

**AN INVESTIGATIVE STUDY
ON
THE MANAGEMENT OF PROPERTY RISKS
IN KENYA
A Case Study of the Insurance Sector**

By:

MUNYITHYA SHADRACK MULI B.A (Buildg Econ.)

Hons. UoN

B/50/P/8714/99

**A Project Paper submitted in partial fulfilment for the Award of the
Degree of Master of Arts in Valuations and Property Management
In the Department of Land Development in the
Faculty of Architecture Design and Development.**

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DECLARATION OF THE CANDIDATE

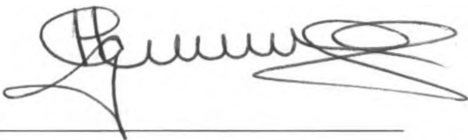
I, Munyithya Shadrack Muli, hereby declare that this project paper is my original work and has not been presented in this or any other university



Signature of the Candidate

DECLARATION OF THE SUPERVISORS

This project paper has been submitted for examination with our approval as university supervisors.



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Munyithya M. Shadrack

2003

DEDICATION

To my dear wife, Terry

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ABSTRACT

Risk can be defined as a hazard, chance or likelihood of loss or bad consequence. It is closely associated with uncertainty where nobody can claim to be sure of what might happen next whether as an individual, business enterprise, society or the state in general. Risk can be classified as *pure, speculative, fundamental or particular*.

Generally, in practice, risk management is associated with insurance. Nevertheless, risk management is much broader than insurance in that it deals with both insurable and uninsurable risks. Insurance is indeed a subset of risk management and strategically serves as one of the most important methods of risk financing which no risk management programme can afford to ignore.

While it is true that insurance is one way of handling risk, the underwriting of property and liability risks by insurers importantly need to be looked at from the perspective of risk management. The need for insurers to be aware and consciously manage the risks they have underwritten is of paramount importance. This is the crux of this research project. Though most Kenyan insurers appreciate the potential benefit of incorporating risk management in the running of their business, they have basically remained as premium collectors and payers of claims.

This research project has been written in four chapters. The first chapter contains a general introduction of the subject of risk and insurance particularly how these two relate to one another in the realm of property and liability risks underwriting. It gives the situation of the Kenyan insurance industry in regard to the practice of risk management thereby bringing out the research problem on which the research is about. The rest of the chapter is taken up by a statement of the research objectives, hypothesis, methodology, assumptions taken and a justification of the research work.

The objectives of this study are fourfold. First is to find out whether Kenyan insurers are aware of and understand the concept of risk management and appreciate its importance in the running of their businesses and if so to what extent they incorporate the same in risk underwriting. Secondly the study has sought to find out whether the

existing insurance legislation in Kenya recognises the risk management aspect of insurance practice and whether there is any particular legislation in regard to risk management and risk managers in Kenya. Thirdly, it has strove to find out if Kenya has any set qualification requirement(s) for practitioners of risk management whether as employees of insurers or consultants. Fourthly, having found out the above, the study has recommended ways and means of promoting risk management practice in Kenya's insurance industry.

The second chapter is about review of related literature that forms the framework of the study. In it, risk is defined and explained and thereafter related to the concept of insurance following which the concept of risk management is introduced and examined from the viewpoint of the underwriter. Various aspects of risk management such as risk identification, measurement/analysis and control are looked into in detail. Insurance and Risk Surveys as a major method of risk identification has been given special attention. The role of risk management in underwriting property risks has been looked at. As it engages in its normal business of underwriting risks, it is necessary for an insurer to formulate and work under the guidance of a risk management policy. The legislative environment in regard to insurance and risk management in the Kenyan industry particularly in regard to the Insurance Act Cap 287 of the Laws of Kenya has also been examined in this chapter as was the training and qualification standards and requirements of the available risk managers/surveyors.

The third chapter is about data presentation and gathering with a preamble on the current set up of the insurance industry in Kenya. The selection of data source and sampling of the respondents has been defined and outlined. This is then followed by the presentation of the various aspects of the gathered data including involvement of insurers in management of risks, risk management policies by insurers, current insurance legislation, risk identification, analysis, valuation of risks, risk control, e.t.c.

The study is basically an investigative study and as such the survey design is adopted. Questionnaires were distributed to a sample of 18 insurance companies out of a total of 36 while all registered 6 risk managers/surveyors. An interview was conducted with the Commissioner of Insurance and the Honorary Secretary to the Institute of Loss Adjusters and Risk Surveyors.

Due to the exploratory nature of the study, a qualitative analysis of the available data has been adopted. Data from questionnaires and interviews has been coded and frequency tables in simple percentages used to analyse responses to each question. A descriptive approach has then been adopted in communicating the results

In summary the study finds that although risk management is consciously present in Kenyan insurance business, there still lacks a clear understanding of the discipline in the industry. Seventy two (72) percent of this research's respondents have been found not to have a risk management policy in their operations and therefore do not practice it. It has been found that the current legislation, the Insurance Act Cap 487 of the laws of Kenya does not address the issue of the practice of risk management in the underwriting of property risks. It only gives a general guideline on the investment of insurance premium funds by the risk takers. It is recommended that a review of the Act be carried out to give the industry the necessary legal framework of actively incorporating risk management in their operations.

The involvement of risk surveyors/managers, where they are available, by insurers has been found not comprehensive enough. They are not involved in risk control and evaluation even after they have recommended appropriate risk control measures.

It has been found that although insurers have adequate information for any risk management activity, there lacks an efficient means of storage and retrieval of the same. Computerisation and general improvement of their information systems is recommended.

Training, qualification and professional organisation of the locally available risk managers/surveyors/assessors has been found wanting. The government has been urged to streamline the available qualification channels or take the initiative to tailor an appropriate curriculum for risk management training. A formal recognition of the recently launched Institute of Loss Adjusters and Risk Managers as the self regulating body for risk management in the country is also encouraged.

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CHAPTER ONE

1.1 INTRODUCTION AND PROBLEM STATEMENT

1.1.1 Risk and Insurance

We live in a world full of danger, hazards and uncertainties as part of every day life. Indeed in recent years, a number of catastrophes have drastically demonstrated the vulnerability of modern economic, social and ecological system. The increasing complexity of property both in concept and marketing and the acceleration of industrial activity on a global scale has further created new magnitudes and categories of risks. As a consequence, the need for appropriate hazard detection, prevention and control is increasingly necessary. Indeed sound risk management in all areas of life including the property sector is now more than ever required (Irukwu, 1991).

As a specialist management concept, risk management may be described as the principles or techniques devised in order to promote and ensure the effective management of risks (Cloete, 2001). From humble beginnings, the concept of risk management has now been developed into a fairly sophisticated specialist management discipline that has evolved sound techniques that make it possible for individuals and organisations in the property industry to reasonably handle perils related to property.

Generally, in practice, risk management is associated with insurance and most people regard risk management only as an element of insurance. Nevertheless, risk management is much broader than insurance in that it deals with both insurable and uninsurable risks. Insurance is indeed a subset of risk management and strategically serves as one of the most important methods of risk financing which no property risk management programme can afford to ignore.

1.1.2 Insurer's need for Risk Management and the Kenyan Scenario

While it is true that insurance is one way of handling risk i.e. by transfer, the underwriting of property and liability risks related to property by insurers importantly need to be looked at from the perspective of risk management. The need for insurers to be aware and consciously manage the property risks they have underwritten is of paramount importance. This is the crux of this research project.

In the first instance, as business entities and service providers to the insuring owners of property, insurers aim at maximising returns at the same time giving the best of service. Looked at from a consumer's viewpoint, before placing business with an insurer, property owners or carriers of liabilities emanating from property would need to be satisfied about insurer's security and financial strength. In other words, the reputation and quality of the management of the insurance company is also a major factor to be considered (Irukwu, 1991).

It is appreciated that sound property risk management is certain to help an insurance firm to achieve the above and perform its role better. As a mitigator of property loss the insurance industry has a more than a passing need to, as much as possible, reduce loss occurrences and claim incidences. This is actually a case of managing the property risks underwritten, which reinforces the fact of the need for property risk management by the insurance industry. The high amounts paid out as claims related to property by the Kenyan insurance sector industry can be reduced and saved by ensuring that measures that prevent or reduce losses are implemented. This implies a greater insurer surplus and therefore net retention as well as a corresponding long-term reduction in insurance premium and reliance on re-insurance. Such a scenario will then allow insurance companies focus better on larger loss exposures. It follows, therefore, that the insurer who has embraced and is well versed in the property risk management discipline and able to give risk management assistance to property risk transferees is certainly likely to attract more business and maintain existing policyholders. This situation is not obtaining

at the Kenyan insurance industry at the moment but can be attained as addressed in this research project.

It is necessary that Kenyan insurers who underwrite property risks, as a norm, formulated and worked under the guidance of a risk management policy. A carefully defined risk management policy would set out clearly the property risk management objective of the insurer including the duties and responsibilities of its risk management team as well as its scope of authority and its relationship with other departments. Such a policy statement would greatly assist the risk manager in the discharge of his duties.

From the foregoing, the researcher doubts whether, despite the importance of risk management today, the concept has been embraced to a reasonable scale in the Kenyan insurance industry. If this were to be the case, Kenya, just as most other developing economies would then have largely been deprived of the benefits of risk management (Irukwu, 1991). As a departure from the current scenario, the insurance industry must refrain from regarding risk management especially that of property risks as an enemy just because it could lead to loss of premium if other risk response methods are adopted instead of insurance. At present, the level of the industry's involvement in the positive promotion of property risk management is still very low (Irukwu, 1991).

Of course it is to be appreciated that insurers' ability to embrace property risk management must be backed by strong and appropriate loss control oriented requirements such as building codes, fire codes, worker health and safety laws e.t.c. It is, nevertheless, doubted whether the Kenyan government has been proactive enough in promoting an enabling environment for the establishment and growth of property risk management in the insurance industry. The government also appears not to have given the required legislative impetus in regard to the importance of risk management by insurance companies and therefore there would be no particular persuasion for insurers to pursue risk management as an integral part of their business. The current scenario suggests that there is no designated specific and exclusive training for risk managers in any of our institutions of higher learning which makes the few interested in the discipline to look to

outside qualification avenues and later struggle on their own to market their skills and expertise to the local industry.

1.2 OBJECTIVES OF THE STUDY

The view of the above, the culmination of this study is expected to achieve the following:

1. To find out whether Kenyan insurers who underwrite property risks are aware of and understand the concept of risk management and appreciate its importance in the running of their businesses and if so to what extent they incorporate the same in property and liability risks underwriting.
2. To find out whether the existing insurance legislation in Kenya recognises the risk management aspect of insurance practice and whether there is any particular legislation in regard to risk management and risk managers in Kenya.
3. To find out if Kenya has any set qualification requirement(s) for practitioners of risk management whether as employees of insurers or consultants.
4. Recommend ways and means of promoting property risk management practice in Kenya's insurance industry.

1.3 STUDY HYPOTHESIS

In carrying out this study it is hypothesised that;

Most insurance companies in Kenya who underwrite property and their related liability risks do not adopt risk management as an integral part of risk underwriting due to a lack

of awareness on its importance as well as lack of a legislative, educational and institutional framework on risk management for the industry.

1.4 SCOPE AND LIMITATION OF THE STUDY

Risk management is a wide discipline and a fundamental aspect of the running of any property development and management project or organisation. One can never meaningfully research on a wide subject like it without losing focus and relevance.

This study confines itself to the management of property risks and their related liability risks in insurance companies registered to carry out general insurance business in Kenya. Registered risk managers who offer consultancy services to the Kenyan insurers have also been involved. However, mainly due to time constraint the study has not been able to involve re-insurers and brokers.

This study is mainly an investigative exercise aimed at finding out whether or not Kenyan insurance companies practise risk management and if so how and to what extent. As part of this exercise, the study also sought to find out, if ever existent, who and how qualified are the persons involved in property risk management.

As mentioned earlier, the practice of the management of property risks comprises three elements viz, risk identification, analysis/measurement and control. This study has endeavoured to probe how each of these is carried out by insurance companies and the consultants, if at all, since each is as important in the chain of property risk management process.

Risks and therefore insurance can broadly be categorised into three classes i.e. Personal, Property and Liability. This study is solely concerned with the management of insurable and insured property and property liability risks.

So as to get an insight into the regulation of the insurance industry the study also involved the office of the commissioner of insurance which is responsible for the administration of the Insurance Act Cap 487 of the Laws of Kenya.

1.5 RESEARCH METHODOLOGY

1.5.1 The Research Design

This is a basically investigative study and as such the survey design is adopted. The aim is to make contact with players in the insurance industry principally insurance companies and find out whether or not they practice risk management and if so how they do it. It intends to explore whether management of risks emanating from the properties underwritten is regarded as necessary by the industry and if so how insurance companies as risk takers incorporate it in the running of their businesses. The way the industry is regulated and organised is also examined and related to the element of property risk management to find out whether benefits of the discipline are being maximised.

1.5.2 Population and Sampling

The study involves three sectors of the industry; viz, the property underwriters (insurers), risk managers and the office of the Commissioner of Insurance. The number and identity of currently registered insurance companies practising general insurance as well as risk managers were obtained from the Commissioner of Insurance. The Commissioner usually prepares annual reports on the performance of the industry and the current report which was relied on was that of the year 2001. A sample of 18 (eighteen) property risks underwriters were randomly picked out of the total 36 (thirty six).

The eighteen being halfway of the total and not more was chosen due to the time and other resource constraints which faced the researcher. Nevertheless, the random sampling from the underwriter registration list (year 2001) was seen as the best way of achieving

an unbiased sample. Such sampling allowed the researcher to avoid selecting a skewed sample in terms of the large sized companies only or smaller companies only or years of operation and therefore achieving a homogeneous reach to the whole industry. The current registered risk managers were only 6 and therefore owing to the small number, the researcher was able to approach all of them to provide data and information.

1.5.3 Data Collection

Secondary data was obtained through literature review. This involved reading books and periodicals including journals for the insurance market. An examination of the Insurance Act Cap 487 of the laws of Kenya and as amended over the years was undertaken.

Primary data was obtained through conducting interviews and administering questionnaires. The commissioner of insurance as the administrator of the Insurance Act and the overseer of industry was interviewed as was the secretary general of the Institute of Risk Surveyors and Loss Adjusters which is the body bringing together the risk management practitioners in Kenya. Two sets of questionnaires were designed and administered to the eighteen sample insurance companies and the six registered risk managers.

1.5.4 Data Analysis

Due to the exploratory nature of the study, a qualitative analysis of the available data was adopted. Data from questionnaires and interviews was coded and frequency tables in simple percentages as well as pie charts and bar graphs used to analyse responses to each question. A descriptive approach supported by graphical presentations was then adopted in communicating the results.

1.6 SIGNIFICANCE OF THE STUDY

The importance of property and property liability risk management to the insurance industry and therefore to the rest of the economy can not be overemphasised. Though insurance is only a part of risk management, it still is important that even after undertaking to indemnify in event of a property loss, it will be unreasonable for a property underwriter to collect premiums and cross fingers hoping that no claim will arise.

Risk management not only helps an insurer to identify which property risks they can profitably underwrite in the first place but can also keep minimal the likelihood of loss by partnering with the policy holder to ensure that the risk is safely kept and efficiently run. Sound risk management will help in checking loss costs through improved loss control. This implies reduced claims for insurers which in turn implies a greater insurer surplus and therefore net retention as well as a corresponding reduction in premiums and reliance on re-insurers. Insurance companies can therefore focus better on large loss exposures, those that could undermine the welfare of not only the insured commercial and industrial enterprises in Kenya but of the entire national economy.

This study therefore aims at bringing to the fore an appropriate campaign for the adoption of the discipline of risk management by all stakeholders in the insurance industry. It roots for the active involvement of the insurance industry in Kenya.

Further, it seeks to encourage the proactive participation of the government in embracing the concept of risk management in its development policies and strategies. This is through such deliberate actions such as enacting suitable legislation and development of an appropriate curriculum for adoption by institutions of higher learning so as to develop the necessary risk management skills for local consumption.

CHAPTER TWO

2.1 INTRODUCTION TO UNCERTAINTY, HAZARD AND RISK

2.1.1 Introduction

In recent years, a number of catastrophes have dramatically demonstrated the vulnerability of modern economic, social and ecological systems. As a consequence, the need for appropriate risk prevention and control is increasingly recognised. Risk management is no new concept. Each traditional society of long standing has developed its proper responses to the perils posed by its environment and activities. These responses are often deeply embedded in ways of life, work and play habits and rituals and hardly recognisable as ways to eliminate or reduce risks. The acceleration of industrial activity on a global scale creates new magnitudes and categories of risks. Responses to these perils need to be found quickly, bearing in mind that for many risks, recourse to the time tested trial-and-error method is not feasible.

The ability to effectively deal with risks, however, is inextricably linked with rational and economic human behaviour without which man would not have survived in a hostile environment. Modern risk management demands a change in attitudes and perception, involving great effort in foresight, rational and judgmental planning, organisation and co-ordination. Our industrial culture demands in fact no less than new risk management culture (Irukwu, 1991).

Sound risk management in all areas of economic life is more than ever required. No country, least of all the countries of Africa, can afford to neglect this essential corollary of productive activity. It is imperative for them to adopt better and more scientific risk management systems to cope with the risks associated with industrialisation and modern socio-economic development. Nevertheless, despite the importance of risk management today, the concept has not been embraced on a reasonable scale in most developing

countries. As a result, these countries have been deprived of the benefits of risk management (Irukwu, 1991).

2.1.2 Risk and Uncertainty

Risk is a perverse condition of human existence. It is a condition in which there is a possibility of adverse deviation from a desired outcome that is expected or hoped for (Vaughan & Elliot, 1998). It is a combination of circumstances in the external environment. In this combination of circumstances, there is a possibility of loss. Uncertainty is simply a psychological reaction to the absence of knowledge about the future. The existence of risk is a condition or combination of the circumstances in which there is a possibility of loss on the part of the individuals when that risk comes to play.

In reality it is possible for an individual to feel not threatened regarding a particular risk when the exposure to loss does not translate into actual loss. Whether or not a risk is recognised however does not alter its existence. When there is a possibility of loss, risks exist whether or not the person exposed to it is aware of the risk.

When an event is possible, it means that it has a probability of between zero and one; it is neither impossible nor definite. We may or may not measure the degree of risk, but the possibility of adverse outcome must be between zero and one.

In the case of insurers, actuaries predict some specific number and amount of losses and charge a premium based on this expectation. The amount of predicted losses is the desired outcome that is expected by the insurer. For the insurer, risk is the possibility that losses will deviate adversely from what is expected.

2.1.3 Nature of risks and scope of risk management

Irukwu (1991), defines risk as a hazard, chance of loss or chance of bad consequence or exposure to mischance. One important feature of risks is its close association with

uncertainty. We live in a most uncertain world where nobody is certain as to what might happen next to him as an individual or to his business enterprise or indeed the society or country in general. Unfortunately, uncertainty cannot be eliminated and since it is clear that where there is uncertainty there is risk, it, therefore, follows that risk cannot also be eliminated. All we can do as sensible and rational beings is to devise ways and means of controlling and managing the risks around us so as to ensure our survival and the survival of our businesses and the society in general.

This ever inherent likelihood of loss is the province of the concept of risk management and is concerned with the principles that have been evolved for the efficient and effective management of all the many risks that face us as human beings living in this fast changing jet-age of industrialisation, the computer and all the inventions of the human mind that have continued to transform our lives and the way we live.

2.1.4 Risk distinguished from peril and hazard

A peril is a cause of a loss. We speak of the peril of fire or windstorm or hail or theft. Each of these is the cause of loss that occurs. A hazard on the other hand is a condition that may create or increase the chance of a loss arising from a given peril. It is possible for something to be both a peril and a hazard. For instance, sickness is a peril causing economic loss but it is also a hazard that increases the chance of the peril of a premature death (Irukwu, 1991).

