfaction, and average time to settle a claim and customer retention (Pearce & Robinson, 2007).

The study also used efficiency analyses in insurance and elsewhere focusing on production and cost efficiency with a focus on revenue and profit. Perhaps the most basic frontier is the production, which is estimated based on the assumption that the firm is minimizing input use conditional on output levels. If data on input prices are available, it is possible to estimate the cost frontier, usually based on the assumption that the firm is minimizing costs conditional on output levels and input prices. The revenue and profit functions allow the firm to do this by maximizing revenues or profits, respectively, contingent only on input and output prices (Brealey, 2009).

Performance measurement systems play a key role in developing strategy, evaluating the achievement of organizational objectives and compensating managers. Inadequacies in financial performance measures have led to innovations ranging from non-financial indicators of intangible assets and intellectual capital to balanced scorecards of integrated financial and non-financial measures. This article discusses the advantages and disadvantages of non-financial performance measures and offers suggestions for implementation (Trigeorgis, 2010).



Similarly, investments in customer satisfaction can improve subsequent economic performance by increasing revenues and loyalty of existing customers, attracting new customers and reducing transaction costs. Non-financial data can provide the missing link between these beneficial activities and financial results by providing forward-looking information on accounting or stock performance (Wamwati, 2008).

## **1.2 Statement of the Problem**

There is need for companies to adopt appropriate strategies to handle the pressures exerted on them by changes in both the internal and external environment (Oliver, 1991). For effectiveness, any strategic response must embrace, the five phases of strategic intelligence and analysis, strategy formulation, implementation and lastly monitoring, review and updating. Strategic Intelligence is all about gaining (or being prepared to gain) a position of advantage over adversaries or best exploiting emerging possibilities. As there is an element of uncertainty about the future, strategy is more about a set of options (Strategic Choices), than a fixed plan. A strategy is a plan of action designed to achieve a specific goal.

Despite the fact that insurance has been practiced for over a thousand years world over, it is still a fact that insurance uptake is still very low, not only in Kenya but the world over. The Insurance industry faced difficult economic environment in 2014. Premiums written in the global insurance industry grew by 1.4% in real terms to USD 4 641 billion in 2013 after a 2.5% increase in 2012, says Swiss Re's latest sigma study. The slowdown was primarily due to weakness in the life sector in the advanced markets.

Global life premiums were up just 0.7% in 2013 to USD 2 608 billion,( down from 2.3% growth in 2012) with weak sales in North America and the advanced Asian markets offsetting a strong performance in Western Europe, Oceania and most emerging markets. In the life sector, notable developments were a return to premium growth in Western Europe, in spite of weak economic growth. Premiums were up 4.0%, having

declined in each of the previous three years. Premium growth also was strong in Oceania (up 9.0%) and in the emerging markets, improving to 6.4% from 5.2%. Growth was solid in Latin American and Africa, and resumed in China and India where regulatory changes had prompted a drop in sales in 2012.

Overall gross premium declined by 0.8% in real terms. Premium growth in the industrialized countries was negative 1.1%. Emerging markets had an average growth of 1.3%, (Swiss Re-sigma 2014). Statistics show that Global life insurance premiums shrank by 2.7% in 2011. Advanced markets contracted by 2.3%, with the sharpest decline observed in Western Europe (9.8%). The US market recorded moderate growth of 2.9%. Global non life insurance premiums rose by 1.9% in 2011 (AKI, 2011).

Insurance penetration is a global problem with developed markets like UK at about 11% and USA at about 8.6% (Swiss Re, Economic Research and Consulting). Insurance performance in Africa has not been spared either. Life insurance premiums increased by a paltry 1.4% to USD 49 billion in 2013. South Africa remains the dominant market, accounting for more than 89.8% of the regional life premium volume. Non life premium rose by 3.3% to USD 22 billion. South Africa accounted for half of the continents premium. The penetration of insurance in Kenya is estimated at 3.4%. The penetration of 3.4% in 2013 is compared to 2.9% in 2014 owing to the rebasing of Kenya's Gross Domestic Product (GDP). Life insurance recorded a penetration ratio of 1.2% while that of non life insurance was 2.3%. The penetration of Insurance among the Kenyan population is also low compared to other countries outside Africa. A good example is Malaysia which has an estimated 41% of the population covered by some form of life insurance in comparison to Kenya that has less than 1% of the population insured. There is therefore need for establishing why the penetration in Kenya remains low and come up with strategies that can be adopted to enhance uptake. This study seeks to close that knowledge gap (AKI, 2013).

Underwriting insurance business in Kenya is characterized by intense competition over established business segments. Very little effort is geared towards innovation in products, service delivery methods and distribution channels. Prospective customers have taken advantage of this competitive environment to dictate contract terms to underwriters consequently pushing down product prices. The result is decreased underwriting performance arising from mismatch between product prices and underwriting costs (IRA, 2014). Several scholars have carried out extensive studies on the Insurance Industry in Kenya. However, these studies have focused on different contexts. For instance, Wanjohi (2002) focused on strategic planning by Insurance companies in Kenya. Lengopito (2004) did a survey on strategic responses to increased competition in the healthcare industry. Wairegi (2004), sought to establish the Strategic responses by Life Insurance Companies in Kenya to changes in the environment.

Ogolla (2005) carried out a study on application of generic strategies by Insurance companies in Kenya. Swalehe (2005) covered strategic issue management in Insurance companies in Kenya, while Kitur (2006) carried out a survey of strategic role of ICT among Insurance Companies in Kenya. Wachira (2008) undertook a study on assessment of attractiveness of the Insurance Industry. Aswani (2010) did a study on the effects of marketing strategies on the performance of insurance companies in Kenya, Magunga (2010) studied the effects of marketing strategies on the performance of insurance companies in Kenya, Charity (2012) carried a study on Competitive Strategies adopted by Insurance Companies in Rwanda, Kiarie (2013). Strategy Implementation and Performance Of Insurance Companies In Kenya and Gitau (2013) studied strategies adopted by Kenyan insurance companies to alleviate low insurance penetration. All these studies have focused on different areas, other than Strategic Intelligence, Strategic Information Systems and Performance of the Insurance Industry in Kenya. A knowledge gap therefore exists and this study sought to bridge this inherent knowledge gap.

## **1.3 Objectives of the Study**

### **1.3.1 General Objectives**

The general objective of the study was to explore the influence of strategic intelligence systems on performance of the insurance industry in Kenya.

### **1.3.2 Specific Objectives**

The specific objectives of this study were to;

1. Determine the influence of Product Value on the performance of the insurance industry in Kenya.
2. Explore the influence of Product awareness on the performance of the insurance industry in Kenya.
3. Find out the influence of Product Satisfaction on the performance of the insurance industry in Kenya.
4. Determine the influence of Service Quality on the performance of the insurance industry in Kenya.
5. Examine the influence of Financial Prudence on the performance of the insurance industry in Kenya.
6. Establish the moderating effect of Strategic Information Systems on the relationship between Strategic Intelligence on the performance of the insurance industry in Kenya.

## **1.4 Research Hypotheses**

H<sub>01</sub>: Product value does not significantly influence the performance of the insurance industry in Kenya.

H<sub>02</sub>: Product awareness does not significantly influence the performance of the insurance industry in Kenya.

H<sub>03</sub>: Product satisfaction does not significantly influence the performance of the insurance industry in Kenya.

H<sub>04</sub>: Service quality does not significantly influence the performance of the insurance industry in Kenya.

H<sub>05</sub>: Financial prudence does not significantly influence the performance of the insurance industry in Kenya.

H<sub>06</sub>: Strategic Information Systems has no significant moderating influence on the relationship between strategic intelligence and performance of the insurance industry in Kenya.

### **1.5 Justification of the study**

Previous studies on strategic intelligence have been done on other industries other-than insurance industry despite the fact that the insurance sector in Kenya is facing many challenges posed by the dynamic competitive environment. This study therefore seeks to fill the existing knowledge gap by carrying out an investigation of competitive intelligence practices for greater profitability in the insurance industry.

This study will be of use to the Insurance Industry to remain competitive and profitable amidst the current stiff competition witnessed in the banking sector. Further the suggestions from the study would lead to new formulation and implementation of policies by IRA that would enhance more effective financial management practices in insurance industry and other financial sectors.

The policy makers will be able to know how well to incorporate the sector and how effectively to ensure its full participation. To the scholars in insurance industry and overall financial sector, the study will provide a source of reference, literature review

and basis upon which further studies can be developed. Finally understanding the extent in which Strategic Intelligence is utilized in the insurance industry in Kenya, the study will identify the benefits and/or challenges that are experienced by implementing and using Strategic Intelligence as an input to the Strategic Management process and what value Strategic Intelligence adds in the decision making process.

### **1.6 Scope of the study**

This study sought to establish the effect of strategic intelligence, strategic information systems and organizational performance of the insurance industry in Kenya. Specifically, the study looked at how product value, awareness, satisfaction, service quality, financial prudence and strategic information systems, influence organizational performance of insurance companies in Kenya. The study was conducted in forty six (46) licensed direct insurance companies in Kenya. The study focused on senior management and middle management employees in the insurance firms. The study was conducted within three years where data was collected and interpreted within 6 months.

### **1.7 Limitations of the Study**

The nature of the study calls for confidential information related to the insurance companies. Some respondents felt intruded when requested to complete a questionnaire which requires them to disclose such information. In order to mitigate this short coming the respondents were assured of confidentiality and ethical handling of the information.

Ideally, all insurance players including reinsurance, insurance broking firms and other service providers in the Kenya should be covered under the study but this were practically impossible. To mitigate this, the study concentrated on the primary underwriters who directly represent the insurance industry as a whole in all business aspects.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The purpose of this chapter is to highlight the work that other scholars and researchers have done concerning strategic intelligence, strategic information systems and performance management. An empirical review has been undertaken leading to a conceptual framework which is proposed to guide the study.

#### **2.2 Theoretical Foundation**

This section examines the various theories that will be used to inform the study on the strategic intelligence, strategic information systems and performance of the insurance in Kenya. The theories to be reviewed include knowledge management theory, resource based view theory, innovation theory, product development theory, value chain theory and customer satisfaction theory.

##### **2.2.1 Knowledge Management Theory**

Although the term knowledge management formally entered popular usage in the late 1980s (conferences in KM began appearing, books on KM were published, and the term began to be seen in business journals), philosophers, teachers, and writers have been making use of many of the same techniques for decades. Denning (2002), related how from “time immemorial, the elder, the traditional healer, and the midwife in the village have been the living repositories of distilled experience in the life of the community” ([http://www.stevedenning.com/knowledge\\_management.html](http://www.stevedenning.com/knowledge_management.html)). Some form of narrative repository has been around for a long time, and people have found a variety of ways to share knowledge in order to build on earlier experience, eliminate costly redundancies, and avoid making at least the same mistakes again. The primary vehicle for knowledge

transfer was people themselves and in fact much of our cultural legacy stems from the migration of different peoples across continents.

Knowledge management represents a deliberate and systematic approach to ensure the full utilization of the organization's knowledge base, coupled with the potential of individual skills, competencies, thoughts, innovations, and ideas to create a more efficient and effective organization. Increasingly, companies will differentiate themselves on the basis of what they know. A relevant variation on Sidney Winter's definition of a business firm as an organization that knows how to do things would define a business firm that thrives over the next decade as an organization that knows how to do new things well and quickly. Davenport & Prusak (1998) Knowledge management was initially defined as the process of applying a systematic approach to the capture, structuring, management, and dissemination of knowledge throughout an organization to work faster, reuse best practices, and reduce costly rework from project to project (Ruggles & Holtshouse, 1999).

Drucker was the first to coin the term knowledge worker in the early 1960s (Drucker, 1964). Senge (1990) focused on the learning organization as one that can learn from past experiences stored in corporate memory systems. Dorothy & Barton-Leonard (1995) documented the case of Chapparral Steel as a knowledge management success story. Nonaka and Takeuchi (1995) studied how knowledge is produced, used, and diffused within organizations and how this contributes to the diffusion of innovation. The growing importance of organizational knowledge as a competitive asset was recognized by a number of people who saw the value in being able to measure intellectual assets (Kaplan & Norton, 2003; APQC, 1996; Edvinsson & Malone, 1997). A cross-industry benchmarking study was led by APQC's president Carla O' Dell and completed in 1996. It focused on the following KM needs Knowledge management as a business strategy; Transfer of knowledge and best practices; Customer-focused knowledge; Personal responsibility for knowledge; Intellectual asset management; and Innovation and knowledge creation (APQC, 1996).



This theory supports the study of the variables; Product Value and Product Awareness in the sense that once the kind of products is known, or even their value, then the insurance companies will develop products which resonates with the needs of the consumers.

### **2.2.2 Innovation Theory**

Etymologically to innovate means to renew, to restore and the word stems from Latin word *innovate*. It essentially means the introduction of something new or different. Innovations are usually classified into product and process innovations (Pain, 2011). The product innovation is the introduction of a new or significantly improved product or service that improves the range and quality of those currently offered. The process innovation is the introduction of a new or significantly improved process of production or delivery of goods and services. In addition to product and process innovations, classifications can also encompass organisational innovations as well as marketing innovations (Pain, 2011).

According to Oslo (2005) “an organizational innovation is the implementation of a new organizational method in the firm’s business practices, workplace organization or external relations” Also, a marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing. Furthermore, innovations can be classified by the degree of novelty.

In financial services, especially in the insurance industry, innovations are more often incremental in their nature (Greenhalgh & Rogers, 2010). In this regard, depending on the degree of radicalism, innovations can be divided into incremental, evolutionary and transformational. Innovations have had a paramount importance throughout the human history. Innovations such as fire, wheel, agriculture, pottery, irrigation systems, use of metals, writing and so on, actually directed the history. Insurance companies and

investment funds facilitate innovations in other industries. By accumulating capital and providing risk diversification, on one hand, and by fostering technological progress, on the other, financial innovations facilitate economic growth and improve social welfare (Chou & Chin, 2004).

Historically, insurance companies have been conservative regarding innovations, especially those of radical character. Although innovations in insurance as well as in other industries present the foundation of success, there are many studies that indicate to conservatively. Pearson (1997), on the basis of the analysis of insurance industry in Great Britain during the period between 1700 and 1914, points out that innovations in insurance are an important ingredient of success but have mainly counter-cyclical character and are relatively-dynamic. Garth (2011) indicates that insurance companies were innovative during the sixties and seventies of the twentieth century while after that they became less innovative. Innovation is recognized to be especially important for market-oriented insurers (Lado & Olivares, 2001).

Despite the traditional conservative approach to changes in products, processes, marketing and organisation, the pace of innovation activities in insurance industry has been identified recently. New regulations such as Solvency II in Europe, changing competitive environment not only among insurance companies but also with other industries such as an investment or pension fund industry, the changing nature of existing and emergence of new risks, such as environmental liability risks, an increasing probability and intensity of loss events because of external influences such as terrorism or climate changes, the need for constant influence on public confidence in insurance, the change in customer preferences, economy, politics and technology are all forcing insurance companies to innovate. The aforementioned and similar changes are happening all the time and are pushing insurers to constantly respond to them by innovations (Chang, 2011).

Recent innovations in the global insurance industry are in no particular order. Insurance is a type of financial service that can potentially help avoid high costs of other risk management approaches. Also, insurance can provide preservation of financial position in the event of a loss but also protect from poverty. However, insurance is usually seen as a luxury by poor or at least there is their distrusting the security of coverage as it cannot be felt, smelt or touched. As a result of expressed needs, micro insurance has been developed as a model for organisation of insurance activities for the poor. Micro insurance provides financial indemnification in the case of a loss event, provides avoidance of other cost-ineffective mechanisms of loss protection, which as a final result has reduced poverty (Njegomir, 2011).

This theory also lays a foundation for study of product value since by it the insurance companies are able to realign their products to be in tandem with the tastes and preferences of the consumer.

### **2.2.3 Product Innovation and Development Theory**

Innovation is a new way of doing something or "new stuff that is made useful" (McKeown, 2008). It may refer to incremental and emergent or radical and revolutionary changes in thinking, products, processes, or organizations. Following Schumpeter (1934), contributors to the scholarly literature on innovation typically distinguish between invention, an idea made manifest, and innovation, ideas applied successfully in practice. In many fields, something new must be substantially different to be innovative, not an insignificant change, e.g., in the arts, economics, business and government policy. In economics the change must increase value, customer value, or producer value.

The goal of innovation is positive change, to make someone or something better. Innovation leading to increased productivity is the fundamental source of increasing wealth in an economy. Innovation is an important topic in the study of economics,

business, design, technology, sociology, and engineering. Colloquially, the word "innovation" is often synonymous with the output of the process. However, economists tend to focus on the process itself, from the origination of an idea to its transformation into something useful, to its implementation; and on the system within which the process of innovation unfolds. Since innovation is also considered a major driver of the economy, especially when it leads to increasing productivity, the factors that lead to innovation are also considered to be critical to policy makers (Black, 2001).

In particular, followers of innovation economics stress using public policy to spur innovation and growth. Although personal characteristics have been identified as significant predictors of consumers' adoption of an innovation several researchers have shown that it is the perceived attributes of the innovation itself rather than the characteristics of the innovators that are stronger predictors of the adoption decision (Black, 2001; Ekin & Polatoglu, 2001). Clients in the insurance industry demand a minimum relative advantage in order to switch channels. This means that new innovative services should be perceived to be better than their predecessors. According to Mills and Morris (1986), insurance must continually invent new products and services in light of changes brought by the Internet and also make existing products more suitable for online delivery. Similarly, Mols (1998) identified a number of critical success factors of Internet service in the context of the Australian insurance industry.

This theory was considered in support of the product satisfaction because once the companies are aware of the requirements of consumers, they are able to tailor make their products to be exactly as expected.

#### **2.2.4 Value Chain Theory**

The value chain is a tool that enables systematic examination of all the activities a firm performs in the whole process of creating and delivering goods or services to its customers. Capon (2008) defines value chain as a framework for thinking about resources and systems that currently provide competitive advantage or have the potential of creating competitive advantage. Technically, the idea of value chain is based on the process view of organizations. The concept of seeing a firm as a system, made up of subsystems each with inputs, transformation processes and outputs. These three main processes define the process of value creation. Porter (1998) asserts that the value creation process is a series of several distinct activities and identifies these distinct activities to include designing, producing, marketing, delivering and product or service support after sale. These activities have both cost and value implications.

According to Porter (1998), value chain disaggregates a firm into its strategically relevant activities in order to understand the behavior of costs and the existing and potential sources of differentiation. Each of these activities can contribute to a firm's relative cost position and/or create a basis of differentiation. A firm therefore gains competitive advantage by performing the value chain activities at a lower cost than its competitors or by performing the activities more uniquely, relative to competition. The value chain consists of value activities and the margin. Porter (1985) explains that whilst the value activities are the distinct building blocks through which a firm creates a product valuable to its buyers, the margin is the difference between the total value and total cost implication of performing the value activities.

The goal of the activities is to offer the customer a level of value that exceeds the cost of the activities, thereby resulting in a profit margin. Influential work by Michael Porter suggests that these activities can be divided into two broad categories; Primary and Support activities. Primary activities would be those that are directly concerned with creating and delivering a product or service. Porter (1998) identifies five generic primary

activities. Inbound logistics, operations, outbound logistics, marketing & sales and service. Support activities are in most cases not directly involved in production, but increase effectiveness.

An industry value chain or value system (Porter, 1985), links a firm's value chain with the value chains of upstream suppliers and downstream buyers. The development of competitive advantages depends not only on the firm-level value chain, but also on the industry value chain of which the firm is a part. The Insurance Industry value chain is made up of six distinct activities. The first activity is the supplying of capital needed to take on insurance risks. Capital represents the scarce resource or raw material in the Insurance Industry. Capital is the commodity that limits the amount of insurance that a company can sell. Capital is acquired through both traditional methods and insurance markets. Traditional methods include equity funding, options, bonds etc. Insurance markets refer to capital that is accessed through reinsurance companies (Thompson, 2005).

The second activity is supplying reinsurance. Reinsurance is an agreement between insurance companies under which one accepts part of the risk or loss of the other. Most primary insurance companies insure only part of the risk of any given policy. The amount varies between insurance carriers. The remainder of the insurance risk is covered by the reinsurance entity. The less primary risk that the company insures, the more premium it has to pay to the insurer. Reinsurance companies therefore are suppliers of capital or raw materials for primary insurer. The third activity is reinsurance brokering. The reinsurance broker acts as an intermediary between primary insurers and reinsurers representing the primary insurer. Reinsurance brokers structure, market and negotiate insurance programs for their clients and match their clients' needs with suitable reinsurance carriers. The fourth activity is insuring risks. This is the role of the primary insurer. The primary insurer is the insurance company that underwrites the risk and whose name is in the insurance contract. Primary insurance companies are highly

regulated companies that traditionally assess and accept insurance risks, issue insurance contracts or policies and adjust payout claims (Mark, 2004).

The fifth activity is insurance brokering. Insurance brokers play essentially three roles in the insurance market. First, insurance brokers reduce the resources or costs insured by insurance buyers when searching for insurers and those incurred by insurers searching for insurance buyers. Second, insurance buyers and sellers have asymmetric information on the product being sold, making it difficult for them to agree on the price and terms of the insurance policy. Insurance brokers solicit and provide information on buyers and sellers and make this information more easily understood to both parties. Since insurance brokers rely on long-term relationships, they have strong incentives to ensure that no party takes advantage of the other. Third, insurance brokers are able to obtain better terms for their clients and are able to reduce the problem of asymmetric bargaining power between the buyers and sellers. The sixth activity is insurance buying. This activity represents the end consumer in the insurance industry value chain. Insurance buyers of insurance products include individuals, small businesses, large corporation and professional associations of groups (Jason, 2005). This theory was reviewed in support of all the variables of this study since strategic intelligence is meant to increase the value of performance of the insurance industry.

### **2.2.5 Customer Satisfaction Theory**

Customer satisfaction (CS) is a term that has received considerable attention and interest among scholars and practitioners perhaps because of its importance as a key element of business strategy, and goal for all business activities especially in today's competitive market (Lovelock & Wirtz 2007). The concept has been variously defined by many authors. Satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's performance (outcome) in relation to his or her expectation'' (Kotler & Keller, 2006). Satisfaction is a "psychological concept that involves the feeling of well-being and pleasure that results from obtaining what one hopes for and

expects from an appealing product and/or service” (WTO, 1985). CS is as an attitude-like judgment following a purchase act or a series of consumer product interactions (Lovelock & Wirtz, 2007). CS is a consumer’s post-purchase evaluation and affective response to the overall product or service experience (Oliver, 1992). Satisfaction is merely the result of things not going wrong; satisfying the needs and desires of consumers. (Besterfield, 1994); CS is an experience based assessment made by the customer of how far his own expectations about the individual characteristics or the overall functionality of the services obtained from the provider have been fulfilled (Bruhn, 2003). According to Gyasi and Azumah (2009) satisfaction is the process of customer overall subjective evaluation of the product/service quality against his/her expectation or desires over a time period.

Many factors drive customer satisfaction in Insurance Industry that need to be examined in order to reliably measure it. Customer satisfaction could be influenced by service quality and the customer service (Kotler & Keller, 2006). Recent empirical studies have shown that customer satisfaction is not only driven by cognitive dimensions of customer perceptions of service quality but also by affective dimensions which have positive impact on post-purchase behaviour like repeated purchase, customers loyalty, switching intention, and likelihood to recommend (Erevelles,1998).

Customer Satisfaction in insurance means the use of a Policy product purchased for a cost, to the ultimate satisfaction of the buyer, when a claim is paid. The satisfaction is not fully achieved only when a product so purchased gives its full use, but it also stipulates that the product bought by the buyer will give him the expected fruit for example peace of mind during the product cycle when it is in use by the customer. The present day customer buys his ultimate satisfaction, not the product (Duodu & Amankwah, 2011). Today’s customer is an active seeker of Value-Evidence through certificate, policy, prompt service and full value. He dwells more on promise of satisfaction made by agents, brokers, and company advertisements, assertions by the company, industry, regulator and the legislature. The judgment of customer service is



mainly on the basis of ‘what was asserted or implied’ about the policy product (Boateng, 2010). Operational staff delivers this assertion done by marketing personnel at the beginning by issuing documents promptly, their behavior at the time the consumer prefers a claim or seeks assurance of his service in any other manner. Therefore, any lapse on the part of operating office turns proactive rather than preventive, and it affects the sustainability of relationship between the insurer and the insured customer (Kotler & Keller, 2006).

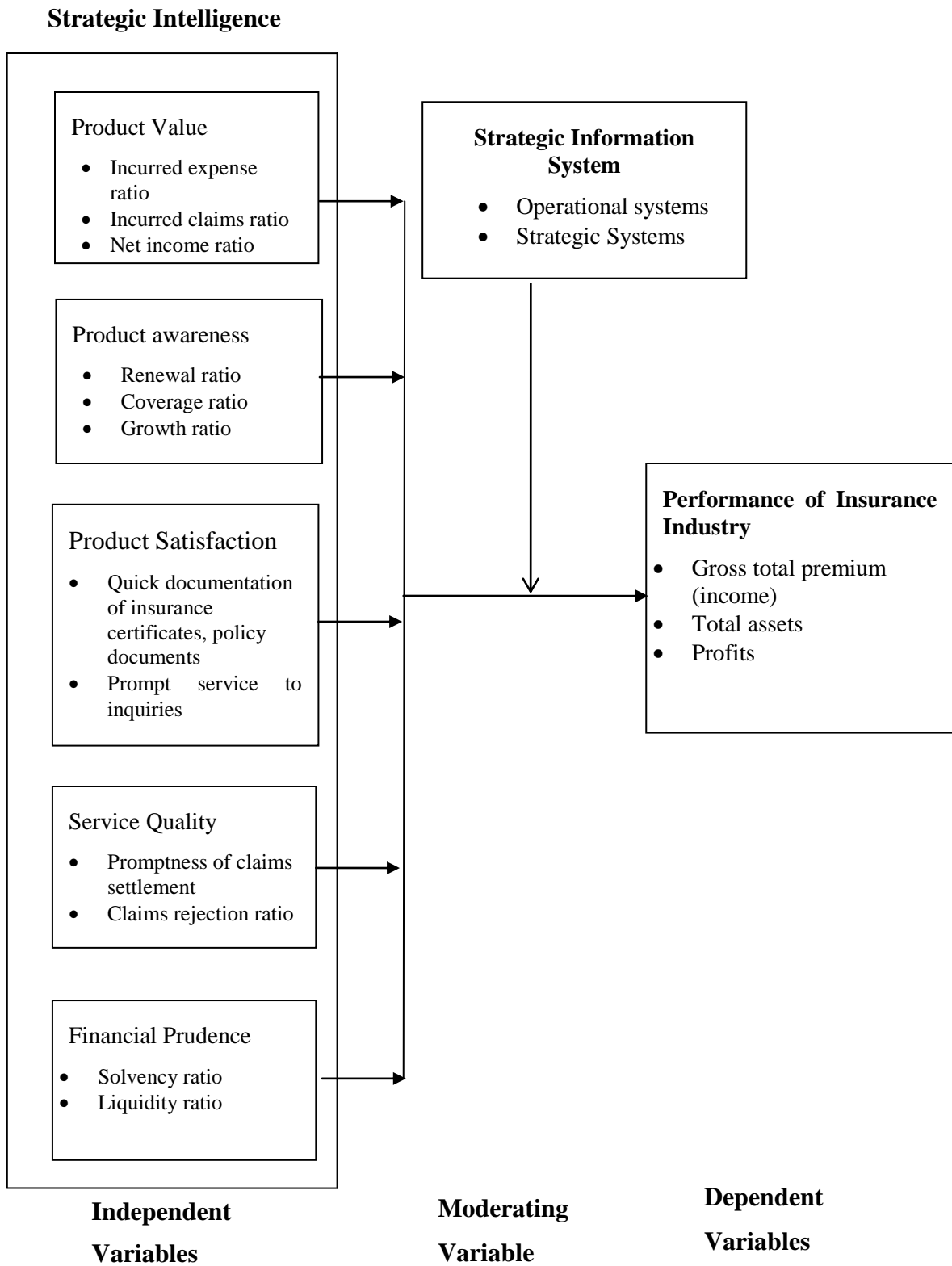
Customer Satisfaction theory supports service quality variable. For the Insurance industry, the ultimate satisfaction of the customer is when claims are paid promptly. In view of this, the customer satisfaction theory was looked at as setting a foundation for the current study which seeks to check how strategic intelligence influences performance of the insurance industry

### **2.3 Conceptual Framework**

A conceptual framework of a study comprises the system of concepts, assumptions, expectations, beliefs, and theories that support and inform a research and is a key part of a researcher’s design. A conceptual framework is defined as a visual or written product, that explains, either graphically or in narrative form, the main things to be studied the key factors, concepts, or variables and the presumed relationships among them Robson (2011). A conceptual framework is structured from a set of broad ideas and theories that help a researcher to properly identify the problem they are looking at, frame their questions and find suitable literature. Most researchers use a conceptual framework to clarify the research questions and aims (Smyth, 2004).