Physical hazard – Consists of those physical properties that increase the chance of loss from the various perils. Example of physical hazards that increase the possibility of loss from the peril of fire are the type of construction, the location of the property, and the occupancy of the building.

Moral hazard – Is the increase in the probability of loss that results from dishonest tendencies in the character of the insured. A dishonest person in the hope of collecting money from the insurance company may intentionally cause a loss or may exaggerate the

amount of loss in an attempt to collect more than the amount which he is entitled. Fraud is a significant problem for insurance companies and increases the cost of insurance in the long run.

Morale hazard – this acts to increase losses where insurance exists not necessarily because of dishonest but because of a different attitude toward losses since they will be paid for by insurance. When people have purchased insurance they may have a more careless attitude toward preventing losses or may have a different attitude toward the cost of restoring damage. Morale hazard is also reflected in the attitude of persons who are not insureds. The tendency of the physician to provide more expensive levels of care when costs are covered by insurance is part of a morale hazard. Similarly the inclination of juries to make larger awards when the loss is covered by insurance – the so-called deep pocket syndrome – is another example of morale hazard. Morale hazard acts to increase both the frequency and severity of losses when such losses are covered by insurance.

2.1.5 Classification of risk

Almost all authorities on risk agree on a similar classification of risks. However, Vaughan & Elliot (1978) comprehensively give the following broad classes of risks.

Financial and non-financial risks

In its broadest context, the term risk includes all situations in which there is an exposure to adversity. In some cases, this adversity involves financial loss while in others it does not. There is some element of risk in every aspect of human endeavour and many of these risks have no financial consequences.

Static and dynamic risks

Dynamic risks are those resulting from changes in the economy. Changes in the price level, consumer tastes, income and output and technology may cause financial loss to members of the economy. Although they may affect a large number of individuals they are generally considered less predictive than static risks, since they do not occur with any

precise degree of regularity. Static risks involve those risks that would occur even if there were no changes in the economy. If we could hold consumer tastes, output and income and the level of technology constant, some individuals would still suffer financial loss. These arise from causes other than changes in the economy such as perils of nature and the dishonesty of other individuals. They tend to occur with a degree of regularity over time and as a result are generally predictable. Because they are predictable, static risks are more suited to treatment by insurance than dynamic risks.

Fundamental and particular risks

The difference between the two is based on the origin and consequences of the losses. Fundamental risks involve losses that are impersonal in origin and consequence. They are group risks caused for the most part by economic, social and political phenomena, although they may also result from physical occurrence. They affect large segments or even all the population. Particular risks involve losses that arise out of individual events and are felt by an individual rather than by the entire group. They may be static or dynamic. Unemployment, war, inflation, earthquake, and floods are all fundamental risks. Since fundamental risks are caused by conditions more or less beyond the control of the individuals who suffer the losses and since they are not the fault of anyone in particular, it is held that society rather than the individual has a responsibility to deal with them. Although some fundamental risks are dealt with through private insurance, it is an inappropriate tool for dealing with most fundamental risks. Usually some form of social insurance or other government transfer program is used to deal with them. Particular risks are considered to be the individual's own responsibility and as such are dealt with by the individual through the use of insurance, loss prevention or some other technique.

Pure and speculative risks

Speculative risks describe a situation where there is a possibility of loss but also a possibility of gain. Gambling is good example of speculative risks. An entrepreneur or a capitalist faces speculative risks in the quest for profit. The investment made may be lost if the product is not accepted by the market at a price sufficient to cover costs, but the risk is borne in return for the possibility of profit. Pure risk is used to designate those

situations that involve only the chance of loss or no loss. Example is the possibility of loss surrounding the ownership of property. Normally only pure risks are insurable.

2.1.6 Classification of pure risks

Pure risks that exist for individuals and business firms can be classified as follows:

1. **Property risks** – anyone who owns property faces property risks simply because such possession can be destroyed or stolen. Property risks embrace two types of losses; direct and indirect or consequential loss. When a firm's facilities are destroyed it loses not only the value of those facilities but also the income that would have been earned through their use. Property risks therefore involve two types of losses; (a) the loss of the property and (b) loss of use of the property resulting in lost income or additional expense.
2. **Liability risks** – the basic peril in the liability risk is the intentional injury or carelessness of other persons or damage to their property through negligence or carelessness. However, liability may also result from the intentional injuries or damages. Liability risks involve the possibility of loss of present assets or future income as a result of damages assessed or legal liability arising out of either intentional or unintentional torts or invasion of the rights of others.
3. **Personal risks** – consist of loss of income or assets as a result of the loss of the ability to earn income. In general, earning power is subject to four perils: Premature death, dependent old age, sickness or disability and unemployment.
4. **Risks arising from the failure of others** – When another person agrees to perform a service for you, he or she undertakes an obligation that you hope will be met. When the person's failure to meet this obligation would result in your financial loss risk exists. Example would include failure of a contractor to complete a construction project as scheduled or failure of debtors to make payment as expected.

2.1.7 The Economic Burden of Risk

Regardless of the manner in which risk is defined, the greatest burden in connection with risk is that some losses will actually occur when a house is destroyed by fire, or money is stolen, or a wage earner dies, there is a financial loss. These losses are the primary burden of risk and the primary reason that individuals attempt to avoid risk or alleviate its impact. In addition to the losses themselves, there are other detrimental aspects of risks. The uncertainty as to whether the loss will occur requires the prudent individuals to prepare for its possible occurrence.

In the absence of insurance one way this can be done is to accumulate a reserve fund to meet the losses if they occur. Accumulation of such a reserve fund carries an opportunity cost for funds that must be available at the time of the loss and must therefore be held in a highly liquid state. The return on such funds will presumably be less than if they were put to alternative use. If each property owner accumulates his or her own fund, the amount of funds held in such reserves will be greater than if the funds are amassed collectively (Vaughan & Elliot, 1978).

Furthermore the existence of risk may have a deterrent effect on the economic growth and capital accumulation. Progress in the economy is determined to a large extent by the rate of capital accumulation, but the investment of capital involves risk that is distasteful. Investors will incur the risks of a new undertaking only if the return on the investment is sufficiently high to compensate for both dynamic and static risks.

Each one of physical risk to property may have an economic impact, whether initial or consequential. The initial impact may be increased design or construction costs (e.g. provision of a fire protection or security system) while the consequential impacts may be direct (e.g. loss of life or cost of replacement of components) or indirect (e.g. loss of income or delictual liability) (South African Property Education Trust 2001)

The economic costs of risks relate both to the losses that do occur and to the costs of uncertainty even if the losses do not occur. The costs of a loss itself is normally clear, but the costs of uncertainty itself are less obvious. The first cost of uncertainty itself is the physical and the mental strain caused by fear and worry. The second cost of uncertainty itself is a distortion in production and in price structures, resulting from among others the misallocation of funds, the shortening of planning time horizons and extreme risk-avoidance actions.

2.1.8 Methods of Handling Risk

There is no escape from the presence of risk and humanity must accordingly seek ways of dealing with it. Some risks are generally of a fundamental nature and are met through the collective efforts of society and government. Police and the fire department are good examples (Vaughan & Elliot, 1978). The existence of risk is a source of discomfort to most people and the uncertainty accompanying it causes anxiety and worry. Since risk is distasteful and unpleasant, people's rational nature leads them to attempt to do something about it.

Most of the early authorities on the subject are agreed as to the natural responses to risks. They all maintain and quite rightly so that the exact response that is adopted in each case would depend on the peculiar circumstances of the individual or institution concerned and on the nature of risks in question (Irukwu, 1991). One may decide to take one or more of possible action; he or she may decide to retain or absorb the risk in which case he has adopted the principle of risk assumption or may decide to avoid the risk. Alternatively, he may adopt the principles of risk prevention, risk distribution or risk transfer.

Basically risks may be dealt with in the following ways;

Risk may be avoided

This is accomplished by merely not engaging in the activity that give rise to risk e.g. if you want to avoid the risks associated with the ownership of property, you do not purchase the same but lease or rent it instead.

Risk may be retained

This is perhaps the most common method of dealing with risk. When one does not take positive action to avoid, reduce or transfer the risk, the possibility of loss involved in that risk is retained.

Risk retention may be conscious or unconscious. The former takes place when the risk is perceived and not transferred or reduced. When the risk is not recognised, it is unconsciously retained.

Risk may be shared

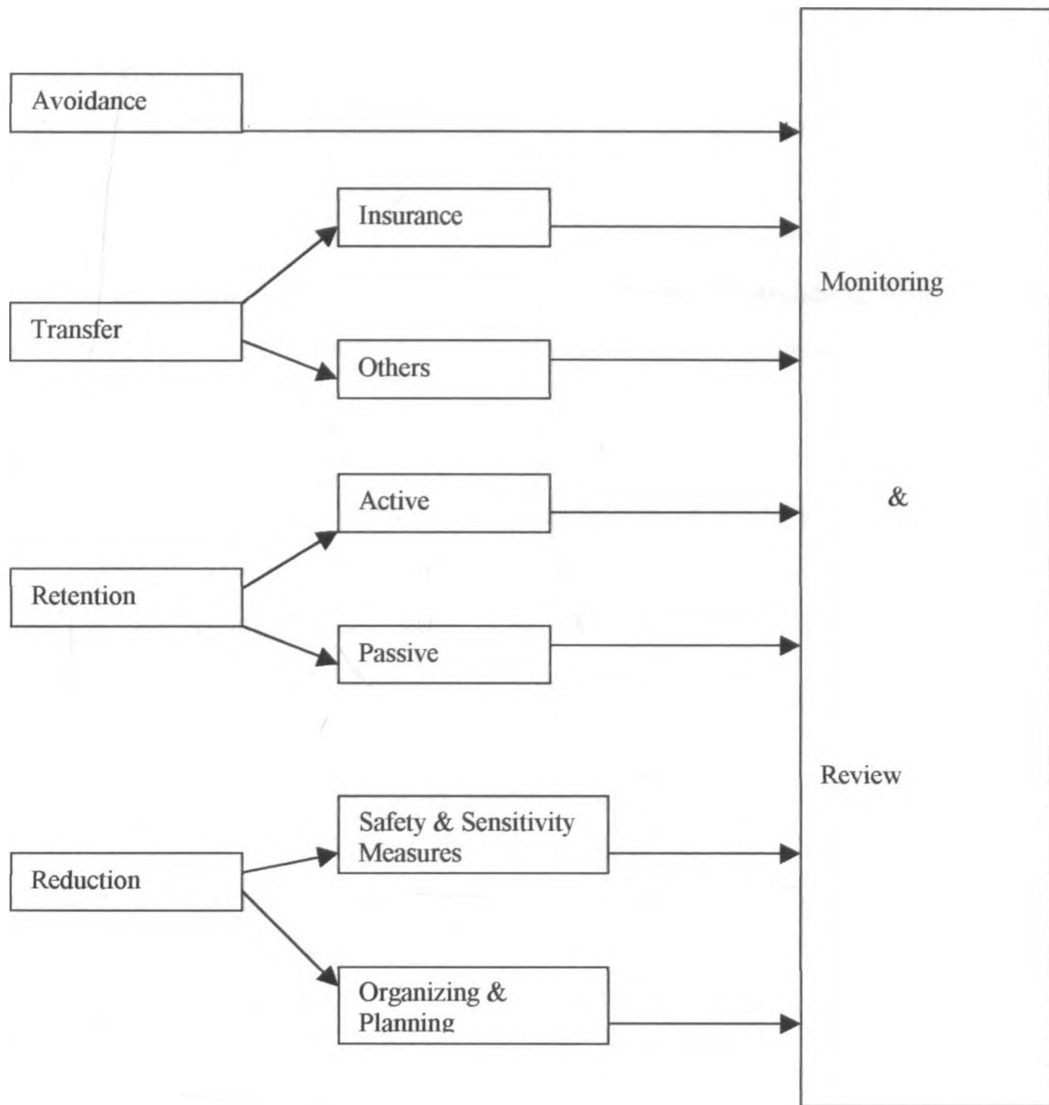
Risk is shared when there is some type of arrangement to share losses. A large number of investors may pool their capital, each bearing only a portion of the risk that the enterprise may fail.

Insurance is another device designated to deal with risk through sharing. One basic characteristic of insurance device is the sharing of risk by the members of the group.

Risk may be reduced

This may be done in two ways. The first is through loss prevention and control. There is almost no source of loss where some efforts are not made to avert the loss. Safety programs and loss prevention measures such as medical care, fire departments, night

security guards, sprinkler systems and burglar alarms are all examples of attempts to deal with risks by preventing the loss or reducing the chance that it will occur.



Source: Underwood, 1989; The Security of Buildings

Figure 1: Graphical representation of the methods of handling risks.

Risks may be transferred

Risk transfer is one of the common responses and takes the form of a transfer of the risk or a potential loss to a third party. There are several possible instances in which a risk may be contracted out from one person to another but the most common example today are where the landlord of a building rents out the building and makes the tenant responsible for damage to the premises. The other which is most common is under a contract of insurance under which the risk generator pays a premium to an insurer who is a professional risk bearer and transfers the risk to the insurer (Vaughan & Elliot, 1978). It is the most extremely used method of risk transfer in the developing countries.

They may be transfers from one individual to another who is more willing to bear the risk. Risk may be transferred or shifted through contracts. A hold-harmless agreement, in which one individual assumes another's responsibility of loss e.g. a tenant agreeing under the terms of a lease to pay any agreement against the landlord that arise out of the use of premises.

Insurance is also a means of shifting or transferring risk. In consideration of a specific payment (the premium) by one party, the second party contracts to indemnify the first party up to a certain limit for the specific loss that may or may not occur (Irukwu, 1991).

2.1.9 Insurance and Risk

Insurance is an arrangement by which one party (the insurer) promises to pay another party (the insured or the policyholder) a sum of money if something happen which causes the insured to suffer a financial loss. The responsibility of paying such losses is then transferred from the policyholder to the insurer. In return for accepting to the burden of paying for losses when they occur, the insurer charges the insured a price - the insurance premium (Diacon, 1984).

(a) How does insurance work?

Insurance works because the insurer can collect premiums from a group of people in similar circumstances not all of who will suffer losses in any one year. These premiums are then pooled together, and used by the insurer to pay losses. Losses are then shared out among all the policyholders rather than borne solely by the unlucky few. Nowadays insurance not only shares losses among individuals and organisations; it also spreads them over time. This is possible because in years when losses are lighter than expected, insurers can build up reserves (out of premium contributions and their investment earnings) that can be used subsequently in more difficult years.

(b) The law of large numbers

Insurance only works because insurers can collect together large numbers of similar exposure units (exposure unit refers to the object which is exposed to the possibility of loss or damage and the duration of that exposure). Because they deal with great many exposure units, insurers can rely on the so-called Law of Large Numbers. This law says that the larger the group of similar exposure units, the closer the actual losses experienced by that group will approach the loss that can be anticipated. It means that the greater the number of exposure units the more accurate the insurers can be in calculating their premium. This is because they are better able to assess the size of future loss payments and hence to work out an appropriate charge that will enable them to cover these losses.

2.1.9.1 Relationship between risk and insurance

a) Insurance controls risk. Buying insurance is one method of controlling the financial aspects of the unknown future. If one buys an insurance policy, he exchanges a situation of risk where different financial outcomes are possible for one of financial result since the insurance guarantees the purchaser, subject to certain provisos that his financial position will not be affected by the occurrence or non-occurrence of certain specific events.

In some respects the insurers risks are the same as everybody else's; they too are unable to foresee the future. They must therefore face the possibility that their policyholders losses will exceed those that they anticipated. The risk for the insurer is much less than that for an individual policyholder. However, because the insurer knows far more about possible losses through having collected together a group of similar exposure units he has better exposure and knowledge to appreciate the risks involved and be able to handle them appropriately.

While insurance controls risk by mainly transferring the responsibility for paying losses from one person to another, it may also affect the risk directly by influencing the chance of a loss occurring. This may happen in two ways;

1. Insurers may encourage policyholders to be more careful by rewarding those whose losses are small. They may also offer advice on how to prevent losses.
2. On the other hand policyholders may either directly cause loss in order to obtain money from insurers or be less careful because of insurance protection. This (as opposed to physical hazards such as poor maintenance, construction e.t.c) is know as moral hazard.

b) Not all risks can be insured. In order for a risk to be covered by insurance, it must meet certain conditions;

1. Must be measurable in monetary terms. The object of insurance is to preserve the insured's financial position and it is obviously unaffected by losses that have no monetary equivalent such as loss of sentimental value or good character. Nevertheless, it may be difficult to determine the monetary value of some items such as rare works of art whose market value is unknown; similarly the value of a person's life cannot be measured. In such a case, the usual procedure is to agree a nominal monetary value in advance.
2. Pure risks only. In general only pure risks are insurable and even then only if they meet the other criteria.
3. A large number of independent exposures. The insurer must be able to collect together, a sufficiently large group of separate and independent exposures units that

are subject to broadly similar risks. This is so that the law of large numbers can operate effectively.

2.1.9.2 Risk as a Concept in Insurance

Risks are a focal point in insurance. The latter examines the magnitude of risk involved in an enterprise and such information is used to fix the premium to be charged in order to cover the risk. Insurance looks at risks from the point of view of pure risks that result in physical loss of property. The higher the risk the more premium to be paid by the insured.

Insurance depends very much on probability that loss may or may not occur. Where the probability is high, the insurance companies charge higher premium. Statistics on incidence of claim plays an important part of this effect. The more the claim, the higher the premium to be charged on a new cover (Gichunge, 2000)

The common meaning of risk is the combined effect of the probability of occurrence of an undesired event and the magnitude of event mathematically expressed as;

$$\text{Risk} = \text{Hazard} \times \text{Probability of occurrence}$$

Insurance companies apply this principle when computing premiums that are a reflection of the magnitude of the risk involved. If hazard and probability are high, the premium is increased proportionately. Statistical data on the occurrence of part hazard is useful if the above model has to be operational.

2.1.10 Insurance and the Law

Like any other agreement between two parties, the law of contract governs all agreements between buyers and sellers of insurance services. A contract is an agreement between two or more participants that is legally binding. If a party to the contract breaks that agreement, he or she may have to pay damages to the other participants. A legally

binding agreement between the buyer and the seller of insurance (the insured and the insurer) is a contract of insurance (Diacon, 1984).

2.1.10.1 Essential features of contract

For an agreement to be legally binding (and therefore a contract), certain important elements must be present.

Agreement: In contracts of insurance, the insurer and insured must agree details such as the price, the extent and nature of cover, the period of cover, e.t.c. These terms are usually set out by the insurer in a contract document called the policy form or document.

Offer and Acceptance: In insurance, the offer is usually made by the prospective insured when he requests insurance cover.

Consideration: The consideration consists on the one hand of the insurers promise to compensate the insured for a loss and on the other hand of premium payment.

Capacity: All parties must have a legal capacity to enter into agreements – minors, drunkards, insanes, e.t.c. are not allowed to enter into contracts of insurance.

Legality: Contracts must not be illegal i.e. they are invalid if they are forbidden by statute or are against public policy.

No mistakes: It may be that one or both of the parties to a contract make a mistake in the process of making the agreement. The effects of such a mistake depend on the nature of the error; a mistake will invalidate the agreement when there was no agreement over the terms, the nature of the contract was mistaken or mistaken identity of one of the parties.

No misrepresentation or fraud: A representation is a factual statement made by one party to the other which is intended (and succeeds) in persuading the latter to enter into

contract; if such a statement is false it is a misrepresentation. Where misrepresentation has been fraudulent, the injured party has several alternatives: He may claim damages if he has suffered a loss, he may carry on with the contract or can either refuse to perform the agreement or rescind the contract.

No duress or undue influence: Courts will refuse to enforce any agreement which one party has been induced to contract by means of pressure applied in order to influence his own independent judgement.

2.1.10.2 Principle of Utmost Good Faith

Contracts of insurance are among the few that are not contracts of caveat emptor (buyer beware), but of uberrimae fidei (utmost good faith). This means that all parties to the contract are legally obliged to disclose all material information i.e. all facts and circumstances that would affect the other's willingness to enter into the contract. For insurance contracts, therefore, prospective policyholders must disclose to insurers all those facts which are material to the risk. Similarly, insurers must not withhold information that could lead to prospective insureds into a less favourable contract.

Insurers have a right to avoid a contract if they can prove either

- i) That there was misrepresentation of a material fact – an insurer only needs to prove that there was misrepresentation and a material fact was involved.
- ii) That there was non-disclosure of a material fact – an insurer must prove that a material fact known or presumed to be known by the insured was withheld from him. Deliberate non-disclosure is known as concealment.

Proven non-disclosure or misrepresentation of a material fact by an insured makes the contract voidable at the option of the insurer (within a reasonable time period) provided that the contract is not of employees liability or motor third party.

What facts Must be disclosed?

The duty of the policyholder to disclose all material facts exist regardless of any question expressly asked on any proposal form if one is used. What is material varies, of course, among different insureds. Some facts are material in almost every instance.

- i) Any claim or losses under previous insurance contracts
- ii) Any refusal of cover by another insurer even if that cover was for a different type of insurance.
- iii) All facts relating to the character or integrity of the insured such as a previous criminal connections
- iv) Full facts relating to and description of the subject matter of the insurance particularly where there are reasons why future losses might be larger in size or greater in frequency than would normally be expected for that nature or class of insurance.

When Must Material Facts be Disclosed?

The policyholders obligation to all material facts arises as soon as negotiations for the contract begin. This obligation ends once it has been formed unless contract conditions stipulate otherwise. The duty of disclosure re-emerges at each renewal date for those (mainly-non life) contracts that allow the insurer, and of course the insured too, the option of refusing renewal. Long-term contracts do not allow the insurer this option, however, and the insured has no further obligation.

What need not be disclosed?

Certain material facts need not be disclosed unless specific inquiry is made:

- i) Those which lessen the risk e.g. installation of a sprinkler
- ii) Those which the insurer already knows or deemed to know. This applies as a matter of common knowledge of the law, incomplete information already disclosed in some way or form
- iii) Those which are not known by the insured except where the policyholder should (in law) have known of them.

Warranties

An insured may avoid the contract if there has been a non-disclosure of a material fact. In practice, insurers can often avoid on stronger legal grounds if the policyholder has failed to comply with a warranty.

A warranty is an undertaking by the insured that something shall or shall not be done, or that a certain state of affairs does (or does not) exist. It can be defined as a strict condition which is normally inserted into the policy or negotiations by the insurer, which are fundamental to the policy and if breached allow the aggrieved party to repudiate the contract.

There are two types of warranty. An implied warranty such as in Marine insurance where the vessel is implied as seaworthy and express warranties that are written into the contract to cover specific circumstances. Warranties can be one off or continuing; the policy must make it clear, which they are. An example of a warranty in respect of fire insurance is 'it is warranted that all fire appliances be tested by a qualified person every six months'. If the client has a fire on his premises and it was discovered that he had not complied with this warranty, then the insurer would be entitled to repudiate the claim.

2.1.10.3 Principle of Insurable Interest

A contract of insurance is only valid in law if the insured has an insurable interest i.e. if he or she has a legally recognised financial relationship with the subject matter of the insurance and stands to lose out if that subject is damaged. Insurance cannot be purchased for amounts exceeding the extent of a financial interest since it is that interest and not the subject matter that is insured.

2.1.11 Brief History of Insurance

Insurance is not a modern concept. It has been in existence for hundreds of years. In her tracing of the origin of insurance, Margaret, 1997 explains that there is evidence of a form of insurance traced as far back as 1750 B.C. There is further evidence from Ancient Greece and yet again in Roman times when individuals came together to pay the cost of a burial. As time marched on marine insurance evolved in Northern Italy towards the end of the 12th Century. In turn Italian merchants, due to their trading activities subsequently brought the concept of insurance to the UK around the 13th and 14th Centuries. Effectively then, a basic form of life assurance was probably the earliest type of insurance available with marine insurance closely at its heels, at least as far as timing of development is concerned.

Few centuries later, we see the emergence of ordinary life assurance as we know it and fire insurance which appeared in the 17th Century. The Great Fire of London in 1666 played a major role in the development of the latter when a large section of the city was completely destroyed by the infamous fire that started in Pudding Lane. By 1861 when another great fire, that of Tooley Street occurred, there was a realisation amongst industry participants and society as a whole that the insurance industry as it was, was inadequate and unable to cope with the risks they were faced with. The first signs of risk management were consequently seen around this time in relation to improving insurable risks and developing an industry that was able to handle the risks to which they were exposed to and for which they existed in business.

Shortly thereafter thought was given to other non-fire perils which later developed into 'special perils' that we know today. In 1887, the fire policy was extended to include one of the common causes of loss or damage; theft. In 1889 the first theft policy was issued by the Mercantile Accident and Guarantee Insurance Company. However, the term used then was burglary. The onset of the industrial revolution in the 18th Century brought with it many dangers which had until then not been a problem. Most of the problems were related to the use of heavy industry and the 'new' technology of moving part and

machinery. The use of child labour, explosions, long working hours, e.t.c exacerbated the problem.

As risk developed so did the need for reinsurance. As risks became larger and more complex, the need to 'spread' the risk became even more relevant from this need.

Modern insurance practices were introduced in Africa by colonial powers that sought to extend the operation of their home companies into the newly acquired territories. Initially, operations were carried out by agencies of the home company set up by their representations set to explore investment potential abroad. The agencies later developed into full companies running branches and offices in their countries of origin.

Between the I and II world wars proprietors started setting up insurance companies in Kenya. In this respect offices were opened by Pioneer General Assurance Society in 1930. Jubilee Insurance Co. – 1937 and the Pan Africa – 1948.

The Government of Kenya set up the Kenya National Assurance in 1964 and the Kenya Re Corporation in 1970, marking another major landmark in the development of the insurance industry. Since then, there has been a phenomenal growth in the insurance industry in Kenya. By 1998, there were four reinsurance companies, 40 insurance companies, 150 insurance brokers and over 4000agents in Kenya.

In addition, there are many other players such as loss adjusters, surveyors and investigators in the industry.

The industry is regulated by the Insurance Act Chapter 487 of Laws of Kenya. It establishes the office of the Commissioner of Insurance who is vested with the responsibility and powers of administering the Act including registration of insurance companies, intermediaries and service providers. He or she works under the direction of the Minister for Finance and prepares a report each year in accordance to Section 5(2) of the Act. This report covers the working of the Insurance Act during the year ending. It compares the developments of the insurance industry during the year with the preceding years highlighting numerous features of the industry.

2.1.12 Types of General Insurance

Nowadays, a wide range of insurance contracts are available. They can be broken down into four main classes,

- i) Transportation insurance – covering motor vehicles, railway rolling stock, aircraft, ships, goods in transit, motor vehicles liability, aircraft liability, liability for ships, e.t.c.
- ii) Property insurance – covering damage to property including damage by fire and natural forces
- iii) Pecuniary insurance – covering credit, suretyship, miscellaneous financial losses and legal expenses.
- iv) Other liability insurance – covering general liability.
- v) Personal and long term insurance – covering life and annuity, marriage and birth.

2.1.12.1 Property Insurance: Fire & Special perils

Before the great fire of London in 1666, the only relief against loss by fire was provided by private charitable collection and donations from churches or craftsmen guilds. The fire revealed a lamentable lack of any protection against fire and specialist fire insurers soon appeared, the first being the 'Fire Office' that subsequently changed its name to the 'Phoenix'. Companies also operated their own fire brigades. These early fire insurers charged premiums that had little relationship to the individual characteristics to the property.

As British industrialisation developed, so did the need for more sophisticated form of fire insurance in order to cover not only private houses but also factory buildings and warehouses, machinery and stock of raw materials, work in progress and finished articles. The need to transport such finished goods evoked a need for transport insurance.

Fire insurance policies also began to include cover against other (special) perils including earthquake, riot and civil commotion, impact damage, flood and storm.

Modern fire insurance attempts to compensate policyholders against any loss or damage to insured property which is caused directly by fire or lightning. The term fire now has a precise legal definition: First, there must be an actual ignition of something which should not be on fire and secondly, the cause of such ignition must be accidental or fortuitous in origin. Fire insurance has two main aspects; one is concerned with damage to private houses and their contents and the other with damage to commercial property.

a) Fire Insurance for Private Property

Fire insurance for private houses and their contents is nowadays almost always provided by house-owners or householder's comprehensive policies. Such insurances often combine protection for the house and its contents and cover damage from fire and a large number of other perils.

In addition to the comprehensive cover of private and their contents, all-risk policies on personal effects are also very popular. Such contracts offer wider protection on particularly expensive personal effects such as cameras and jewellery by covering a wider range of perils (including accidental loss) and by insuring the property irrespective of its location at the time of loss.

b) Fire insurance for business property

Fire cover for commercial property is provided (usually on a twelve months basis) under the standard fire policy that includes buildings, machinery and plant and stock. The insured is compensated for losses to such property caused by fire, lightning or explosion (but only the explosion of domestic boiler or of gas used for domestic purposes, lightning or heating).

The standard fire policy will also cover losses directly or proximately caused by a fire, such as water damage from losses and other extinguishing agents.

The scope of the standard fire policy is limited, in that certain perils causing damage to business property are specifically excluded. For an additional premium, however, several extra perils (termed special perils) can be covered by the standard policy.

These include damage by,

- Explosion (a wider cover)
- Riot or civil commotion
- Malicious damage
- Storm tempest or flood
- Burst pipes or overflowing water tank
- Earthquake
- Impact damage and damage from articles dropped from the air
- Spontaneous combustion, heat or fermentation.

2.1.12.2 Property Insurance: Other damage or loss

Besides fire, other perils cause damage to or loss of property. Some of these perils such as the special perils can be covered as additional items in the fire insurance policy, but others must form the subject of separate insurance contracts.

This is to cover business property insurance; most private houses have comprehensive cover which makes additional property insurance unnecessary.

2.1.12.3 All-Risks Insurance

The basic object is to provide compensation against theft of commercial property. Cover for the contents of business premises (such as shops, warehouses, offices, e.t.c.) must

distinguish carefully between different types of stock because some are easier to steal and dispose of than others.

2.1.12.4 Engineering Insurance

Provides cover for damage to machinery caused by that machinery's own failure, explosion or breakdown. It originated in the mid 19th century when explosion of pressure vessels particularly steam boilers was a major problem. Specialist inspection service by qualified engineers were implemented to check on the safe operation of boilers and insurance protection against the consequences of boiler explosion.

The safety inspection and insurance protection have now widened to include many type of other plant and machinery including boilers, cranes, lifts, engines, computers and other electrical equipment. Cover is now available to include all kinds of plant and machinery and against property losses caused by 'extraneous' perils unconnected with machinery failure such as fire, flood or impact), loss due to business interruption following breakdown and liabilities to third parties, if there are not more specifically insured elsewhere.

2.1.12.5 Glass Insurance

This is often included in package policies for businessmen like shopkeepers or hoteliers, but it can be bought separately. It provides compensation for damage to plate – glass, windows and doors as well as most other kinds of fixed glass. Damage to shop fronts, contents of windows and near sign can also be covered.

2.1.12.6 Combined, Comprehensive or Packaged Insurances

As insurance has developed, successive entrepreneurs have spotted a need for a specific type of insurance protection and then formed specialist companies to provide it. Typically

the early insurance companies dealt with only one or two type of insurance and it was not until much later that companies dealing in several types of business became usual.

Consequently policies tended to cover only one type of insurance. Yet business and individuals often need many different type of insurance covers simultaneously e.g. householders need protection not only against fire but also against theft, liabilities incurred to third parties, explosion, water damage, e.t.c. To meet this need, insurers have developed combined (or packaged) and comprehensive insurance policies.

- i) **Combined or packaged insurance** – they are simply different types of insurance cover into one policy form. Example – package policies for shopkeepers (traders combined) or Hoteliers and for holidaymakers – combining personal accident, medical expenses, loss of deposits, e.t.c. all in one policy.
- ii) **Comprehensive insurance** – offer a wide scope of cover than combined policies and protect the policyholder more fully against those contingencies that cause financial loss. Householder comprehensive policies cover the risk of fire as well as many other possible cause of loss.

According to the Insurance Act Cap 487, a general business insurer can be registered in Kenya for any of the twelve classes of general business namely; aviation, engineering, fire-domestic, fire-industrial, liability, marine, motor-private, motor-commercial, personal accident, theft, workmen's compensation and miscellaneous.

2.1.13 Insurance and Control of Risks

Insurance is primarily concerned with the financial consequences of loss but it would be fair to say that insurers have more than a passing interest in loss control. It could be argued that insurers have no real interest in the complete control of loss, as this would inevitably lead to an end to their business. This is rather a short-sighted view of the issue.

Insurers indeed do have a real interest in reducing the frequency and severity of losses, not only to enhance their own profitability but also to contribute to a general reduction in the economic waste which follows losses.

It is true that insurers have played a major role in loss control over the years. In the case of fire and related risks we can trace the involvement (UK) of insurers in loss control right back to the provision of fire brigades and this is certainly an evidence of an active interest in loss control.

In modern times, the insurance industry pools its resources and funds on-going research work in the prevention and control of many forms of loss. A number of individual insurance companies have developed considerable expertise in the technology of different forms of loss control and regarded as being at the forefront of research in this field.

The measurement of uncertainty obviously must play an important part in responding to risk. Industry in particular must measure the extent to which it believes it is exposed to the risk of loss, what the extent of that loss may be should it occur. The insurance industry has its own interest in risk measurement. It is taking the risk of others upon itself and must be able to calculate the cost of doing this, in other words the premium it should charge (Dickson, 1990) otherwise it will be difficult and unprofitable to do business.

In a practical way, buyers will normally come into contact with the loss control services offered by an insurer when they meet the surveyor. The surveyor may be employed by the insurer or indeed the insurance broker, and part of his job is to give advice on loss control. Many insurers employ specialist surveyors in fire, security, liability and other types of risk. Others will employ people with broader, but less detailed knowledge.

The surveyor will assess the extent of the risk to which the insurance company is exposed. In doing so, he will also offer advice which could take the form of pre-loss control (minimising the chance that something will happen) or post-loss control (after something has occurred).

Any industry which has a total investment of Kshs.53.3 billion (Commissioner's annual report, 2001) and is the largest contributor by far to the overseas earnings of all financial institution is certainly going to be the subject of government interest. This calls for the examination of the role of government as far as the transaction of insurance is concerned.

2.2 RISK MANAGEMENT

2.2.1 Definition

Risk management is the scientific approach to the problem of dealing with the pure risks faced by individuals and businesses. It is a function of management in the same style as marketing, financial management or personnel management. Vaughan (1978) defines it as the logical and systematic means of minimising the causes and adverse effects of accidental loss or destruction so as to conserve the assets and earning power of an organisation all at the least possible cost.

Risk management is narrower than the term implies, because organisations face a wide range of risks, some of which are beyond the scope of risk management function as the term is used. This is because the managers of an organisation have the ultimate responsibility for dealing with all risks facing the organisation including both pure and speculative risks (Vaughan & Elliot, 1978).

Risk Management as a management concept may be described as the principles or techniques devised in order to promote and to ensure the effective management of risk. The modern concept of risk management is still relatively new to most developing countries. One of the objectives of this project is to make a strong case for the adoption of its principles as a management tool by not only the insurance industry but by all sectors of the economy in general. The fact that developing countries are still relatively poor makes it imperative that they should spare no effort in protecting their assets and there can be no better way of doing so than by adopting efficient risk management and loss prevention measures.

Gichunge (2000), explains that risk management is the identification, measurement and treatment of property liability and personnel pure risks exposure (William & Heins, 1989). It is the action taken to deal with potential for loss or damage. It is based on the proverbial phrase 'an ounce of prevention is better than a pound of cure'. Risk management aims at minimising incidences and permit rapid response to those that do occur, to mitigate losses as fully and efficiently as possible.

Proper risk management enables a business to handle its exposures to accidental losses in the most economic way. This way losses and expenses are reduced thus increasing profits as well as efficiency.

From very humble beginnings the modern concept of risk management has now been developed into a fairly sophisticated specialist management discipline which has evolved very sound techniques which make it possible for modern organisations to combat their ever increasing exposures to different risks associated with modern technological development (Irukwu, 1991).

2.2.2 Development of Risk Management

Although some companies had already made progress in the development of a professional approach to insurance buying, it was not until 1929 that much consideration was given to the importance of management of pure risks in American enterprises. In that year, corporate insurance buyers met informally in Boston to discuss problems of mutual interest. In 1931, the *American Management Association* established its insurance division for exchanging information among members and publishing news and information of interest to corporate insurance buyers. In 1932, the *Insurance Buyers of New York* (which later became the *Risk Research Institute*) was formed. In 1950, the *National Insurance Buyers Association* was launched; this later became the *American Society of Insurance Management*. And still later the *Risk and Insurance Management Society*.

As the profession as well as constituent risk manager's associations have grown a large portion of the insurance buying public has become more knowledgeable about insurance as a product. The *Risk and Insurance Management Society* publishes a magazine called *Risk Management* and the Insurance Division of the *American Management Association* publishes a wide array of reports and studies to assist the risk manager. In addition the *Insurance Institute of America* has developed an education program in risk management, with a series of examination leading to a diploma in risk management (Vaughan, E & Vaughan, T 1995)

Margaret, 1997 argues that we cannot talk about the development of insurance without also discussing the concept of Risk Management. Risk management as a concept has developed over the last 30 years and so is much younger than the concept of insurance. For Britain and larger Europe, it appears that risk management originated in the United States in the late 1950s and caught on in the early sixties/seventies. It has been progressing steadily albeit slowly since then.

Risk management is about identifying, analysing and controlling risk which up until now had been the sole province of insurance. The effect it has had on the insurance industry therefore has to be noted.

Originally it seems that risk management was considered part of the insurance function but over the years, there has been a realisation that insurance forms a part of risk management and not the other way round and that an appreciation of what risk management entails is vital for the insurance industry, the general public and business/organisations. No longer is the way to handle risk purely by the use of insurance. There are now other considerations.

This is not to say that insurance plays a smaller part than before in controlling risk, but that it takes a slightly different seat in the overall managing of risks.

Insurance still forms a significant and vital part of the risk management process and without it the public, business, the country and the world would have a difficult job in handling the risks. The insurance industry has however to appreciate the important role it plays in this, and risk managers have to appreciate the importance of the insurance function as a risk transfer mechanism and as a mechanism for providing risk finance. They are not mutually exclusive but part and parcel of the same concept - that concept being the handling of risk in the best possible way.

Insurance companies are now offering risk management services either independent of the insurance function or in conjunction with it. They are beginning (if slowly) to realise the important part they have to play in risk management by recognising companies with good risk management and offer not only services but real identifiable premium reduction. If insurers want to retain their important place in 'managing risk', then they will have to recognise the changing nature of the corporate culture.

Risk management in the United Kingdom has its own professional body, The *Institute of Risk Management (IRM)* responsible for educational advancement and an industry body of the *Association of Insurers and Risk Management (AIRMIC)* which seeks to respond to and expand Risk Management issues throughout industry and commerce. A number of countries now have similar organisations.