The conceptual framework developed for this research was intended to assist the researcher to develop awareness and understanding of the influence of strategic intelligence on the organizational performance of the insurance industry in Kenya. The framework has been adopted for its potential usefulness as a tool to assist the researcher

to make meaning of subsequent findings. The conceptual framework was therefore based on five independent variables, and one moderating variable as shown diagrammatically in Figure 2.1 that illustrates the conceptualized relationship between the explanatory and dependent variables. The conceptual framework shows how variables interact in a diagram format.



**Figure 2.1: Conceptual Framework**

### **2.3.1 Product Value**

The value performance indicators focus on how much the insured, on average, receive for their money. The higher incurred claims ratio means that on average, more financial benefits are being paid back to the insured in relation to premium cost (increased value). On the other hand, high net income and high expenses have the opposite effect of reducing value since less money is available for benefits. Changes in product value drive the awareness and satisfaction indicators such as in the case of member-based schemes where members increase or decrease their participation in reaction to the changes in value (Periasamy, 2005).

Clearly, the three indicators address viability (Incurred Expense Ratio, the efficiency of the delivery of insurance; Incurred Claims Ratio, the value of insurance to the insured and; Net Income Ratio, the viability of insurance product or programme). Without a positive net income the programme will not achieve viability and will become reliant on subsidies to survive. A positive net income, on the other hand, cannot be realized without a proper combination of expenses and benefits (Akotey, 2013).

### **2.3.2 Product awareness**

The awareness and satisfaction performance indicators focus on how readily the target market enrolls in the programme and retains coverage. Where enrolment is voluntary, performance in this category will be good only if the market is aware of the programme, understands the product well is satisfied with the price-benefits combination, and can afford the premium (contribution) payment schedule (Coviello, 2000).

Where coverage is mandatory (in the sense that it is conditional to access credit or is towards some other objective) these factors are still very important determinants but their effect may in some cases be diminished (Camp, 2008). The three indicators are crucial for viability (Renewal Ratio; Coverage Ratio; and Growth Ratio to determine the satisfaction of the insured, whether the product meets the true need, the level of

insurance awareness and competitiveness in the product vis-à-vis other products or household risk management alternatives). Without sufficiently high participation, and without a low turnover, the programme will usually suffer from adverse selection leading to a higher claims ratio, increased expense ratio, reduced net income, and it may even experience bankruptcy if the problems are not addressed (Gosalia, 2008).

### **2.3.3 Product Satisfaction**

Customer Satisfaction in insurance means the use of a Policy product purchased for a cost, to the ultimate satisfaction of the buyer, when a claim is paid. The satisfaction is not fully achieved only when a product so purchased gives its full use, but it also stipulates that the product bought by the buyer will give him the expected fruit, peace of mind during the product cycle when it is in use by the customer (Karanja, 2008).

The present day customer buys his ultimate satisfaction, not the product. Today's customer is an active seeker of Value-Evidence (Certificate, Policy, Prompt Service, Full value). The customer dwells more on promise of satisfaction made by agents, brokers, company advertisements, assertions by Company, Industry/Regulator and Legislature. The judgment of customer service is mainly on the basis of 'what was asserted or implied' about the policy product (Wanjiru, 2013). The satisfaction of Insured customer requires building relationship of confidence and trust between the buyer and seller. It is essential to build trust so that the intentions of both the parties are clearly understood by each other (Daniell, 2006). For instance if an insured has paid premium against a proposal, mere issue of receipt without any narration (cover note/ Certificate of insurance) as to the specifications of the product intended to be sold, would not render satisfaction, prompt issue of the policy document and quick and adequate settlement of claim, would only create confidence in buyer about the product bought by him (Naren, 2009).

### **2.3.4 Service Quality**

The service quality indicators directly quantify two of the most important servicing aspects of insurance programmes. Both have a direct effect on the satisfaction level of the participants which in turn impacts the three indicators mentioned in the awareness and satisfaction category (El-Ansary, 2006). The claims rejection ratio also reflects the degree of understanding and usefulness of the product. The promptness indicator is an analytical breakdown of service times taken to report and process a set of claims. The indicator is calculated for a set of claims that have been fully processed, which means paid and rejected. Time is measured from the date that the covered event happens to the date that benefit(s) were received by or denied to the clients. Note that when a claim benefit is denied, it is still necessary to communicate and inform the claimant (Bakos, 2009).

Claims rejection ratio for a given period or for an unbiased sample, the claims rejection ratio is the proportion of claims that has been disqualified for benefit payment (rejected), for whatever reason. A 10 percent claims rejection ratio means that for every 100 claims reported, only 90 result in a benefit payment while the other 10 claims are denied.

### **2.3.5 Financial prudence**

The financial prudence indicators are concerned with the financial strength and liquidity of the insurance programme. Often, these are not tracked at product level but rather at the level of the organisation that bears the insurance risk. Larger companies may, however, allocate specific assets to cover reserves and expenses for each product and to maintain a good asset-liability match; doing this enables them to track solvency and liquidity by product. These companies may, however, have some additional assets to fall back on if solvency or liquidity of the product were threatened (Bakos, 2009). Liquidity and solvency do affect the other performance areas of an insurance programme, for example, excessive liquidity reduces investment income which in turn lowers overall net

income. Too little liquidity on the other hand may cause a delay in claims payment (Akotey, 2013).

The solvency ratio is defined as the ratio of admitted assets to liabilities. A programme (or a risk-bearing organisation) with 130 percent solvency ratio owns 130 in admitted assets for every 100 of its liabilities (Gupta, 2007). The liquidity ratio as an indicator measures the amount of available cash to meet short-term obligations. Here, short-term liabilities mean projected payables within the next three months (McKeown, 2008). To evaluate it, tally the available cash and short-term investments that can be immediately converted to cash (government securities, commercial paper, money market funds). Second, project expenses, claims, surrender payouts and other payables for the next three months; this is the denominator of the ratio (Ghimire, 2013).

### **2.3.6 Strategic Information System**

Neumann (2004) defined a Strategic Information System, by focusing on the use of the system, which is to support the competitive strategy of a company in its industry and its plan for gaining and maintaining competitive advantage, or reducing its competitive disadvantage relative to its rivals while Ciborra (2006) identified Strategic Information Systems as those that generate competitive advantage and that essentially support the business against competition and in the process of planning and implementing strategy. Laudon and Laudon (2006) define Strategic Information Systems with a broader view as computer systems at any level of the organisation that change goals, operations, products, services or environmental relationships to help the organisation gain a competitive advantage, while Oz and Jones (2008) believe that Strategic Information Systems are created to assist organisations in seizing opportunities and define Strategic Information Systems as any information system that gives its owner a competitive advantage.

Strategic Information Systems are systems that are built to support or shape an organisations competitive strategy by solving problems or seizing opportunities. The systems are characterized by their ability to change significantly the manner in which business is conducted, to give the organisation a strategic advantage by enabling the creation and appropriation of value. The systems cannot be classified by organisational structure or functional area, and can include any information system that could potentially change the goals, processes, products, or environmental relationships to assist the organisation in gaining a competitive advantage or reducing a competitive disadvantage (Oz & Jones, 2008; Piccoli, 2008; Turban, 2007).

Insurance Companies have a desire for environmental information. The generation of data is not the problem, but rather the focus on how to determine what information is relevant and actionable. Certain strategic planning tools can provide a framework for ascertaining what information is needed and how to utilize it if obtained. A simple framework for specifying needs is used to identify the organisations: areas of influence product/market segments; the immediate zone which represents areas of competitive activity which are close to, but not directly competitive to the organisations current operations; and areas of interest which represent potential opportunities or threats in the longer term (Piccoli, 2008).

Rajan (2007) considers insurance services to be information intensive, showing a high degree of automation, particularly in underwriting, claims and accounts processing. In fact, the industry relies on Information Technology to handle the routine business of administering insurance policies and would not be able to conduct business without it. The strategic use of Information Technology helps to introduce direct marketing and direct underwriting of new channels of distribution which would not have been possible without Information Technology, and today the question is not whether Information Technology is used, but how well it is used.



### **2.3.7 Insurance Industry Performance**

The insurance industry is competitive and top performers excel at managing expenses and the efficiencies of their operations. The challenge is to know where to focus within the operation to achieve optimum performance (Marwa, 2007). Operational benchmarking is a proven tool used by organizations to help define a practicable strategy for moving forward. The benchmarking process compares the internal operations of a company to the operations of other similar companies. It gives a clear picture of expense improvement opportunities and areas to increase investment. The primary benefits of operational benchmarking include expenses reduction; more effective management; optimizing resource allocation; precision focus on top priorities; balancing the pay for performance equation; understanding the economics of different geographies and product mixes; and supporting risk management, regulatory pressures (Osero, 2009).

Insurance company executives are searching for solutions to streamline processes and deliver improved performance to support profitable growth strategies. Four key strategies are finding favor with forward-thinking companies: focus on operational efficiency and expense control across the value chain; driving for leverage across silos; scale to capture increased demand for select products and support diversified geographic footprint; expand distribution channels while maintaining excellence in customer service; and remove paper and automate case management support to reduce cost and settlement timeframes within the claims life cycle (Mark, 2009).

## **2.4 Empirical Review**

### **2.4.1 Strategic intelligence**

Strategic intelligence consists of the aggregation of the various types of intelligentsia, which creates a synergy between business intelligence, competitive intelligence, and knowledge management to provide value-added information and knowledge toward making organizational strategic decisions. Strategic intelligence signifies the creation

and transformation of information or knowledge that can be used in high-level decision making. The emphasis is on how best to position the organization to deal with future challenges and opportunities to maximise the organization's success Liebowitz (2006). Xu and Kaye (2009) define strategic intelligence as “strategically significant information [provided] to senior managers that is scanned, analyzed, digested, and is meaningful that could affect senior managers' beliefs, commitments, and actions.”

A research was conducted by Becker (2001) with the title of “Corporate foresight in Europe” and the purpose is to make Europe the most competitive knowledge economy in the world, the EU-Commission was interested in getting a first overview of the current uses, practices and impacts of foresight in the private sector. The major findings were that nearly all companies described their competitive environment as highly dynamic, with a continuous pressure to engage in activities, and most corporate foresight activities are grounded in two motives either they are a consequence of a companies’ business operation which inherently demand such a long-term orientation (as in industries with long product cycles), or they are undertaken as a proactive step to better cope with uncertainties in the business environment in general.

Later, Andreas (2008) conducted a research with title of “Competitive intelligence in Austria”, and the purpose was to address the gap in existing literature through an empirical research of the competitive intelligence in Austria, and this done by developing a definition of CI, conducting explorative research on CI carried in 15 Austrian companies. The research found that there is a gap in the existing literatures that this research wants to close, namely the topic of CI value measurement.

In the same light, Becker (2009) conducted a research with the title of “Corporate foresight in Europe” and the purpose is to make Europe the most competitive knowledge economy in the world, the EU-Commission was interested in getting a first overview of the current uses, practices and impacts of foresight in the private sector. The major findings were that nearly all companies described their competitive environment as

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Another research by Jacques (2010) conducted a research with the title of “Failure of foresight: had the Cold War more than one origin?”, and the purpose is to recall, with specific developments in international relations, how the major powers failed to avoid prolonged political conflict that teetered for a half-century on the brink of war. Evocation of developments tending to confirm reciprocal hostility instead of cooperation between partners in international enterprise. The findings of this research that Foresight and determination, often translatable into expression of trust, may ensure the success of an undertaking. The Cold War, with its political as well as psychological origins, was not such a case.

In a similar study, Seitovirta (2011) conducted a research with the title of “The Role of Strategic Intelligence Services in Corporate Decision Making”, and the purpose was to describe the role of strategic intelligence (SI) in corporate decision making. He aimed to find out how the case firm’s top management makes decisions in their work, to map out the current role of strategic intelligence activities in decision making, and to find suggestions on how SI could assist more in the decision making process. The research was conducted as a qualitative single case study. The case organization is a global, Finnish-based supplier of technology and services for various heavy industries. Thematic interviews were used as the main method for collecting data. The research revealed that Strategic Intelligence (SI) helps to form a big picture of the business environment and to benchmark the firm’s operations. It is also a source of forward-leaning information. However, decision makers also need firm internal information and tacit external information in addition to the public domain information that SI currently provides. The SI function could be improved through increasing the information flows

within the SI network and conducting the analysis in cooperation with experts and decision makers. It was found that SI should interact more with decision makers.

In a study by René (2011), studying strategic intelligence as a strategic management tool in the long-term insurance industry in South Africa, explored the extent to which strategic intelligence is utilized within the South African long-term insurance industry and whether it could be used to identify opportunities or threats within the global environment to remain competitive, create greater innovation, and corporate advantage. The findings of this research showed that there are marked differences in the conformity and usage of strategic intelligence and its components between the organizations surveyed, with a measurable difference between large and small organizations, however, it is generally viewed that the use of a strategic intelligence framework could greatly enhance decision making.

In another study by Kruger (2011), Strategic Intelligence as a Strategic Management tool in the long-term Insurance Industry in South Africa was investigated. It reviewed the understanding and implementation of Strategic Intelligence systems and processes in the South African Long-Term Insurance Industry, in order to identify problems experienced and advantages incurred by management through the implementation and use of Strategic Intelligence as an input to the Strategic Management process. The study further set out to determine the value of Strategic Intelligence in the decision-making process. Based upon these results, it seems that respondents believe that Strategic Intelligence, as a collective, provide better information input to decision makers. While belief is important, reality proved that the majority of respondents did not have a Long-Term Strategic Intelligence plan, and that Strategic Intelligence is not used at all levels of decision-making but that a growing proportion of Managers felt its importance and thus started to use Strategic Intelligence in their strategic planning and decision-making.

Another scholar Khan (2012) conducted a research with the title of “Business intelligence: an integrated approach” and the purpose to present a frame work for building BI system, that combine operational and historical data with analytical tools to present valuable and competitive information to business planners and decision makers. The objective of Business intelligence (BI) is to improve the timeliness and quality of information, and enable managers to be able to better understand the position of their firm as in comparison to competitors. He found that business intelligence applications and technologies that can help companies to analyze changing trends in market share; changes in customer behavior and spending patterns; customers' preferences; firm capabilities; and market conditions. Business intelligence can be used to help analysts and managers determine which adjustments are most likely to respond to changing trends.

Riccardo (2012) conducted an article with the title of “Strategic foresight and environmental uncertainty: a research agenda”, and the purpose is to promote further systematic inquiry into the field of strategic foresight. It carefully aims to re-examine the notion of environmental uncertainty, the main theoretical approaches advanced by literature on strategy to cope with uncertainty, and foresight activities in corporate organizations. This article is theoretical in nature. However, its insights are significantly based on empirical analysis: the author has been involved in the past ten years in in-depth investigation of foresight practices in several international firms of different industries.

Several important issues and research questions on strategic foresight have remained largely unresolved from both an academic and managerial perspective. Calof (2012) conducted an article with the title of “Foresight impacts from around the world: a special issue” and the purpose is to propose a framework for foresight impacts on policy and decision making. The need to identify direct impacts, measure them and identify the

factors that lead to impact is the primary objective of the special issue and, as outlined in the article, represents a critical addition to the foresight field.

On the basis of case studies, experience, and theoretical-evaluative frameworks this issue seeks to offer suggestions regarding the factors that may help policy makers, academics, consultants, and others involved in foresight produce impactful results. The methodology deployed for this article is both empirical and meta analysis. This introductory article is based on the special issue articles as well as the authors' extensive practical experiences in foresight. The findings of this article are that foresight does impact policy. Case studies and experiences in Europe, North America, Africa and Asia identified in the special issue provide support for this article (Khan, 2012).

#### **2.4.2 Strategic Information Systems and Industry Performance**

Business trends in the industries of the 21st century have emerged around customer relationships, global communications, knowledge management, outsourcing and social networking based on the Information Systems/ Information Technology systems' innovation (Grant, 2010). The key goal of all industries is to attain sustainable performance and competitive advantage. Some dominant drivers for industries changes comprise globalization (Rajapaksha & Singh, 2009), virtualization (Rainey, 2010) innovation (Lutchman, 2012) and collaboration (Rainey, 2010). These drivers make industries more flexible, opportunistic and dynamic (Lutchman, 2012; Rainey (2010). The term 'dynamic' has been defined as the capacity to renew resource positions to attain harmonization with the changing environmental conditions (Pettus, 2001).

It is important for industries to create effective strategies for delivering sustainable performance and for achieving better results. Thus, industries frameworks need to be well harmonized with business and Information Technology planning as well as industries structure by undertaking of SIS in order to successfully operate in this current environment (Kemp, 2013; Lutchman, 2012). Industries need to have a very long-term

strategic perspective for their industrial processes and structures based on enhanced communication and coordination, and improved decision-making because strategy should not be isolated but be consistent with the dynamic industries environments (Grant, 2010). Thus, to undertake SISP successfully, industries need to consider and take multiple planning views at addressing interactions of different cultures as well as political, structural and technological features and issues for improved industries performance and competitive advantage from the capabilities achieved from SIS (Bechor, 2010).

In a study on Information Systems and Performance by Abugabah and Louis (2007) using an analytical approach to understand IS value in business companies, it was showed that the performance impact of information systems is an important research topic. Over the past decades, a great amount of attention has been drawn to the contributions of Information Systems by researchers and practitioners. Although there have been many attempts at assessing the impact of IS on industry performance, the empirical results have varied along with the deployment of key performance indicators. In this sense, measuring IS utilization, rather than IS investment, makes better sense in terms of understanding IS's role in the company and how IS affect performance at the company level. Companies that can achieve optimal performance from their IS are coordinated with organizational redesign and other managerial decisions, business strategy and the nature of managerial work. Also investment on user training, application of standards and the way people work and how their performance is measured and controlled are critical to realizing more productivity from IS.

Another study in tandem with the foregoing ones is that of Karanja (2009) who studied innovation strategies adopted by insurance companies in Kenya. The study found out that companies with strong technology-enabled innovation strategies are more likely to secure competitive advantage and create superior shareholder value. A formal innovation strategy helps firms achieve success in new product development. The study recommends that insurance companies need to develop robust technology-enabled

innovation strategies that define how a company source's and develops technology to help deliver compelling new products, services, customer experiences and business models while simultaneously creating barriers to entry.

Similarly, Stuart (2009) studied on Information System Strategies in the U.K. Insurance Industry. The study assessed the state of the development and implementation of IT strategies and their relation to business strategies. The study concluded that IT strategies support the business reasonably well and that, in most companies, IT strategy is closely aligned with strategic aims even though it may not be a documented part of the business strategy. Most of the companies surveyed and interviewed seemed to have had a clear business direction, in which the major areas of emphasis and concern were the insurance products, the distribution channels and the 'image' to customers or the concept of quality customer care. IT was central to all of these. IT was seen as a service, as a follower and as part of a partnership. Its role in relation to the business can be independent, supportive in the sense of reactive, or participative. The state of IT strategy in the companies surveyed were at different phases in the same evolutionary cycle; some developed, some under review, and some planned but yet to start.

In continuation, Hemmatfar (2010) studied on Competitive Advantages and Strategic Information Systems. Because information has emerged as an agent of integration and the enabler of new competitiveness for today's enterprise in the global marketplace and because strategic IS supports or shapes competitive strategies, the concepts of ISs is so important, IT can be used to support a variety of strategic objectives, including creation of innovative applications, changes in business processes, links with business partners, reduction of costs, acquiring competitive intelligence, and others. In this article we consider the opinion of some of ISs scientists and reviewed the literature of strategic ISs, competitive advantage and porter's model for competitive situations.

As a built up, Ondura (2012) studied factors influencing information technology outsourcing in the insurance sector in Kenya. The study findings have revealed that the



financial drivers and focus on core competence are the major factor that influences insurance companies to outsource IT. The other factors; focus on core competence and technological advancements also play a key role in insurance companies' decisions to perform Information System/ Information Technology outsourcing. It was further established that other factors apart from the four objectives were responsible for insurance companies' decision to outsource IT and hence this opens an avenue for further research.

As a follow up study, Olumoye (2013) carried out a study on Impact of Information Systems on Management Decision-Making in the Nigerian Insurance Sector. This study dealt with the impact of information systems on management decision making in the Nigerian insurance sector as perceived by the staff on the selected insurance companies in Nigeria. The study revealed that information system plays a very crucial role on management decision making. The adoption of information systems has influenced the ways decisions are made in insurance companies by changing the manner and rate at which information is provided for decision makers. It was also made known in the study that information systems provide relevant, timely and accurate information for the management for effective decision making. The management of various insurance companies in Nigeria are becoming more aware that information systems can be used to produce meaningful, relevant and accurate information which they can base their decisions. In view of this, it is recommended that the insurance companies in Nigeria should develop the various information system strategies to meet the changes in competition of their various operations.

Later in the same line of study, Yang, Singh, Pita and Storey (2013) studied The relationship between Strategic Information Systems planning facilitators and the success of South Korean organisations The study investigated the significance of facilitators vital for Strategic Information Systems Planning (SISP) and observed the relationship among these facilitators, SISP success and the outcome of SISP success. The two dimensions of SISP success positively affect improving sustainable competitive

advantage and organisational performance, but business-IT strategic alignment might be more critical to facilitate the level of its outcome. Other facilitators, except for active communication and knowledge-sharing between business and IT sectors, were essential to facilitate dynamic capabilities and IT infrastructure flexibility. Organisational learning needs to be considered to improve and sustain the outcome of SISP success.

It was also noticed that, Idris (2013) studied the Role of Information Technology in Customers' Service Delivery and Firm Performance: Evidence from Nigeria's Insurance Industry. This study attempts to find out how relevant and effective information technology is perceived in quality service delivery to customer and also, to examine its effect on insurance companies' performance in Nigeria. However, the study found that in most companies, customers find it difficult to perform vital transactions on-line without necessarily being present physically at the companies. This is because many customers have not bought into the idea of the use of IT as means of reaching their respective insurance companies. Furthermore, responses from the various companies show further that many insurance companies have started relating with their customers via IT networks, and have also encouraged customers by reaching out to them through electronic mails, text messages and the likes. The study also found that a good number of the insurance companies are of the opinion that IT has aided their performance levels. This study is consistent with (Harris & Katz, 1988). Findings from this study also gave supporting evidence that greater investments in information technology are perceived as enhancing organizations' profitability level.

In this series, Lawson (2013) carried a study on the embeddedness of information technology in the workflow of business processes. Furthermore, through the case, it was discovered that if IT is not fully integrated in workflows, it can also act as a hindrance for employees working in the process. This occur when IT fails in meeting its objectives or when the process which it intends to support has not been properly mapped, which in turn means that it is not fully known how work is truly conducted. The case study also showed that embedded IT, in its interdependency with workers routines and habits, can

act both as support as well as hindrance. Based on these two findings of the insurance company, it was discovered that embedded IT can lead to improvement in processes when there is knowledge about how work is truly done. This further entails that habits and routines as well as workers attitudes are known (Afolabi, 2009).

## **2.5 Critique of the Existing Literature**

This study has looked into many previous related studies that have provided an insight and a pathway to the achievement of the study's objectives. Some of the empirical studies cited provide general views of Strategic Intelligence and Strategic Information Systems application in various parts of the world. Previous studies on Strategic Intelligence and Strategic Information Systems in Kenya have focused more on other sectors but very little on the insurance industry in Kenya.

Another scholar, Kruger (2011) studied on Understanding the use of strategic intelligence as a strategic management tool in the long-term insurance industry in South Africa. The paper obtained the qualitative views and opinions of strategic decision makers, on an executive managerial level within the South African long-term insurance industry, on their organisations use of strategic intelligence. It has however marked differences in the conformity and usage of strategic intelligence and its components between the companies surveyed, with a measurable difference between large and small companies. It has, however, generally viewed that the use of a strategic intelligence framework could greatly enhance decision-making.

This study was done in more developed economy with an insurance penetration of 13% compared to Kenya with a lower penetration of 3.4%. This study has been done with emphasis on the insurance industries in Kenya, which is among the emerging economies. Pirttilä (2007) study dealt with strategic intelligence and competitor analysis in a large industrial company, and thus the external information and environment are emphasized.

The objective of the study was to deepen the knowledge of different intra-organizational processes that are used in a corporate organization to manage and exploit the vast amount of competitor information that is received from the environment. This study was also done in developed economy.

In his study, Karanja (2009) studied innovation strategies adopted by insurance companies in Kenya. The study found out that companies with strong technology-enabled innovation strategies are more likely to secure competitive advantage and create superior shareholder value. This study did not examine Strategic Intelligence and Strategic Information Systems on the performance of the insurance industry in Kenya.

Hemmatfar (2010) studied on Competitive Advantages and Strategic Information Systems. Olumoye (2013) carried out a study on Impact of Information Systems on Management Decision-Making in the Nigerian Insurance Sector. Both the studies did not look into Strategic Intelligence and Strategic Information Systems.

Having reviewed the available literature on previous studies carried out on the Strategic Intelligence and Strategic Information Systems on the performance, there is little research so far carried out in relation to the insurance industry. The studies which have been carried out so far relate to marketing intelligence, customer intelligence, competitive intelligence, information technology and information systems but very little on strategic intelligence. Most of these studies also have been centered on the individual companies most of which are in other sectors other than insurance companies as opposed to the whole insurance industry in Kenya.

## **2.6 Summary of Literature**

This chapter has reviewed available literature pertinent to strategic intelligence and strategic information systems and the conceptualized determinants thereof. It has been established that various empirical studies have been conducted to explore strategic

intelligence and strategic information systems have an influence on the successful strategic implementation with reference to a myriad of corporate institutions and sectors.