2.2.3 The Risk Manager

Is a specialist trained to identify and evaluate the organisation's risk exposures and to deal with them effectively by applying the established risk management processes and procedures. The Insurance Act Cap 487 of the laws of Kenya defines the Risk Manager as a person, his clients or employees with regard to a programme of minimising losses arising through unforeseen events and minimising the cost of protection by physical or financial measures through insurance or any other means. Since the primary objective of the risk management concept is to safeguard person, property and other assets against the devastating effects of such pure risks as fire, flood and any other threat that might injure a

person or inflict loss or damage to property of any kind, it is desirable to have a specialist official whose responsibility would be to ensure that the desired risk management objective is achieved. That official is the risk manager, who is expected to take all reasonable steps in accordance with the established risk management procedures to protect the person and other assets of the organisation (Irukwu, 1991).

The risk manager is expected to;

- a) Identify all the pure risks to which the individual and the assets or properties of his firm is exposed
- b) Proceed to arrange suitable plan and program to deal with the pure risk identified

The success of the risk manager in the execution of his risk management function will be judged mainly by the extent to which he has been able to discover all the risks to which his company or organisation is exposed, the suitability of the responses chosen and their cost effectiveness.

He should always ensure that the management of his company is fully aware of all the risks threatening the organisation and he must recommend possible action that should be taken to combat such risks.

The appointment of a full time specialist risk manager as an employee of the company is not yet a common feature in most developing countries. Others use the service of part time risk management consultants or none at all since the practice of risk management is still at a relatively low level of development in most third world countries.

2.2.4 The Risk Manager's Qualifications

There is generally no uniformity in most third world countries on the qualification of risk managers. This is primarily due to the fact that risk management is still very much an infant discipline.

With the establishment of professional risk management associations and with the growing awareness of the importance of risk management as a tool for the preservation of

the assets of business enterprises, it is expected that the profession of risk management will be taken a lot more seriously in developing countries.

The practitioner of risk management should be a highly qualified expert not only in the management of risks, but also in general business development. He or she should have a broad general education. He should at least hold the Associateship Diploma in Risk Management or its equivalent.

In order to be effective and to earn the recognition of other departmental managers in the enterprise, the risk manager should be a senior official, preferably at top management level, reporting to the CEO or to his deputy.

2.2.5 Formulating the Company's Risk Management Policy

In order to make the task of the risk manager and his department and relevant to the company's objectives, it is useful for the company to formulate a risk management policy.

A carefully defined risk management policy would set out clearly the risk management objectives of the company including the duties and responsibility of the risk manager as well as the scope of authority of the risk management department and its relationship with other departments. Such a policy statement would greatly assist the risk manager in the discharge of his duties since it will establish the position of the risk management department on the organisation's chart. It would also invariably define the rights and responsibilities of the department in its dealings with other departments in the organisation.

Use of outside Consultants

Sometimes it may be necessary to use the specialised services offered by outside consultants in risk management to supplement the services offered by the risk

management department. This is desirable and therefore recommended whenever it will help to improve on the quality of the risk management service to an organisation.

Until quite recently, there were no independent risk management consultants in Africa and other third world countries. With the growing recognition of the importance of risk management it is expected that associations of risk management practitioners would come into existence to enhance the growth of the discipline.

2.2.6 The Risk Management Process

Vaughan (1978) gives the following six steps by which the risk manager achieves the risk management goal.

1. Determination of objective
2. Identification of risks
3. Evaluation of risks
4. Consideration of alternatives and selection of the risk treatment device
5. Implementation of the decision
6. Evaluation and review

2.2.7 Risk Identification

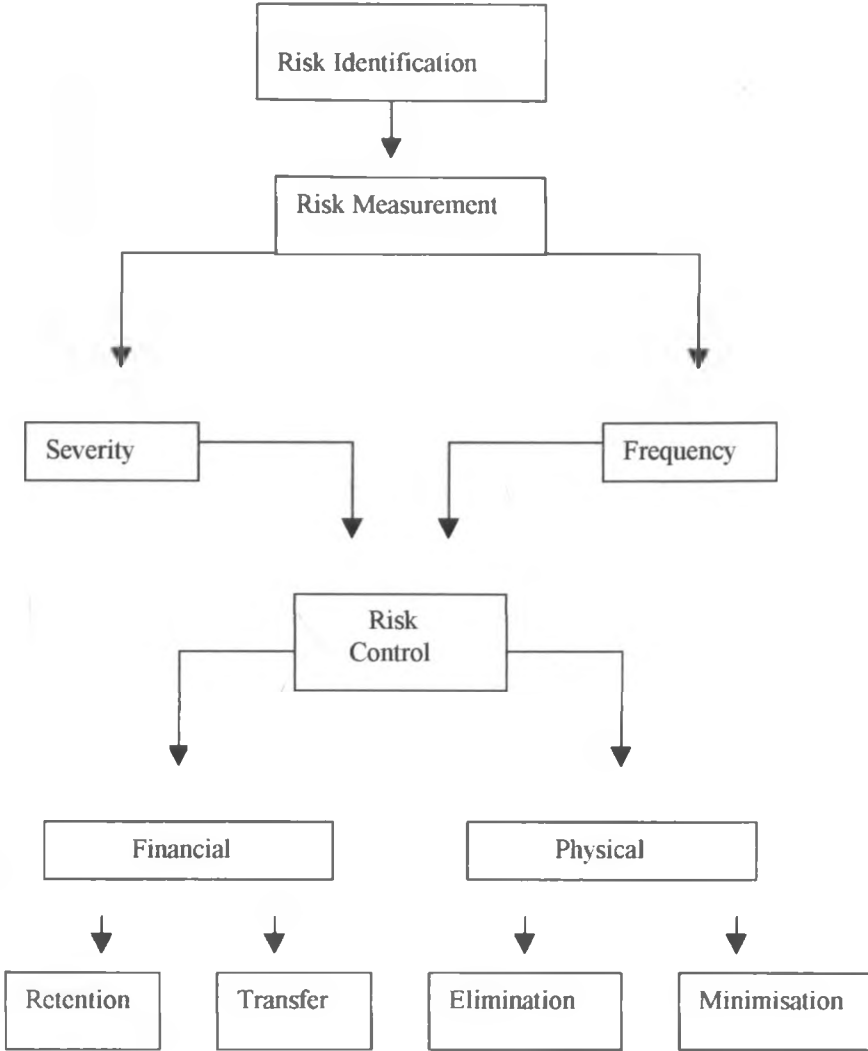
The toll of risk in financial and monetary terms continues to increase each year and if risk is to be managed then the first step is to ensure that we have adequate mechanism for identification and analysis (Dickson, G. C.A 1981).

There is little doubt that as business becomes more and more complex, there will be ever increasing demands on those whose tasks is to identify risk.

Risk identification is an attempt rigorously to identify all possible events, situations or activities that could cause or enhance losses. It has three main stages according to Diacon (1984):

- a) An analysis of the major types of loss affecting the individual or firm

- b) A systematic search of the underlying causes of the consequences.
- c) A systematic assessment of the underlying causes of their consequences



Source: Dickson, 1990; Risk & Insurance

Figure 2: A graphical representation of The Risk Management Process

2.2.7.1 Sources of Pure Risks

1. Physical Damage to assets: Assets may be damaged by fire or acts of God such as earthquakes. Physical damage could make an enterprise to collapse.

2. Indirect or consequential losses: These losses may result from transaction indulgence. Transaction costs maybe so great that business may ground to a halt. Economic recession may contribute to transaction costs.
3. Loss through fraud or criminal acts: A company may experience losses through fraud by staff or outsiders. Huge sums of money may be withdrawn fraudulently without being duly authorised. Such withdrawals would greatly affect cash flow of companies.
4. Loss of assets due to responsibilities to others. Business transactions are undertaken with other parties. The latter may in the process cause loss of assets belonging to the other promoter.
5. Loss of business resulting from an employees death or disability of an employee who has professional skills or whose trade is not easy to replace would adversely affect the operations of a company in the short run hence resulting to a pure risk.

2.2.7.2 Types of loss

An enterprise faces various kinds of loss, the relative importance of which depend on the nature of the company's activities. There are five main types;

i) Property losses

All firms own property or assets that could be damage or stolen/lost, both static assets such as buildings and machinery and movable assets such as vehicles, stock e.t.c. Concern over property losses is greater to firms that either have large values of property at risk – extensive factories or warehouses.

Insurance is available to cover property against possible loss or damage, although the indemnity paid may be insufficient to make good the loss fully.

Few firms are able to recover from a major interruption of business, in the event of a loss such as a disastrous fire, management's first concern is not to receive an indemnity from an insurer but to replace the damaged property and continue production.

ii) Business Interruption losses

Result from any cessation of production caused by property, financial liability or personal losses. Production processes relying on one key man or key piece of machinery, such as a computer are particularly susceptible.

iii) Liability losses

Are losses arising out of legal liability for incidents involving injury to third parties (including employees) or damage to their property. Concern over employer's liability losses is particularly strong in industries with high incidences of accident, such as those using machinery or hazardous processes like mining and quarrying. Concern for products liability losses is felt by firms selling consumables (whether to be used by human beings or animals) chemical or pharmaceutical products, or vehicle, particularly aircraft.

iv) Personal losses

Arise from the injury, sickness, or death of employees. If such losses are incurred in the course of employment, then they are liabilities of the employer. Employees are particularly concerned for the possible illness, accidental injury or death of key employees.

v) Pecuniary losses

May result from defaulting creditors or from thefts or frauds perpetrated by employees and are covered by pecuniary insurance contracts. Concern over financial losses is most keenly felt by enterprises relying on secret processes or procedures or who handle loose cash or who are vulnerable to computer fraud.

2.2.7.3 The immediate cause of loss

The next step in risk identification is to search through the firm's operations to detect immediate causes of possible loss e.g. fire, flood and explosion are immediate causes of damage and loss may each cause any of the five types of losses. Underlying causes of

loss in turn produces 'immediate causes' e.g. a burst pipe or a high tide may be the underlying causes of flooding; an electric short-circuit may cause a fire or an explosion.

A vast number of underlying causes may apply to any one immediate cause; attention should therefore be concentrated first on the immediate cause. The risk manager of an enterprise is unlikely to know everything about that organisation. He cannot run through its product, its products, production methods, customers, suppliers, factories and staff, listing potential loss-making situations off the top of his head and he must therefore use systematic methods to search for immediate causes of loss.

Although several methods are recognised, no single method can be guaranteed to identify every loss-making situation.

Three things have to be identified with regard to each hazard.

- a) What is the likely event which causes the loss
- b) The likely cause of loss
- c) What is at risk; if a loss occurs how large is the loss likely to be. It is the probability of the event occurring that alters the hazard into a risk.

2.2.7.4 What are the aims of assessment?

There are three objectives to any risk assessment endeavour. These are,

- a) Understanding and measurement
- b) Costing
- c) Control

In other words it is the gathering of facts to enable a risk to be managed.

2.2.7.5 Common features of risk identification

1. The task of risk identification must be given the proper priority in an organisation. It is an important function, as many of the risks that are to be identified can cut their way into the very core of the existence of the organisation itself.
2. There is a range of techniques available and no one technique can be used in all situations. Each technique has relevant uses to which it can be put. Thought must be given to the nature of each risk and the best technique or combination of techniques selected.
3. The task of risk identification is a continuing one; the one-off exercise is of little value in many practical cases. The nature of industry is such that it is constantly changing and it is therefore essential that risk identification take place at regular intervals.
4. Efficient record keeping is an important part of identification of risk. A great deal of valuable information is obtained at the time of risk identification, and this should be stored carefully for later use and referral.
5. Other people, in addition to the risk identifier, should be involved in the process of risk identification whenever possible. Organisations are complex and no one person will have all the knowledge that will be required to enable risks to be identified.
6. The cost of risk identification must be remembered. There is little point in spending Kshs.10,000 to identify risk which in the worst case can only cost Kshs.3,000. Identifying risk is important, but it costs money and this cannot be overlooked.

2.2.7.6 Risk Identification Techniques

There are some methods that are predominantly desk-based while others could not be completed without site visits. There are others that are more appropriate to the post loss situation than to the pre-loss position. Some involve the use of quantitative analysis while others are essentially qualitative in style. Both Vaughan (1978) and Dickson (1981) basically give the following tools of risk identification.

Before starting any risk identification it is essential to carry out some kind of physical inspection. Many simply take the form of a brief walk over the plant to complement what you have read in company publicity material or heard for managers at the factory. This initial step helps in giving a 'feel' of the place and may later direct you in risk identification in one way or another. Having done this, one or more of the following may be a helpful aid to identifying risk;

i) Physical Inspection

This is the *best known* and most *often used* technique for identifying risks. It is extremely time consuming as a part altogether from the distance which may be involved in travel, there is also the time taken in carrying out the inspection. Before embarking on an inspection, it is therefore essential that as much preparatory work as possible is done. The first and probably most obvious point is to get clear is the actual time that the proposed inspection will take visiting any plant will have to be programmed into all the other tasks which have to be performed. You will have to give serious thought to how long you anticipate the inspection to take and when in the year it would be best to do it.

Advantages of a physical inspection

You see the plant yourself and do not have to rely on reports from others. Others also get the opportunity to see you. In trying to build up or maintain good links with those on the ground and those in charge of various plants it is essential that you are seen and approachable. Visiting plants does bring you into contact with the people on whom you will rely for much of your information concerning risks and hazards.

Disadvantage

The time it takes to carry out inspection. You will have to invest a considerable amount of time in each inspection. This investment of time also means cost and all of this will have to be balanced against the advantages you hope to gain from inspection. Another disadvantage could probably be that by visiting plants on a regular basis you may in fact discourage others from being vigilant themselves in the identification of risks. There are

pros and cons for physical inspection and whether one is to be carried out or not can only be judged in the light of all the circumstances.

ii) Checklists

A possible alternative to the actual task is the completion of a checklist or some other form of questionnaire. This is clearly not as good as going to see for yourself but it does have some advantages.

Once the checklist has been prepared the risk manager can either send it for completion by someone at the plant or if he wishes, he can use it as a pro-forma to complete while he inspects the plant personally. The main use of checklists however is having them completed by someone on site. The form must therefore be clear and unambiguous in every detail. This is very difficult to achieve and will probably take several drafts before a list emerges with which you are happy.

Advantages of checklists

- i) They are a reasonably inexpensive method of generating a great deal of information about risks within the company. They are inexpensive in time and money in comparison for example with physical inspections
- ii) They are also very simple in essence and can be arranged quickly and implemented with not a great deal of fuss
- iii) They allow for a fairly rapid comparison with previous years and this makes for efficient monitoring of risks year by year
- iv) They are also adaptable and can be changed very simply to keep up with changes in the company or just to take account of improvement in the layout of the firm itself

Disadvantages

- i) Since they are invariably completed by someone rather than the risk manager it is possible that inaccuracies creep in during their completion

- ii) It is inevitable even with the best form, that there will be ambiguities and hence a measure of subjectivity when the forms are being completed. This may lead to a differing standard each year and also to differing standards being applied among different plants within the same group.
- iii) In practical terms, it may be difficult to have the form completed on time and several reminders may be required. If this occurs then some doubt must be cast on the validity of the returns
- iv) A problem with all questionnaires is that it is not possible to say how the form is completed. It is hoped that the form was given thought and that the answers are valid but there is no way of knowing this unless you actually go with the form and see it completed.

iii) Organisational Charts

The checklist and physical inspection attempt to identify actual risks while the organisational charts try to pinpoint 'areas' of risk. This is a slightly different approach but nevertheless one which is valuable to the risk manager.

Organisation charts can highlight duplications, dependencies and concentrations. Placing figure on organisational charts can be of marginal assistance in the identification of risks but there is one technique that can make use of charts and figure and this is the flow chart.

iv) Flow charts

The flow chart is not restricted to the organisational structure of the company. It can be used to describe any 'flow' within the company. In any organisation there will be many different aspects of flows. There will of course be a production flow, as raw materials are converted into a finished product. In a service company there will be a service flow as the company attempts to satisfy the demands of its customers.

For the risk manager, the most important is probably the production flow. From such a flow chart the risk manager can see where the raw materials come from, how they are processed, the various stages of production and the final destination of the product. At any of these stages there can be risk and it will be the task of the risk manager, not simply to describe the flow but to interpret the chart in terms of potential risk. The first step is to ascertain exactly what the various stages in the production process are. This will involve lengthy discussion with those most closely involved in the production. It may be that some form of flow chart of production activities already exists but it is a useful exercise for the risk manager to ensure that he knows for himself all that is involved in manufacturing the product.

The flow chart is not intended to identify causes of loss such as fire, theft, liability, e.t.c. What it does is to highlight the effect of certain events. The risk manager can ask a number of 'what if' questions and can use the chart to suggest the answers.

Advantages

- i) Use of flow charts is an excellent example of breaking a problem into manageable proportions. It is a daunting task at the best of times to begin the job of risk identification but once a large problem is broken down into smaller sections then the work can at least begin
- ii) Has the advantage of letting the risk manager see the whole process in the one chart and see the entire operational flow of the company. This is much preferable to having to read a number of publications describing the processes
- iii) Allows for structured thought about the problem of risk. It also demands it if the chart is to be used properly. This logical approach to risk identification is often what is missing but the chart guides the manager through the process of identifying risk.

Disadvantages

- i) The time it takes to complete a study. From undertaking the processes involved in drawing the chart can take considerable time and then the real work of interpreting the chart begins
- ii) Some charts can be extremely complex. If the chart is so complex that it obscures the risks then it may well be that a flow chart is not the best technique to adopt
- iii) The chart could also be said to be very general in nature. It covers the whole process in a general sense but does not concentrate on any one specific part of the process which itself may conceal all kinds of risk. This is a disadvantage associated with any form of risk identification which takes the broad brush approach adopted by the flow chart
- iv) The flow chart does not comment on the likelihood of events occurring. We mention likely loss producing events but we do not say whether we believe the events to be extremely likely or hardly likely at all

v) Hazard and Operability Studies

The Hazard and Operability Study (HAZOP) is a qualitative approach to risk identification which can be employed at the planning stage of projects. It is now used extensively in the chemical industry.

HAZOP is a critical enquiry into the operations of a plant, from the hazard point of view. It follows the basic logic that many problems are complex and must be broken down into manageable parts. A plant is divided into a number of parts and each part is then examined extensively in order to identify all the hazards associated with it. A logical framework is laid down by which this identification is achieved. There are four main questions with which the HAZOP study is concerned;

- i) The intention of the parts examined
- ii) The deviation from the declared intention
- iii) The causes of the deviation
- iv) The consequences of the deviation

A particular section of the plant is selected and the intention of that section is defined. This is clearly a crucial stage as if the intention is not accurately stated then the deviations from it will also be suspect.

The HAZOP is best carried out by a team and the team will jointly derive the intention of the section of the plant under inquiry. The study is not just on the one selected section as once the risk on that part is done then another section and another will be chosen until the entire plant has been examined.

Advantages

- i) Identification of possible risks is carried out in an extensive way. There is little likelihood that anything major will be omitted when the study is properly carried out.
- ii) A team of people is involved in the task of risk identification and this may pay dividends in the future for the risk manager.
- iii) The HAZOP allows each part of a complicated system to be examined in detail and this is something that can be very hard to achieve in the absence of a structured approach.

Disadvantages

- vi) Time involved is much. The combined investment of time will be expensive considering the whole team involved
- vii) It may be necessary to simplify a system in order to draw a diagram and then work your way through it. If this is done, then there is the risk that some aspect which may be risky could be omitted.

Taking all the advantages and disadvantages together we must conclude that the HAZOP is an important technique for the identification of risk and one which the risk manager should become familiar with.

The risk manager should as much as possible endeavour to keep up to date with modern risk identification methods and not be content with the traditional physical inspection and checklist as the sole or primary source of information.

2.2.7.7 Assessment of Selected Risks

a) Assessing the Fire Risk

Once the nature of fire risk and the factors leading to its inception have been considered, it is necessary to examine the circumstances which may cause it to be sustained or propagated in the particular circumstances that are being considered.

The inception risk and the propagation risk are entirely disconnected factors in the overall assessment. In a large warehouse, the inception risk may be small but the bulk storage of combustible material over a large area represents a high propagation risk. Conversely, although in a factory the inception risk may be higher, perhaps because of process involving the use of high temperatures, there may be little danger in the fire spreading because the particular process is undertaken in a building or compartment which is cut off or segregated from the remainder of the site. Again a process which is clearly hazardous may present a reduced inception risk because of rigorous enforcement of statutory safety requirements but this does not in any way affect the propagation risk.

Accordingly, in assessing the risk,

- a) the inception risk may be gauged by how a building is occupied and the processes and hazards associated with such occupation
- b) the propagation risk may be gauged by the extent to which the size and layout of the premises and the presence of combustible materials which may facilitate propagation of the fire
- c) the concentration of values involved; that is the extent to which high valued materials subject to risk are concentrated within relatively small areas

- d) the construction of the building to assess the degree to which it can resist a fire or arrest its progress

These are usually assessed in the course of a survey in which the site is inspected in some considerable detail and the results noted down in the form of a plan and report.

b) Consequential Loss Risk Assessment

The consequential loss or business interruption policy cover is based on the fire policy and therefore the plan and report prepared for the latter is needed in assessing the consequential loss risk. There are however some additional features that must be examined so that the risks involved may be assessed in full. These additional features that must be surveyed and reported are;

- a) any areas of possible bottlenecks in the process, for example where all the products have to be worked only one machine which if destroyed or damaged would stop all products
- b) any chance of access to the site being restricted for example if a fire in another property could block or limit entry to the property being surveyed until the debris is cleared away
- c) the possibility of supplies such as power, raw materials used in production being cut or stopped as a result of damage to the property of the supplier
- d) the possibility that customers will be unable to take delivery of or purchase the goods or services as a result of their property being damaged
- e) seasonal factors, for example a fruit cannery or a ski resort

From a risk manager's point of view, perhaps the most important features to be examined are (a) to (c) above together with the dependency on major customers and the availability of replacement machinery should it be damaged or destroyed. For example;

- a) Can it be obtained?
- b) If so, from where?
- c) How long will it take?

d) Are spare part or alternatives available?

c) Special Perils Risk Assessment

The increasing exposure to loss resulting from special perils means that the surveyors are often asked to prepare reports dealing with such perils particularly where there is an exposure to water damage or explosion in trade and individual risks.

The information needed naturally varies but as a general rule the following features need consideration.

Aircraft

Proximity to airports or airfields and the purpose for which the airport is being used e.g. private commercial, armed service e.t.c. as well as the situation of the property with respect to the airport runways all need to be considered.

Explosion

a) Details of

- i) any process where explosion risk is above normal and/or
- ii) any goods of an explosive nature stored
- iii) vessels under pressure or vacuum

Explosion risk (if any) from surrounding properties

Windstorm, Storm & Tempest, Hailstorm, Snowstorm and other climatic exposures

- i) Situation – consider exposure to elements – proximity to coast – elevation
- i) Construction and general state of repair (particularly the roof)
- ii) Maintenance (e.g. tall trees – chimneys near enough to cause damage)

Flood

- a) Level of premises relative to surrounding land and water courses

- b) Distance from sea, river or other water body might cause flooding
- c) The condition of any water courses in the proximity particularly down stream from the site
- d) Basements on the site and their use

Burst Pipes

- a) Main stopcocks, accessibility and if turned off outside working hours
- b) Subsidiary stopcocks
- c) Details of elevated tanks and if provided with stopcocks and/or overflow pipes
- d) Susceptibility of tanks and pipes to frost and whether or not adequate protection has been provided

Subsidence

- a) Situation of premises with particular reference to position e.g. side of hill, bank or river
- b) Details of any nearby quarries, mines or other underground workings
- c) Nature of subsoil
- d) Confirmation that the ground on which the building is sited is not 'made up' or fill

Earthquake

- a) Past earthquake experience of the region
- b) Proximity to and alignment with known fault lines
- c) Nature of the subsoil – type, nature of subsoil layers, groundwater
- d) Materials used in the buildings construction
- e) Design of the building
- f) Standards of the workmanship in the building and plant
- g) Sensitivity of machinery and other contents to earthquake forces
- h) Likelihood of fire or explosion following earthquake – ignition sources, combustible materials, fire fighting capability in adverse conditions, fire and explosion prevention measures designed and built into the building and plant

d) Theft/Burglary Risk Assessment

The burglary risk is assessed in a similar manner to the assessment of fire risk, though, of course, particular attention must be paid to the features that affect the likelihood of loss from burglary or theft.

The person making the assessment should try to imagine himself as the criminal armed with the most technologically advanced equipment that is available at the moment such as pinch bars, heavy hammers, tyre levers, pipe wrenches, tyre jacks, bolt cutter, battery operated electric drills, e.t.c.

To identify the exposure to burglary and theft risks,

- a) study details of any previous attempts of burglary and theft at the site before visiting the property
- b) try to tour the property with a senior member of the firm(s) who occupy the property
- c) keep in mind the cost of providing good protection through out the whole time that the survey takes
- d) work through the property systematically paying particular attention to the external features of the property itself and of buildings in the immediate neighbourhood
- e) Consider
 - i) the use or uses to which the property is being put
 - ii) the attractiveness and portability of the goods and materials that are present in the property
 - iii) how entry may be made and how the goods or materials may be removed from the property
 - iv) try to cover all aspects of loss prevention, visualising the possible causes of loss

e) Public liability risk assessment

The assessment of public liability risk is complicated and as a consequence surveys are normally limited to the larger and more complex risks. The assessor of the risk must however, as a general practice try to anticipate how property may be damaged and people injured. In addition, whilst not all people are careless, it is safe to assume that most will be at some time or another and the risk should be assessed accordingly.

The person examining the risk should pay special attention to;

- a) identify all aspects of the activities of the business
- b) access to the premises by customers and members of the general public
- c) materials used in any aspect of the occupation; checking for any that are toxic, inflammable, explosive, corrosive, otherwise dangerous to property or person to ensure that they are handled and stores properly
- d) machinery, lifts, hoists and cranes, e.t.c., used in the building checking to ensure that,
 - adequate guards are fitted and used
 - all equipment is regularly inspected and maintained
 - all operators are adequately trained and supervised
- e) the extension of the premises, checking to ensure that
 - overhead signs
 - parapets, chimneys, guttering
 - trapdoors, cellar flaps, goods chutes, pavements, lights, grills and gratings in the pavement outside the premises
 - stairs, passageways and public spaces are not only adequately lit but also are maintained in a good state of repairs
- f) the collection and disposal of waste
- g) the standard of management and housekeeping
- h) packaging and distribution is adequate for this type of product
- i) the possible improvement of that will reduce the risk and size of loss

There are number of checklists covering the safety and quality of products which can be usefully used in assessing and improving products risk.

2.2.7.8 Surveys

There is a considerable variety in the use made of surveys and in the way in which surveys are done. Property underwriters have always commissioned reports on fire risks. Sometimes reports are intended to provide better information than could be obtained in other ways. Sometimes this purpose is to propose ways in which bad risks could be improved and made more acceptable to the underwriter (Way & Rainbird 1991).

Special expertise of surveyors

The content of insurance surveys is governed by the underwriters. Surveyors are very much involved with rules, standards, code of practice, underwriting guides and the like, covering such matters as construction, intruder alarms, sprinklers, and the classification of risks. Underwriters also need to understand and apply this material and in this sense, it is common ground for surveyors and underwriters.

Within this framework, surveyors have special expertise. The Insurance Act Cap 487, laws of Kenya defines a surveyor as a person who engages in surveying risk and in advising on the rate and terms and conditions of premium including suggestions for improvement of the risks. They confront individual risks and find that it is rare for anything to precisely fit within the rules. They therefore develop special expertise in applying the rules to individual situations. In addition, surveyors have to apply basic knowledge and principles (such as physics and chemistry of combustion) when dealing with matter for which there are no ready-made standards or rules.

Obtaining good information as to what the risk consists of is an essential stage in the control of risk and the surveyor needs expertise both in looking and seeing for himself and interviewing.

Having assessed the risk, surveyors often draw up specifications in connection with risk improvement, provide clients with the names of approved products and services and advice whether recommended products can be obtained.

It is a myth that the surveyor merely looks. It is usually essential for the surveyor to meet the relevant people and ask questions. What a firm does, what it makes, what it stores, how it is organised, what losses it may have had, what security consists of, are rarely self-evident. In large firms it is often relevant to meet several people.

- i) The company accountant or the financial director may be familiar with the policy schedule and the profit figures.
- ii) The works manager or works engineer will know about the products and processes, and about some aspects of security and fire protection.
- iii) The maintenance person knows most about losses, because he has to carry out repairs.

Risk Management and Surveys

Risk management is a relatively recent development. Sometimes the term risk management is applied to the simple transfer of risk (for example insuring it) but in general, there is not a sharp dividing line between the traditional survey and the risk management exercise. Both involve an inspection of the clients operations, both analyse risks, both assess the significance of hazards and both propose ways to prevent and reduce loss in a cost-effective ways. Further, both are multidisciplinary. What varies is the extent to which time and expertise are devoted to the individual case, and the extent to which specialised experts are used.

Surveys are done as part of risk management exercise by risk management consultants or by insurance company surveyors.

Survey Limits

It is not economic to survey everything. The selection of risks which are to be surveyed is usually based on type of cover, the trade, the occupation, the type of property and the amount of risk.

The existence of a problem, a bad claims history, a preference for seeing for oneself in a particular case, are examples of reasons for a survey which can override the survey limits.

Who carries out surveys and why?

Underwriting Surveys by Insurers

The majority of property insurance surveys are commissioned by underwriters and written by surveyors who are employed by the insurer. These reports are internal documents for the insurer. They have two main purposes

- i) To describe, classify and assess the risk to enable a proper decision on acceptability and terms to be made.
- ii) To propose way(s) by which the risk can be improved.

After a survey, the insurer is held to be in possession of all the information which is material to the underwriting that was available to the surveyor at the time of the survey. This is one reason why the job of the surveyor demands a great thoroughness, competence and tact.

Underwriter's lay varying emphasis on risk improvements. Others tend to take the view that their function is mainly to match premium to risk as they stand and not to be dictatorial to clients. Some improvements are regarded as by the underwriters as prerequisites, without which cover will not be granted. Some improvements are optional as far as the underwriter is concerned, but can result in reduced premium or wider cover for the insured.

Much of the work of persuading clients to improve risks and reduce losses is done by surveyors. The surveyor does not usually have underwriting authority, but operates

within an underwriting framework. He will often be able to indicate to the client what the underwriter's reaction to his report is likely to be and indicate non-controversial things such as the discount obtainable for initial suitable fire extinguishing equipment. However, any authority that may be exercised on site is only delegate from the underwriter. The ultimate decision (which illustrates the point) that is if the client does not agree to some crucial proposal or term, his cover will cease or not be renewed, belongs solely to the underwriter.

Independent Surveys

Some insurers and brokers do not have their own surveyors and independent surveyors carry out surveys for them

Specialised consultants

There are also highly specialised firms of consultants who include insurance surveyors among these specialists. The firms tend to operate in markets which can afford to employ a highly proportion of very specialised and highly qualified staff.

Contents of survey reports

The following are summaries of the types of information found in insurance survey reports.

All types of reports

- i) Name of client
- ii) Trade And occupation of client
- iii) Address of risk
- iv) Name of surveyor
- v) Date of survey
- vi) Policy or branch
- vii) Person seen
- viii) Other contacts (broker , client)
- ix) Losses
- x) Quality of management

- xi) Quality of records
- xii) Adequacy of sums insured
- xiii) Future plans
- xiv) Risk improvement
- xv) Remarks (summary and general comments)

Post-loss Surveys and Re-surveys

There are surveys or re-surveys done after a loss and in direct connection with it (as distinct from those which may be done after a loss but which are simply underwriting reviews

After a loss the insurer is still on cover for what is left but their condition may be substandard because of the loss. For example after a fire the roof may be missing and stock and machines may be exposed to the weather, the building may be insecure against thieves and looters et c. Accordingly, some guidance as to the best way to achieve the temporary arrangements may be needed.

It is important to avoid a repetition of the loss. When repairs and replacements are carried out, the offending features or must not be repeated if at all possible. If a design defect in a machine caused the fire it should be designed out in the replacement machine.

Special need for urgency after theft.

After thefts many people want to improve security before they deal in more detail with making the claim. This desire is practical and commendable. However, the aftermath of a burglary is not the best of times for clear thought and the self-imposed pressure to act quickly very often result in unsatisfactory new arrangements.

For example a large sum of money may be spent on intruder alarms, which, in some cases, may even fail to detect the burglars if they were to come back simply because the installer was incompetent at surveying and establishing what was needed.

If the insurer waits for some information about the loss before deciding whether a post-loss survey is needed, it is often too late to intervene and the insured has done some improvements. These might be inappropriate. The only practical solution is to offer advice to the insured on the telephone so that at least for major expense, there is an opportunity to influence their decision and also to give time for the surveyor to visit if this is needed.

Criteria for post-loss surveys and re-surveys

It is usually the amount of the claim, which determine whether a post-loss survey or re-survey is required.

A different approach bases the decision solely on the amount of claim but also on the size of the sum insured and on the degree of hazard e.g. the attractiveness to thieves or the fire hazard of the risk.

Routine or Periodic Re-surveys

Routine re-surveys are carried out according to a program or as needed at the instigation of the insurer. They provide an opportunity to maintain the relationship with the client to maintain the quality of information for the underwriter and to maintain the quality of information for the underwriter and to maintain the quality of the risk.

If the insurer wishes to control the quality of risk already on the books, it is not practical to rely on the insured to ask for a visit. He may never ask. Any re-survey program must have its own momentum and preferably not be confined with other matters.

If reports are re-used it is vital that the whole of the report is brought up to date.

2.2.7.9 Estimating Potential Losses – ‘Estimated Maximum Loss (EML)’

Estimates of potential losses are usually made by surveyors on the basis of their observation of the individual risks. The need for the estimates of the size of losses arise out of the following reasons.

1. Underwriters need to know whether a risk exceeds their direct capacity and whether they need to share the risk or remove it.
2. They also need to know by how much a loss may exceed their direct capacity.
3. Re-insurers for their purposes also need estimates of potential losses.
4. Estimates of possible losses are relevant in assessing which loss prevention measures could be more cost effective.
5. Some risk managers need to estimate how big the losses may be, both in relation to insurance arrangement and also in relation to uninsured risks.
6. An estimate of routine losses is needed when the size of an excess or deductible is being decided.

The prime reason for estimating the biggest losses is to protect the solvency of the insurer or the solvency of the insured or uninsured firm.

In 1977 a committee of European insurers decided to standardise the use of the term 'estimated maximum loss' to mean an estimate of a loss which is not necessarily the maximum possible but one that was the maximum to be expected in normal circumstances. Since then, this vaguely defined term has been widely used, but with a variety of meanings. There are other terms in use such as maximum probable loss, maximum possible loss, e.t.c.

EMLs are often used as a guide to the desirability of risk improvements.

2.2.7.10 Warranties and Policy wordings

Identifying the risk is an essential part of actually controlling the risk itself. Survey reports contain much information that contributes to the wording of a policy or modification of the standard wordings.

Warranties and conditions are used to define precisely what the risk consists of and to state the obligation of the insured. The information is the report on construction, trade

and processes is usually built into the policy wording. The report notes the existence of features which need to be defined by means of warranties and condition e.g. fire protection equipment, intruder alarms, e.t.c. The purpose of the wording is to achieve the management of the risk in the agreed manner.

2.2.7.11 The surveyor as an interface

The surveyor is a representative of his firm. For insurers, the surveyor may be the only person who meets a client face to face. It follows therefore that the surveyor must be well trained, preferably experienced, credible and efficient

There is no substitute for a personal inspection of a risk by a specialist trained in both insurance and in the various hazards. The surveyor carries a great responsibility and the job cannot be performed in a superficial manner if it is to achieve its purposes. It is usually impossible to obtain the underwriting information in any other way.

2.2.8 Risk Analysis and Measurement

This is evaluating the impact of risks on the firm. Often this evaluation can be made in a qualitative manner, i.e. without the use of quantitative analysis. A risk manager could, for example, study a flow chart and make certain qualitative evaluation as to the effects which specific events may have. In some cases this may be all that is possible because accurate records have not been kept and further quantitative analysis would be impossible.

Qualitative risk evaluation is something which benefits from experience and those involved in risk management invariably fall back on their own experience of similar events or situations in measuring the potential impact of risks.

The aim of risk measurement is to calculate the impact of possible risks on the enterprise. Once possible loss-making situations have been identified, it is then necessary to examine:

- a) the number of possible losses each year (the frequency)
- b) the possible size of each of these losses
- c) the value of assets at risk (maximum possible loss)

In theory, the size and frequency of possible losses should be estimated for each of the loss-making situation identified. This is likely to be a tall order – there are usually many such situations and the information available is likely to be sparse. Nevertheless, such an exercise should at least be attempted for those losses of major concern (Diacon, 1984).

Risk analysis acts as a kind of a hub around which many other practical aspects of risk management rotate. The below diagram shows the various stages of risk analysis



Source: Dickson, (1990); Risk & Insurance

Figure 3: Cause-Risk –Effect relationship expressed graphically

Every risk is caused by some factor or factors and results in some effects or effects. It can be viewed rather like a chain. The cause is linked to the nature of the risk and the risk itself is linked to the effect. Risk analysis is necessary at each stage in the chain (Dickson, G. C. A 1991).

There is need for the analysis of causes not yet known. We must look, in other words for potential causes of risk. New processes or methods of construction must be looked at carefully. Risk analysis is not limited to identifying those things which we know can cause loss.

2.2.8.1 Reasons for Risk Measurement

1. Insurance relies on accurate use of numbers. Risk, uncertainty and insurance are inextricably linked with the use of numbers. Data has to be collected, tabulated, described and measured. Estimates of likelihood have to be made, premium calculated, losses paid, reinsurances arranged, the list is endless. Those involved in insurance cannot escape the need to use and understand numerical calculations.
2. The quantitative world of business. The whole world of business is becoming more and more quantitative. This has certainly been aided by the advent of the computer, particularly the micro or personal computer. The desktop computer has almost become a standard item of office furniture. It is no longer sufficient simply to be literate, the person wishing to make a career in business must also be numerate.
3. A disciplined pattern of thought. The study of qualitative concepts, and the discipline it involves, encourages a particular way of approaching problems. Once this approach has been mastered it can also be transferred to other areas of business life. The result can be a more logical pattern of thought, an orderly approach to problem solving and consequently a reduction in the temptation to generalise or put forward invalid arguments.

2.2.8.2 Frequency of losses

First the, risk manager needs to know the average number of losses of a particular type that he can expect in a year, that is in the average, expected or mean frequency of loss. Some losses are extremely rare and only occur on average only once every 50 or 100 years e.g. a major fire. Others such as engine failure in public transport vehicles happen quite regularly.

Secondly the risk manager also need to know the probability distribution of loss frequencies. This takes the form of a table showing the probability or chance of having one two or more losses in one year, or having no loss at all. This is of considerable use because the average and actual loss experiences are very rarely the same. Suppose for example that a loss occurs only once every 100 years, this is 0.01 losses per year on average. But this 'average' loss tells us nothing about the chance in terms of proportion rather than percentages 0.99005 rather than 99.005 per cent for example.