The literature reviewed demonstrates a widespread concurrence regarding the influence of strategic intelligence and strategic information systems on performance of insurance industry in Kenya. It also presents various theories on strategic intelligence, strategic information systems and performance of insurance industry namely theories of Customer satisfaction, Product Development, Value Chain Analysis, Knowledge Management and Innovation in Insurance. A Conceptual Model has been developed with the dependent variables being product value, product awareness, product satisfaction, service quality, financial prudence with the moderating variable being strategic information system and the dependent variable being insurance industry Performance.

Strategic Intelligence and Previous Studies on the Performance in the Insurance Industry are highlighted. There are several empirical studies of effects of strategic intelligence in the performance of organizations. However a significant portion of the studies have concentrated in developed countries and emerging countries especially the South Africa and Europe. There are just a handful of studies on the influence of strategic intelligence on organizational performance of companies in Africa and a serious paucity in Kenya. This study therefore comes in handy to cover this pertinent gap in literature. This study is unique due to its concentration on insurance companies which is a major player in the financial sector.

## **2.7 Research Gaps**

A critical review of past literature show that several conceptual and contextual research gaps existed in the effects of financial management practices on organizational performance of insurance companies in Kenya. For instance, Seitovirta (2011) the research revealed that Strategic Intelligence (SI) helps to form a big picture of the

business environment and to benchmark the firm's operations. Kruger (2011) Strategic Intelligence is not used at all levels of decision-making but that a growing proportion of Managers felt its importance and thus started to use Strategic Intelligence in their strategic planning and decision-making. Abugabah and Louis (2007) studied Information Systems utilization, rather than Information Systems investment, making better sense in terms of understanding Information Systems' role in the organization and how Information Systems affect performance at the company level. Karanja (2009) recommended that insurance companies need to develop robust technology-enabled innovation strategies that define how a company source's and develops technology to help deliver compelling new products, services, customer experiences and business models while simultaneously creating barriers to entry.

In Kenya, some notable on Strategic Intelligence include: Mugo, Wanjau and Ayodo (2012) who researched on an investigation into competitive intelligence practices and their effect on profitability of firms in the banking industry: A case of Equity Bank. Mutua (2010) did a research on competitive intelligence practices by Essar Telkom (YU) (K) Ltd. Muiva (2001) conducted a survey on the use of competitive intelligence systems in the Kenyan Pharmaceutical Industry while Kipkorir (2001) researched on competitive intelligence practices by FM radio stations operating in Kenya. These studies were however done on different sectors other than the insurance industry in Kenya. This is despite the fact that the insurance sector in Kenya is facing many challenges posed by the competitive environment and the nature of services offered. Despite the adoption of this strategic intelligence and strategic information systems there is little study that has been done on the Kenyan insurance industry to date. This study therefore sought to fill the existing knowledge gap by carrying out a study on Strategic Intelligence, Strategic Information Systems and performance of the insurance industry in Kenya.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter describes the methodology of the study detailing the research philosophy, research design, and population of the study, sample frame, sample and sampling technique, data collection procedures, pilot test and finally data analysis. It presents the methodological concerns used in conducting this research and provides a justification for each step taken. It involves the general research perspectives, data collection, summary of statistical measurement methods, and validity and reliability of the research, pilot test and data analysis.

#### **3.2 Research Design**

Burns and Grove (2003) define a research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. Parahoo (1997) describes a research design as a plan that describes how, when and where data are to be collected and analyzed. Polit *et al.* (2001) define a research design as the researcher's overall for answering the research question or testing the research hypothesis. In this descriptive study, qualitative and quantitative data collection techniques were used including; semi-structured interviews, and pre and post-test questionnaires.

In order for the study to gain different perspectives and draw attention to different factors that affect the insurance industry, descriptive research methods were employed in this study. According to Polit, Beck, and Hungler (2001), descriptive methods are used when the study seeks to describe, observe, and document a naturally occurring phenomenon which cannot readily be ascribed in an objective value. In other words, descriptive research deals with questions that look to explain what things are like and

describe relationships but do not predict relationships between variables or the direction of the relationship.

Depending on what is to be described, descriptive research can be very concrete or more abstract (DeVaus, 2002). At a concrete level, data collected is often strongly quantitative in nature (Polit, Beck & Hungler, 2001). More abstract descriptive research, in the form of interviews, was also included. According to Morse and Richards (2002), qualitative descriptive approaches are extremely helpful because evidence of experience and knowledge can be easily missed when quantitative methods are used.

### **3.2.1 Research Paradigm**

According to Taylor, Kermode, and Roberts (2007), a paradigm is a broad view or perspective of something. Additionally, Weaver and Olson's (2006) definition of paradigm reveals how research could be affected and guided by a certain paradigm by stating, paradigms are patterns of beliefs and practices that regulate inquiry within a discipline by providing lenses, frames and processes through which investigation is accomplished. Therefore, to clarify the researcher's structure of inquiry and methodological choices, a descriptive of the paradigm adopted for this study will be discussed prior to any discussion about the specific methodologies utilized in this study. The use of both the qualitative and quantitative methodologies is necessary to have in-depth examination of the use of Strategic Intelligence within the Insurance Industry.

There are three components of research paradigm: epistemology which refers to the common parameters and assumptions associated with the excellent way to investigate the nature of the real world; ontology which refers to the common assumptions that are created to understand the real nature of the society; and methodology which refers to the combination of different techniques that are used by the researcher to investigate different situations. The term epistemology (what is known to be true) as opposed to doxology (what is believed to be true) encompasses the various philosophies of research



approach. The purpose of science, then, is the process of transforming things believed into things known: doxa to episteme.

### **3.2.2 Research Philosophy**

Research philosophy refers to the assumptions and beliefs that govern the way we view the world (Saunders, 2007). A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analysed and used. Two major research philosophies have been identified in the Western tradition of science, namely positivist (sometimes called scientific) and interpretive (also known as ant positivist) (Galliers, 1991). The quantitative methodology shares its philosophical foundation with the positivist paradigm (Weaver & Olson, 2006). The positivist paradigm arose from the philosophy identified as logical positivism and is based on rigid rules of logic and measurement, truth, absolute principles and prediction (Andrew & Halcomb, 2005; Cole, 2006).

The positivist philosophy argues that there is one objective reality. Therefore, as a consequence, valid research is demonstrated only by the degree of proof that can be corresponded to the phenomena that study results stand for Hope and Waterman (2003). Two main research philosophical views are positivism or phenomenological perspective. Positivism has to do with the situation where knowledge or the world is thought to exist independent of people's perceptions of it and that science uses objective techniques to discover what exist in the world (Sullivan, 2001). Positivism uses logical, quantitative, more objective scientific methods to test hypothetically-deductive generalizations. On the other hand, phenomenological or interpretive philosophy holds that reality of the world is thought to arise out of the creation and exchange of social meaning during the process of social interactions (Sullivan, 2001). Phenomenological perspective uses qualitative, more subjective, naturalistic approaches in inductively and holistically to understand human experiences in context-specific settings (Amaratunga & Newton, 2002).

In this study the positivism approach was chosen over the phenomenological perspective because it is believed that the influence of Strategic Intelligence on the performance constructs as pertaining in Kenya's insurance industry can be examined objectively through the use of established theoretical frameworks and structured instruments to assess and analyze it, upon which generalizations can be made.

### **3.3 Population of the Study**

Saunders *et al.* (2007) define a population as the complete set of cases or group members upon which a research study will be based. The Kenyan business environment comprises many industries and for the purpose of this study the Insurance industry was selected as the population. The population was selected as a representative of the greater Kenyan business environment as the organisations involved are vulnerable to changes within the macro and micro environment and are undergoing intense changes within their market and regulatory environment.

A census study of the whole population comprising 46 units (46 direct insurance companies) of analysis which are the licensed in Kenya by the Insurance Regulatory Authority (IRA) in the year 2013 from which the target and accessible population will be drawn as indicated in Appendix III. The study population which represent unit of observation was comprised of 316 senior management employees and 749 middle management employees both totaling to 1065 as presented on appendix IV. The study population was derived from the annual reports of the insurance companies and also from inquiries from their human resource departments.

### **3.4 Sample and Sampling Procedures**

#### **3.4.1 Sample Frame**

A sampling frame is a list of population from which a sample will be drawn (Leary, 2001). It is the source material or device from which list of all elements within a population that can be sampled is drawn Sarndal, Swensson and Wretman, (1992) and may include individuals, households or institutions. It's a published list in which or a set of directions for identifying a population (Borg & Gall, 2007).

A sampling frame facilitates formation of a sampling unit that refers to one member of a set of entities being studied which is the material source of the random variable (Bailey, 2008). The sampling frame for the target population is the employees' data base for senior management and middle level managers of all the 46 licensed insurance companies in operation in Kenya as at December 2013 as they appear in the IRA of Kenya website and database as indicated on Appendix IV. The employee data base has been derived from human resource records of the insurance companies in liaison with the human resource departments and also returns to IRA.

#### **3.4.2 Sampling and Sample size**

Sampling is the selection of a subset of individuals from within a population to yield some knowledge about the whole population, especially for the purposes of making predictions based on statistical inference (Black, 2011). This study used stratified and simple random sampling method on all the insurance companies. Stratified random sampling was used in each insurance company to group respondents into two strata. The strata will be that of senior management and middle management employees. Within each of the two strata simple random sampling was done to identify individual respondents who were issued with a questionnaire to respond to research statements. Kothari (2004) supports random sampling as it satisfies the law of statistical regularity that if a sample is chosen at random, on average it has the same characteristics and

composition as the population. The sampling process comprised of defining the population, sampling frame, sampling method, sample size and sample plan (Lavrakas, 2008). Cooper and Schindler (2007) assert that a sample can be drawn from a sampling frame. The study population comprise of 1065 employees from senior and middle management. According to Mugenda and Mugenda (2003), a population of less than ten thousand elements is defined as a small population. They recommend a formula for determining appropriate sample from a small population as demonstrated by equation 1 provided.

**Equation 1**

$$n = Z^2 * p * (1-p) / d^2 \quad \text{where;}$$

n      desired sample size of a big population i.e. more than 10,000

Z      standard normal deviate at the required confidence level, Z value score, (1.96)

p      Proportion of units in the target population estimated to have characteristics being measured. For this study it is set at 50% (0.5)

d      Precision level desired for the study (0.05)

N      1017 subjects

Based on the equation 1, the sample of a big population size can be established as;

$$n = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2} = 384$$

According to Mugenda and Mugenda (2003), with a small population of less than 10,000, the required sample size will be smaller. In such cases the researcher was required to calculate the final sample estimate  $n_0$  using equation 2.

## Equation 2

$$n_0 = \frac{n}{1 + (n - 1) N}$$

Where:  $n_0$  =the desired sample size ( when the population is less than 10,000)

$n$  =the desired sample size ( when the population is more than 10,000)

$N$  = the estimate of the population size

Based on the equation 2, the reduced sample size can be established as;

$$384 / (1 + ((384 - 1) / 1017)) = 278$$

The target sample size of 278 constitutes 27% of the target population which was adequate based on the recommendation by Kothari (2004) and Creswell (2007) who assert that a sample of at least 10% to 15% is able to lead to meaningful generalizations about the general characteristics of a study population. The target sample size is distributed within the 46 licensed insurance companies in the two strata using the study population ratio representation. This ensures that sample distribution is unbiased and balanced. The detailed sample distribution is laid on appendix IV.

### 3.5 Data Collection Instruments

This study used both primary and secondary data. Primary data was collected using questionnaires while secondary data was collected from licensed insurance companies' annual financial statements for the years 2009 to 2013. This study adopted questionnaire because it was free from bias and respondents have adequate time to give well thought out answers as well as large samples can be used and thus the results will be more dependable and reliable.

### **3.6 Pilot Test**

A pilot test is an evaluation of the specific questions, format, question sequence and instructions prior to use in the main survey. The practice of pre-testing the questionnaire was very important because of the following reasons: Comments and suggestions made by respondents during the pre-testing were seriously considered and incorporated. Such comments helped to improve the questionnaire. This study used

#### **3.6.1 Validity Test**

According to Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research results. In other words validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. This study used both construct validity and content validity. For construct validity, the questionnaire was divided into several sections to ensure that each section assesses information for a specific objective, and also ensures the same close ties to the conceptual framework for this study. Validity of the questionnaire was initially tested by reviewing it with the supervisor. The questionnaire was validated by discussing it with two randomly selected managers of the target insurance companies and other resource people including my supervisors.

Their views were evaluated and incorporated to enhance content validity of the questionnaire. In this study 10% of the target population which was not part of the sample size was used for the pilot test. Sekaran (2003) and Kothari (2004) state that 5% to 10% of the population is adequate for running reliability tests. Baker (2001) states that the size of a population to be used for pilot testing varies depending on time, costs and practicality, but the same would tend to be 5- 10% of the main survey.

### **3.6.2 Reliability Test**

Reliability refers to the repeatability, stability or internal consistency of a questionnaire (Jack & Clarke, 1998). Cronbach's alpha will be used to test the reliability of the measures in the questionnaire (Cronbach, 1951). Sekaran (2006) studied Cronbach's alpha has the most utility for multi-item scales at the interval level of measurement, requires only a single administration and provides a unique, quantitative estimate of the internal consistency of a scale. The reliability of the questionnaire was tested using the Cronbach's Alpha correlation coefficient with the aid of Statistical Package for Social Sciences (SPSS) software version 22 and Cronbach coefficient of 0.7 and above was considered adequate for a newly developed questionnaire. The closer Cronbach's alpha coefficient is to one (1), the higher the internal consistency reliability (Sekaran, 2003).

### **3.7 Data Analysis and Presentation**

To determine the patterns revealed in the data collected regarding the selected variables, data analysis was guided by the aims and objectives of the research and the measurement of the data collected. Data was sorted, coded and input into the statistical package for social sciences (SPSS) version 22 and presented in graphs, tables.

The study analyzed the variations in the different data sets captured for each study objective through Analysis of Variance (ANOVA), specially designed to test whether the means of more than two quantitative populations are equal. This was done through the F test for testing for the significance of the difference between two variances. This study used this test because it allowed one to analyze two or more groups and thus test for significant difference between means. The study conducted a univariate regression analysis in order to test the effect of each predictor variable on the dependent variable as follows;

Objective 1: To determine the influence of Product Value on the performance of the insurance industry in Kenya.

$$Y = \beta_0 + \beta_1 X_1 + e$$

Objective 2: To explore the influence of Product awareness on the performance of the insurance industry in Kenya.

$$Y = \beta_0 + \beta_2 X_2 + e$$

Objective 3: To find out the influence of Product Satisfaction on the performance of the insurance industry in Kenya.

$$Y = \beta_0 + \beta_3 X_3 + e$$

Objective 4: To investigate the influence of Service Quality on the performance of the insurance industry in Kenya.

$$Y = \beta_0 + \beta_4 X_4 + e$$

Objective 5: To examine the influence of Financial Prudence on the performance of the insurance industry in Kenya.

$$Y = \beta_0 + \beta_5 X_5 + e$$

Objective 6: To establish the moderating effect of Strategic Information System on the relationship between the independent variable and dependent variables.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X^* X_6 + e$$



The study further multiple regression analysis to test the significance of the relationship between independent variables and the dependent variable. The multiple regression model was as below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X^* X_6 + e$$

Where:

Y = the value of the dependent variable (organizational performance)

{ $\beta_i$ ;  $i=1,2,3,4,5,6$ } = The coefficients representing the various independent variables.

$B_0$  = the Y intercept

{ $X_i$ ;  $i = 1, 2, 3, 4, 5, 6$ } = Values of the various independent (covariates) variables.

$e$  = the error term which is assumed to be normally distributed with mean zero and constant variance.

Y = organizational performance of insurance companies

$X_1$  = Product value

$X_2$  = Product awareness

$X_3$  = Product satisfaction

$X_4$  = Service quality

$X_5$  = Financial prudence

$X^* X_6$  = Interaction of moderating variable (strategic information system) and aggregation of independent variables

Regression analysis is also valuable for quantifying the effect of various simultaneous influences upon a single dependent variable. Further, because of omitted variables bias with simple regression, multiple regression is often essential even when the researcher is only interested in the effects of one of the independent variables. Faraway (2002), states that multiple regression analysis involves combining several predictor variables in a single regression equation. With multiple regression analysis, we can assess the effects of multiple predictor variables (rather than a single predictor variable) on the dependent measure.

Using SPSS, the regression models was tested on how well they fit the data. The model fitness was estimated using the coefficient of determination which helps to explain how closely the predictor variables explain the variations in the dependent variable. The significance of each independent variable was also tested. The p-value for each t-test was used to make conclusions on whether to reject or accept the null hypotheses.

The benchmark for this study for accepting or rejecting the null hypothesis is a level of significance of 5 percent. If the p-value is less than five percent the null hypothesis was rejected and the alternate hypothesis was accepted. Similarly, Fischer distribution test called F-test was applied. It refers to the ratio between the model mean square divided by the error mean square. F-test was used to test the significance of the overall model at a 95 percent confidence level. The p-value for the F-statistic was applied in determining the robustness of the model. The conclusion was based on the basis of p- value where if the null hypothesis of the beta is rejected then the overall model was significant and if null hypothesis is accepted the overall model was insignificant. Faraway (2002), states that multiple linear regressions are used in situations where the number of independent variables is more than one.

In order to establish the moderating effect of strategic information system on the influence of the foregoing variables on the performance of insurance companies in Kenya, descriptive analysis was employed to depict the moderating effect of strategic information system onto the independent variables and dependent variable.

To expedite the proposed statistical methods, the Statistical Package for Social Sciences (SPSS) was used as it has an in-built formula. The software is a comprehensive system for data analysis and can take data from any type of file and use it to generate tabulated reports, charts, compare means, correlation and many other techniques of data analysis (Microsoft Corporation, 2003). During the descriptive statistics, the researcher intended to discuss aspects of Correlation Analysis. Correlation measures the extent of interdependence where two variables are linearly related (Lucy, 1996). If variables are correlated then a change in one variable is accompanied by a proportionate change in another variable. In this part, the researcher is cognizant of the fact that the coefficient (R) is a measure of correlation between two variables. If variables are independent,  $r = 0$ , if dependent, then  $r = 1$ . If the value of R is close to one, then it shows there is a strong correlation between the variables. If the value of R is close to zero, then the association is weak.

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the responses from target Insurance companies that formed the sample of the study whose main objective was to determine the factors that affect effective implementation of strategic plans in Insurance companies in Kenya. The data was analyzed through descriptive statistics and presented using tables, charts and in prose using qualitative content analysis. The study also made valid replicable inferences on the data in various contexts. Analysis was conducted to statistically determine whether the independent variables affect or influence the dependent variable

#### 4.2 Results of Pilot

From the findings of the study all the variables had a Cronbach alpha above 0.7 and thus were accepted. This represented high level of reliability and on this basis it was supposed that scales used in this study accurately reflected the variables being measured.

**Table 4.1: Reliability Coefficients for Specific Variables**

<b>Variable</b>	<b>Cronbach's Alpha</b>	<b>Comment</b>
Product value	0.802	Accepted
Product awareness	0.758	Accepted
Product satisfaction	0.891	Accepted
Service quality	0.721	Accepted
Financial prudence	0.844	Accepted
Strategic information system	0.921	Accepted
Performance	0.843	Accepted

### 4.3 Response Rate

The number of questionnaires that were administered was 278 out of which 204 were properly filled, returned and found suitable for analysis. This represented an overall response rate of 73.38% as shown on Table 4.2. This results concurs with a study by Babbie (2004) who asserted that return rates of above 50% are acceptable to analyze and publish, 60% is good, 70% is very good while above 80% is excellent

Based on the response, according to Mugenda and Mugenda (2003) a response rate of 50% is adequate for analysis and reporting and therefore, 73.38% response rate was very good for the study.

**Table 4.2: Response Rate**

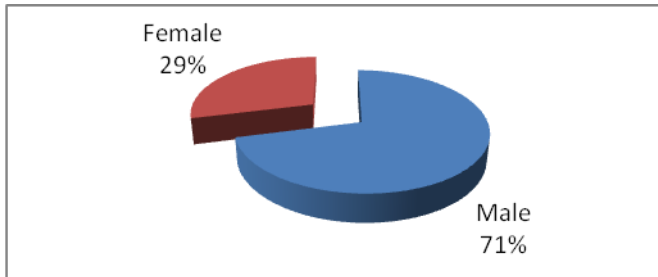
<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Returned	204	73.38%
Unreturned	74	26.62%
<b>Total</b>	<b>278</b>	<b>100%</b>

### 4.4 Demographic Characteristics

This section consists of information that describes basic characteristics namely gender of the respondents, level of education, years of operation, type of insurance and number of employees that represented the entire study and an overview of their input in determining the relationship between strategic intelligence, strategic information systems and performance of insurance companies in Kenya.

#### 4.4.1 Gender of the respondents

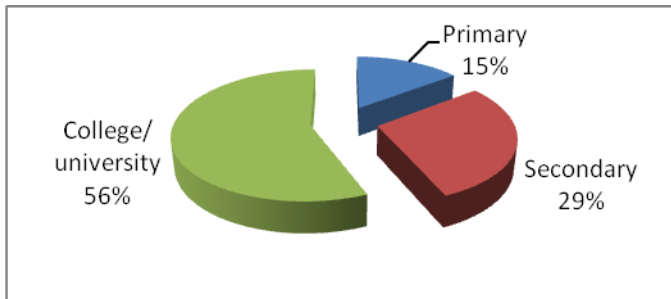
The respondents were asked to indicate their gender. The results are shown in Figure 4.1.



**Figure 4.1: Gender of the respondents**

Figure 4.1 shows that majority of the respondents were male who represented 71% of the sample while 29% were female. This implies that insurance firms employees are male dominated. This agrees with a study by Ellis, Cutura, Dione, Gillson, Manuel and Thongori (2007) that in spite of women being major actors in Kenya's economy, and notably in agriculture and the informal business sector, men dominate in the formal sector citing the ratio of men to women in formal sector as 74%:26%. Other studies that have identified male domination in the formal and informal sectors include Gakure (2001) and Gakure (2003).

#### 4.4.2 Level of education

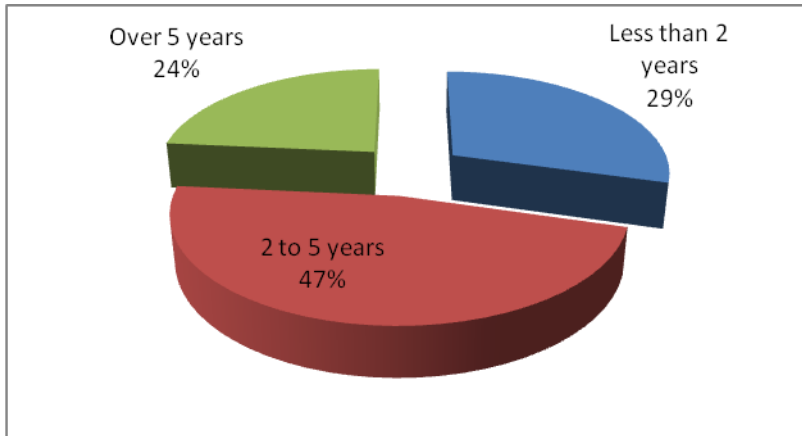


**Figure 4.2: Level of education of the respondent**

The respondents were asked to indicate their level of education. The level of education of the respondents are shown in Figure 4.2 which indicates that 56% of respondents have college/university education, 29% had secondary qualification while only 15% had primary qualifications. From the findings in Figure 4.2, it implies that the employees in insurance firms generally have a higher level of education and thus are expected to undertake business activities better and with more output (King & McGrath, 2002). Brown and Duguid (2003) also found that highly skilled personnel enhance production of high quality outcomes and effective quality improvement in an enterprise.

#### 4.4.3 Duration of operation

Respondents were asked to indicate the length of operation of their insurance firms.



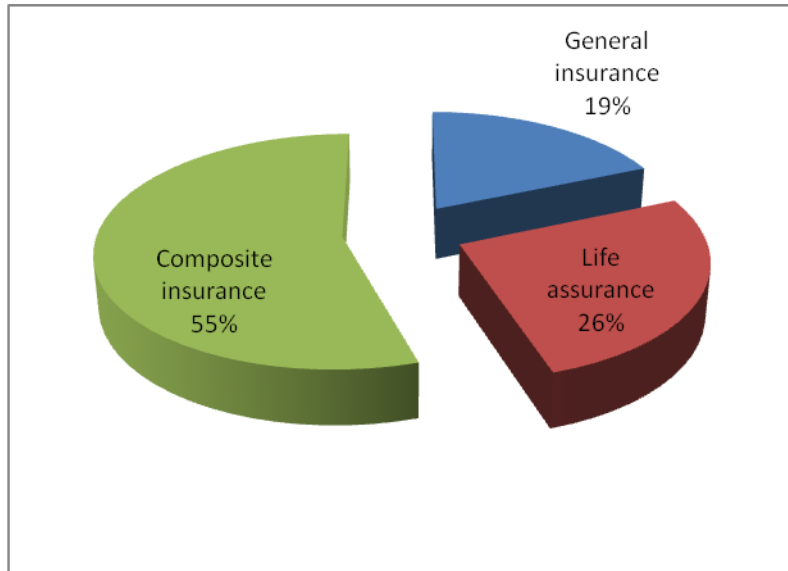
**Figure 4.3: Duration of operation**

From the findings in Figure 4.3, it implies that 47% indicated that their firms have been in the operation for between 2 to 5 years, 29% responded less than 2 years while 24% indicated over 5 years as shown in Figure 4.3. This implies that most organizations have diverse years of existence which shows that as organizations establish themselves and take a market share, their existence and sustainability is dependent upon strategic planning and review of performance over the years.



#### 4.4.4 Type of Insurance firm

The study sought to find out the type of insurance firms which is existing and operational.

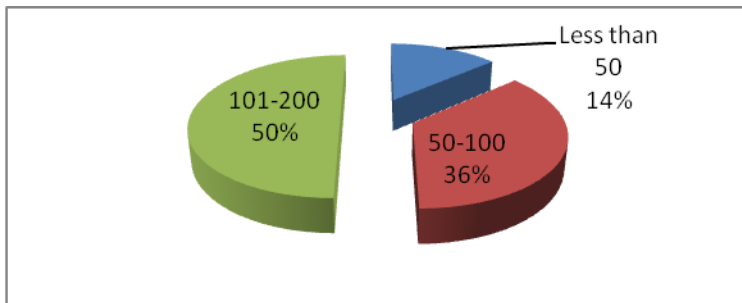


**Figure 4.4: Type of insurance firms**

According to the findings, 55% indicated that their firms were composite insurance firm, 26% indicated life insurance firm while only 19% indicated that their firm was a general insurance firm as shown in Figure 4.4. This implies that insurance landscape in Kenya is adequately defined within the global expectations.

#### 4.4.5 Number of employees

The respondents were asked to indicate the number of employees in their firms.



**Figure 4.5: Number of employees**

According to the findings, 50% indicated between 101-200 employees, 36% indicated between 50-100 employees while only 14% indicated less than 50 employees as shown in Figure 4.5. This implies that majority of the insurance firms have a larger number of employees. The number of employees in most of the companies is more than 100 which is an indication that the insurance companies need a large number of employees to able to meet the growing demand of consumers to their various products and services.

#### 4.5 Product value

##### 4.5.1 Descriptive Statistics

The first objective of the study was to establish the influence of Product Value on the performance of the insurance industry in Kenya. Particularly, the study focused on expense ratio, incurred claim ratio and net income ratio. The respondents were asked to indicate the expense ratio as a percentage incurred by insurance companies over the last three year.

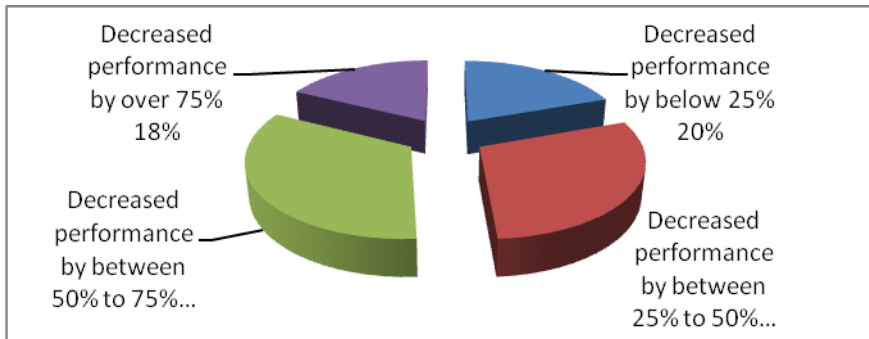
**Table 4.3: Table of Incurred Expense Ratio**

<b>Year</b>	<b>less than 10%</b>	<b>10-50%</b>	<b>over 50%</b>
2011	6.80%	48.30%	44.90%
2012	4.00%	54.50%	41.50%
2013	6.80%	47.20%	46.00%
2014	10.40%	41.80%	47.80%
2015	9.30%	45.60%	45.10%

Results in Table 4.3 shows that 48.3% of the respondents and who were the majority indicated that their insurance firm had an expense ratio of between 10-50% in the year 2011, 54.50% who were also the majority indicated 10-50% in the 2012, 47.2% also indicated 10-50% in the year 2013, 47.8% of the respondents indicated an expense ratio of over 50% while in the year 2014, majority of the respondents(45.6%) indicated that their firms had an expense ratio of 10-50%. This finding agrees with Bose (2008) who found that the value performance indicators focus on how much the insured, on average, receive for their money. The higher incurred claims ratio means that on average, more financial benefits are being paid back to the insured in relation to premium cost (increased value). On the other hand, high net income and high expenses have the opposite effect of reducing value since less money is available for benefits. Changes in product value drive the awareness and satisfaction indicators such as in the case of member-based schemes where members increase or decrease their participation in reaction to the changes in value. The respondents were asked to indicate on how expenses ratio influence the performance of the insurance industry in Kenya.

The findings showed that 33% who were the majority responded that incurred expense ratio decreased performance by between 50% to 75%, 29% indicated that incurred expense ratio decreased performance by between 25% to 50%, 20% of the respondents revealed that incurred expense ratio decreased performance by below 25% while 18% of

them indicated that incurred expense ratio decreased performance by over 75% as shown in Figure 4.6.



**Figure 4.6: Influence of Incurred Expense ratio**

These results agrees with a study by Ghimire (2013) and Rabindra (2013) on Financial Efficiency of Non Life Insurance Industries in Nepal which concludes that maintaining the sound financial health of insurance industry is most challenging job for regulatory agencies while its contribution to the economy and society is noteworthy.

Further, the respondents were requested to indicate the incurred claim ratios as a percentage over the last three years that their insurance company has incurred.

**Table 4.4: Table of Incurred Claims Ratio**

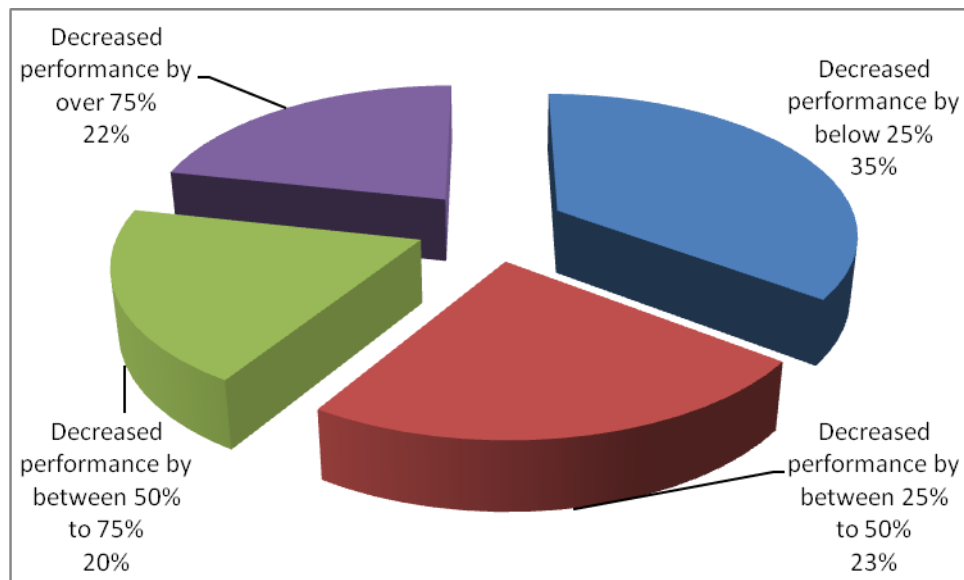
Year	less than 10%	10-50%	over 50%
2011	6.80%	48.30%	44.90%
2012	4.00%	54.50%	41.50%
2013	6.80%	47.20%	46.00%
2014	10.40%	41.80%	47.80%
2015	9.30%	45.60%	45.10%

The results in Table 4.4 show that 48.3% of the respondents who were the majority indicated that they incurred a claim ratio of between 10-50% in the year 2011, 54.5% of

the respondents also indicated between 10-50% in the year 2012, 47.2 % further indicated 10-50% in the year 2013. 47.8% of the respondents revealed that they incurred a claim ratio of over 50% in the year 2014, while 45.6% of the respondents who were the majority indicated a claim ratio of 10-50% in the year 2015.

The findings agree with that of (Periasamy, 2005) who found that the value performance indicators focus on how much the insured, on average, receive for their money. The higher incurred claims ratio means that on average, more financial benefits are being paid back to the insured in relation to premium cost (increased value). On the other hand, high net income and high expenses have the opposite effect of reducing value since less money is available for benefits. Changes in product value drive the awareness and satisfaction indicators such as in the case of member-based schemes where members increase or decrease their participation in reaction to the changes in value.

The respondents were asked to indicate on how incurred claim ratio influences the performance of the insurance industry in Kenya.



**Figure 4.7: Influence of Incurred claim ratio**

The findings showed that 35% who were the majority responded that incurred expense ratio decreased performance by below 25%, 23% indicated that incurred expense ratio decreased performance by between 25% to 50%, 22% of them indicated that incurred expense ratio decreased performance by over 75% and 20% of the respondents revealed that incurred expense ratio decreased performance by between 50% to 75% as shown in Figure 4.7.

This finding agrees with that of (Gosalia, 2008) who found that the value performance indicators focus on how much the insured, on average, receive for their money. The higher incurred claims ratio means that on average, more financial benefits are being paid back to the insured in relation to premium cost (increased value). On the other hand, high net income and high expenses have the opposite effect of reducing value since less money is available for benefits. Changes in product value drive the awareness and satisfaction indicators such as in the case of member-based schemes where members increase or decrease their participation in reaction to the changes in value

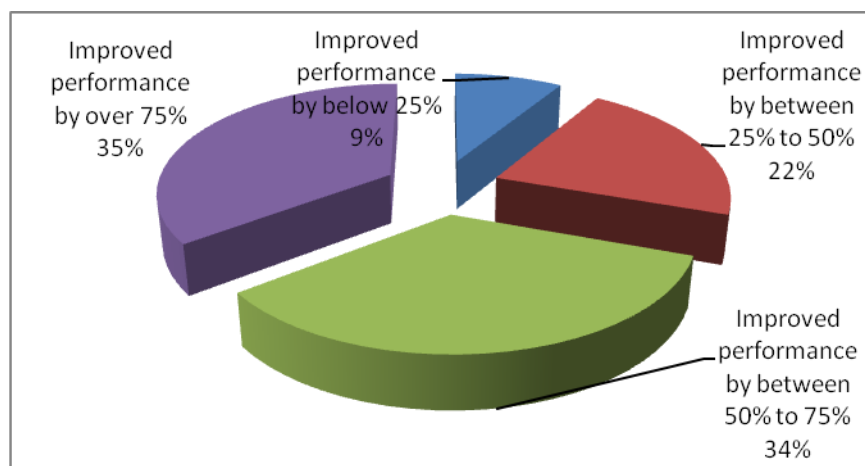
**Table 4.5: Table of Net Incomes Ratio**

<b>Year</b>	<b>less than 10%</b>	<b>10-50%</b>	<b>over 50%</b>
2011	6.90%	44.80%	48.30%
2012	7.10%	52.90%	40.00%
2013	13.30%	41.60%	45.20%
2014	4.60%	49.40%	46.00%
2015	6.70%	39.40%	53.90%

Concerning net income ratio, 48.3% of the respondents who were the majority had income ratio of over 50% in the year 2011, 52.9% indicated an income ratio of between 10-50% in the year 2012, in the year 2013, 45.2% of the respondents indicated a net income ratio of over 50%, 49.4 % answered that their firm had a net income of 10-50%

in the year 2014 while 53.9% indicated a net income ratio of over 50% in the year 2015 as shown in Table 4.5.

The findings concurs with Akotey (2013) who found that the three indicators address viability (Incurred Expense Ratio, the efficiency of the delivery of insurance; Incurred Claims Ratio, the value of insurance to the insured and; Net Income Ratio, the viability of insurance product or programme). Without a positive net income the programme will not achieve viability and will become reliant on subsidies to survive. A positive net income, on the other hand, cannot be realized without a proper combination of expenses and benefits.



**Figure 4.8: Influence of net income ratio**

According to the findings, 35% of the respondents indicated that net income ratio improved performance by over 75%, 34% responded that net income ratio improved performance by between 50% to 75%, 22% indicated that net income ratio improved performance by between 25% to 50% while only 9% of the respondents revealed that net income ratio improved performance by below 25% as shown in Figure 4.8.

This finding is consistent with that of (Daniell, 2006) who found that the three indicators address viability (Incurred Expense Ratio, the efficiency of the delivery of insurance; Incurred Claims Ratio, the value of insurance to the insured and; Net Income Ratio, the viability of insurance product or programme). Without a positive net income the programme will not achieve viability and will become reliant on subsidies to survive. A positive net income, on the other hand, cannot be realized without a proper combination of expenses and benefits.

#### **4.5.2 Relationship between Product Value and Gross Total Premium (income)**

The results presented in Table 4.6 present the fitness of model used of the regression model in explaining the study phenomena. Incurred expense ratio, incurred claims ratio and net income ratio explained 21.1% of gross total premium (income)

**Table 4.6: Model Fitness for Gross Total Premium Regressed on Product Value**

<b>Indicator</b>	<b>Coefficient</b>
R	0.459
R Square	<b>0.211</b>
Adjusted R Square	0.199
Std. Error of the Estimate	0.4022519

The p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

Table 4.7 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of gross total income. This was supported



by an F statistic of 17.556 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

**Table 4.7: ANOVA for the Regression of Gross Total Premium on Product Value**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	8.522	3	2.841	17.556	<b>0.000</b>
Residual	31.876	197	0.162		
Total	40.398	203			

Regression of coefficients results in Table 4.8 shows that incurred expense ratio and gross total premium (income) are negatively and significantly related ( $r=-0.192$ ,  $p=0.000$ ). The Table further indicates that incurred claim ratio and gross total premium (income) are negatively and significantly related ( $r=-0.094$ ,  $p=0.017$ ). It was further established that net income ratio and gross total premium (income) were positively and significantly related ( $r=0.154$ ,  $p=0.001$ ).

**Table 4.8: Regression of the Gross Total Premium on the Product Value**

Variable subcontract	B	Std. Error	t	Sig.
(Constant)	2.858	0.163	17.489	0.000
Incurred expense ratio	-0.192	0.044	-4.337	<b>0.000</b>
Incurred claim ratio	-0.094	0.039	-2.403	<b>0.017</b>
Net income ratio	0.154	0.047	3.299	<b>0.001</b>

The specific model was;

$$\text{gross total premium (income)} = 2.858 - 0.192X_1 - 0.094X_2 + 0.154X_3$$

Where  $X_1$  is Incurred expense ratio

$X_2$  is Incurred claim ratio

$X_3$  is Net income ratio

The findings are consistent with that of Akotey (2013) who found that the three indicators address viability (Incurred Expense Ratio, the efficiency of the delivery of insurance; Incurred Claims Ratio, the value of insurance to the insured and; Net Income Ratio, the viability of insurance product or programme). Without a positive net income the programme will not achieve viability and will become reliant on subsidies to survive.

#### 4.5.3 Relationship between Product Value and Total Assets

The results presented in Table 4.9 present the fitness of model used of the regression model in explaining the study phenomena. Incurred expense ratio, incurred claims ratio and net income ratio explained 12.5% of total assets.

**Table 4.9: Model Fitness for the Regression of Total Assets on Product Value**

<b>Indicator</b>	<b>Coefficient</b>
R	0.353
R Square	<b>0.125</b>
Adjusted R Square	0.111
Std. Error of the Estimate	0.7762555

In statistics significance testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.10: ANOVA for the Regression of Total Assets on Product Value**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	16.915	3	5.638	9.357	<b>0.000</b>
Residual	118.707	197	0.603		
Total	135.622	203			

Table 4.10 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of total assets. This was supported by an F statistic of 9.357 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

**Table 4.11: Regression of Total Assets on Product Value**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
(Constant)	2.762	0.315	8.761	0.000
Incurred expense ratio	-0.294	0.085	-3.444	<b>0.001</b>
Incurred claim ratio	-0.154	0.076	-2.03	<b>0.044</b>
Net income ratio	0.158	0.09	1.747	<b>0.008</b>

The specific model was;

$$\text{Total assets} = 2.762 - 0.294X_1 - 0.154X_2 + 0.158X_3$$

Where  $X_1$  is Incurred expense ratio

$X_2$  is Incurred claim ratio

$X_3$  is Net income ratio

Regression of coefficients results in Table 4.11 shows that incurred expense ratio and total assets are negatively and significantly related ( $r=-0.294$ ,  $p=0.001$ ). The Table further indicates that incurred claim ratio and total assets are negatively and significantly related ( $r=-0.154$ ,  $p=0.044$ ). It was further established that net income ratio and total assets were positively and significantly related ( $r=0.158$ ,  $p=0.008$ ).

This finding is consistent with that of Akotey (2013) who found that the three indicators address viability (Incurred Expense Ratio, the efficiency of the delivery of insurance; Incurred Claims Ratio, the value of insurance to the insured and; Net Income Ratio, the viability of insurance product or programme). Without a positive net income the programme will not achieve viability and will become reliant on subsidies to survive. A positive net income, on the other hand, cannot be realized without a proper combination of expenses and benefits.

#### **4.5.4 Relationship between product value and growth in profit**

The results presented in Table 4.12 present the fitness of model used of the regression model in explaining the study phenomena. Incurred expense ratio, incurred claims ratio and net income ratio explained 10.9% of growth in profits

**Table 4.12: Model Fitness for Growth in Profit Regressed on Product Value**

<b>Indicator</b>	<b>Coefficient</b>
R	0.330
R Square	<b>0.109</b>
Adjusted R Square	0.095
Std. Error of the Estimate	0.7959976

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value ( $p$ ) which is statistically set at 0.05, then the

conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.13: ANOVA for Growth in Profit Regressed on Product Value**

Variable subcontract	Sum of Squares	df	Mean Square	F	Sig.
Regression	15.278	3	5.093	8.037	<b>0.000</b>
Residual	124.822	197	0.634		
Total	140.1	203			

Table 4.13 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of profit. This was supported by an F statistic of 8.037 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

**Table 4.14: Regression of Growth in Profit on Product Value**

Variable subcontract	B	Std. Error	T	sig
(Constant)	2.105	0.323	6.509	0.000
Incurred expense ratio	-0.249	0.088	-2.843	<b>0.005</b>
Incurred claim ratio	-0.149	0.078	-2.919	<b>0.005</b>
Net income ratio	0.193	0.092	2.085	<b>0.038</b>

The specific model was;

$$\text{Profit growth} = 2.105 + 0.193X_1 - 0.249X_2 - 0.149X_3$$

Where  $X_1$  is Net income ratio

$X_2$  is Incurred expense ratio

$X_3$  is Incurred claim ratio

Regression of coefficients results in Table 4.14 shows that incurred expense ratio and growth in profit are negatively and significantly related ( $r=-0.249$ ,  $p=0.005$ ). The Table further indicates that incurred claim ratio and growth in profit are negatively and significantly related ( $r=-0.149$ ,  $p=0.005$ ). It was further established that net income ratio and growth in profit were positively and significantly related ( $r=0.193$ ,  $p=0.038$ ).

This finding is consistent with that of Akotey (2013) who found that the three indicators address viability (Incurred Expense Ratio, the efficiency of the delivery of insurance; Incurred Claims Ratio, the value of insurance to the insured and; Net Income Ratio, the viability of insurance product or programme). Without a positive net income the programme will not achieve viability and will become reliant on subsidies to survive. A positive net income, on the other hand, cannot be realized without a proper combination of expenses and benefits.

#### **4.5.5 Hypothesis testing**

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the  $H_0$  is accepted but if it's less than 0.05, the  $H_0$  is rejected.

The null hypothesis for the first objective was: product value does not have a significant influence on performance of insurance firms in Kenya while the alternative hypothesis was product value have a significant influence on performance of insurance firms in Kenya. The calculated f-statistic of 84.129 was higher than the tabulated/critical f statistic. The findings were further supported p-value of 0.000. This led to the rejection of the null hypothesis and therefore it was concluded that product value has a significant influence on performance of insurance firms in Kenya. This result is illustrated in Table 4.18

**Table 4.18: Table of Hypothesis Testing for Product Value**

<b>Variable</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
(Constant)	1.53	0.105	14.627	0.000
Product value	0.426	0.046	9.172	<b>0.000</b>
F Test (p value)	<b>84.129(0.000)</b>			
R Squared	0.294			
Adjusted R Squared	0.291			

## **4.6 Product Awareness**

### **4.6.1 Descriptive Statistics**

The second objective of the study was to establish the influence of Product awareness on the performance of the insurance industry in Kenya. Particularly, the study focused on renewal ratio, coverage ratio and growth ratio.

The respondents were asked to indicate the renewal ratio as a percentage over the last three years the insurance company has incurred. 48.1% of the respondents and who were the majority indicated that their insurance firm had an renewal ratio of between 10-50% in the year 2011, 50.8% who were also the majority indicated 10-50% in the 2012, 49.5% also indicated 10-50% in the year 2013, 47.5% of the respondents indicated a renewal ratio of over 50% in the year 2014, while in the year 2015, majority of the respondents(42.4%) also indicated that their firms had a renewal ratio of over 50%.

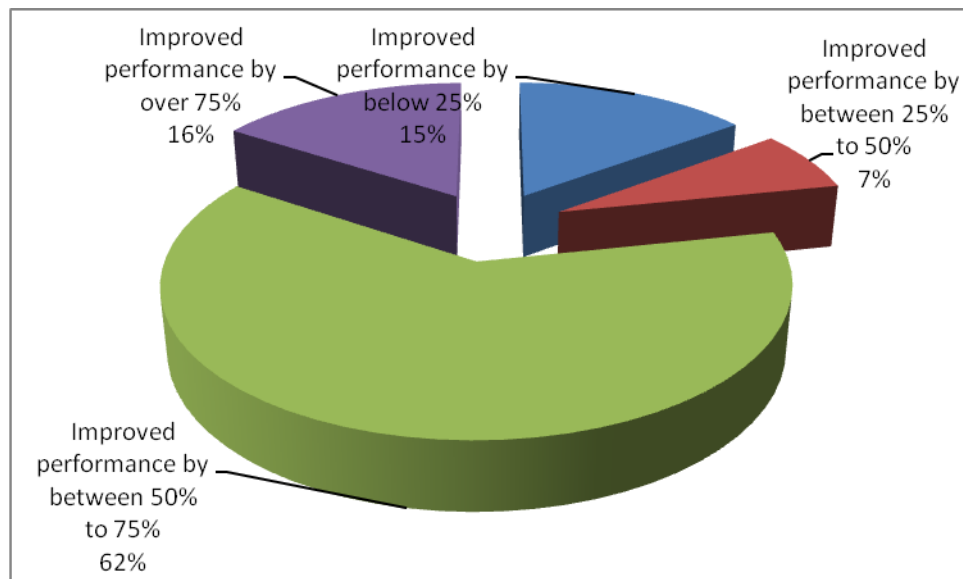
Camp (2008) argued that the awareness and satisfaction performance indicators focus on how readily the target market enroll in the programme and retains coverage. Where enrolment is voluntary, performance in this category will be good only if the market is aware of the programme, understands the product well (or at least thinks it does), is satisfied with the price-benefits combination, and can afford the premium (contribution)

payment schedule. Where coverage is mandatory (in the sense that it is conditional to access credit or is towards some other objective) these factors are still very important determinants but their effect may in some cases be diminished.

**Table 4.19: Renewal ratio**

Year	less than 10%	10-50%	over 50%
2011	9.00%	48.10%	42.90%
2012	11.40%	50.80%	37.80%
2013	5.40%	49.50%	45.10%
2014	21.90%	30.60%	47.50%
2015	24.90%	32.80%	42.40%

The respondents were asked to indicate on how renewal ratio influence the performance of the insurance industry in Kenya.



**Figure 4.9: Influence of Incurred renewal ratio**



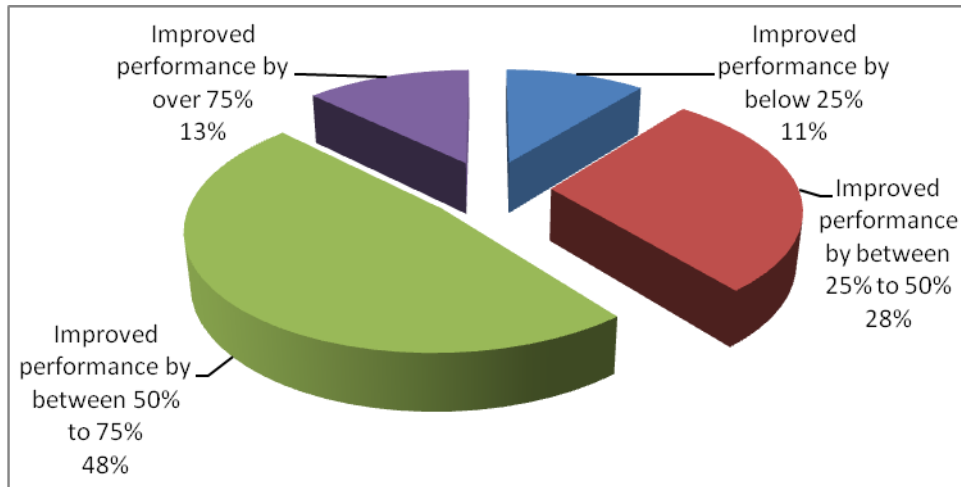
The findings showed that 62% who were the majority responded that renewal ratio increased performance by between 50% to 75%, 16% indicated that renewal ratio increased performance by over 75%, 15% indicated that renewal ratio increased performance by below 25% while only 7% revealed that renewal ratio increased performance by between 25% to 50%.

Further, the respondents were requested to indicate the coverage ratio as a percentage that insurance companies have incurred over the last three years. 46.0% of the respondents who were the majority indicated that they had a coverage ratio of over 50% in the year 2011, 54.1% of the respondents who were the majority also indicated over 50% in the year 2012, 47.9 % indicated 10-50% in the year 2013. 47.7% of the respondents revealed that they had a coverage ratio of between 10-50% in the year 2014, while 47.3% of the respondents who were the majority also indicated a coverage ratio of 10-50% in the year 2015.

**Table 4.20: Coverage ratio**

<b>Year</b>	<b>less than 10%</b>	<b>10-50%</b>	<b>over 50%</b>
2011	10.20%	43.80%	46.00%
2012	8.20%	37.60%	54.10%
2013	21.70%	42.90%	35.40%
2014	9.70%	47.70%	42.60%
2015	14.00%	47.30%	38.70%

The respondents were asked to indicate on how coverage ratio influences the performance of the insurance industry in Kenya.



**Figure 4.10: Influence of Coverage ratio**

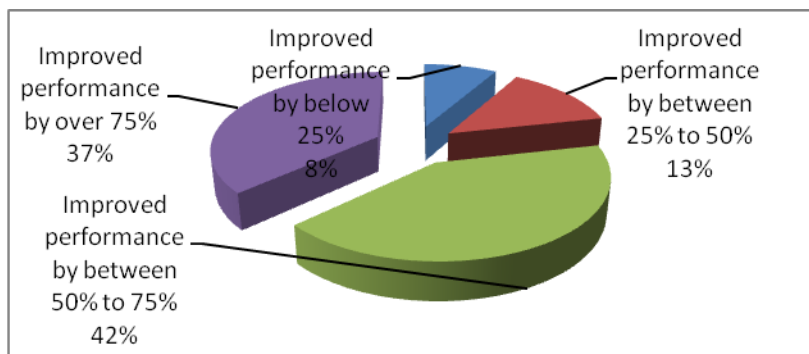
According to the findings, 48% who were the majority responded that coverage ratio increased performance by between 50% to 75%, 28% revealed that coverage ratio increased performance by between 25% to 50%, 13% indicated that coverage ratio increased performance by over 75% while 11% indicated that coverage ratio increased performance by below 25% as shown in Figure 4.10.

(Bakos, 2009) argued that the awareness and satisfaction performance indicators focus on how readily the target market enrolls in the programme and retains coverage. Where enrolment is voluntary, performance in this category will be good only if the market is aware of the programme, understands the product well (or at least thinks it does), is satisfied with the price-benefits combination, and can afford the premium (contribution) payment schedule. Where coverage is mandatory (in the sense that it is conditional to access credit or is towards some other objective) these factors are still very important determinants but their effect may in some cases be diminished.

**Table 4.21: Growth ratio**

Year	less than 10%	10-50%	over 50%
2011	8.00%	48.30%	43.70%
2012	8.30%	36.10%	55.60%
2013	6.30%	47.10%	46.60%
2014	7.50%	53.80%	38.80%
2015	10.00%	43.80%	46.20%

Concerning growth ratio, 48.3% of the respondents who were the majority had a growth ratio of between 10-50% in the year 2011, 55.6% indicated a growth ratio of over 50% in the year 2012, in the year 2013, 47.1% of the respondents indicated a growth ratio of between 10-50%, 53.8 % answered that their firm had a growth ratio of 10-50% in the year 2014 while 46.2% indicated a growth ratio of over 50% in the year 2015 as shown in Table 4.21.



**Figure 4.11: Influence of growth ratio**

42% responded that growth ratio improved performance by between 50% to 75%, 37% of the respondents indicated that growth ratio improved performance by over 75%, 13% indicated that growth ratio improved performance by between 25% to 50% while only 8% of the respondents revealed that growth ratio improved performance by below 25% .

#### 4.6.2 Relationship between product awareness and gross premium (income)

The results presented in Table 4.22 present the fitness of model used of the regression model in explaining the study phenomena. Renewal ratio, coverage ratio and growth ratio explained 28.5 % of gross total premium (income).