2.2.8.3 Sizes of losses

The next concern is to estimate the probability distribution of loss size. This will tell the chance or probability associated with each and every loss value from a given loss-making situation. In general, small losses are the most likely to occur (if at all) and larger losses become increasingly improbable. Some, but very few, losses are fixed in size. The vast majority of losses can vary in size, however, often from very small to very large amounts. The size of a property loss can vary from zero right up to the maximum value of the property at risk (the maximum possible loss) while the size of a liability or financial loss is unlimited.

The information to be desired from a probability distribution table is of considerable value to the risk manager in three ways.

- i) The average loss size can be calculated. This is simply obtained by multiplying each probability by the corresponding midpoint of the range of loss sizes and then summing.
- ii) The chances of having a really large loss can be marked out.
- iii) Some idea of the 'spread' of loss size can be obtained, either by casual examination of the distribution or by computation of a statistical measure of the 'spread' such as the standard deviation.

2.2.8.4 Risk Analysis Techniques

a) Fault trees

A Fault Tree can use numbers in the quantification of risk, although it does not always do so. Fault trees are essentially quantitative in nature but they can certainly be used as a qualitative tool. The fault tree is a diagrammatic representation of all the events that may give rise to some major event. It shows the way in which individual events can combine together to produce potentially dangerous situations and it forces us to consider all aspects of the problems, including quantification of likelihood.

Fault trees have considerable practical value and are in use in many different areas of industry and it is as well that the risk manager familiarize himself with them. It is an excellent way of describing a complicated process or system. It provides the structure that may be required in order to fully understand how a particular process works. The tree approach allows for the identification of risks as the tree is built. Building the tree involves not only an understanding of the process or system but also the risks that are inherent in it.

Advantages

- i) It affords a structured approach to risk identification
- ii) It is a simpler analysis of complex systems
- iii) It helps in the tracing of causes and their impact

Disadvantage

Time it takes to carry out a study using a fault tree and the time which may be involved in learning the appropriate techniques

b) Hazard Indices

This technique attempts to express the degree of hazard by using a number. There are a number of different ways in which this can be done but probably the most common method is the Dow fire and Explosion Index. It is a method refined over the years since 1964 by the Dow Chemical Company and now used fairly extensively.

A number of other methods have also been developed by industrial concerns and risk management consultants. In essence they share the same basic philosophy as the Dow Index and that is to measure the likelihood of loss and express the result as a number to which others can then be compared and annual changes monitored.

2.2.8.5 Information and Communication in Risk Management

The whole business of insurance depends on numbers. An amazing volume of data is gathered from a wide variety of sources;

- Proposal forms
- Claim forms
- Survey reports
- Adjuster's reports

This data is gathered for particular reasons by different people within the industry. The underwriter needs accurate information on the risks he is to accept on behalf of his company; the claims official has to have information at hand on many aspects of claim. It is essential that the correct information is collected in the most efficient manner and from the most accurate source (Dickson, 1990).

Collecting the correct information is the first and most important step in quantitative methods. However, once the data has been collected, the work really begins. What we have found must be represented in such a way as to make the meaning quite clear.

Insurers have vast amount of data and it would be easy to confuse a message rather than make it clear, simply due to the volume of information.

Gathering data and presenting it are essential first steps, but analysis of the risk data go far beyond that. This means moving into the more quantitative, statistical aspects of the measurement of risk data. It will be necessary to calculate 'average' cost of losses and the extent to which claims are grouped together or well spread out. There will also be a need to arrive at a measure of the likelihood that particular events will take place.

Insurance is all about risk and the estimation of likelihood, and calculation of expected outcomes will be essential.

Thompson and Perry (1992) argue that successful risk management requires qualitative risk analysis. This analysis identifies sources of and provides an initial evaluation of their influence on the project goals. The analysis requires from the analyst a lot of time, discipline, experience and creativity.

The manager has to use all information available to make the best decision on how to minimise risks. Risk management can best be done through collating relevant information, making the right decisions and hence reducing the incidence of risk (Gichunge, 2000).

Gathering Data

The first stage in statistical risk analysis is the gathering of data. Risk and insurance departments do generate large volumes of information on claims, policies, premiums, e.t.c. Very often, the data is collected as a matter of routine than by definite conscious decision to gather it. The risk manager has data and must look at it and see to what use it can be put.

In deciding on what information to collect it is essential to have a clear picture of what the end result is likely to be. This is often best achieved by imagining what kind of statements you would like your analysis to produce at the end of the day.

There are a number of techniques that can be employed in the gathering of data and most textbooks on statistics will include a comprehensive list of them. In the risk management situation, it is likely that the data already exists. In only a few cases will the risk manager have to set about devising a system for collecting data. What may be necessary is some adjustment in the format in which the data is gathered. If we take claim information, for example, it may well be that a report of, say, industrial injuries is submitted to the insurance department. The risk manager needs to ensure that this report contains all the information needed for analysis in addition to whatever is required by the insurers for their uses.

The following points should be considered when designing any form for gathering information. This could be any kind of information which the risk manager may want to collect e.g. information on fires, thefts, revision of sums insured, e.t.c.

1. The form should contain full instructions. Included in the instruction should be some indication of why the form is required, what its objectives are and how it will be used.
2. Ambiguities should be avoided.
3. Leading questions should be avoided.
4. The form should be no more complicated than necessary. Long and complicated forms tend to 'put people off' there is no doubt. The form should be such that it can be completed quickly and accurately. Short crisp questions are more likely to achieve this end than lengthy wordy forms
5. When designing the form, remember how the information is to be analysed. In many cases the data will be recorded on a computer and this will speed up the eventual analysis. The designer of the form must remember this and gather data in a suitable way.

Presentation of Data

The first task is to represent data in the most appropriate way for our own purpose. There are a number of different ways we can represent the data. The point is that the method chosen must match the need at the time. If the need is to provide an overall picture of fire losses in your company for some annual report then a different method would be selected from one which you may use when providing a technical report for your insurers.

The most elementary step is to prepare an unordered array concentrating on cost of settlement but this still requires careful reading to be able to interpret how the costs are distributed. An ordered array could also be done to avoid this difficulty.

To overcome these problems further, we can construct a frequency distribution. This simply condenses the array and is much easier to interpret. We can look at a distribution and see that e.g. claims costs are fairly evenly spread. It gives a clearer picture of what the data is telling us. It is also useful when comparing our data with someone else's or indeed when comparing subsets within the data. In addition to frequency distribution method of data presentation we also have a range of more pictorial methods which can be used. These are bar charts, pie charts, pictograms, frequency distribution, e.t.c.

Data and Records keeping

Any statistical work that is done in risk evaluation will be as good as the data which have been gathered and which formed the basis of calculation. We could say then that the statistical analysis of risk really starts with the keeping of adequate records. Only if we have these records will we be able to carry out any form of valid statistical work.

One major difficulty is that these records have to be compiled before the immediate need for them arises. In other words, if a risk manager decided to self insure the theft risk, to which his premises is exposed, he would want to measure the impact of the theft risk on his company. If he had not been keeping accurate records of the theft losses he would

find it very difficult to look back over, say, the last five years and try to remember such incidents.

With modern computer technology, the keeping of records is much less of a burden than it used to be. Incidents can be entered on a computer file and codes used to indicate the type of incident and the plant at which it occurred. Later the file can be updated to show the final loss figure, the date settled and any other relevant facts. If incidents are reported regularly to the risk manager, and if these reported incidents are accurately recorded, then an invaluable source of information is collected which can later be turned to the risk manager's advantage.

Not only does the computer store loss information but also it can carry out appropriate statistical analysis including prediction of loss trends. However, whatever figures are produced are only estimates of what may happen. In the end, the risk manager must form his own judgement as to what he believes may happen and the resultant effects.

2.2.8.6 Valuation of Assets and Possible Losses

The value of an asset can be thought of as its opportunity cost i.e. the loss or additional expense that an organisation would incur if deprived of that asset rather than its second hand value. In practice there is no single way of evaluating an asset's opportunity cost and there are three main alternatives.

- i) Replacement cost or current purchase price. This obviously has no meaning if the last asset is irreplaceable.
- ii) Current resale value i.e. the price obtained if the asset were sold. It is appropriate for very specialised assets.
- iii) The net present value of expected future earnings. This values an asset according to its future 'earning power' and opinion may well differ as to the nature and extent of this (Diacon, 1984).

A risk manager and an insurer may place quite different values on the same asset. The principle of indemnity requires an insurer to pay the second hand value at the time and place of loss in the event of total destruction.

Valuing possible no-property losses is more difficult. Liability losses are essentially determined by courts of law that continually set new levels of compensation paid to injured third parties.

2.2.9 Risk Control

Once one has known what the problem is and how big it is, the next step is to decide upon and implement whatever mechanisms are considered as being likely to solve or at least minimise the problem or its effects. So it is with risks, once the nature and scope of the exposure to risk have been recognised the next step involves the determination and implementation of measures that will reduce the risk or reduce the effects of the loss or both at an economical cost.

By doing so, the need for loss financing will be reduced in most instances and losses will be avoided or minimised. It must be realised that the control measures that are installed may sometimes not work as intended; some may perform better than expected whilst others may function as intended. A regular monitoring and review of the performance of the control measures is therefore essential as is taking action to take advantage of any better than expected performances and to improve any that do not come up to standard (Wilkinson, 1992).

In the end, it is economic risk control that is the objective of the risk manager. He has identified and evaluated risk only so that he can decide how best to respond to it. This final step is the important decision stage where he must use all of the information he has in his possession to make the best decision on behalf of his firm (Dickson, 1990).

The prevention and minimisation of loss are the most effective means of reducing the cost of risk apart from eliminating or reducing the risk itself.

Risk and loss reduction is an area that should be of vital concern to;

- a) The management of each individual organisation
- b) The insurance industry
- c) The community as a whole (Vaughan & Vaughan, 1995).

There are number of different means by which loss may be prevented or minimised

- a) Prior to a loss happening – there are means that aim at reducing the chance of loss occurring by;
 - eliminating the possibility of its occurrence - avoiding the risk e.g. using non-inflammable liquid in place of an inflammable liquid
 - reducing the probability of its occurrence – improving the risk e.g. clearing waste at more frequent intervals
- b) Upon a loss happening. These are concerned with
 - detecting the occurrence and raising an alarm
 - minimising the effect and size of loss
- c) Following the happening of loss – these are concerned with limiting the effects of loss by;
 - minimising the extent of loss
 - maximising the salvage
 - effecting rehabilitation as soon as possible after the occurrence

During the assessment of a risk, the person assessing should be constantly aware of the need to prevent or minimise loss. They should therefore actively promote ways and means of reducing risk and preventing or reducing loss. All risks control measures involve taking action before the loss can occur so that it may be prevented or controlled. In essence all risk control measures involve planning if they are to be successful. The likelihood of loss should as much as possible be able to be foreseen and the risk control measures that are implemented are expected to prevent or control the loss.

The measures to limit the extent of any loss and to maximise the recovery from loss are of two basic types

- a) Passive i.e. the nature of the measure itself limits the loss or facilitates recovery without any change in state e.g. walls, automatic fire doors, e t.c
- b) Proactive i.e. the measures involves taking steps to limit or maximise the recovery e.g. sprinklers, burglar alarms and storage operations

The measures can also be classified in terms of,

- a) Reducing the probability of such loss as fitting safety guards to machines and removing possible sources of ignition
- b) Reducing the severity of loss such as sprinklers, storage of goods susceptible to water damage above the ground level and providing first aid facilities
- c) Reducing both the probability and the severity of loss such as education and training of management and employees and the use of fire resistant building materials.

2.2.9.1 Physical Control of risks

Once a loss-making situation has been identified and its nature assessed, the final stage is to decide how best to deal with it. Physical risk control covers all techniques or physical operations designed to reduce either the number or the size of losses occurring each year.

There are two alternatives:

- a) To eliminate completely the possibility of loss - risk avoidance
- b) To undertake measures which reduce either the frequency or the size of loss – risk reduction

Risk Avoidance

The only way to avoid a risk completely is usually to abandon the activity that generates it. A firm does not usually choose to renounce a hazardous process, product or practice if the cost of doing so is greater than the benefits.

Risk Reduction

Risk reduction incorporates all measures designed to reduce the loss frequency, the loss severity or both. There are three main categories of measures aimed at reducing the frequency of loss.

- i) Physical devices – safety guards, non-slip walkways, specially designated non-smoking areas
- ii) Education and safety –both in the design of products and processes and in their uses, including employees training schemes and contingency planning
- iii) Procedural devices – employees should design procedures that ensure that work is done in a safe manner and environment

Measures aimed at reducing the severity of loss can also be divided into the same three categories.

- i) Physical devices – sprinkler systems, smoke vents, fire break walls, e.t.c
- ii) Education and safety – training first aiders, employing occupational health nurses
- iii) Procedural devices – establishing fire drills and assembly points

Governments frequently require the physical control of certain risks. Employers are required by the Factories Act to maintain a safe working environment and must also provide adequate training, prepare safety policies, e.t.c.

Pre-loss minimisation – Insurance companies employ specialists who can assist individuals or firms in working out ways of minimising losses by steps taken before the adverse event has occurred. The essence of the pre-loss minimisation is that the effect of the loss is anticipated and steps taken to ensure that the frequency and/or severity are reduced to the minimum. The use of guards on dangerous machinery anticipates the risk of injury to employees, e.t.c. A great measure of experience is required in being able to anticipate risks and persuade people to take steps to minimise their effects.

Post-loss minimisation – Even after the risk has materialised and the loss taken place, there are still steps that can be taken to minimise loss. The most common area where post-loss minimisation occurs is probably after fire damage. Property can often be salvaged from burning buildings and other property salvaged and sold in an attempt to minimise loss. Automatic sprinkler installation will minimise the effects of fires.

2.2.9.2 Financial Control of Risk

Risks can be reduced by some financial mechanism; retention and transfer.

Retention: After identification and evaluation of the risks facing his company, the risk manager may find that a given level of fire loss can be expected each year. A separate fund could be set up to pay for such cost and other risks that may be fully retained. Such a fund is called self-insurance.

Transfer: Second method of financial risk control could be those situations where the company transfers the effects of the loss to some other person or company.

Insurance will always be the most important method of paying for the cost of risk.

Risk Transfer

Risk transfer is the shifting of responsibility for meeting one's own losses from oneself to someone else. The transfer of pure risks can take two forms;

- iii) the transfer of the activity creating potential losses
- iv) the transfer of responsibility for paying losses

Transfer of the responsibility of paying for losses may be undertaken either by insurance or via special clauses placed in contracts of sale, purchase, employment, rent, e.t.c.

Insurance is the most common method of risk transfer. By paying premium, the insured can transfer the risk of loss to the insurer (subject to the terms and conditions of the policy in force at the time). The policyholder purchasing full insurance can therefore

substitute the unknown cost of losses (with all their associated variability) for a known cost.

2.2.9.3 Education and Training

The human factor is rarely absent from risk situations. Frequently carelessness, incompetence or lack of technical knowledge is either the primary or at least a contributing cause of a loss-producing event. Furthermore, the failure of an individual or group to respond in the correct way to a loss situation may contribute to the size of the ensuing loss. Consequently, education and training have a major role to play in loss reduction programmes and should cover everyone employed by or associated with the work of an organisation.

Nevertheless, despite rapid changes in the market-place, and growth of alternative risk financing strategies, it is probably still true to say that insurance remains the pre-eminent risk transfer mechanism (Margaret, 1997).

2.3 INSURANCE & RISK MANAGEMENT

2.3.1 Introduction

Insurance is one part of the risk management process. Risk management is not a part or subset of insurance. Insurance is in fact a subset of risk management (Dickson, 1990).

Viewed this way it is easy to see why the concept of risk management was not met with overwhelming enthusiasm by those engaged in insurance, in early days. Risk management was viewed by many, and perhaps still is to a certain extent, as an attack on the part of insurance had always played in the management of risks. As the benefits of risk management began to be experienced, a number of insurers and insurance brokers started to embrace the concept and there are now a large number of insurers who offer

comprehensive risk management services. Indeed many of the advances in risk management methodology are attributable to these firms.

2.3.2 Risk Management and Insurance

There is always the tendency to believe that insurance and risk management are one and the same because the concept of risk management like insurance is concerned with the control and management of risks. This view is not correct. Risk management is not synonymous with insurance and insurance is not risk management although they are both concerned with risks.

In an insurance transaction, the insurer undertakes to indemnify or compensate the insured in the event of a loss. It is, however, not all risks that are insurable and a typical insurance contract covers only the specific risk or peril insured against.

Nevertheless, insurance, in the risk management process is important as it is the most common, risk financing tool and therefore a useful tool for achieving one feature of the risk management objective.

2.3.2.1 The Insurance Mechanism as a Method of Controlling Risk

Although risk management is much wider in scope than insurance, the discerning person would know that there is a close relationship between the two and that insurance is one of the most important methods of risk financing which no risk management program can afford to ignore.

In its most basic form, insurance has two main features. The first is that it is a mechanism for transferring a risk from one individual to a group. The second is that it involves the sharing of losses on some recognised equitable basis, by all the members of the group. It is a contract whereby an entity called the insurer agrees in consideration of money to him called premium by another person called the insured to indemnify the latter against loss

resulting to him on the happening of certain events. The purchase price which the assured pays the insurer is known as the premium – often an annual payment - and the insurer's promise to pay if the event insured against occurs is embodied in what is called a policy.

The primary function of insurance is to ensure that the financial losses of an individual are fairly and equitably distributed over the insured community. The policyholders pay premium into a common pool, out of which the unfortunate few who suffer losses are indemnified or compensated in accordance with the terms of their relevant contracts as indicated in the policy which is the document which contains the terms and conditions of the contract.

There is much more to the management of risks than simply buying insurance for those risks that happen to be insurable. Over the past three decades there has been a marked development in what has come to be known as risk management.

Techniques have been developed and refined which allow for risks to be identified, their effects evaluated and the most efficient means of control adopted and implemented.

Insurance companies do not insure all risks. As a general rule insurers will only insure pure risks and not speculative risks. Insurance is the most used tool especially where financial losses are expected and the frequency in which they occur is high or cannot be predicted. The risks that commercial properties commonly insure for are fire and perils, consequential loss, public liability and plate glass (Gichunge, 2000).

2.3.2.2 Advantage of Insurance as a method of risk transfer

- i) The insured can transfer the risk unexpectedly large or frequent losses to the insurer
- ii) The insured can substitute a known cost (the premium) for an unknown and highly variable one (losses). In addition, companies can offset the premiums as a charge against corporation tax.

- iii) In any one year, premiums paid will represent only a very small proportion of values exposed to the risk of loss.
- iv) Insurance acts to smooth out the payment of losses over time – the premium vary little from year to year in comparison with losses.
- v) In addition to the risk transfer mechanism, the insured also benefits from the insurers subsidiary function – specialist advice on claim handling, risk reduction, e.t.c.

2.3.3 Subsidiary Insurance Functions

While the primary function of insurance is to provide a risk transfer mechanism, insurers also provide certain additional subsidiary services by which policyholders benefit from the specialist knowledge and advice.

A firm that decides not to insure must provide these services itself; many of these can be purchased from specialist advisers or consultants and even insurance companies (Diacon, 1984).

a) Physical Risk control Advice

Insurers can advise their clients both on measures to avoid risk and on those that reduce it. Advice is usually given by company surveyors. In engineering insurance, a large proportion of the premium covers the inspection services and inspection by an engineering surveyor satisfies the requirements of the Factories Act and other statutory regulation.

Fire surveyors advise on the possible causes of fire in manufacturing processes and material storage and in the use of fuels and also in the installation of sprinkler system.

Theft surveyors advise on the protection of property against theft and on the installation of burglar alarms and other protective devices.