**Table 4.22: Model Fitness for Gross Premium Regressed on Product Awareness**

<b>Indicator</b>	<b>Coefficient</b>
R	0.534
R Square	<b>0.285</b>
Adjusted R Square	0.274
Std. Error of the Estimate	0.3823014

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Table 4.23 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of gross total income. This was supported by an F statistic of 26.312 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

**Table 4.23: ANOVA for the Regression of Gross Premium on Product Awareness**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	11.537	3	3.846	26.312	<b>0.000</b>
Residual	28.939	198	0.146		
Total	40.475	203			

(Daniell, 2006) argued that the awareness and satisfaction performance indicators focus on how readily the target market enrolls in the programme and retains coverage. Where enrolment is voluntary, performance in this category will be good only if the market is aware of the programme, understands the product well (or at least thinks it does), is satisfied with the price-benefits combination, and can afford the premium (contribution) payment schedule. Where coverage is mandatory (in the sense that it is conditional to access credit or is towards some other objective) these factors are still very important determinants but their effect may in some cases be diminished.

**Table 4.24: Regression of Gross Premium on Product Awareness**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig</b>
(Constant)	1.633	0.141	11.606	0.000
Renewal ratio	0.134	0.052	2.56	<b>0.011</b>
Coverage ratio	0.225	0.036	6.317	<b>0.000</b>
Growth ratio	0.161	0.035	4.578	<b>0.000</b>

Regression of coefficients results in Table 4.24 shows that renewal ratio and gross total premium (income) are positively and significantly related ( $r=0.134$ ,  $p=0.011$ ). The Table further indicates that coverage ratio and gross total premium (income) are positively and significantly related ( $r=0.225$ ,  $p=0.000$ ). It was further established that growth ratio and gross total premium (income) were positively and significantly related ( $r=0.161$ ,  $p=0.000$ ).

The specific model was;

$$\text{Gross total premium (income)} = 1.633 + 0.134X_1 + 0.225X_2 + 0.161X_3$$

Where  $X_1$  is Renewal ratio

$X_2$  is Coverage ratio

$X_3$  is Growth ratio

#### 4.6.3 Relationship between product awareness and total assets

The results presented in Table 4.25 present the fitness of model used of the regression model in explaining the study phenomena. Renewal ratio, coverage ratio and growth ratio explained 39.5% of total assets.

**Table 4.25: Model Fitness for the Regression of Total Asset on Product Awareness**

<b>Indicator</b>	<b>Coefficient</b>
R	0.639
R Square	<b>0.395</b>
Adjusted R Square	0.386
Std. Error of the Estimate	0.6446564

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Table 4.26 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of total assets. This was supported by an F statistic of 43.12 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

**Table 4.26: ANOVA for Regression of Total Asset on Product Awareness**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	53.759	3	17.92	43.12	<b>0.000</b>
Residual	82.285	198	0.416		
Total	136.045	203			

Regression of coefficients results in Table 4.27 shows that shows that renewal ratio and total asset are positively and insignificantly related ( $r=0.039$ ,  $p=0.663$ ). The Table further indicates that coverage ratio and total asset are positively and significantly related ( $r=0.500$ ,  $p=0.000$ ). It was further established that growth ratio and total asset were positively and significantly related ( $r=0.443$ ,  $p=0.000$ ).

**Table 4.27: Regression Total Asset on Product Awareness**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
(Constant)	0.362	0.237	1.525	0.129
Renewal ratio	0.039	0.088	0.437	0.663
Coverage ratio	0.500	0.06	8.327	<b>0.000</b>
Growth ratio	0.443	0.059	7.464	<b>0.000</b>

The specific model was;

$$\text{Total assets} = 0.362 + 0.039X_1 + 0.500X_2 + 0.443X_3$$

Where  $X_1$  is Renewal ratio

$X_2$  is Coverage ratio

$X_3$  is Growth ratio

Gosalia, (2008) argued that the three indicators are crucial for viability( Renewal Ratio; Coverage Ratio; and Growth Ratio) to determine the satisfaction of the insured, whether the product meets the true need, the level of insurance awareness and competitiveness in the product vis-à-vis other products or household risk management alternatives). Without sufficiently high participation, and without a low turnover, the programme will usually suffer from adverse selection leading to a higher claims ratio, increased expense ratio, reduced net income, and it may even experience bankruptcy if the problems are not addressed.

#### **4.6.4 Relationship between product awareness and growth in profit**

The results presented in Table 4.28 present the fitness of model used of the regression model in explaining the study phenomena. Renewal ratio, coverage ratio and growth ratio explained 42.7% of growth in profits.

**Table 4.28: Model Fitness for the Regression of Growth in Profit on Product Awareness**

<b>Indicator</b>	<b>Coefficient</b>
R	0.654
R Square	<b>0.427</b>
Adjusted R Square	0.419
Std. Error of the Estimate	0.6395399

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.



Table 4.29 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of profit. This was supported by an F statistic of 49.23 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

**Table 4.29: ANOVA for the Regression of Profit Growth on Product Awareness**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	60.407	3	20.136	49.23	<b>0.000</b>
Residual	80.984	198	0.409		
Total	141.391	203			

Regression of coefficients results in Table 4.30 shows that renewal ratio and growth in profit are positively and insignificantly related ( $r=0.007$ ,  $p=0.940$ ). The Table further indicates that coverage ratio and growth in profit are positively and significantly related ( $r=0.561$ ,  $p=0.000$ ). It was further established that growth ratio and growth in profit were positively and significantly related ( $r=0.446$ ,  $p=0.000$ ).

(Kotler, & Keller, 2006) argued that the awareness and satisfaction performance indicators focus on how readily the target market enrolls in the programme and retains coverage. Where enrolment is voluntary, performance in this category will be good only if the market is aware of the programme, understands the product well (or at least thinks it does), is satisfied with the price-benefits combination, and can afford the premium (contribution) payment schedule. Where coverage is mandatory (in the sense that it is conditional to access credit or is towards some other objective) these factors are still very important determinants but their effect may in some cases be diminished.

**Table 4.30: Regression of Profit Growth on Product Awareness**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>Sig</b>
(Constant)	0.153	0.235	0.65	0.517
Renewal ratio	0.007	0.088	0.075	0.940
Coverage ratio	0.561	0.06	9.413	<b>0.000</b>
Growth ratio	0.446	0.059	7.579	<b>0.000</b>

The specific model was;

$$\text{Profit growth} = 0.153 + 0.007X_1 + 0.561X_2 + 0.446X_3$$

Where  $X_1$  is Renewal ratio

$X_2$  is Coverage ratio

$X_3$  is Growth ratio

#### **4.6.5 Hypothesis testing**

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the  $H_0$  is not rejected but if it's less than 0.05, the  $H_0$  fails to be accepted.

The null hypothesis for the second objective was: product awareness does not have a significant influence on performance of insurance firms in Kenya while the alternative hypothesis was product awareness have a significant influence on performance of insurance firms in Kenya. The calculated f-statistic of 76.424 was higher than the tabulated/critical f statistic. The findings were further supported p-value of 0.000. This indicated that the null hypothesis was rejected hence product awareness have a significant influence on performance of insurance firms in Kenya.

**Table 4.31: Table of Hypothesis Testing for Product Awareness**

<b>Variable</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>Sig.</b>
(Constant)	1.503	0.113	13.354	0.000
Product awareness	0.422	0.048	8.742	<b>0.000</b>
F Test (p value)	<b>76.424</b> (0.000)			
R Squared	0.274			
Adjusted R Squared	0.271			

## **4.7 Product Satisfaction**

### **4.7.1 Descriptive Statistics**

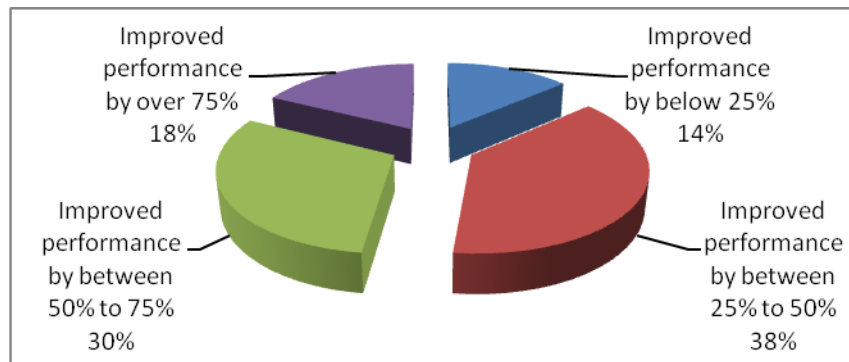
The third objective of the study was to establish the influence of Product satisfaction on the performance of the insurance industry in Kenya. Particularly, the study focused on insurance certificate issuance, insurance policies and prompt services.

The respondents were asked to respond on the statements on documentation of certificates and insurance policies. 61.3% who were the majority indicated that it takes less than 24hours for the certificates to be verified. 67.3% indicated that it takes less than 24 hours for the certificates to be documented while 56% indicated that it takes between 24-48 hours for contractual agreements.

**Table 4.32: Documentation of certificates**

Statement	Less than 24hrs	24hrs-48hrs	Over 48 hrs
Verification of certificates	61.30%	17.60%	21.10%
Documentation of certificates	67.30%	15.10%	17.60%
Contractual agreement	13.50%	56.00%	30.60%

The respondents were asked to indicate on how quick documentation of certificates influences the performance of the insurance industry in Kenya.



**Figure 4.12: Influence of quick documentation of certificates**

According to the findings, 38% who were the majority responded that quick documentation of certificates increased performance by between 25% to 50%, 30% indicated that quick documentation of certificates increased performance by between 50% to 75%, 18% indicated that quick documentation of certificates increased performance by over 75% while only 14% indicated that quick documentation of certificates increased performance by below 25% as shown in Figure 4.12.

Karanja (2008) argued that customer Satisfaction in insurance means the use of a Policy product purchased for a cost, to the ultimate satisfaction of the buyer, when a claim is paid. The satisfaction is not fully achieved only when a product so purchased gives its

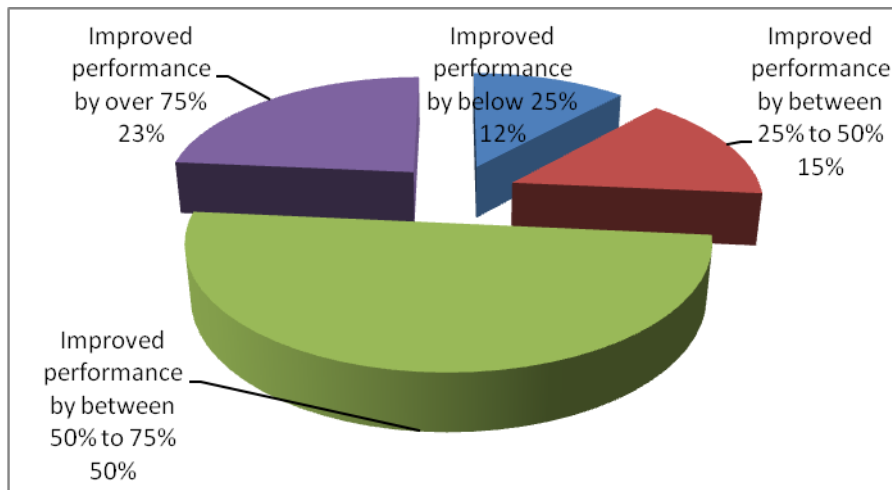
full use, but it also stipulates that the product bought by the buyer will give him the expected fruit, peace of mind during the product cycle when it is in use by the customer.

Further, the respondents were requested to respond on the statements related to documentation of insurance policies. 66.8% who were the majority indicated that it takes less than 30 days for the verification of policy documents, 53.3% also indicated that it takes less than 30 days for the certificates to be documented while 63.5% indicated also that it takes less than 30 days for contractual agreements as shown in Figure 4.12.

**Table 4.33: Documentation of Insurance Policies**

Statement	Less than 30 days	30-90 days	More than 90 days
Verification of policies	66.80%	19.30%	13.90%
Documentation of policies	53.30%	23.40%	23.40%
Contractual agreement	63.50%	16.30%	20.20%

The respondents were asked to indicate on how quick documentation of insurance policies influences the performance of the insurance industry in Kenya.



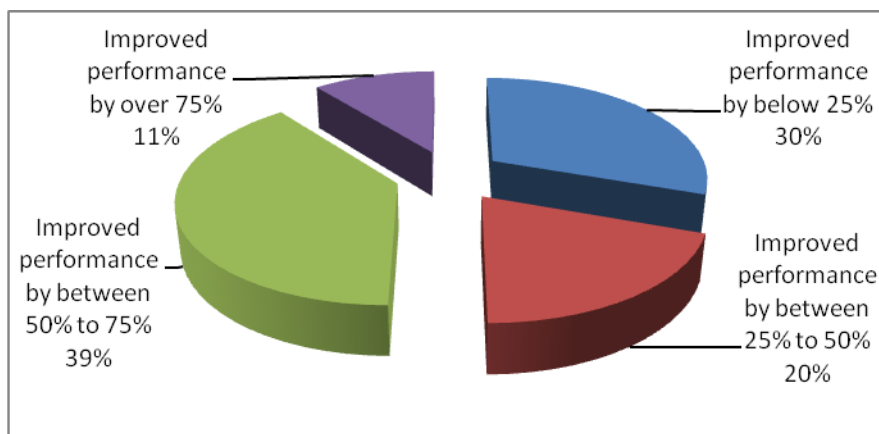
**Figure 4.13: Influence of quick documentation of insurance policies**

The findings show 50% who were the majority responded that quick documentation of insurance policies increased performance by between 50% to 75%, 23% indicated that quick documentation of insurance policies increased performance by over 75%, 15% revealed that quick documentation of insurance policies increased performance by between 25% to 50%, while 12% indicated that quick documentation of insurance policies increased performance by below 25% as shown in Figure 4.13.

**Table 4.34: Prompt services to inquiry**

Statements	Less than 30 days	30-90 days	More than 90 days
Issuing of policies	27.70%	41.60%	30.70%
Issuing of certificates	60.10%	15.70%	24.20%
Settlement of claim	13.20%	46.50%	40.30%

Concerning prompt services to inquiry Table 4.34 shows that, 41.6% who were the majority indicated issuing of policies takes between 30-90 days, 60.1% indicated that it takes less than 30 days to issue certificates while 46.5% indicated that it takes between 30-90 days for settlement of claims.



**Figure 4.14: Prompt services to inquiry**

39% responded that prompt services to inquiry improved performance by between 50% to 75%, 30% of the respondents indicated that prompt services to inquiry improved performance by less than 25%, 20% indicated that prompt services to inquiry improved performance by between 25% to 50% while only 11% of the respondents revealed that prompt services to inquiry improved performance by over 75% as shown in Figure 4.14.

#### **4.7.2 Relationship between product satisfaction and gross total premium**

The results presented in Table 4.35 present the fitness of model used of the regression model in explaining the study phenomena. Quick documentation of insurance certificates, quick documentation of insurance policies and prompt services to inquiry explained 32.7% of gross total premium (income).

**Table 4.35: Model Fitness for the Regression of Gross Total Premium on Product Satisfaction**

<b>Indicator</b>	<b>Coefficient</b>
R	0.572
R Square	<b>0.327</b>
Adjusted R Square	0.317
Std. Error of the Estimate	0.3709734

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.36: ANOVA for the Regression of Gross Total Premium on Product Satisfaction**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	13.226	3	4.409	32.035	<b>0.000</b>
Residual	27.249	198	0.138		
Total	40.475	203			

Table 4.36 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of gross total income. This was supported by an F statistic of 32.035 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

**Table 4.37: Regression of Gross Total Premium on Product Satisfaction**

<b>Variable subcontracts</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>Sig</b>
(Constant)	1.627	0.119	13.659	0.000
Quick documentation of insurance certificates	0.249	0.035	7.042	<b>0.000</b>
Quick documentation of insurance policies	0.192	0.035	5.549	<b>0.000</b>
Prompt services to inquiry	0.094	0.039	2.449	<b>0.015</b>

The specific model was;

$$\text{Gross total premium (income)} = 1.627 + 0.249X_1 + 0.192X_2 + 0.094X_3$$

Where  $X_1$  is Quick documentation of insurance certificates

$X_2$  is Quick documentation of insurance policies

$X_3$  is Prompt services to inquiry



Regression of coefficients results in Table 4.37 shows that quick documentation of insurance certificates and gross total premium (income) are positively and significantly related ( $r=0.249$ ,  $p=0.000$ ). The Table further indicates that quick documentation of insurance policies and gross total premium (income) are positively and significantly related ( $r=0.192$ ,  $p=0.000$ ). It was further established that prompt services to inquiry and gross total premium (income) were positively and significantly related ( $r=0.094$ ,  $p=0.015$ ).

This finding is consistent with that of Naren (2009) who found out that the satisfaction of Insured customer requires building relationship of confidence and trust between the buyer and seller. It is essential to build trust so that the intentions of both the parties are clearly understood by each other. For instance if an insured has paid premium against a proposal, mere issue of receipt without any narration (cover note/ Certificate of insurance) as to the specifications of the product intended to be sold, would not render satisfaction, prompt issue of the policy document and quick and adequate settlement of claim, would only create confidence in buyer about the product bought by him (Naren , 2009).

#### **4.7.3 Relationship between product satisfaction and total assets**

**Table 4.38: Model Fitness for the Regression of Total Assets on Product Satisfaction**

<b>Indicator</b>	<b>Coefficient</b>
R	0.674
R Square	<b>0.454</b>
Adjusted R Square	0.446
Std. Error of the Estimate	0.6124422

The results presented in Table 4.38 present the fitness of model used of the regression model in explaining the study phenomena. Quick documentation of insurance certificates, quick documentation of insurance policies and prompt services to inquiry explained 45.4% of total assets. In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.39: ANOVA for the Regression of Total Assets on Product Satisfaction**

<b>Variable subcontract</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	61.778	3	20.593	54.901	.000b
Residual	74.267	198	0.375		
Total	136.045	203			

Table 4.39 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of total assets. This was supported by an F statistic of 54.901 and the reported p value (0.000) which was less than the conventional probability at 0.05 significance levels. These findings are consistent with that of Naren (2009) who found out that the satisfaction of Insured customer requires building relationship of confidence and trust between the buyer and seller. It is essential to build trust so that the intentions of both the parties are clearly understood by each other. For instance if an insured has paid premium against a proposal, mere issue of receipt without any narration (cover note/ Certificate of insurance) as to the specifications of the product intended to be sold, would not render satisfaction, prompt issue of the policy document and quick and adequate settlement of claim, would only create confidence in buyer about the product bought by him (Naren , 2009).

**Table 4.40: Regression of Total Assets on Product Satisfaction**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>sig</b>
(Constant)	0.108	0.197	0.549	0.583
Quick documentation of insurance certificates	0.527	0.058	9.017	<b>0.000</b>
Quick documentation of insurance policies	0.486	0.057	8.492	<b>0.000</b>
Prompt services to inquiry	0.081	0.064	1.279	0.202

The specific model was;

$$\text{Total assets} = 0.108 + 0.527X_1 + 0.486X_2 + 0.081X_3$$

Where  $X_1$  is Quick documentation of insurance certificates

$X_2$  is Quick documentation of insurance policies

$X_3$  is Prompt services to inquiry

Regression of coefficients results in Table 4.40 shows that quick documentation of insurance certificates and total asset are positively and insignificantly related ( $r=0.527$ ,  $p=0.000$ ). The Table further indicates that quick documentation of insurance policies and total asset are positively and significantly related ( $r=0.486$ ,  $p=0.000$ ). It was further established that prompt services to inquiry and total asset were positively and insignificantly related ( $r=0.081$ ,  $p=0.202$ ).

#### 4.7.4 Relationship between product satisfaction and growth in profit

**Table 4.41: Model Fitness for the Regression of Growth in Profit on Profit Satisfaction**

<b>Indicator</b>	<b>Coefficient</b>
R	0.641
R Square	<b>0.410</b>
Adjusted R Square	0.401
Std. Error of the Estimate	0.648957

The results presented in Table 4.41 present the fitness of model used of the regression model in explaining the study phenomena. Quick documentation of insurance certificates, quick documentation of insurance policies and prompt services to inquiry explained 41.0% of growth in profits.

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. The results further indicated that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of profit. This was supported by an F statistic of 45.931 and the reported p value (0.000) which was less than the conventional probability at 0.05 significance levels as shown in the Table 4.42: Analysis of Variance.

**Table 4.42: ANOVA for the Regression of Growth in Profit on Product Satisfaction**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	58.02	3	19.34	45.931	<b>0.000</b>
Residual	83.371	198	0.421		
Total	141.391	203			

Regression of coefficients results in Table 4.43 shows that quick documentation of insurance certificates and growth in profit are positively and insignificantly related ( $r=0.535$ ,  $p=0.000$ ). The Table further indicates that quick documentation of insurance policies and growth in profit are positively and significantly related ( $r=0.439$ ,  $p=0.000$ ). It was further established that prompt services to inquiry and growth in profit were positively and insignificantly related ( $r=0.095$ ,  $p=0.162$ ).

**Table 4.43: Regression of Growth in Profit on Product Satisfaction**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig</b>
(Constant)	-0.326	0.208	-1.567	0.119
Quick documentation of insurance certificates	0.535	0.062	8.643	<b>0.000</b>
Quick documentation of insurance policies	0.439	0.061	7.236	<b>0.000</b>
Prompt services to inquiry	0.095	0.067	1.405	0.162

The specific model was;

$$\text{Profit growth} = -326 + 0.535X_1 + 0.439X_2 + 0.095X_3$$

Where  $X_1$  is Quick documentation of insurance certificates,  $X_2$  is Quick documentation of insurance policies,  $X_3$  is Prompt services to inquiry.

This finding is consistent with that of Naren (2009) who found out that the satisfaction of Insured customer requires building relationship of confidence and trust between the buyer and seller. It is essential to build trust so that the intentions of both the parties are clearly understood by each other. For instance if an insured has paid premium against a proposal, mere issue of receipt without any narration (cover note/ Certificate of insurance) as to the specifications of the product intended to be sold, would not render satisfaction, prompt issue of the policy document and quick and adequate settlement of claim, would only create confidence in buyer about the product bought by him (Naren , 2009).

#### **4.7.5 Hypothesis testing**

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the  $H_0$  is not rejected but if it's less than 0.05, the  $H_0$  fails to be accepted. The null hypothesis for the third objective was: product satisfaction does not have a significant influence on performance of insurance firms in Kenya while the alternative hypothesis was product satisfaction have a significant influence on performance of insurance firms in Kenya. The calculated f-statistic of 64.758 was higher than the tabulated/critical f statistic. The findings were further supported p-value of 0.000. This indicated that the null hypothesis was rejected hence product satisfaction have a significant influence on performance of insurance firms in Kenya.

**Table 4.44: Hypothesis Testing for Growth in Profit on Product Satisfaction**

<b>Variable</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>Sig.</b>
(Constant)	1.476	0.125	11.787	0.000
Product satisfaction	0.452	0.056	8.047	<b>0.000</b>
F Test (p value)	<b>64.758(0.000)</b>			
R Squared	0.243			
Adjusted R Squared	0.239			

## 4.8 Service quality

### 4.8.1 Descriptive Statistics

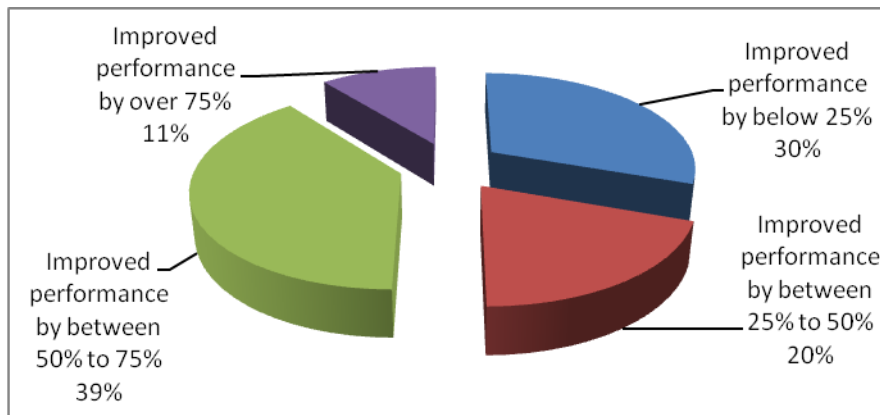
The fourth objective of the study was to establish the influence of service quality on the performance of the insurance industry in Kenya. Particularly, the study focused on promptness to settlement of claim, claim rejection ratio and prudent insurance practices

The respondents were asked to respond on the statements on promptness to settlement of claim. 35.8% who were the majority indicated that it takes less than 30 days for the acceptance of claim. 51.1% indicated that it takes more than 90 days for the rejection of claim while 65.1% indicated that it takes less than 30 days for claim settlement.

**Table 4.45: Promptness to Settlement of Claim**

<b>Statement</b>	<b>Less than 30 days</b>	<b>30-90 days</b>	<b>More than 90 days</b>
Acceptance of claim	35.80%	31.20%	32.90%
Rejection of claim	10.60%	38.30%	51.10%
Claim settlement	65.10%	15.90%	19.00%

The respondents were asked to indicate on how promptness to settlement of claim influences the performance of the insurance industry in Kenya.



**Figure 4.15: Influence of promptness to settlement of claim**

The findings show that 39% indicated that quick promptness to settlement of claim increased performance by between 50% to 75%, 30% indicated that promptness to settlement of claim increased performance by below 25%. 20% who were the majority responded that promptness to settlement of claim increased performance by between 25% to 50%, while only 11% indicated that quick promptness to settlement of claim increased performance by over 75% as shown in Figure 4.15.

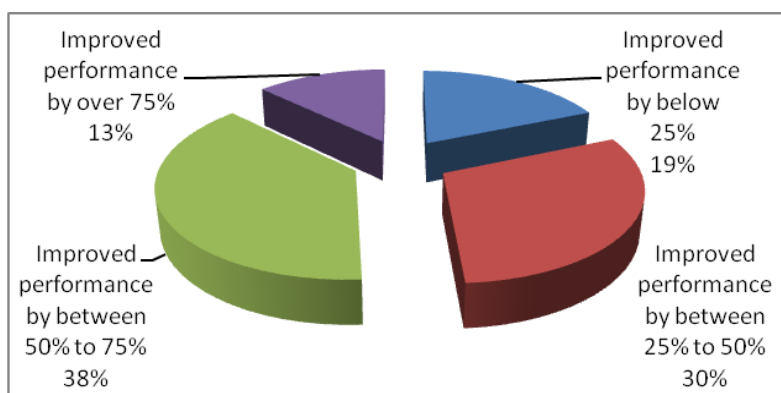
Further, the respondents were requested to respond on the statements related to Claims rejection ratio as a percentage that insurance companies have incurred over the last five years. 50% of the respondents who were the majority indicated that they had a claim rejection ratio of over 50% in the year 2011, 46.3% of the respondents who were the majority also indicated over less than 10% in the year 2012, 45.3 % indicated more than 50% in the year 2013. 38.5% of the respondents revealed that they had a claim rejection ratio of between 10-50% in the year 2014, while 42.1% of the respondents who were the majority also indicated a claim rejection ratio of 10-50% in the year 2015.



**Table 4.46: Claims Rejection Ratio**

Year	less than 10%	10-50%	over 50%
2011	8.60%	41.40%	50.00%
2012	46.30%	26.30%	27.40%
2013	17.20%	37.50%	45.30%
2014	23.60%	38.50%	37.90%
2015	26.20%	31.70%	42.10%

Ghimire, (2013) and Rabindra, (2013) studied on Financial Efficiency of Non Life Insurance Industries in Nepal which concludes that maintaining the sound financial health of insurance industry is most challenging job for regulatory agencies while its contribution to the economy and society is noteworthy.



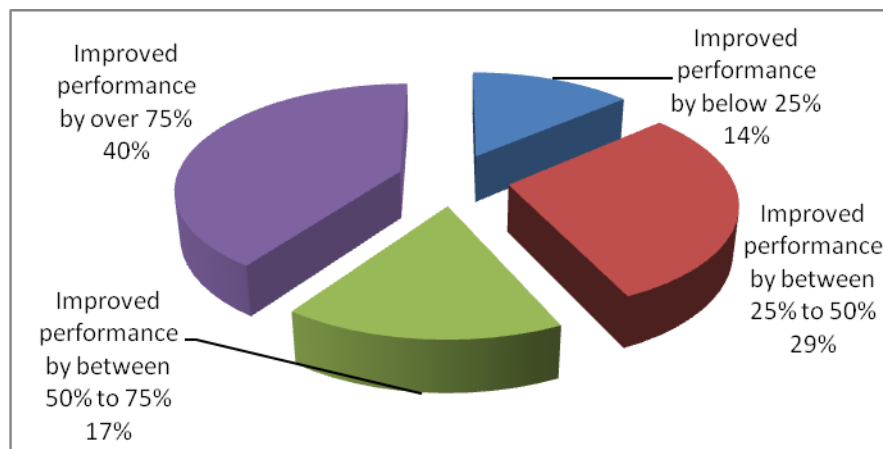
**Figure 4.16: Influence of claim rejection ratio**

The findings show that the respondents were asked to indicate on how claim rejection ratio influences the performance of the insurance industry in Kenya. 38% who were the majority responded that claim rejection ratio increased performance by between 50% to 75%, 30% revealed that claim ratio increased performance by between 25% to 50%, 19% indicated that claim rejection ratio increased performance by below 25% while 13% indicated that claim rejection ratio increased performance by over 75% as shown in Figure 4.16.

Concerning prudent insurance practices, 60.6% who were the majority indicated that Proper manning of customers' help desk is done more than once in a month, 87.2% also indicated that Proper complaints management systemic done more than once in a month while 75.3% indicated that Proper training policy to continuously improve staff is also done more than once in a month as shown in Table 4.47.

**Table 4.47: Prudent Insurance Practices**

<b>Statement</b>	<b>Never</b>	<b>Once a month</b>	<b>More than once in a month</b>
Proper manning of customers' help desk	0.60%	38.90%	60.60%
Proper complaints management system	0.00%	12.80%	87.20%
Proper training policy to continuously improve staff	0.00%	24.70%	75.30%



**Figure 4.17: Influence of prudent insurance practices**

40% of the respondents revealed that prudent insurance practices improved performance by over 75% , 17% responded that prudent insurance practices improved performance by

between 50% to 75%, 14% of the respondents indicated that prudent insurance practices improved performance by less than 25%, while 29% indicated that prudent insurance practices improved performance by between 25% to 50% as shown in Figure 4.17.

#### **4.8.2 Relationship between service quality and gross premium (income)**

The results presented in Table 4.48 present the fitness of model used of the regression model in explaining the study phenomena. Promptness to settlement of claim, claim rejection ratio and prudent insurance practices explained 41.9% of gross total premium (income).

**Table 4.48: Model Fitness for the regression of Gross Premium on Service Quality**

<b>Indicator</b>	<b>Coefficient</b>
R	0.648
R Square	<b>0.419</b>
Adjusted R Square	0.410
Std. Error of the Estimate	0.3469488

The p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.49: Regression of Gross Total Premium on Service Quality**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>Sig</b>
(Constant)	1.494	0.114	13.088	0.000
promptness of claims settlement	0.229	0.032	7.194	<b>0.000</b>
Claim rejection ratio	0.102	0.038	2.723	<b>0.007</b>
Prudent insurance practices	0.255	0.031	8.124	<b>0.000</b>

The specific model was;

$$\text{Gross total premium (income)} = 1.494 + 0.229X_1 + 0.102X_2 + 0.255X_3$$

Where  $X_1$  is Promptness of claims settlement

$X_2$  is claims rejection ratio

$X_3$  is prudent insurance practices

Regression of coefficients results in Table 4.49 shows that promptness of claims settlement and gross total premium (income) are positively and significantly related ( $r=0.229$ ,  $p=0.000$ ). The Table further indicates that claims rejection ratio and gross total premium (income) are positively and significantly related ( $r=0.102$ ,  $p=0.007$ ). It was further established that prudent insurance practices and gross total premium (income) were positively and significantly related ( $r=0.255$ ,  $p=0.000$ ). The results indicate that the overall model was statistically significant.

Analysis of Variance in Table 4.50 shows the results imply that the independent variables are good predictors of gross total income. This was supported by an F statistic of 47.414 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance levels.

**Table 4.50: ANOVA for the Regression of Gross Total Premium on Service Quality**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	17.122	3	5.707	47.414	<b>0.000</b>
Residual	23.714	197	0.12		
Total	40.836	203			

These findings agrees with that of Mahajan (2013) who studied gaps in customer services in insurance industry and strategic intelligence to close these gaps focusing on the increase in quality service such as improving the service and training of employees of insurance industry to be more pleasant throughout their daily interaction with the public will apparently increase in service quality that can further have a dramatic impact on a insurance firm / industry's survival.

#### **4.8.3 Relationship between service quality and total assets**

The results presented in Table 4.51 present the fitness of model used of the regression model in explaining the study phenomena. Promptness to settlement of claim, claim rejection ratio and prudent insurance practices explained 46.9% of total assets.

**Table 4.51: Model Fitness for the regression of Total Asset on Service Quality**

<b>Indicator</b>	<b>Coefficient</b>
R	0.685
R Square	<b>0.469</b>
Adjusted R Square	0.461
Std. Error of the Estimate	0.6037984

The p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be

that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.52: ANOVA of Total for the regression Asset on Service Quality**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	63.493	3	21.164	58.052	<b>0.000</b>
Residual	71.821	197	0.365		
Total	135.313	203			

Table 4.52 provides the results on the analysis of the variance (ANOVA). The results imply that the independent variables are good predictors of total assets. This was supported by an F statistic of 58.052 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance levels.

Regression of coefficients results in Table 4.52 shows that promptness of claims settlement and total asset are positively and significantly related ( $r=0.484$ ,  $p=0.000$ ).

**Table 4.53: Regression of Total Asset on Service Quality**

Variable subcontract	B	Std. Error	T	Sig
(Constant)	0.205	0.199	1.032	0.303
promptness of claims settlement	0.484	0.056	8.712	<b>0.000</b>
Claim rejection ratio	0.045	0.065	0.681	0.497
Prudent insurance practices	0.503	0.055	9.206	<b>0.000</b>

The specific model was; Total assets  $=0.205+0.484X_1+0.045X_2+0.503X_3$

Where  $X_1$  is Promptness of claims settlement,  $X_2$  is claims rejection ratio  $X_3$  is prudent insurance practices

The Table further indicates that claims rejection ratio and total asset are positively and insignificantly related ( $r=0.045$ ,  $p=0.497$ ). It was further established that prudent insurance practices and total asset were positively and significantly related ( $r=0.503$ ,  $p=0.000$ ). The results indicate that the overall model was statistically significant.

The findings concur with Cartwright *et al.* (2009) who surveyed seventy-four companies, which are members of the Strategic and Competitive Intelligence Professionals (SCIP). The study found that technical adequacy (quality) and interaction with the competitive intelligence unit are the major characteristics influencing the perceived usefulness of competitive intelligence.

#### **4.8.4 Relationship between service quality and growth in profit**

The results presented in Table 4.53 present the fitness of model used of the regression model in explaining the study phenomena. Promptness to settlement of claim, claim rejection ratio and prudent insurance practices explained 45.1% of growth in profits.

**Table 4.54: Model Fitness for the Regression of Growth in Profit on Service Quality**

<b>Indicator</b>	<b>Coefficient</b>
R	0.672
R Square	<b>0.451</b>
Adjusted R Square	0.443
Std. Error of the Estimate	0.6291284

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value ( $p$ ) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.55: ANOVA for the Regression of Growth in Profit on Service Quality**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	64.126	3	21.375	54.005	<b>0.000</b>
Residual	77.973	197	0.396		
Total	142.1	203			

Table 4.55 provides the results on the analysis of the variance (ANOVA). Further, the results imply that the independent variables are good predictors of profit. This was supported by an F statistic of 54.005 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance levels.

Regression of coefficients results in Table 4.56 shows that promptness of claims settlement and growth in profit are positively and significantly related ( $r=0.459$ ,  $p=0.000$ ). The Table further indicates that claims rejection ratio and growth in profit are positively and insignificantly related ( $r=0.049$ ,  $p=0.475$ ). It was further established that prudent insurance practices and growth in profit were positively and significantly related ( $r=0.529$ ,  $p=0.000$ ). The results further indicated that the overall model was statistically significant.

**Table 4.56: Regression of the Growth in Profit on Service Quality**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>sig</b>
(Constant)	-0.291	0.207	-1.405	0.161
promptness of claims settlement	0.459	0.058	7.934	<b>0.000</b>
Claim rejection ratio	0.049	0.068	0.716	0.475
Prudent insurance practices	0.529	0.057	9.289	<b>0.000</b>



The specific model was;

$$\text{Profit growth} = -0.291 + 0.459X_1 + 0.049X_2 + 0.529X_3$$

Where  $X_1$  is Promptness of claims settlement

$X_2$  is claims rejection ratio,  $X_3$  is prudent insurance practices

These findings are consistent with that of Mugo, Wanjau and Ayodo (2012) who found that for greater profitability the competitive intelligence practices that should be applied are mainly product differentiation strategies, market intelligence, technology intelligence and strategic alliance. All these strategic intelligence practices lead to greater profitability and also reduction in costs for an organization, with technology intelligence being the highest contributor.

#### **4.8.5 Hypothesis testing**

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the  $H_0$  is not rejected but if it's less than 0.05, the  $H_0$  fails to be accepted. The null hypothesis for the forth objective was: service quality does not have a significant influence on performance of insurance firms in Kenya while the alternative hypothesis was service quality have a significant influence on performance of insurance firms in Kenya. The calculated f-statistic of 123.463 was higher than the tabulated/critical f statistic as shown in Table 4.57. The findings were further supported p-value of 0.000. This indicated that the null hypothesis was rejected hence service quality have a significant influence on performance of insurance firms in Kenya.

**Table 4.57: Hypothesis Testing for Growth in Profit on Service Quality**

<b>Variable</b>	<b>B</b>	<b>Std.</b>		<b>Sig.</b>
		<b>Error</b>	<b>T</b>	
(Constant)	1.187	0.117	10.129	0.000
Service quality	0.573	0.052	11.111	<b>0.000</b>
F Test (p value)	<b>123.463(0.000)</b>			
R Squared	0.379			
Adjusted R Squared	0.376			

## 4.9 Financial Prudence

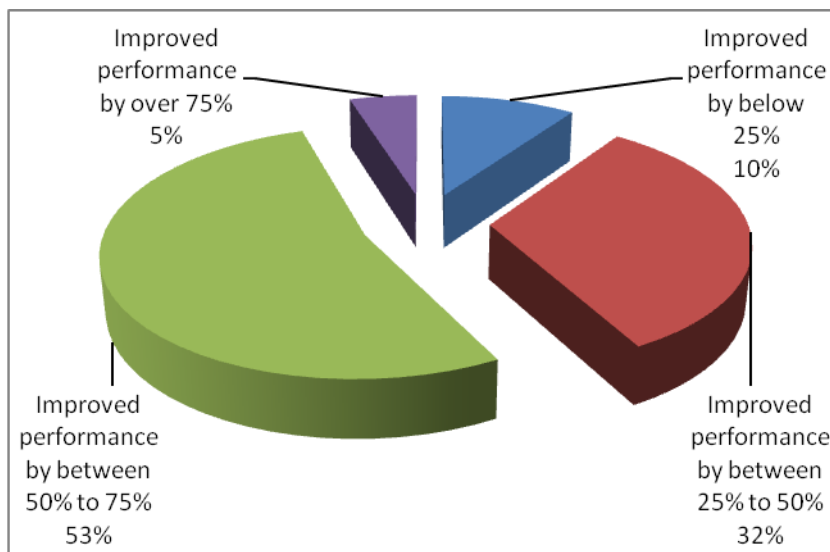
### 4.9.1 Descriptive Statistics

The fifth objective of the study was to establish the influence of financial prudence on the performance of the insurance industry in Kenya. Particularly, the study focused on solvency ratio, liquidity ratio and adherence to the regulator's requirement on assets and liabilities by insurance company. The respondents were asked to respond on to solvency ratio as a percentage that insurance companies have incurred over the last five years as shown in Table 4.58.

**Table 4.58: Solvency Ratio**

<b>Year</b>	<b>Less than 30%</b>	<b>30-70%</b>	<b>Over 70%</b>
2011	11.40%	38.00%	50.60%
2012	10.60%	48.10%	41.20%
2013	48.90%	22.80%	28.30%
2014	21.50%	30.90%	47.50%
2015	8.40%	38.50%	53.10%

50.6 % of the respondents who were the majority indicated that they had a solvency ratio of over 70% in the year 2011, 48.10% of the respondents who were the majority also indicated between 30-70% in the year 2012, 48.9 % indicated less than 30% in the year 2013. 47.5% of the respondents revealed that they had a solvency ratio of over 70% in the year 2014, while 53.1% of the respondents who were the majority also indicated a solvency ratio of over 70% as shown in Table 4.58.



**Figure 4.18: Influence of Solvency ratio**

The respondents were asked to indicate on how solvency ratio influences the performance of the insurance industry in Kenya. 53% indicated that solvency ratio increased performance by between 50% to 75%, 10% indicated that solvency ratio increased performance by below 25%. 32% who were the majority responded that solvency ratio increased performance by between 25% to 50%, while only 5% indicated that solvency ratio increased performance by over 75% as shown in Figure 4.18.

Further, the respondents were requested to indicate the liquidity ratio as a percentage that insurance companies have incurred over the last five years as shown in Table 4.59.

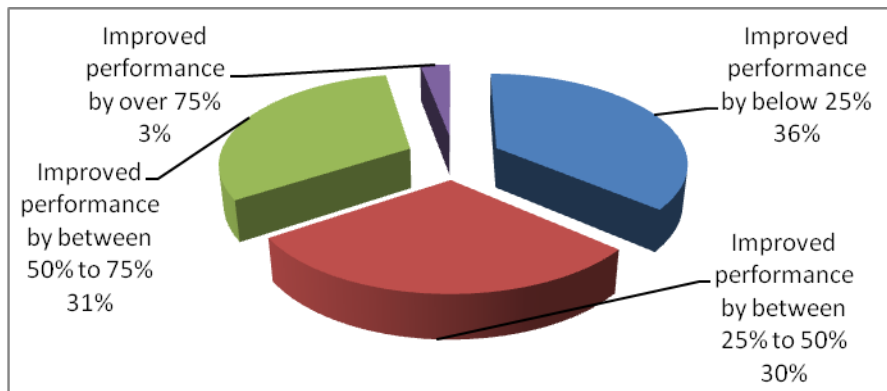
**Table 4.59: Liquidity Ratio**

<b>Year</b>	<b>Less than 30%</b>	<b>30-70%</b>	<b>Over 70%</b>
2011	12.00%	39.50%	48.50%
2012	6.90%	45.60%	47.50%
2013	5.00%	48.10%	46.90%
2014	12.70%	46.00%	41.30%
2015	4.70%	51.20%	44.10%

48.5% of the respondents who were the majority indicated that they had a liquidity ratio of over 70% in the year 2011, 47.5% of the respondents who were the majority also indicated more than 70% in the year 2012, 48.10% indicated between 30-70% in the year 2013. 46% of the respondents revealed that they had a liquidity ratio of between 30-70% in the year 2014, while 51.2% of the respondents who were the majority also indicated a liquidity ratio of between 30-70% in the year 2015.

The findings are in line with Chirag (2008) who studied on Financial Performance of Indian Non-Life Insurance Industry involving an analysis of financial performance of the Non-Life insurance sector in India using financial ratios such as claims ratio and combined ratio. It also involved assessment of compliance with IRDA regulations - Solvency margins and Rural and Social Sector Obligations - by the existing insurers.

The respondents were asked to indicate on how liquidity ratio influences the performance of the insurance industry in Kenya.



**Figure 4.19: Influence of liquidity ratio**

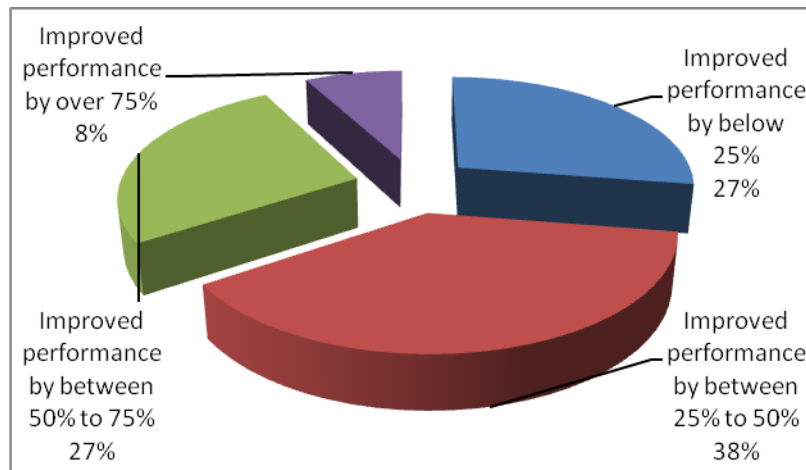
According to the findings, 31% who were the majority responded that liquidity ratio increased performance by between 50% to 75%, 25% revealed that liquidity ratio increased performance by between 25% to 50%, 36% indicated that liquidity ratio increased performance by below 25% while 8% indicated that liquidity ratio increased performance by over 75% as shown in Figure 4.19. Akotey (2013) argued that the financial prudence indicators are concerned with the financial strength and liquidity of the insurance programme. Often, these are not tracked at product level but rather at the level of the organisation that bears the insurance risk. Larger companies may, however, allocate specific assets to cover reserves and expenses for each product and to maintain a good asset-liability match; doing this enables them to track solvency and liquidity by product. These companies may, however, have some additional assets to fall back on if solvency or liquidity of the product were threatened.

Concerning adherence to the regulator's requirement on assets and liabilities as shown in the Table 4.60, 44.6% who were the majority indicated that their adherence rate to the regulator's requirement on assets and liabilities was between 30-70% in the year 2011, 52.4% of the respondents who were the majority indicated over 70% in the year 2012, 51.4% indicated over 70% in the year 2013. 52.7% of the respondents revealed that they had adherence to the regulator's requirement on assets and liabilities rate of over 70% in the year 2014, while 48.2% of the respondents who were the majority indicated

adherence to the regulator’s requirement on assets and liabilities rate of between 30-70% in the year 2015.

**Table 4.60: Adherence to the regulator’s requirement on assets and liabilities**

Year	Less than 30%	30-70%	Over 70%
2011	13.60%	44.60%	41.80%
2012	11.80%	35.90%	52.40%
2013	11.00%	37.60%	51.40%
2014	5.50%	41.80%	52.70%
2015	5.40%	48.20%	46.40%



**Figure 4.20: Influence of adherence to the IRA requirement on assets and liabilities**

According to findings, 8% of the respondents revealed that adherence to the regulator’s requirement on assets and liabilities improved performance by over 75% , 27% responded that adherence to the regulator’s requirement on assets and liabilities improved performance by between 50% to 75%, 27% of the respondents indicated that adherence to the regulator’s requirement on assets and liabilities improved performance

by less than 25%, while 38% indicated that adherence to the regulator’s requirement on assets and liabilities improved performance by between 25% to 50% as shown in Figure 4.20.

#### **4.9.2 Relationship between financial prudence and gross premium (income)**

The results presented in Table 4.61 present the fitness of model used of the regression model in explaining the study phenomena. Solvency ratio, liquidity and adherence to the regulator’s requirement on assets and liabilities explained 13.3% of gross total premium (income).

**Table 4.61: Model Fitness for the Regression of Gross Premium on Financial Prudence**

<b>Indicator</b>	<b>Coefficient</b>
R	0.365
R Square	<b>0.133</b>
Adjusted R Square	0.120
Std. Error of the Estimate	0.4240789

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.62: ANOVA for the Regression of Gross Premium on Financial Prudence**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5.541	3	1.847	10.27	<b>0.000</b>
Residual	35.969	200	0.18		
Total	41.51	203			

Table 4.62 provides the results on the analysis of the variance (ANOVA). The results indicated that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of gross total income. This was supported by an F statistic of 10.27 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance levels.

**Table 4.63: Regression of Gross Total Premium on Financial Prudence**

Variable subcontract	B	Std. Error	T	Sig
(Constant)	1.932	0.152	12.719	0.000
Solvency ratio	0.14	0.04	3.512	<b>0.001</b>
Liquidity ratio	0.122	0.04	3.055	<b>0.003</b>
Adherence	0.111	0.05	2.233	<b>0.027</b>

The specific model was;

$$\text{Gross total premium (income)} = 1.932 + 0.14X_1 + 0.122X_2 + 0.111X_3$$

Where  $X_1$  is Solvency ratio

$X_2$  is Liquidity ratio

$X_3$  is adherence to the regulator's requirement on assets and liabilities



Regression of coefficients results in Table 4.63 shows that solvency ratio and gross total premium (income) are positively and significantly related ( $r=0.14$ ,  $p=0.001$ ). The Table further indicates that liquidity ratio and gross total premium (income) are positively and significantly related ( $r=0.122$ ,  $p=0.003$ ). It was further established that adherence to the regulator's requirement on assets and liabilities and gross total premium (income) were positively and significantly related ( $r=0.111$ ,  $p=0.027$ ).

The findings is consistent with that of Akotey (2013) who found out that Liquidity and solvency do affect the other performance areas of an insurance programme. Excessive liquidity reduces investment income which in turn lowers overall net income. Too little liquidity on the other hand may cause a delay in claims payment (Akotey, 2013).

#### **4.9.3 Relationship between Financial Prudence and Total Assets**

The results presented in Table 4.64 present the fitness of model used of the regression model in explaining the study phenomena. Solvency ratio, liquidity and adherence to the regulator's requirement on assets and liabilities explained 20.5% of total assets.

**Table 4.64: Model Fitness for the Regression of Total Assets on Financial Prudence**

<b>Indicator</b>	<b>Coefficient</b>
R	0.453
R Square	<b>0.205</b>
Adjusted R Square	0.193
Std. Error of the Estimate	0.7406186

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value ( $p$ ) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. The results further indicate that the overall

model was statistically significant. Further, in Table 4.65 the results imply that the independent variables are good predictors of total assets. This was supported by an F statistic of 17.184 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance levels.

**Table 4.65: ANOVA for the Regression of Total Assets on Financial Prudence**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	28.277	3	9.426	17.184	<b>0.000</b>
Residual	109.703	200	0.549		
Total	137.98	203			

Regression of coefficients results in Table 4.66 shows that solvency ratio and total asset are positively and significantly related ( $r=0.396$ ,  $p=0.000$ ). The Table further indicates that liquidity ratio and total asset are positively and significantly related ( $r=0.234$ ,  $p=0.001$ ).

**Table 4.66: Regression of Total Assets on Financial Prudence**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>sig</b>
(Constant)	0.705	0.265	2.656	0.009
Solvency ratio	0.396	0.07	5.679	<b>0.000</b>
Liquidity ratio	0.234	0.07	3.356	<b>0.001</b>
Adherence	0.164	0.087	1.882	0.061

The specific model was;

$$\text{Total assets} = 0.705 + 0.396X_1 + 0.234X_2 + 0.164X_3$$

Where  $X_1$  is Solvency ratio

$X_2$  is Liquidity ratio

$X_3$  is Adherence to the regulator's requirement on assets and liabilities

It was further established that adherence to the regulator’s requirement on assets and liabilities and total asset were positively and insignificantly related ( $r=0.164$ ,  $p=0.061$ ). These findings is consistent with that of Akotey (2013) who found out that Liquidity and solvency do affect the other performance areas of an insurance programme. Excessive liquidity reduces investment income which in turn lowers overall net income. Too little liquidity on the other hand may cause a delay in claims payment (Akotey, 2013).

#### **4.9.4 Relationship between financial prudence and growth in profit**

The results presented in Table 4.67 present the fitness of model used of the regression model in explaining the study phenomena. Solvency ratio, liquidity and adherence to the regulator’s requirement on assets and liabilities explained 17.8% of growth in profits

**Table 4.67: Model Fitness for the Regression of Growth in Profit on Financial Prudence**

<b>Indicator</b>	<b>Coefficient</b>
R	0.422
R Square	<b>0.178</b>
Adjusted R Square	0.166
Std. Error of the Estimate	0.7662961

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

**Table 4.68: ANOVA for the Regression of Growth in Profit on Financial Prudence**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	25.436	3	8.479	14.439	.000b
Residual	117.442	200	0.587		
Total	142.877	203			

The ANOVA results in Table 4.68 indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of profit. This was supported by an F statistic of 14.439 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance levels. Regression of coefficients results in Table 4.69 shows that solvency ratio and growth in profit are positively and significantly related ( $r=0.395$ ,  $p=0.000$ ).

**Table 4.69: Regression of Growth in Profit on Financial Prudence**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>sig</b>
(Constant)	0.327	0.274	1.19	0.236
Solvency ratio	0.395	0.072	5.479	<b>0.000</b>
Liquidity ratio	0.186	0.072	2.583	<b>0.011</b>
Adherence	0.158	0.09	1.755	0.081

The specific model was;

$$\text{Profit growth} = 0.327 + 0.395X_1 + 0.186X_2 + 0.158X_3$$

Where  $X_1$  is Solvency ratio

$X_2$  is Liquidity ratio

$X_3$  is Adherence to the regulator's requirement on assets and liabilities

The Table further indicates that liquidity ratio and growth in profit are positively and insignificantly related ( $r=0.186$ ,  $p=0.011$ ). It was further established that adherence to the regulator's requirement on assets and liabilities and growth in profit were positively and insignificantly related ( $r=0.158$ ,  $p=0.081$ ).

This finding is consistent with that of Akotey (2013) who found out that Liquidity and solvency do affect the other performance areas of an insurance programme. Excessive liquidity reduces investment income which in turn lowers overall net income. Too little liquidity on the other hand may cause a delay in claims payment (Akotey, 2013).

#### **4.9.5 Hypothesis testing**

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the  $H_0$  is not rejected but if it's less than 0.05, the  $H_0$  fails to be accepted.

The null hypothesis for the fifth objective was: financial prudence does not have a significant influence on performance of insurance firms in Kenya while the alternative hypothesis was financial prudence have a significant influence on performance of insurance firms in Kenya. In Table 4.70, the calculated f-statistic of 69.505 was higher than the tabulated/critical f statistic. The findings were further supported p-value of 0.000. This indicated that the null hypothesis was rejected hence financial prudence have a significant influence on performance of insurance firms in Kenya.