Liability surveyors advise on possible causes of employees, products or public liability losses, such as those caused by bad working practices or poor quality control.

b) Claims Handling Service

After a loss, insurers will frequently handle negotiations with affected third parties, either members of the public or employees and advise on the best way to reduce the effects of the loss.

After property losses, insurers often employ the specialist service of independent firms of loss adjusters to investigate the causes of loss and the values concerned and to help the firm to get back to business as quickly as possible. Loss adjusters can also advise on the salvage of the damaged property, the names of suitable contractors and repairers and the best place to hire or purchase temporary machinery.

c) Recovery from Uninsured Losses

As well as acting to reduce their own losses, insurers will also help the insured to recover those losses that he has agreed to bear e.g. by exercising subrogation rights. An insurer may also act to recover from a negligent third party a loss met by a policyholder under an excess or deductible.

2.3.4 Underwriting Risks

This is the process of selecting and classifying exposures. It is an essential element in the operations of any insurance program for unless the company selects from among its applicants, the inevitable result will be a selection of risks adverse to the profit-making objective of the company. The primary objective of underwriting is to guard against adverse selection (Vaughan & Vaughan 1995).

The future experience of the group to which the rates are applied will approximate that of the group upon which the rates are based only if both groups have approximately the same loss-producing characteristics. There must be the same mix of good and bad risk in

the group from which the rates were taken. The tendency of the poorer than average risks to seek insurance to a greater extent than do the average or better than average risk must be blocked.

It is important to understand that the goal of underwriting is not the selection of risks that will not have losses. It is to avoid a disproportionate number of bad risks, thereby equalising the actual losses with the expected ones. While attempting to avoid adverse risks, the underwriter must secure an adequate volume of exposures in each class. In addition he must guard against congestion or concentration of exposures that might result in a catastrophe.

The importance of the underwriting function rests on its relationship to the adequacy of rates. The actuaries compute rates based on past experience. The underwriter must determine into which of the classes, if any, each exposure unit should go. Poor underwriting can wipe out the efforts of the actuary, rendering a good rate inadequate. For this reason, those who perform the underwriting function must develop a keen sense of judgement and a thorough knowledge of the hazards associated with various types of coverage.

2.3.4.1 The Underwriting Process

Underwriting begins with the formulation of the company's underwriting policy, which is generally established by the officers in charge of underwriting. The underwriting policy establishes the framework within which the desk underwriter makes decision. This policy specifies the lines of insurance that will be written as well as prohibited exposures, the amount of cover to be permitted on various types of exposure, the areas of the country in which each line will be written and similar restrictions.

To perform effectively, the underwriter must rule on the exposures submitted by the agents, accepting some and rejecting others that do not meet the company's underwriting

requirements. When a risk is rejected, it is because the underwriter feels that the hazards connected to it are excessive in relation to the rate.

There are five sources from which the underwriter obtains information regarding the hazards inherent in an exposure.

1. Application

The basic source of underwriting information is the application, which varies for each line of insurance and for each type of coverage. The broader and more liberal the contract, usually the more detailed the information required in the application. The questions on the application are designed to give the underwriter the information needed to decide if he will accept the exposure, reject it or seek additional information.

2. Information from the agent or broker

In many cases the underwriter places much weight on the recommendation of the agent or broker. This varies, of course, with the experience the underwriter has had with the particular agent in question. In certain cases, the underwriter will agree to accept an exposure that does not meet the underwriting requirement of the company. Such exposures are referred to as accommodation risks, because they are accepted to accommodate a valued client or agent.

3. Investigation

In some cases, the underwriter will request a report from an inspection company that specialises in investigation. These reports provide additional information the underwriter can use in evaluating the exposure.

4. Physical examination or inspection

In the field of property and liability insurance, the equivalent of the physical examination in life insurance is the physical examination of the premises. Although such inspections are not always conducted, the practice is increasing. In some instances, the inspection is

performed by the agent, who sends a report to the company with photographs of the property. In other cases, a company representative conducts the inspection.

2.3.4.2 Post Selection Underwriting

In some lines of insurance, the insurance company has the opportunity to periodically re-evaluate its insured. When the policy in question is cancellable or optionally renewable, the underwriting process may include post-selection (or renewal) underwriting, in which the insurer decides whether the insurance should be continued.

When a review of the experience with a particular policy or account indicate that the losses have been excessive, the underwriter may insist on an increased deductible at renewal. In other words, the underwriter may decide that the coverage should not be continued and will decline to renew it or even cancel it outright.

2.3.5 The Role of Risk Management in Underwriting

Risk Management is a widely used, and sometimes abused phrase. It has often been said with some justification that it is largely common sense. Of common sense always plays a part but fundamentally there is always a need for a technical understanding of the risks. In addition, it is essential to take account of the human aspects of risks.

It might be assumed that insurers are good at managing risks, but practical experience can sometimes show that this is not always the case. Example – the big fire at the London University Centre when it was still under construction.

The role that risk management can play in underwriting is clearly shown by the success of independent insurers. Writing in a risk management supplement in 'Insurance Age' group marketing manager Graeme Suthern explained, "Pivotal to our approach to risk management is something we call SAM. This stands for Source, Adequacy and Management. Its means that the source of the business, i.e. the broker, must be a

professional who shares independent philosophies and objectives (Bannister – Info RM 2002). It also means that the premium must be adequate for the risk and must not be merely to attract business. Finally it means that the policyholder must work in conjunction with the broker and the insurer to manage the risk so as to reduce the likelihood of insured events” (Bannister, 2002).

The typical underwriter works at a desk, and in most markets, the broker brings the slips with risk details to the underwriter. How can he manage the risks that he is unlikely to have seen? He should have a number of ‘tools’. These may include a survey report. He may know the broker well enough to have confidence in his skills in assessing and reporting to the underwriter. He may have a good working knowledge of the trade or industry and/or the country or location involved.

Survey reports vary in quality and completeness. Hopefully the underwriter has a good working knowledge of the individual surveyor’s competence, reliability and skills. There is no substitute for having carried out site visits with the surveyors. There are several key elements in the surveyor’s inspection. He must understand the physical risks of the site and the process and other risks, including some appreciation of the out of working hours’ risks. He must appraise the quality of management, supervision and workforce. This is important since they are responsible for the hour by hour control of the risk and as such their skill, understanding and commitment have a big influence on both the likelihood and the severity of any claim.

There are a number of other factors mainly ‘environmental, in the widest sense of the word that also affect the risk.

The broker is an important part of the risk management equation. Unfortunately brokers vary in quality and commitment. In law they are the agents of the buyer and not the insurer but they do have a duty of full disclosure which is affected by their position of special knowledge. Indeed any special claim they make of high technical knowledge will enhance their duty. The best brokers have a special value to the insurer that is

increasingly recognised by the enhanced status. Such a broker evaluates the risks with the client, help to manage those risks, and can describe them accurately. The underwriter has the opportunity to question the broker and take advantage of his special knowledge and acquaintance with the individual account. Some brokers however take a more narrow and partisan view of their responsibilities and a few are unscrupulous in their determination to secure the account at all costs and with no regard for professionalism. A key part of risk management for the insurer is to know the quality and integrity of every producer whether broker, agent or employee.

Today underwriters are more likely than ever before to make field visits and to meet existing and prospective clients when they visit the office. Such visits often have a strong social bias. It is clearly important to be in good terms with clients. An enquiring approach need not conflict with being nice to the client. It can permit the underwriter to gain more insight into the client company's operations, awareness and problems as well as assessing the degree of commitment of senior and middle management to day by day practical risk management.

The management of claims is part of the overall risk management of the insurer. It is necessary to ensure that only valid claims are paid with due allowance for any element of doubt. The processing of claims often provides risk management information. It may add to the underwriting knowledge on particular account or it may describe a more general risk problem that had not been appreciated in previous underwriting.

Reinsurance adds another dimension to the overall risk management process. The reinsurer needs to assess how his client, the insurer, manages his risks including assessment of both broker and client. Professional reinsurers have always used this approach as shown in the periodic underwriting and claims audits that they carry out. The attitude of some reinsurance clients has sometimes been to show a degree of hostility to these underwriting and claims audits, seeing them as either an unreasonable interference in the clients operations or as a criticism of the insured. Assuming that the audit is carried out by a skilled staff with underwriting and detachment, it is now generally recognised

that they have an additional value to the client insurer in providing valuable professional review and help.

2.3.6 Selecting the Insurer

Irukwu, 1991 suggests three main factors that the risk manager must consider when selecting an insurer.

- a) Ability or willingness of the insurer to offer the required cover.
- b) Security, which refers to the financial ability, solvency and stability of the insurer.
- c) Cost of the insurance cover as well as the extent and quality of the service offered by the insurer

Before placing his businesses with an insurer, the policyholder and the risk manager should be satisfied about the insurer's security and financial strength. Security in this context depends on a number of issues and could be verified by examining the insurers books and annual accounts to ascertain the general state of its assets and liabilities, the ratio between its policyholders surplus and liabilities, the volume of business written, the stability and other reserves as well as actuarial and other valuations of the assets and strength of the insurer before deciding to insurer with the particular insurer.

2.3.7 Quality of service and Cost of insurance

The quality of the insurance service offered by the insurers as well as the cost of insurance cover are certainly factors that should influence the decision of the insured or risk manager in the selection of an insurer.

A company that is managed by reliable, efficient and technically competent team is certainly better than one that is managed by an unreliable unqualified and incompetent team. The underwriting results of the company over the years, the adequacy of its technical, statutory and other reserves as well as the soundness of its underwriters in

addition to the competence of its management are factors which should give some idea of the financial status, stability and competence of the insurer.

2.3.8 Co-insurance between insurers

In commercial property insurance, the sum insured may be larger than a single insurer can afford to pay in the event of a claim. The cover may then be provided by several insurers (co-insurers) who agree to share out the claim between themselves in previously agreed proportions. Co-insurers who are still worried about large claim payments can then re-insure.

Co-insurance is usually arranged by insurance brokers who approach several insurers until they have obtained complete cover. When complete cover has been arranged, the leading office (the insurer with the greatest proportion of cover) carries out a survey and prepares a collective policy on behalf of all the co-insurers. Besides the usual details, the policy specifies the co-insurers and the proportion of any loss that they have agreed to pay.

2.3.9 Assessing the Sum Insured

When insurance is taken, the next move is to choose the amount of insurance covered i.e. the maximum amount the insurer will pay in the event of a loss. It is pointless, of course, to insure for more than the firm's insurable interest in the subject matter of the insurance. It is also important not to underinsure since the cover will then be insufficient and an average clause may be applied during settlement of a loss claim. This entails reducing the claim in proportion to the level of underinsurance.

Motor engineering, money and liability insurances do not have sums insured, but instead have limits of liability. Sometimes this limits the amount that the insurer will pay for any one event or occurrence or accident. Sometimes they set an aggregate limit to the total amount that the insurer will pay in any one year. In some instances both limits apply.

In assessing the sum insured or the sum to be insured, those chosen values must not be less than the amount of compensation that the firm would like to receive in the event of a claim whenever it occurs. For full insurance, the sums insured should obviously equal the value of those assets exposed to the risk of loss. But there is no one recognised method of valuation; furthermore an asset's value may reduce in relation to inflation, for instance and other factors (Diacon, 1984).

2.4 The Insurance Industry and Risk Management

The insurance industry must refrain from regarding risk management as an enemy just because it could lead to loss of premium if other risk management processes are adopted instead of insurance. They should regard risk management as an ally.

The insurance industry in developing countries should be more actively involved in the positive promotion of risk management. At present, the level of the industry's involvement is still very low.

The United Nation Conference on Trade & Development (UNCTAD) conference (1995) discussed the effect of risk management on insurance in the context of developing countries of the world and arrived at the following conclusion

“ The creation and strengthening of a national insurance industry is not an end unto itself. Rather, it is seen as an effective means to help accomplish certain development objectives including its traditional role as a ‘lubricant of commerce’ as well as its special role in developing countries in foreign exchange conservation”

Sound risk management will help insurance to perform its role better. Additionally, sound risk management will help hold down loss costs through improved loss control. This implies reduced claims for insurers, which in turn, implies a greater insurer surplus and therefore net retention, as well as a corresponding reduction in insurance premium and reliance on re-insurance. Insurance companies can then focus better on large loss

exposures, those that could undermine the welfare not only of commercial and industrial enterprise in developing countries but of the entire national economy.

Risk management connotes awareness of risk by commercial and industrial enterprises. This new level of awareness often has been found in developing countries to lead to the recognition of the need for more insurance and for new form and combination of cover.

Insurance will prove to be an essential part of any well-conceived risk management program. If the insurance industries of developing countries would seize the initiative, they could provide the leadership role of the appropriate promotion of risk management in their countries.

However, insurers role in promoting risk management must be backed by strong and appropriate building codes, fire codes, worker health and safety laws and other loss control requirements. Additionally, government must ensure that its insurance laws do not unduly stifle insurer and reinsurer innovation.

The insurance industry in developing countries should be more actively involved in risk management activities. Any third world insurer or reinsurer that wants to survive in the next decade must actively be involved in risk management activities as policyholders will expect their insurers and brokers to guide and advise them fully in risk management and loss prevention measures.

The insurer who is versed in the risk management discipline and therefore able to give risk management assistance to his clients is more likely to succeed than one who is not.

It is in the background of the foregoing that this study indulges in finding out how the Kenyan insurance industry goes about managing the risks they market for and the ones they have brought on board. In some respects, insurers' are faced with uncertainty in the same way as anyone else; they too are unable to foresee the future. They must face the possibility that their policyholders' losses could exceed those that they anticipated. Insurers indeed do have a real interest in reducing the frequency and severity of losses,

not only to enhance their own profitability but also to contribute to a general reduction in the economic waste which follows losses.

The measurement of uncertainty insurers obviously must play an important part in the way they take up, reject and even proceed with the contracts of giving protection. Industry in particular must measure the extent to which it believes it is exposed to the risk of loss and what the extent of that loss may be should it occur. In other words the insurance industry has its own interest in risk measurement.

It is in the light of the above, therefore, that the study will establish whether the industry appreciates the importance of risk management as an important strategy of maintaining desirable claim ratios, attaining surpluses and ensuring profitable and sustainable business. The next chapter will mainly be the analysis of the questionnaires administered and interviews carried out with a purpose of finding out whether and how far the Kenyan insurance industry has incorporated the discipline of risk management to its core and traditional function of underwriting. Whether or not insurance companies operate along a specific risk management policy is an important question whose answer is being sought. Consequent to this, information has been sought on whether and how risk identification, measurement and analysis is practised. The issue of control of risks has been looked at which element involves the offloading of risks by insurers to others in way of re-insurance. Other important areas which form part of the next chapter include information and communication in risk management, valuation of risks to be insured and data collection, storage and retrieval systems as well as presentation when it so necessitates. These are important areas in insurance and risk management.

The insurance industry operates under given legislation which regulates it and provides the necessary controls. In Kenya, this is the Insurance Act Cap 487 of 1987. This law establishes the office of the Commissioner of Insurance whose responsibility is to administer the Act. The study has involved the Commissioner whose interview has been analysed in the following chapter and related to the rest of the findings.

CHAPTER THREE

3 DATA PRESENTATION AND ANALYSIS

3.1 Introduction

This chapter contains presentation and analysis of data as obtained from the field. Four sources of information were involved. These are the Commissioner of Insurance, insurance companies, risk managers/surveyors and the body bringing together risk surveyors/managers. Eighteen questionnaires were prepared and sent to insurance companies as were 6 to risk managers/surveyors. An interview was carried out with the Commissioner of Insurance and with the secretary general of the Institute of Loss Adjusters and Risk Surveyors. Out of the said number of questionnaires, sixteen and six filled questionnaires were received from the insurance companies and risk managers respectively. Two insurance company respondents could not complete them within the time required.

Information was obtained from the office of the Commissioner of Insurance that six risk managers/surveyors were registered in the year 2001. All of these were targeted questionnaire respondents. Insurance companies were randomly sampled from the list availed by the Commissioner of year 2001 registration. This was also the latest statistics given in the latest annual report (i.e. 2001) by the Commissioner of Insurance. It was seen as the best way of achieving an unbiased sample of 18 insurance companies out of the total 36. Such sampling allowed the researcher to avoid selecting a skewed sample in terms of the large sized companies only or smaller companies only or years of operation and therefore achieving a homogeneous reach to the whole industry.

These are tabulated as follows;

No	Insurer	Amounts ('000) Kshs
✓1	Kenindia Assurance Co. Ltd	2,237,949
2	American Life Ins. Co. (K) Ltd	1,234,825
3	United Insurance Co. Ltd	892,560
✓4	Heritage A.I.I. Insurance Co. Ltd	844,651
✓5	UAP Provincial Insurance Co. Ltd	758,821
6	Insurance Company of East Africa Ltd	708,011
✓7	Lion of Kenya Insurance Co. Ltd	627,257
✓8	Pan Africa Insurance Co. Ltd	580,421
9	Kenyan Alliance Insurance Co. Ltd	566,276
10	Occidental Insurance Co. Ltd	543,049
✓11	Apollo Ins. Co. Ltd	503,112
✓12	Jubilee Insurance Co. Ltd	486,974
13	Invesco Assurance Co. Ltd	472,577
14	Madison Insurance Co. (K) Ltd	471,751
15	First Assurance Co. Ltd	449,145
16	Royal Insurance Company of E. A Ltd	356,330
✓17	Phoenix of East Africa Ins. Co. Ltd	343,375
✓18	British American Ins. Co. Ltd	332,559
19	Fidelity Shield Insurance Co. Ltd	327,761
20	Blue Shield Ins. Co. Ltd	305,610
21	Intra Africa Assurance Co. Ltd	292,704
22	Geminia Insurance Co. Ltd	276,727
23	Co-operative Insurance Co. Ltd	265,476
24	Mercantile Life & General Ass. Co. Ltd	252,571
25	Standard Assurance Co. Ltd	250,346
26	Concord Insurance Co. Ltd	228,588
✓27	Tausi Insurance Co. Ltd	225,706
✓28	Gateway Insurance Co. Ltd.	216,539

29	African Merchant Assurance (K) Ltd	184,764
✓ 30	Trident Insurance Co. Ltd	178,619
31	General Accident Insurance Co. Ltd	176,777
32	Kenya Orient Insurance Co. Ltd	173,256
✓ 33	The Monarch Insurance Co. Ltd	130,630
34	Corporate Insurance Co. Ltd	121,216
✓ 35	Cannon Assurance (K) Ltd	77,611
36	Liberty Insurance Co. Ltd	29,270

Table I: Gross Direct Premium posted by General Business Insurers

Source: Annual Report – 2001; Commissioner of Insurance

From the above table with gross domestic premiums in a descending order those companies falling on even positions were selected to form a sample of 18 insurance companies. This arrangement of the insurance companies and thereafter selection in the manner described above gave a representative sample of 18 underwriters to which questionnaires were then administered.

3.2 The Kenyan Insurance Industry

As mentioned before, the insurance industry operates under the Insurance Act Chapter 487 of the Laws of Kenya. This Act establishes the office of the Commissioner of Insurance who under the direction of the Minister for Finance registers and licences insurance and re-insurance companies, intermediaries and service providers. Intermediaries include insurance brokers while service providers comprise Loss Assessors, Loss Adjusters, Claims Settling Agents and Insurance Surveyors/Managers. The Commissioner prepares a report each year in accordance with Section 5 (2) of the Act. It covers the operation of the Insurance Act during the year and compares the

developments of the insurance industry during the year with preceding years highlighting various features of the insurance industry.

The current report (at the time of writing this project) from the commissioner gives the status of the industry for the year 2001. It reports that the share of financial sector's, to which the insurance sector belongs, contribution to Gross Domestic Product remained constant for the year 2001 at 10.6% of which 0.4% was from the insurance industry. This shows how significant the industry is and how crucial its welfare to the economy is in general.