**Table 4.70: Hypothesis Testing on the Regression of Growth in Profit on Financial Prudence**

Variable	B	Std. Error	t	Sig.
(Constant)	1.536	0.114	13.475	0.000
Financial prudence	0.47	0.056	8.337	<b>0.000</b>
F Test (p value)	<b>69.505(0.000)</b>			
R Squared	0.256			
Adjusted R Squared	0.252			

#### **4.10 Strategic Information system**

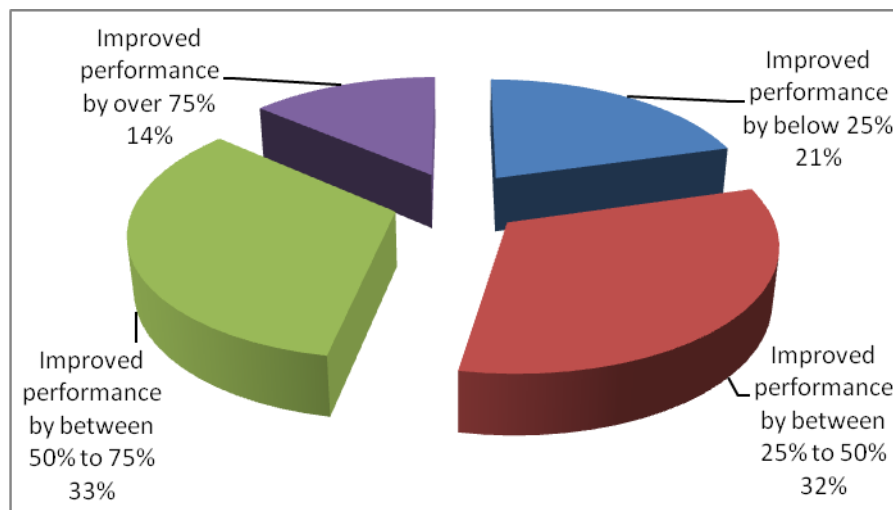
##### **4.10.1 Descriptive Statistics**

The sixth objective of the study was to establish the moderating effect of Strategic Information System on the relationship between the independent variable and dependent variables. Particularly, the study focused on operation system and strategic information system. The respondents were asked to respond on the statements on operational system as shown in Table 4.71. 35.60% who were the majority indicated that the rate of automation of underwriting is less than 25%. 64% indicated that the rate of automation of claims is also less than 25% while 62% indicated that the rate of automation of account processing is between 25-50%.

**Table 4.71: Operation System**

Statement	Less than 25%	25-50%	Above 50%
Automation of underwriting	35.60%	31.70%	32.80%
Automation of claims	64.00%	19.50%	16.50%
Automation of account processing	8.40%	62.10%	29.50%

The respondents were asked to indicate on how operation system influences the performance of the insurance industry in Kenya.



**Figure 4.21: Influence of operation system**

The findings show that 32% who were the majority responded that operation system increased performance by between 25% to 50%, 33% indicated that operation system increased performance by between 50% to 75%, 14% indicated that operation system increased performance by over 75% while 21% indicated that operation system increased performance by below 25% as shown in Figure 4.21.

Rajan (2007) considers insurance services to be information-intensive, showing a high degree of automation, particularly in underwriting, claims and accounts processing. In fact, the industry relies on Information Technology to handle the routine business of administering insurance policies and would not be able to conduct business without it. The strategic use of Information Technology has already helped to introduce direct marketing and direct writing - new channels of distribution which would not have been possible without Information Technology, and today the question is not whether Information Technology is used, but how well it is used.

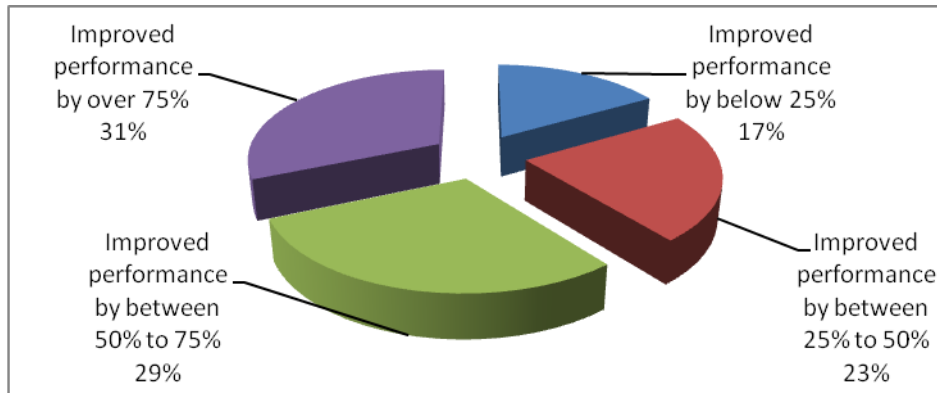
Further, the respondents were requested to respond on the statements related to strategic information system as shown in Table 4.72. 47% who were the majority indicated that the rate of changing goals to gain competitive advantage between 25-50%. 51.6% indicated that the rate of changing operations to gain competitive advantage is also between 25-50% while 49.5% indicated that the rate of changing products and services to gain competitive advantage between 25-50%.

**Table 4.72: Strategic Information System**

<b>Statement</b>	<b>Less than 25%</b>	<b>25- 50%</b>	<b>Above 50%</b>
Changing goals to gain competitive advantage	12.40%	47.00%	40.50%
Changing operations to gain competitive advantage	9.80%	51.60%	38.60%
Changing products and services to gain competitive advantage	6.00%	49.50%	44.60%

The respondents were asked to indicate on how strategic information systems influence the performance of the insurance industry in Kenya.





**Figure 4.22: Influence of strategic information system**

According to the findings, 29% who were the majority responded that strategic information system increased performance by between 50% to 75%, 31% indicated that strategic information system increased performance by over 75%, 23% revealed that strategic information system increased performance by between 25% to 50%, while 17% indicated that strategic information system increased performance by below 25%.

#### **4.10.2 Relationship between strategic information system and gross premium**

The results presented in Table 4.73 present the fitness of model used of the regression model in explaining the study phenomena. Operation system and strategic information system explained 17.2% of gross total premium (income).

**Table 4.73: Model Fitness of the Regression of the Gross Premium on Strategic Information System**

<b>Indicator</b>	<b>Coefficient</b>
R	0.415
R Square	<b>0.172</b>
Adjusted R Square	0.164
Std. Error of the Estimate	0.4070035

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant.

Regression of coefficients results in Table 4.74 shows that operational system and gross total premium (income) are positively and significantly related ( $r=0.194$ ,  $p=0.001$ ). It was further established that a Strategic information System and gross total premium (income) were positively and significantly related ( $r=0.191$ ,  $p=0.001$ ).

**Table 4.74: Regression of the Gross Total Premium on Strategic Information System**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>sig</b>
(Constant)	1.86	0.139	13.382	0.000
Operational system	0.194	0.057	3.394	<b>0.001</b>
Strategic information System	0.191	0.056	3.435	<b>0.001</b>

The specific model was;

$$\text{Gross total premium (income)} = 1.86 + 0.194X_1 + 0.191X_2$$

Where  $X_1$  is Operational system

$X_2$  is Strategic information System

The ANOVA results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of gross total income. This was supported by an F statistic of 20.484 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance levels.

**Table 4.75: ANOVA for the Regression of the Gross Total Premium on Strategic Information System**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	6.787	2	3.393	20.484	<b>0.000</b>
Residual	32.633	197	0.166		
Total	39.42	203			

Ghimire (2013) and Rabindra (2013) studied on Financial Efficiency of Non Life Insurance Industries in Nepal which concludes that maintaining the sound financial health of insurance industry is most challenging job for regulatory agencies while its contribution to the economy and society is noteworthy.

#### **4.10.3 Relationship between strategic information system and total assets**

The results presented in Table 4.76 present the fitness of model used of the regression model in explaining the study phenomena. Operation system and strategic information system explained 5.8% of total assets.

**Table 4.76: Model Fitness for Regression of the Total Asset on Strategic Information System**

<b>Indicator</b>	<b>Coefficient</b>
R	0.241
R Square	<b>0.058</b>
Adjusted R Square	0.048
Std. Error of the Estimate	0.7955335

In statistics testing the p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Regression of coefficients results in Table 4.77 shows that operational system and gross total asset are positively and significantly related ( $r=0.214$ ,  $p=0.005$ ). It was further established that a Strategic information System and total asset were positively and insignificantly related ( $r=0.196$ ,  $p=0.072$ ).

**Table 4.77: Regression of the Total Asset on Strategic Information System**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>sig</b>
(Constant)	1.439	0.272	5.297	0.000
Operational system	0.214	0.112	2.91	<b>0.005</b>
Strategic information System	0.196	0.109	1.806	<b>0.072</b>

The specific model was;

$$\text{Total assets} = 1.439 + 0.214X_1 + 0.196X_2$$

Where  $X_1$  is Operational system,  $X_2$  is Strategic information System

The ANOVA results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of total assets. This was supported by an F statistic of 6.067 and the reported p value (0.003) which was less than the conventional probability of 0.05 significance levels.

**Table 4.78: ANOVA for the Regression of the Total Asset on Strategic Information System**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	7.679	2	3.839	6.067	<b>0.003</b>
Residual	124.676	197	0.633		
Total	132.355	203			

This finding agrees with that of Oz and Jones (2008) who found out that Strategic Information Systems are created to assist organizations in seizing opportunities and define Strategic Information Systems as any information system that gives its owner a competitive advantage.

#### **4.10.4 Relationship between strategic information system and growth in profit**

The results presented in Table 4.79 present the fitness of model used of the regression model in explaining the study phenomena. Operation system and strategic information system explained 5% of growth in profits

**Table 4.79: Model Fitness for the Regression of the Growth in Profit on Strategic Information System**

<b>Indicator</b>	<b>Coefficient</b>
R	0.224
R Square	<b>0.050</b>
Adjusted R Square	0.041
Std. Error of the Estimate	0.8212258

The p-value indicates the level of relation of the independent variable to the dependent variable. If the significance number found is less than the critical value also known as the probability value (p) which is statistically set at 0.05, then the conclusion would be that the model is significant in explaining the relationship; else the model would be regarded as non-significant. Regression of coefficients results in Table 4.80 shows that operational system and growth in profit are positively and significantly related (r=0.212, p=0.006). It was further established that a Strategic information System and growth in profit were positively and insignificantly related (r=0.18, p=0.11).

**Table 4.80: Regression of the Growth in Profit on Strategic Information System**

<b>Variable subcontract</b>	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>sig</b>
(Constant)	0.99	0.281	3.529	0.001
Operational system	0.212	0.116	2.833	<b>0.006</b>
Strategic information System	0.18	0.112	1.605	<b>0.11</b>

The specific model was;

Profit growth =  $0.99 + 0.212X_1 + 0.18X_2$ ; Where  $X_1$  is Operational system,  $X_2$  is Strategic information System

The ANOVA results indicate that the overall model was statistically significant. Further, the results imply that the independent variables are good predictors of profit. This was supported by an F statistic of 5.201 and the reported p value (0.006) which was less than the conventional probability of 0.05 significance levels.

**Table 4.81: ANOVA for the Regression of the Growth in Profit on Strategic Information System**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	7.016	2	3.508	5.201	<b>0.006</b>
Residual	132.859	197	0.674		
Total	139.875	203			

This finding agrees with that of Oz and Jones (2008) who found out that Strategic Information Systems are created to assist organizations in seizing opportunities and define Strategic Information Systems as any information system that gives its owner a competitive advantage.

#### **4.10.5 Hypothesis testing**

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho is not rejected but if it's less than 0.05, the Ho fails to be accepted. The null hypothesis was: strategic information system does not have a significant influence on performance of insurance firms in Kenya while the alternative hypothesis was strategic information system have a significant influence on performance of insurance firms in Kenya. In Table 4.82, the calculated f-statistic of 27.893 was higher than the tabulated/critical f statistic. The findings were further supported p-value of 0.000. This indicated that the null hypothesis was rejected hence strategic information system have a significant influence on performance of insurance firms in Kenya.

**Table 4.82: Hypothesis Testing for the Regression of the Growth in Profit on Strategic Information System**

Variable	B	Std.		Sig.
		Error	t	
(Constant)	1.821	0.125	14.603	0.000
strategic information system	0.287	0.054	5.281	<b>0.000</b>
F Test (p value)	<b>27.893(0.000)</b>			
R Squared	0.121			
Adjusted R Squared	0.117			

#### **4.11 Overall Correlation Analysis**

The overall correlation analysis results in Table 4.82 revealed that there was a positive and a significant association between product value and performance ( $r=0.542$ ,  $p=0.000$ ). The results indicated that there was a positive and a significant association between product awareness and performance ( $r=0.524$ ,  $p=0.000$ ). The results also indicated that there was a positive and a significant association between product satisfaction and performance ( $r=0.493$ ,  $p=0.000$ ). Further the results showed that there was a positive and a significant association between service quality and performance ( $r=0.616$ ,  $p=0.000$ ), financial prudence also had a positive and significant association ship with performance ( $r=0.506$ ,  $p=0.000$ ), while strategic information system had also positive and significant effect on growth performance ( $r=0.348$ ,  $p=0.000$ ).



**Table 4.83: Overall correlation matrix**

		<b>Performance</b>	<b>Product value</b>	<b>Product awareness</b>	<b>Product satisfaction</b>	<b>Service quality</b>	<b>Finance prudence</b>	<b>Strategic information system</b>
Performance	Pearson							
	Correlation	1.000						
Product value	Sig. (2-tailed)							
	Pearson							
Product awareness	Correlation	.542**	1.000					
	Sig. (2-tailed)	0.000						
Product satisfaction	Pearson							
	Correlation	.524**	.334**	1.000				
Service quality	Sig. (2-tailed)	0.000	0.000					
	Pearson							
Finance prudence	Correlation	.493**	.358**	.597**	1.000			
	Sig. (2-tailed)	0.000	0.000	0.000				
Strategic information system	Pearson							
	Correlation	.616**	.418**	.482**	.646**	1.000		
Strategic information system	Sig. (2-tailed)	0.000	0.000	0.000	0.000			
	Pearson							
Strategic information system	Correlation	.506**	.438**	.443**	.374**	.312**	1.000	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		
Strategic information system	Pearson							
	Correlation	.348**	.404**	.262**	.366**	.482**	0.091	1.000
Strategic information system	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.194	

\*\* Correlation is significant at the 0.01 level (2-tailed).

#### 4.12 Overall Regression model before moderation

Regression of coefficients results in Table 4.83 shows that there was a positive and a significant relationship between product value and performance ( $r=0.188$ ,  $p=0.000$ ). The results indicated that there was a positive and a significant relationship between product awareness and performance ( $r=0.148$ ,  $p=0.004$ ). The results also indicated that there was a positive and an insignificant relationship between product satisfaction and performance ( $r=0.024$ ,  $p=0.708$ ). Further the results showed that there was a positive and a significant relationship between service quality and performance ( $r=0.351$ ,  $p=0.000$ ). Lastly, the study revealed that financial prudence also had a positive and significant effect on performance of insurance firms in Kenya ( $r=0.196$ ,  $p=0.000$ ).

**Table 4.84: Regression of coefficients before moderation**

Variable	B	Std. Error	T	sig
(Constant)	0.595	0.123	4.82	0.000
Product value	0.188	0.044	4.269	<b>0.000</b>
Product awareness	0.148	0.05	2.941	<b>0.004</b>
Product satisfaction	0.024	0.064	0.375	<b>0.708</b>
Service quality	0.351	0.06	5.817	<b>0.000</b>
Finance prudence	0.196	0.053	3.729	<b>0.000</b>

There the specific model before moderation is;

$$\text{Performance} = 0.595 + 0.188X_1 + 0.148X_2 + 0.024X_3 + 0.351X_4 + 0.196X_5$$

Where  $X_1$  is Product value

$X_2$  is Product awareness

$X_3$  is Product satisfaction

$X_4$  is Service quality

$X_5$  is Finance prudence

#### 4.13 Regression model after moderation

Regression of coefficients results in Table 4.84 shows that there was a positive and a significant relationship between product value and performance ( $r=0.122$ ,  $p=0.025$ ). The results indicated that there was a positive and a significant relationship between product awareness and performance ( $r=0.116$ ,  $p=0.027$ ). The results also indicated that there was a positive and an insignificant relationship between product satisfaction and performance ( $r=0.055$ ,  $p=0.396$ ). Further the results showed that there was a positive and a significant relationship between service quality and performance ( $r=0.300$ ,  $p=0.000$ ), the study also revealed that financial prudence had a positive and significant effect on performance of insurance firms in Kenya ( $r=0.142$ ,  $p=0.015$ ).

Strategic information system had a positive and significant influence on performance ( $r=0.001$ ,  $p=0.038$ ). This implies that strategic information system had a moderating effect on the performance of insurance firms.

**Table 4.85: Regression of coefficients after moderation**

Variable	B	Std. Error	T	sig
(Constant)	0.962	0.215	4.483	0.000
Product value	0.122	0.054	2.266	<b>0.025</b>
Product awareness	0.116	0.052	2.222	<b>0.027</b>
Product satisfaction	0.055	0.065	0.851	0.396
Service quality	0.300	0.065	4.63	<b>0.000</b>
Finance prudence	0.142	0.058	2.444	<b>0.015</b>
Moderating effect of strategic information systems	0.001	0.001	2.084	<b>0.038</b>

There the specific model after moderation is;

$$\text{Performance} = 0.962 + 0.122 X_1 + 0.116 X_2 + 0.055 X_3 + 0.300 X_4 + 0.142 X_5 + 0.001 X^* X_5$$

Where  $X_1$  is Product value

$X_2$  is Product awareness

$X_3$  is Product satisfaction

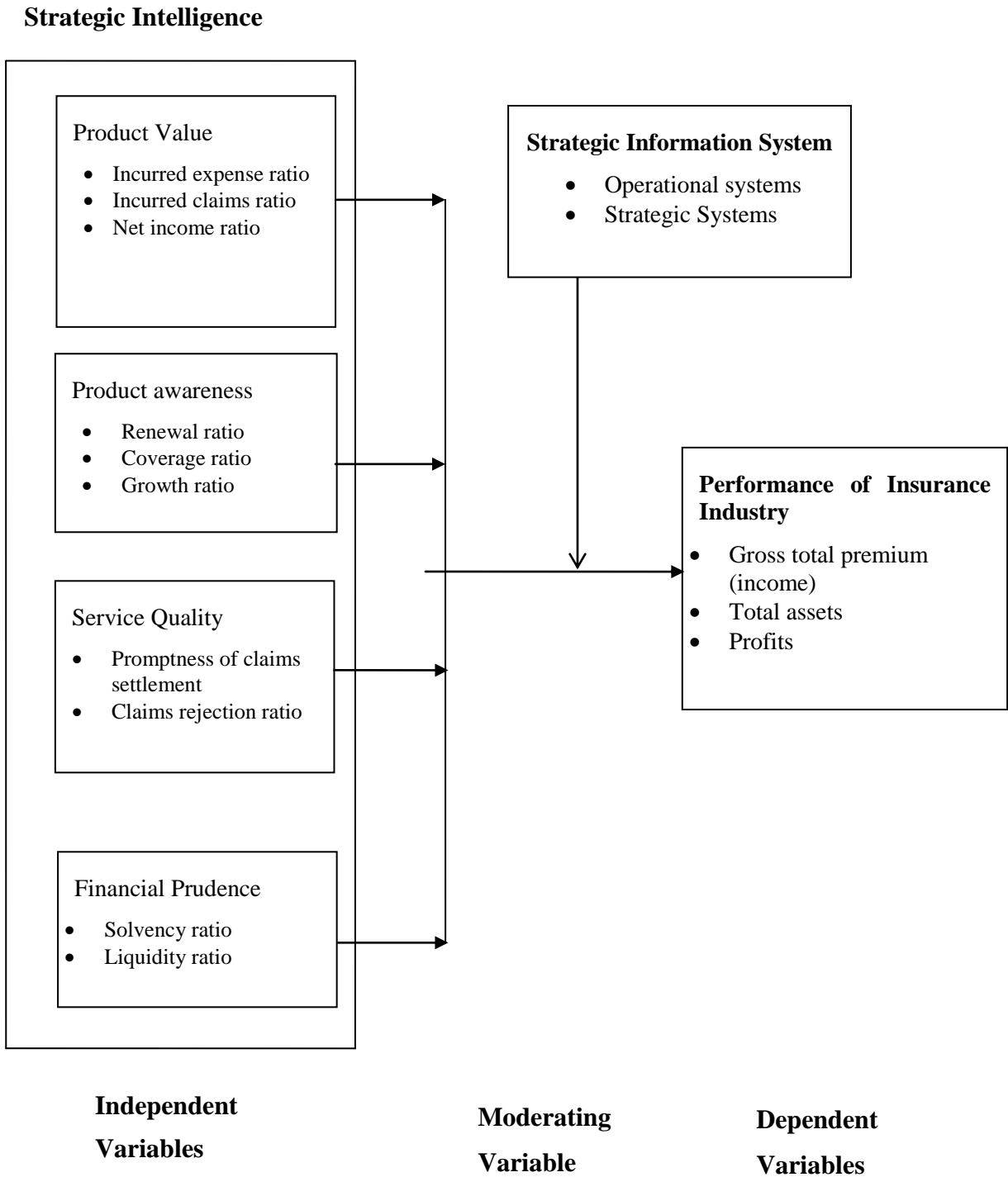
$X_4$  is Service quality

$X_5$  is Finance prudence

$X^* X_6$  is Moderating effect of strategic information systems

#### **4.14 Revised Conceptual Framework**

According to the objectives and hypothesis results (Appendices V), the rules for rejecting the hypothesis and the critical p values presented. The actual /calculated p values were then evaluated against the critical p values and the comment on whether the hypothesis was rejected, or not rejected. These results were used to develop a revised conceptual framework based on variables that were only significant. The results of hypotheses testing showed that only four variables (product value, product awareness, service quality and finance prudence) were significant and therefore product satisfaction was dropped since it was not significant and thus the revised conceptual framework remained as shown below. The summary of hypothesis testing and optimization of the model is shown in appendices V.



**Figure 4.23: Revised Conceptual Framework**

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This section provides the summary of findings, conclusions and recommendations from chapter four of the study. It further provides a recommendation on the areas for further studies in relation to the entire study findings which relates to the areas of the study with a bias to performance of insurance industry.

#### **5.2 Summary**

In this section, a summary of what ensued from the analysis of each specific objective is presented. The said results are linked to the literature and thereafter conclusions drawn. Finally some recommendations based on these results are made.

##### **5.2.1 Product value**

The first objective of the study was to establish the influence of Product Value on the performance of the insurance industry in Kenya. The study found out that insurance firms have been incurring an average expense ratio. This was as per the response. The study also found out that the insurance firms have an average incurred claim ratio. The higher incurred claims ratio means that on average, more financial benefits are being paid back to the insured in relation to premium cost (increased value) but for this case insurance firms are not losing much on payment of claims.

In addition, the study found out that majority of the insurance firms earns a higher net income ratio. High net income has a positive effect of increasing value since more money is available for benefits. Changes in product value drive the awareness and

satisfaction indicators such as in the case of member-based schemes where members increase or decrease their participation in reaction to the changes in value. Without a positive net income the programme will not achieve viability and will become reliant on subsidies to survive. A positive net income, on the other hand, cannot be realized without a proper combination of expenses and benefits. The linear regression model revealed that Product value has a positive effect on the performance of the insurance industry in Kenya. Product value leads to improved gross total premiums (income). In addition it leads to an increased total assets and also growth in insurance profit.

### **5.2.2 Product awareness**

The second objective of the study was to establish the influence of Product value on the performance of the insurance industry in Kenya. The study found out that majority of the insurance firms has a higher renewal ratio, coverage ratio and growth ratio. Performance will be good only if the market is aware of the programme, understands the product well is satisfied with the price-benefits combination, and can afford the premium (contribution) payment schedule. The study found out that renewal ratio; coverage ratio; and growth ratio are very important in determining the satisfaction of the insured, whether the product meets the true need, the level of insurance awareness and competitiveness in the product vis-à-vis other products or household risk management alternatives.

Without sufficiently high participation, and without a low turnover, the programme will suffer from adverse selection leading to a higher claims ratio, increased expense ratio, reduced net income, and it may even experience bankruptcy if the problems are not addressed. Results from the linear regression models revealed that product awareness has positive and significant effect on performance of the insurance industry in Kenya.

### **5.2.3 Product satisfaction**

The third objective of the study was to establish the influence of Product satisfaction on the performance of the insurance industry in Kenya. The study found out that majority of the insurance firms takes less hours on documentation of certificates and policies. Majority of the respondents indicated that it takes less than 24 hours for the certificates to be verified, for the certificates to be documented and for contractual agreements. The findings from the results also showed that it takes an average period for the prompt services to inquiry. Majority of the respondents indicated that issuing of policies and settlement of claims takes between 30-90 days, while issuing of certificates takes less than 30 days. Results from the linear regression models revealed that product satisfaction have positive and significant effect on performance of the insurance industry in Kenya. Product satisfaction leads to improved gross total premiums (income). In addition it leads to an increased total assets and also growth in insurance profit.

### **5.2.4 Service quality**

The forth objective of the study was to establish the influence of service quality on the performance of the insurance industry in Kenya. The study found out that majority of the insurance firms takes less than 30 days for the acceptance of claim, more than 90 days for the rejection of claim and less than 30 days for claim settlement. In addition, the study found out that majority of the insurance firms had an average claim rejection ratio ranging between ten to fifty percent. Further, the study found out that majority of the insurance firms has prudent insurance practices in place. Proper manning of customers' help desk is done more than once in a month, Proper complaints management system is done more than once in a month while Proper training policy to continuously improve staff is also done more than once in a month. Results from the linear regression models revealed that service quality have positive and significant effect on performance of the insurance industry in Kenya. Service quality leads to improved gross total premiums (income). In addition it leads to an increased total assets and growth in insurance profit.



### **5.2.5 Financial prudence**

The fifth objective of the study was to establish the influence of service quality on the performance of the insurance industry in Kenya. The study found out that majority of the insurance firms is high solvency ratio and liquidity ratio. This means that majority of the insurance firms can easily meet their short term cash obligations

The study also found out that majority of the insurance firms adheres to the regulator's requirement on assets and liabilities. This is supported by the response in which majority of the respondents indicated a higher rate of adherence. Majority of the insurance firms allocate specific assets to cover reserves and expenses for each product and to maintain a good asset-liability match; doing this enables them to track solvency and liquidity by product. Results from the linear regression models revealed that financial prudence have positive and significant effect on performance of the insurance industry in Kenya. Financial prudence leads to improved gross total premiums (income). In addition it leads to an increased total assets and also growth in insurance profit.

### **5.2.6 Strategic Information Systems**

The sixth objective of the study was to establish the moderating effect of strategic information system on the aggregation of strategic intelligence and the performance of the insurance industry in Kenya. The findings from the results showed that majority of the insurance firms have a lower rate of automation of underwriting and also automation of claims is also less than twenty five percent but the rate of automation of account processing is higher. The study also found out that majority of the insurance firms has a higher rate of changing goals, operations and products to gain competitive advantage.

Further results from linear regression model indicated that strategic information system has a moderating effect on the aggregation of strategic intelligence and the performance of the insurance industry in Kenya. This was achieved by interacting the dependent variables with the moderating variable (strategic information systems). The resultant p

value was significant thus indication of moderation affect of strategic information systems being supported.

### **5.3 Conclusions of the study**

The overall objective of the study was to establish the influence of strategic intelligence on the performance of the insurance industry in Kenya. Based on the findings above, the study concludes that product value is one of the contributory factors to performance of insurance firms. The study concluded that insurance firms take care of expense ratio, claims and net income so as to improve on their organization performance. The study also concluded that product awareness is key and primary for any insurance organization that wants to grow and maintain its market share. Renewal ratio, coverage ratio and growth ratio are critical components of product value. From the linear regression models the study concluded that product awareness have positive and significant effect on performance of the insurance industry in Kenya. Product awareness leads to improved gross total premiums (income). In addition it leads to an increased total assets and also growth in insurance profit. Further, the study concluded that product satisfaction plays a greater role on performance of insurance firms. Documentation of certificates and policies in terms of certificates verification and contractual agreements are critical components which determine customers' satisfaction on the products and services. In addition prompt service to inquiry contributes to customer satisfaction thus translating to a positive performance. From the linear regression models the study concluded that product satisfaction have positive and significant effect on performance of the insurance industry in Kenya. Product satisfaction leads to improved gross total premiums (income). In addition it leads to an increased total assets and also growth in insurance profit.

The study also concluded that service quality and financial prudence are important in determining the performance of insurance firms. From the linear regression models the study concluded that service quality and financial prudence have positive and significant

effect on performance of the insurance industry in Kenya. Lastly, the study concluded that strategic information system has a moderating effect on the aggregation of strategic intelligence and the performance of the insurance industry in Kenya. Strategic information systems and performance is a review tool which helps firms see how best or poor they have achieved the set goals that existed in their strategic reasoning.

#### **5.4 Recommendations**

Based on the findings and recommendations above, the study recommends insurance firms to have a clear focus on expense ratio, claims and net income so as to improve on their organization performance. Product value is one of the contributory factors to performance of insurance firms. For any insurance organization that wants to grow and maintain its market share, the study recommends for product awareness campaigns. Renewal ratio, coverage ratio and growth ratio are critical components of product awareness.

Strategic Intelligence is the key and road map to be followed by any insurance company that aspires to succeed in the undefined industry climate; consumers are evolving and have new preferences and options for better products thus an insurance company that wants to remain productive should be in the business of finding out why consumers would choose one product or service over the other and meet this need Market share being an indicator of performance, insurance companies need to be aware of their current market share, why they stand as they are and what strategies can they adopt to ensure they increase in their market share.

The study recommends insurance firms to emphasize on satisfaction of the customers since the study found out that product satisfaction has a positive effect on performance. Today's customer is an active seeker of value-evidence. The judgment of customer service is mainly on the basis of 'what was asserted or implied' about the policy product. The satisfaction of Insured customer requires building relationship of confidence and

trust between the buyer and seller. It is essential to build trust so that the intentions of both the parties are clearly understood by each other.

From the findings and conclusion, the study recommends insurance firms to offer proper and quality services to the customer. The quality of customer service has proven to be the yard stick of determining whether companies will retain and get new customer or lose them. Insurance companies should ensure that their underwriting is done promptly and accurately to ensure that consumers get professional customer service. The service quality indicators directly quantify two of the most important servicing aspects of insurance programmes. Both have a direct effect on the satisfaction level of the participants which in turn impacts product awareness and satisfaction.

From the findings, the study insurance firms to adhere to the financial prudent practices since it have an impact on the firm performance. The financial prudence indicators are concerned with the financial strength and liquidity of the insurance programme. Often, these are not tracked at product level but rather at the level of the organization that bears the insurance risk. The study also recommended that insurance firms should put in place strategic information systems. In particular, the firms should consider introducing operation systems and strategic systems. This will lead a positive growth in the firms' premiums, total assets and growth in profits. Strategic thinking should be one of the fundamental factors taken into consideration by insurance companies before they venture either into any market or the launch of new products or services; through strategic planning, an analysis can be done on both the in and out factors that will affect management decisions to be adopted by insurance companies.

### **5.5 Area for Further Study**

There is need to investigate other factors that influence the performance of insurance firms other than those covered in this study. These other factors may include industry specific factors or macro economic factors. The study also recommends for the study of the impact of performance rating of strategy on evaluation of insurance firms since there are various ways through which performance rating can be used as a model for measuring the performance of organizations.

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## APPENDICES

### Appendix I: Introduction Letter

Chief Executive Officer  
Insurance Company  
P.O Box .....

Nairobi.

Dear Sir,

#### RE: ACADEMIC RESEARCH PROJECT

I am a Phd student at the University of Jomo Kenyatta and Technology University (JKUAT). I wish to conduct a research entitled “*The Influence of Strategic Intelligence on the organizational performance of the insurance industry in Kenya*”. A questionnaire has been designed and will be used to gather relevant information to address the research objectives of the study. The purpose of writing to you is to kindly request you to grant me permission to correct information on this important subject from randomly selected members of staff.

Please note that the study will be conducted as an academic research and the information provided will be treated in strict confidence. Strict ethical principles will be observed to ensure confidentiality and the study outcomes and reports will not include reference to any individuals.

Your acceptance will be highly appreciated.

Yours Sincerely

**Benard Ajwang**

## **Appendix II: Questionnaire**

This questionnaire is meant to gather information regarding the influence of strategic intelligence on the organization performance of the insurance industry in Kenya.

### **CONFIDENTIALITY CLAUSE:**

The responses you provide will be used for academic purposes and will be strictly confidential.

### **SECTION 1: BACKGROUND INFORMATION/ DEMOGRAPHIC DATA**

1. Gender:

- a) Male [   ]
- b) Female [   ]

2. What is your highest level of formal education?

- a) No formal education [   ]
- b) Primary level [   ]
- c) Secondary level [   ]
- d) College/University level [   ]

3. How many years has your insurance company been operational?

- a) Less than 2 years [   ]
- b) 3 to 5 years [   ]
- c) Over 5 years [   ]

4. What type of insurance company do you operate?

- a) General insurance [ ]
- b) Life assurance [ ]
- c) Composite insurance [ ]

5. How many employees in your company

- a. Less than 50 [ ]
- b. 50-100 [ ]
- c. 101-200 [ ]
- d. Above 200 [ ]

**SECTION 2: PRODUCT VALUE**

This section is concerned with assessing the influence of product value on the performance of the insurance industry in Kenya.

6. Kindly indicate the **expense ratio** as a percentage(*fund's operating expenses/ average dollar value of its assets under management*) over the last three years that your insurance company has incurred.

	<10%	10%-50%	>Over 50%
2011			
2012			
2013			
2014			
2015			



*Expense ratio: A measure of what it costs an investment company to operate a mutual fund. An expense ratio is determined through an annual calculation, where a fund's operating expenses are divided by the average dollar value of its assets under management.*

7. How did expenses ratio influence the performance of the insurance industry in Kenya?

- a) Decreased performance by below 25% [    ]
- b) Decreased performance by between 26% to 50% [    ]
- c) Decreased performance by between 51% to 75% [    ]
- d) Decreased performance by over 75% [    ]

8. Kindly indicate the **incurred claim ratios** as a percentage over the last three years that your insurance company has incurred.

	<10%	10%-50%	>Over 50%
2011			
2012			
2013			
2014			
2015			

*Claim ratio: Ratio of a general insurance firm's claims total paid added to the loss adjustments against the premiums earned.*

9. How did claim ratio influence the performance of the insurance industry in Kenya?

- a) Decreased performance by below 25% [    ]
- b) Decreased performance by between 26% to 50% [    ]

- c) Decreased performance by between 51% to 75% [    ]
- d) Decreased performance by over 75% [    ]

10. Kindly indicate the estimated **net income ratio** as a percentage for you insurance firm over the last three years.

	<10%	10%-50%	>Over 50%
2011			
2012			
2013			
2014			
2015			

*Net income ratio: This ratio determines whether the institution is financially better off than in previous years by measuring total economic return*

11. How did net income influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

12. In what other ways, did the net income influence the performance of the insurance industry in Kenya.....

### SECTION 3: PRODUCT AWARENESS

This section is concerned with assessing the influence of product awareness on the performance of the insurance industry in Kenya.

13. Kindly indicate the estimated **renewal ratio** as a percentage (number of products renewed/ number of potential renewals) for your insurance firm over the last three years.

	<10%	10%-50%	>Over 50%
2011			
2012			
2013			
2014			
2015			

*Renewal ratio: Percent of policies that stay enrolled after their coverage term expires, during the reporting period.*

14. How did renewal ratio influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [ ]
- b) Improved performance by between 26% to 50% [ ]
- c) Improved performance by between 51% to 75% [ ]
- d) Improved performance by over 75% [ ]

15. In what other ways, did the **renewal ratio** influence the performance of the insurance industry in Kenya.....

16. Kindly indicate the estimated **coverage ratio** as a percentage for your insurance firm over the last three years.

	<10%	10%-50%	>Over 50%
2011			
2012			
2013			
2014			
2015			

*Coverage ratio: A measure of a company's ability to meet its financial obligations. In broad terms, the higher the coverage ratio, the better the ability of the enterprise to fulfill its obligations to its lenders.*

17. How did coverage influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

18. In what other ways, did the **coverage ratio** influence the performance of the insurance industry in Kenya.....

19. Kindly indicate the estimated **growth ratio** as a percentage for your insurance firm over the last three years.

	<10%	10%-50%	>Over 50%
2011			
2012			
2013			
2014			
2015			

*Growth ratio: The ratio of increase that a specific variable has gained within a specific period and context*

20. How did growth influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

21. In what other ways, did the **growth ratio** influence the performance of the insurance industry in Kenya.....

#### **SECTION 4: PRODUCT SATISFACTION**

This section is concerned with assessing the influence of product satisfaction on the performance of the insurance industry in Kenya.

22. Kindly indicate the length of time it takes for the following to be done (**Insurance certificates**)

	<b>Less than 24hrs</b>	<b>24hrs-48hrs</b>	<b>Over 48 hrs</b>
Verification of certificates			
Documentation of certificates			
Contractual agreement			

23. How did quick issue of certificates influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

24. In what other ways, did the quick issue of certificates influence the performance of the insurance industry in Kenya.....

25. Kindly indicate the length of time it takes for the following to be done (**insurance policies**)

	<b>Less than 30 days</b>	<b>30-90 days</b>	<b>More than 90 days</b>
Verification of policies			
Documentation of policies			
Contractual agreement			

26. How did the quick issue of insurance policies influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

27. In what other ways, did the quick issue of insurance policies influence the performance of the insurance industry in Kenya.....

28. Kindly indicate the length of time it takes for the following to be done (**prompt services**)

	<b>Less than 30 days</b>	<b>30-90 days</b>	<b>More than 90 days</b>
Issuing of policies			
Issuing of certificates			
Settlement of claim			

29. How did prompt services influence the performance of the insurance industry

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

30. In what other way(s), did the prompt services of insurance policies influence the performance of the insurance industry in Kenya

.....  
 ...

**SECTION 5: SERVICE QUALITY**

This section is concerned with assessing the influence of service quality on the performance of the insurance industry in Kenya.

31. Kindly indicate the length of time it takes for the following to be done (**Promptness of claims settlement**)

	<b>Less than 30 days</b>	<b>30-90 days</b>	<b>More than 90 days</b>
Acceptance of claim			
Rejection of claim			
Claim settlement			

32. How did promptness in claim settlement influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

33. In what other ways, did the promptness in claim settlement influence the performance of the insurance industry in Kenya.....



34. Kindly indicate the estimated **Claims rejection ratio** in % for your insurance firm over the last three years.

	<10%	10%-50%	>Over 50%
2011			
2012			
2013			
2014			
2015			

35. How did claim rejections ratio influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

36. In what other ways, did the claim rejections ratio influence the performance of the insurance industry in Kenya.....

37. Kindly rate the frequency by which prudent insurance practices are reviewed by management

<b>Characteristic</b>	<b>Never</b>	<b>Once a month</b>	<b>More than once in a month</b>
Proper manning of customers' help desk			
Proper complaints management system			
Proper training policy to continuously improve staff			

38 How did prudent insurance practices influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

39. In what other ways, did prudent insurance practices influence the performance of the insurance industry in Kenya.....

**SECTION 6: FINANCIAL PRUDENCE**

This section is concerned with assessing the influence of financial prudence on the performance of the insurance industry in Kenya.

40. Kindly indicate the estimated **solvency ratio** as a % for your insurance firm over the last three years.

	<30%	31%-70%	>Over 70%
2011			
2012			
2013			
2014			
2015			

*Solvency ratio: solvency ratio is defined as the ratio of admitted assets to liabilities*

41. How did solvency ratio influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

42. In what other ways, did solvency ratio influence the performance of the insurance industry in Kenya.....

43. Kindly indicate the estimated **liquidity ratio** as a % for your insurance firm over the last three years.

	<30%	30%-70%	>Over 70%
2011			
2012			
2013			
2014			
2015			

44. How did liquidity ratio influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

45. In what other ways, did liquidity ratio influence the performance of the insurance industry in Kenya.....

46. In your view, rate the **adherence to the regulator’s requirement on assets and liabilities** by your insurance company

	<30%	30%-70%	>Over 70%
2011			
2012			
2013			
2014			
2015			

47. How did the adherence to the regulator’s requirement influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 26% to 50% [    ]
- c) Improved performance by between 51% to 75% [    ]
- d) Improved performance by over 75% [    ]

48. In what other ways, did adherence to the regulator’s requirement influence the performance of the insurance industry in Kenya .....

**SECTION 7: STRATEGIC INFORMATION SYSTEMS**

This section is concerned with assessing the moderating effect of strategic information system between strategic intelligence and the performance of the insurance industry in Kenya.

49. Kindly rate the degree of usage of **operational system** in the following

	<b>Less than 25%</b>	<b>25-50%</b>	<b>Above 50%</b>
Automation of underwriting			
Automation of claims			
Automation of account processing			

50. How did the operational system influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [ ]
- b) Improved performance by between 25% to 50% [ ]
- c) Improved performance by between 50% to 75% [ ]
- d) Improved performance by over 75% [ ]

51. In what other ways, did operational system influence the performance of the insurance industry in Kenya.....

52. Kindly rate the degree of usage of **strategic information system** in achieving the following

	<b>Less than 25%</b>	<b>25-50%</b>	<b>Above 50%</b>
Changing goals to gain competitive advantage			
Changing operations to gain competitive advantage			
Changing products and services to gain competitive advantage			

53. How did strategic information system influence the performance of the insurance industry in Kenya?

- a) Improved performance by below 25% [    ]
- b) Improved performance by between 25% to 50% [    ]
- c) Improved performance by between 50% to 75% [    ]
- d) Improved performance by over 75% [    ]

54. In what other ways, did strategic information system influence the performance of the insurance industry in Kenya.....

**SECTION 8: PERFORMANCE OF THE INSURANCE INDUSTRY**

This section is concerned with assessing the performance of the insurance industry in Kenya.

55. Kindly indicate the percentage increment in **gross total premium (income)** for the last three years?

<b>Year</b>	<b>&lt;5%</b>	<b>5%-10%</b>	<b>&gt;10%</b>
2011			
2012			
2013			
2014			
2015			

56. Kindly indicate the percentage increment in **total assets**, for the last three years?

<b>Year</b>	<b>&lt;5%</b>	<b>5%-10%</b>	<b>&gt;10%</b>
2011			
2012			
2013			
2014			
2015			

57. Kindly indicate the growth in **profits** for the last three years?

<b>Year</b>	<b>&lt;5%</b>	<b>5%-10%</b>	<b>&gt;10%</b>
2011			
2012			
2013			
2014			
2015			

### **Appendix III: List of Licensed Insurance Companies in Kenya**

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



24	Kenya Orient Insurance Limited
25	Madison Insurance Company Kenya Limited
26	Mayfair Insurance Company Limited
27	Mercantile Insurance Company Limited
28	Metropolitan Life Insurance Kenya Limited
29	Occidental Insurance Company Limited
30	Old Mutual Life Assurance Company Limited
31	Pacis Insurance Company Limited
32	Pan Africa Life Assurance Limited
33	Phoenix of East Africa Assurance Company Limited
34	Pioneer Assurance Company Limited
35	Real Insurance Company Limited
36	Resolution Insurance Company Limited
37	Shield Assurance Company Limited
38	Takaful Insurance of Africa Limited
39	Tausi Assurance Company Limited
40	The Heritage Insurance Company Limited
41	The Jubilee Insurance Company of Kenya Limited
42	The Monarch Insurance Company Limited
43	Trident Insurance Company Limited
44	UAP Insurance Company Limited
45	UAP Life Assurance Limited
46	Xplico Insurance Company Limited

**Source: Insurance Regulatory Authority 2013 Annual Report**

#### Appendix IV: Study Population

No	Name of Company	Senior Management	Middle Management	Total
1	AAR Insurance Kenya Limited	5	15	20
2	APA Insurance Limited	10	18	28
3	Africa Merchant Assurance Company Limited	5	9	14
4	Apollo Life Assurance Limited	7	15	22
5	AIG Kenya Insurance Company Limited	12	18	30
6	British-American Insurance Company (Kenya) Limited	12	31	43
7	Cannon Assurance Limited	5	8	13
8	Capex Life Assurance Company Limited	4	8	12
9	CFC Life Assurance Limited	12	34	46
10	CIC General Insurance Limited	9	16	25
11	CIC Life Assurance Limited	6	15	21

<b>No</b>	<b>Name of Company</b>	<b>Senior Management</b>	<b>Middle Management</b>	<b>Total</b>
12	Corporate Insurance Company Limited	5	7	12
13	Directline Assurance Company Limited	7	15	22
14	Fidelity Shield Insurance Company Limited	6	14	20
15	First Assurance Company Limited	8	14	22
16	G A Insurance Limited	5	11	16
17	Gateway Insurance Company Limited	6	12	18
18	Geminia Insurance Company Limited	5	11	16
19	ICEA LION General Insurance Company Limited	9	23	32
20	ICEA LION Life Assurance Company Limited	8	20	28
21	Intra Africa Assurance	5	11	16

<b>No</b>	<b>Name of Company</b>	<b>Senior Management</b>	<b>Middle Management</b>	<b>Total</b>
	Company Limited			
22	Invesco Assurance Company Limited	6	21	27
23	Kenindia Assurance Company Limited	8	18	26
24	Kenya Orient Insurance Limited	6	11	17
25	Madison Insurance Company Kenya Limited	7	16	23
26	Mayfair Insurance Company Limited	5	13	18
27	Mercantile Insurance Company Limited	5	12	17
28	Metropolitan Life Insurance Kenya Limited	5	8	13
29	Occidental Insurance Company Limited	4	7	11

<b>No</b>	<b>Name of Company</b>	<b>Senior Management</b>	<b>Middle Management</b>	<b>Total</b>
30	Old Mutual Life Assurance Company Limited	7	16	23
31	Pacis Insurance Company Limited	5	13	18
32	Pan Africa Life Assurance Limited	7	15	22
33	Phoenix of East Africa Assurance Company Limited	5	12	17
34	Pioneer Assurance Company Limited	6	18	24
35	Real Insurance Company Limited	5	14	19
36	Resolution Insurance Company Limited	6	19	25
37	Shield Assurance Company Limited	5	9	14
38	Takaful Insurance of Africa	6	13	19

No	Name of Company	Senior Management	Middle Management	Total
	Limited			
39	Tausi Assurance Company Limited	5	11	16
40	The Heritage Insurance Company Limited	9	18	27
41	The Jubilee Insurance Company of Kenya Limited	11	31	42
42	The Monarch Insurance Company Limited	5	11	16
43	Trident Insurance Company Limited	4	13	17
44	UAP Insurance Company Limited	12	33	45
45	UAP Life Assurance Limited	8	27	35
46	Xplico Insurance Company Limited	3	7	10
	<b>Total</b>	<b>306</b>	<b>711</b>	<b>1,017</b>

(Source: Human Resource Records, Insurance Companies 2013)

#### Appendix IV: Study Sample Distribution

No	Name of Company	Senior Management Percent	Middle Management Percent	Senior Management	Middle Management	Total
1	AAR Insurance Kenya Limited	0%	1%	1	4	5
2	APA Insurance Limited Africa Merchant	1%	2%	2	5	7
3	Assurance Company Limited	0%	1%	1	2	4
4	Apollo Life Assurance Limited	1%	1%	2	4	6
5	AIG Kenya Insurance Company Limited British-American	1%	2%	2	5	6
6	Insurance Company (Kenya) Limited	1%	3%	3	8	11
7	Cannon Assurance Limited	0%	1%	1	2	3
8	Capex Life Assurance Company Limited	0%	1%	1	2	3
9	CFC Life Assurance Limited	1%	3%	3	9	12
10	CIC General Insurance Limited	1%	2%	2	4	7
11	CIC Life Assurance Limited	1%	1%	2	4	6
12	Corporate Insurance Company Limited	0%	1%	1	2	3

No	Name of Company	Senior Management Percent	Middle Management Percent	Senior Management	Middle Management	Total
1	Directline Assurance					
3	Company Limited	1%	1%	2	4	6
1	Fidelity Shield Insurance					
4	Company Limited	1%	1%	2	4	5
1	First Assurance Company					
5	Limited	1%	1%	2	4	6
1	G A Insurance Limited					
6		0%	1%	1	3	4
1	Gateway Insurance					
7	Company Limited	1%	1%	2	3	5
1	Geminia Insurance					
8	Company Limited	0%	1%	1	3	4
1	ICEA LION General					
9	Insurance Company	1%	2%	2	6	8
	Limited					
2	ICEA LION Life					
0	Assurance Company	1%	2%	2	5	7
	Limited					
2	Intra Africa Assurance					
1	Company Limited	0%	1%	1	3	4
2	Invesco Assurance					
2	Company Limited	1%	2%	2	6	7
2	Kenindia Assurance					
3	Company Limited	1%	2%	2	5	7
2	Kenya Orient Insurance					
4	Limited	1%	1%	2	3	5



No	Name of Company	Senior Management Percent	Middle Management Percent	Senior Management	Middle Management	Total
2	Madison Insurance	1%	2%	2	4	6
5	Company Kenya Limited					
2	Mayfair Insurance	0%	1%	1	3	5
6	Company Limited					
2	Mercantile Insurance	0%	1%	1	3	5
7	Company Limited					
2	Metropolitan Life	0%	1%	1	2	3
8	Insurance Kenya Limited					
2	Occidental Insurance	0%	1%	1	2	3
9	Company Limited					
3	Old Mutual Life					
0	Assurance Company	1%	2%	2	4	6
	Limited					
3	Pacis Insurance Company	0%	1%	1	3	5
1	Limited					
3	Pan Africa Life	1%	1%	2	4	6
2	Assurance Limited					
3	Phoenix of East Africa					
3	Assurance Company	0%	1%	1	3	5
3	Limited					
3	Pioneer Assurance	1%	2%	2	5	6
4	Company Limited					
3	Real Insurance Company	0%	1%	1	4	5
5	Limited					
3	Resolution Insurance	1%	2%	2	5	7
6	Company Limited					

No	Name of Company	Senior Management Percent	Middle Management Percent	Senior Management	Middle Management	Total
37	Shield Assurance Company Limited	0%	1%	1	2	4
38	Takaful Insurance of Africa Limited	1%	1%	2	3	5
39	Tausi Assurance Company Limited	0%	1%	1	3	4
40	The Heritage Insurance Company Limited	1%	2%	2	5	7
41	The Jubilee Insurance Company of Kenya Limited	1%	3%	3	8	11
42	The Monarch Insurance Company Limited	0%	1%	1	3	4
43	Trident Insurance Company Limited	0%	1%	1	3	5
44	UAP Insurance Company Limited	1%	3%	3	9	12
45	UAP Life Assurance Limited	1%	3%	2	7	9
46	Xplico Insurance Company Limited	0%	1%	1	2	3
	<b>Total</b>	<b>30%</b>	<b>70%</b>	<b>76</b>	<b>187</b>	<b>267</b>

(Source: Human Resource Records, Insurance Companies 2013)

## Appendix V: Summary of Hypotheses Testing

Objective No	Objective	Hypothesis	Rule	p-value Income (premium)	p-value Total asset	p-value profit growth	Comment
Objective 1	To determine the influence of Product Value on the performance of the insurance industry in Kenya.	Ho: Product Value does not influence the performance of the insurance industry in Kenya.	Reject Ho if at least one subcontracts had p value <0.05	All the subcontracts had a p<0.05	All subcontracts had a p<0.05	All subcontracts had a p<0.05	The null hypothesis was rejected; therefore Product Value influence the performance of the insurance industry in Kenya.
Objective 2	To determine the influence of product awareness on the performance of the insurance industry in Kenya.	Ho: Product awareness does not influence the performance of the insurance industry in Kenya.	Reject Ho if at least one subcontracts had p value <0.05	All the subcontracts had a p<0.05	two subcontracts had a p<0.05	two subcontracts had a p<0.05	The null hypothesis was rejected; therefore Product awareness influence the performance of

Objective No	Objective	Hypothesis	Rule	p-value Income (premium)	p-value Total asset	p-value profit growth	Comment
							the insurance industry in Kenya.
Objective 3	To determine the influence of Product satisfaction on the performance of the insurance industry in Kenya.	Ho: Product satisfaction does not influence the performance of the insurance industry in Kenya.	Reject Ho if at least one subcontracts had p value <0.05	All the subcontracts had a p<0.05	two subcontracts had a p<0.05	two subcontracts had a p<0.05	The null hypothesis was rejected; therefore Product satisfaction influence the performance of the insurance industry in Kenya.
Objective 4	To determine the influence of service quality on the performance of the	Ho: Service quality does not influence the performance of the insurance	Reject Ho if at least one subcontracts had p value	All the subcontracts had a p<0.05	two subcontracts had a p<0.05	two subcontracts had a p<0.05	The null hypothesis was rejected; therefore Service quality

Objective No	Objective	Hypothesis	Rule	p-value Income (premium)	p-value Total asset	p-value profit growth	Comment
	insurance industry in Kenya.	industry in Kenya.	<0.05				influence the performance of the insurance industry in Kenya.
Objective 5	To determine the influence of financial on the performance of the insurance industry in Kenya.	Ho: Financial prudence does not influence the performance of the insurance industry in Kenya.	Reject Ho if at least one subcontracts had p value <0.05	All the subcontracts had a p<0.05	two subcontracts had a p<0.05	two subcontracts had a p<0.05	The null hypothesis was rejected; therefore Financial prudence influence the performance of the insurance industry in Kenya.
Objective 6	To establish the moderating	Ho: strategic information	Reject Ho p value <0.05	All the subcontracts	One subcontract	One subcontract	The null hypothesis was

Objective No	Objective	Hypothesis	Rule	p-value Income (premium)	p-value Total asset	p-value profit growth	Comment
	influence strategic information systems on aggregated strategic intelligence and performance of the insurance industry in Kenya	systems has no significant influence on the aggregated strategic intelligence and performance of the insurance industry in Kenya.		had a $p < 0.05$	s had a $p < 0.05$	s had a $p < 0.05$	rejected; therefore strategic information systems has a significant influence on the aggregated strategic intelligence and performance of the insurance industry in Kenya.