The table below gives the highlights of the industry in summary for the year 2001.

Item	Year 2000	Year 2001
Gross Direct Premium Written	20,867,645	23,195,308
Assets	67,624,928	66,352,084
Investments	53,551,478	53,320,718
Investment Income	4,400,794	2,424,392
Claims Incurred (General Business)	8,939,723	7,044,033
Operating profit/loss	1,433,121	1,654,413
Underwriting Results	-579,835	218,669

Table 2: Insurance Industry's Highlights for the year 2001

Source: Annual Report – 2001; Commissioner of Insurance

In the year 2001, Gross Direct Premium income under general insurance business only amounted to Kshs.16.12 billion against the previous year's Kshs.15.19 billion showing a 5.8% increase.

3.2.1 Underwriting Results

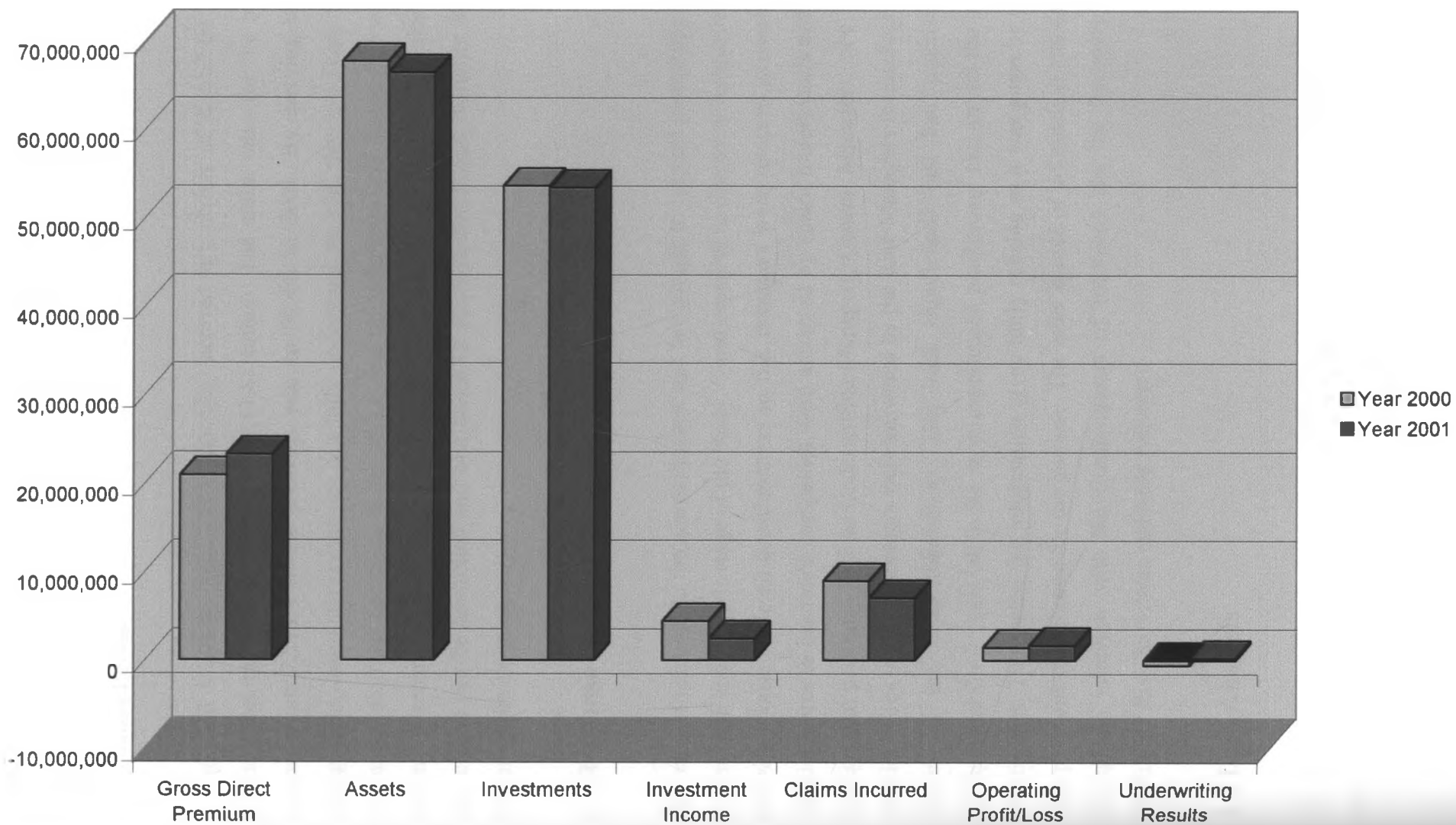
Overall technical results for the industry registered an underwriting profit of Kshs.104.5 million compared to the previous year's underwriting loss of Kshs.636.54 million showing a positive trend in the underwriting results. This improvement was attributed to improved technical underwriting standards. Risk management is a technical aspect of insurance underwriting and this study aims at examining whether it has had or could be an aid in achieving even better underwriting results.

3.2.2 Reinsurance Arrangements

Section 29 of the Insurance Act requires all insurers to submit their reinsurance arrangements to the Commissioner for approval. There are two reinsurance companies registered in Kenya: Kenya Reinsurance Corporation and East Africa Reinsurance Company Ltd. However, there are other reinsurers domiciled in Kenya namely Africa Re, Zep Re, Munich Re and Swiss Re.

Insurers are required by the Act to apply for prior approval of their reinsurance arrangements by November of the preceding year. The outward reinsurance premium ceded during year 2001 amounted to Kshs.5.84 billion while the inward reinsurance premium received during the same period amounted to Kshs.984.04 million. Risk transfer is one of the methods of handling risk and therefore insurance companies use reinsurance as one way of handling the risks they take up. By offloading a given share of some of the risks, they ensure that they are able to meet their obligations of paying out a claim once it occurs without creating instability in their level of solvency. Risk management helps in deciding on an appropriate reinsurance program for the risks underwritten. This study is aimed at finding out whether local insurers incorporate risk management in deciding out their reinsurance arrangements.

Kenya's Insurance Industry Highlights - Years 2000 & 2001



3.2.3 Claims Levels

The general insurance business companies incurred net claims of Kshs.7.04 billion against a net earned premium of Kshs.11.85 billion. The claim ratio for the industry dropped from 72.35% in the previous year to 59.4% in 2001. By carrying out risk management, insurance companies can fully understand the risk they are likely to take up, make informed decisions about which one to underwrite and hence forecast with reasonable accuracy the likelihood of losses and claims for given categories of risks. This way claims can be controlled and minimised to desirable levels and therefore improve further on the claim ratios.

3.3 Response to Data Collection

The level of response to the questionnaires was fair enough to warrant proceeding to data presentation and analysis stage of the study. Questionnaires to insurance companies had a 88.9% response while all questionnaires to risk managers were returned answered. The questionnaires to insurance companies were answered by senior underwriters and senior management personnel such as Underwriting Managers, General Managers, e.t.c. All the questionnaires to Risk Managers were answered by the Risk Managers themselves i.e. the owners of the firms themselves. The least experienced one had practised risk management for 7 years while the most experienced practitioner had served the industry for 26 years. This makes the information given fairly reliable as it was given by persons with positions of authority for the purpose. The other source of information and data was through an interview with the Commissioner of Insurance and the Secretary to the Institute of Risk Surveyors and Loss Adjusters.

3.4 Data Analysis

In analysing the data obtained from the field, the questions presented in the questionnaires and interviews were grouped in the following headings.

3.4.1 Involvement in Management of Risks

Question 7 to risk managers asked whether risk managers were involved in the risk management in terms of risk identification, analysis/measurement and control. It also sought to further find out whether they were involved in the management of the fire risk, special risk, consequential loss risk, all risks (including industrial), theft/burglary risks and public liability risks. They all were answered in the affirmative showing that from the outset, the services of a risk manager when needed and applicable are utilised in whole and not just in part. In the same vein, insurance companies answered that they insured the risks indicated above. Further all insurance companies indicated that they are involved in risk identification, analysis and control. These answers gave the study a good base of taking the general view that risk management is a consciously present aspect of insurance business in Kenya

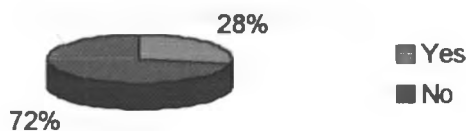
3.4.2 Risk Management Policy

Risk surveyors were asked to choose between Important, Very Important, Less Important and Not important as regards the importance of risk management as one of the tools of risk response. All respondents chose important as their option. They were also asked to state whether or not risk management practice is necessary to risk takers in the insurance industry. 100% of them responded in the affirmative.

From the interview carried out with the commissioner of Insurance it was indicated that risk management is necessary to the industry. The question of how this is so elicited the response that risk management helps insurance companies understand clearly what risks they are about to underwrite and be able to accept or reject. Further, risk management ensures that for those premiums collected, proper investments be able to be done so as to maintain solvency and stability to be able to meet obligations to policyholders as when they fall due.

Asked whether they considered risk management as important in the running of their businesses all insurance companies responded in the affirmative. The next part of this question sought to find out whether the insurance companies had a risk management policy. Only five out of the eighteen or 27.8 % of the respondents followed a clear risk management policy in their underwriting programmes. They explained that for larger risks they would normally involve their internal risk assessors/surveyors or contract the services of a risk consultants to carry out surveys and give reports otherwise for standard-size risks and small risks they rely on the proposal forms or the brokers submissions and writs. The rest of the insurers i.e. 72.2% did not have a risk management policy. On whether they would consider having one in the future they all responded in the affirmative.

Availability of a Risk Management Policy



Source: Field Data - Analysis, 2003

The Commissioner of Insurance was asked whether his office has any requirement on the practice of risk management on insurance companies. The answer was in the affirmative and explained that such requirement is basically to do with the way insurers are to engage the premium funds in suitable investments. Section 50 of the Insurance Act gives guidelines on how this is to be done. He observed that this mainly related to insurers of life risks but not general business insurers. In addition, the principal officers of the insurance companies are required to at least have a diploma in insurance and possess managerial skills.

The Commissioner was further asked whether in practice Kenyan insurers practice risk management and whether this could be said to be at optimal level. He responded in the

Position	Source of Business
1.	Brokers
2	Agents
3	Direct marketing
4	Co-insurance
5	Sister firms/organisation

Table 3: Insurers' source of business

Source: Field Data

This shows that insurers obtain most of their businesses from other parties mainly brokers and agents. This shows that they have to ensure that they know about the brokers very well and have confidence on them in terms of the quality of the business they propose. This led to the other question of whether or not there are certain qualities insurers adhere to so as to be able to accept dealing with a broker. All answered in the affirmative about the observance of certain pre-qualification procedures to brokers and agents. These are such as;

- Registration with the Commissioner of Insurance
- Professional/business ethics/integrity
- Experience in handling the kind of risk at hand and strategy of marketing
- Creditworthiness of the broker
- Availability of certain amount of business with the agent/broker before acceptance

The qualities looked for in agents/brokers as seen above have very little to do with risk management qualities of these intermediaries. It appears that no insurer at the outset is concerned with finding out whether the intermediaries would usually have the adequate exposure to risk management so as to propose better business and be able to handle mutual clients even after effecting cover including in the event of claims.

negative and pointed out that risk management need to be embraced by all insurers and its practice streamlined for maximum benefit of the industry as a whole.

3.4.3 Adequacy of Current Legislation

The Commissioner of Insurance was asked whether the Insurance Act adequately captures the need and encourages the practice of risk management. The answer was in the negative and explained that the Act could still be reviewed to accommodate other channels of investment of premium funds and require risk management to be actively practised by insurers including specifying the training and qualification requirements for risk management surveyors and managers.

The Secretary General of the Institute of Loss Adjusters & Risk Surveyors responded that the Insurance Act does not sufficiently address the concerns of the risk management discipline. The Institute wishes that the Act were amended to address the following.

- Ensure the Act defines risk managers and other insurance service providers correctly according to field of practice
- To effect legal recognition of the Institute as the self-regulatory body for risk managers and other insurance service providers
- That the Institute of Loss Adjusters and Risk Surveyors be legally made the licensing/vetting body for all service providers
- The Act should set minimum, reasonable and realistic qualifications for service providers

3.4.4 Risk Identification

Insurance companies were asked to indicate their sources of business and rank them in order of importance. The response was as follows;

The study also sought to find out whether during the time of proposal insurers find the proposal form adequate in capturing the requisite information. Only 25% said that they considered the proposal form as providing adequate information on the risks proposed. 75% said they do not and therefore have to further obtain information by other means. What other means are used formed the other segment of the question. Out of the options of Site Visits by underwriters, Surveyors reports, investigation reports, Valuation reports, Adjusters reports Meetings and Discussion with the client, 55% of insurers make use of Surveyor's Reports and Meeting and Discussion with the client. Some 25% of the respondents indicated that they also have their underwriters make site visits to see for themselves the risk being proposed. 45% do not use any other means of obtaining information on the risks other than the proposal forms and the submissions of the brokers. This shows some significant weakness in the area risk identification. It would appear that risk underwriters are likely to take up risks for which they do not have adequate information about.

Insurers were asked whether they used external consultants to carry out risk inspection. All insurers indicated that they do for the big risks and that the criteria used to pre-qualify risk consultants was their academic qualification such as a university degree with a technical bias such as engineering and experience in risk management/surveys/assessment. They all indicated that they are satisfied with their work.

On whether there was a set financial limit for the risks that needed surveys, there was found a significant discrepancy in regard to this among the various insurers. 26% of insurers prefer having a certain limit e.g. Kshs.20,000,000 worth of risk so as to commission a survey. The rest i.e. 74% prefer surveying all risks or doing so selectively depending on the information given on the proposal form.

Risk surveyors/managers were asked on what methods of risk identification they used in their management of risk. Out of the 5 options given i.e. Physical Inspection, Checklists, Organisational Charts, Flow Charts, Hazard and Operability Studies (HAZOP) and

Others, 100% of respondents chose Physical Inspection. Only 2 firms out the total 18 or 11% chose Checklists in addition to Physical Inspection.

3.4.5 Risk Analysis

Risk surveyors/managers were asked on what methods of risk analysis they used in management of risks. Out of the three options given i.e. Fault Trees, Hazard Analysis, Estimated Maximum Loss (E.M.L), risk surveyors use only the E.M.L to determine the level of exposure of a given risk.

3.4.6 Information and Communication in Risk Management

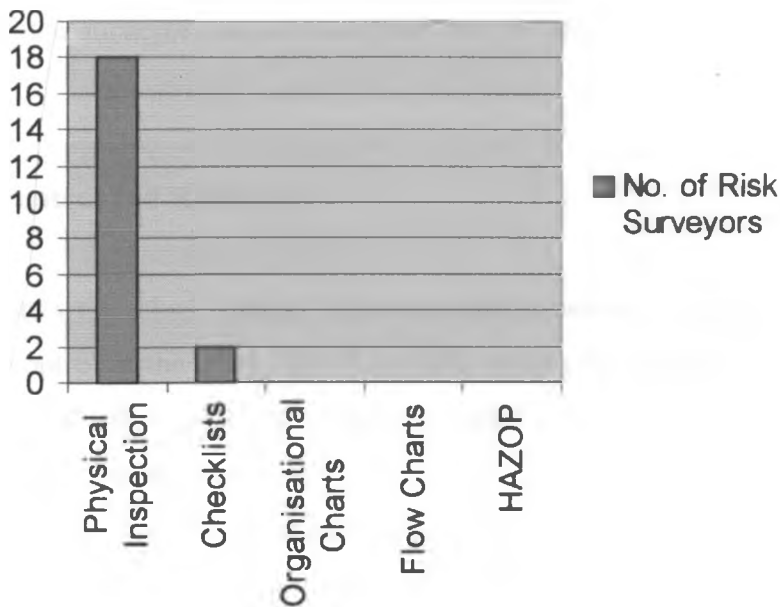
Risk surveyors were asked to indicate how they communicated their information to their principals. The responses given were as follows:-

1. Report writing on the risks including photographs and site plans
2. Physical consultations including formal meetings and discussions
3. Normal correspondences
4. Telephone calls

Of the above only Reports writing was common to all eighteen respondents showing that the principal tool for communication is by preparing Reports. Only 40% at one time or another would use Physical Consultations including formal Meetings and Discussions.

On whether risk surveyors obtained adequate information from their principals and insured's, all eighteen risk survey respondents responded in the affirmative. Nevertheless, only 4 or 40% of the total 10 respondents felt that insurers have efficient means of storing and retrieving information for purposes of risk management. The rest, 60% including those employed directly by the insurers thought that insurers need to improve in this area.

Level of Use of Risk Identification Methods



Source: Field Data – Analysis, 2003

All the 16 insurance companies responded that they usually have an adequate access to and amount of data and information. On whether they have a computerised method of data storage and retrieval only 8 or 44% of all the respondents had an affirmative answer. The rest stored and retrieved their data and information manually in physical files and cabinets. The 50% who had computerised information system did not have a specifically designed computer program or computer aided program for purposes of risk management. This clearly shows that insurers need to seriously look at the issue of computerisation particularly in the area of improving on risk management.

3.4.7 Valuation of Risks

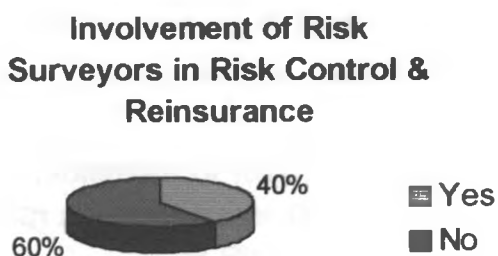
Risk surveyors were asked to indicate whether in their risk assessment/management exercises they were able to carry out a valuation and determine the value of the risks they

manage/survey. Out of the total 10 risk surveyors who responded to this question, only 2 or 20% were able to do a valuation of the risks. 80% indicated that they relied on the figures disclosed to them by the owners of the properties or when inevitable they sought or advised the insurance company to contract the services of a professional. This shows that most of the surveyors would ordinarily not be able to advise on the actual sums insured.

3.4.8 Risk Control and Reinsurance

Risk surveyors were asked whether following risk assessment and measurement they are involved in control of the risks. Only 4 or 40% of the respondents were involved in risk control. The rest, 60% were not. Those involved said that they would normally get involved in the following ways;

- Giving risk improvement recommendations
- Hold both formal and informal meetings with the owners or management of the risks to explain findings and recommendations
- Propose, depending on the risk in question, a suitable risk improvement programme
- Follow and encourage implementation of the programme including giving a grace/transition period and giving a budgetary guide



Source: Filed Data – Analysis, 2003

The above shows that risk managers, although they could have an invaluable input in the risk control element of risk management, their usefulness is not substantially used in that area.

Re-insurance is an important risk control tool for insurance companies. The study sought to find out whether risk managers are involved in formulation of reinsurance programmes for insurance companies. All of the respondents including those employed directly by the insurers indicated that they are not involved in reinsurance programmes for the insurers. On their part, insurers acknowledged that risk management is an important influencing factor in their decisions to co-insurer and re-insure. Out of 4 choices of Very Important, Important, Less Important and Not Important, 10 of the 18 or 56% respondents indicated that risk management was very important while the other 44% indicated that it was important. In addition 14 out of the 18 insurers or 78% of insurers indicated that awareness and practice of risk management positively influenced their choice of co-insurers.

3.4.9 Authority to Decline or Accept Risk

Out of the 10 risk surveyor respondents only 2 i.e. 20% & indicated that they have authority to direct acceptance or declination of a risk/cover to underwriters. These were in-house surveyors. The rest i.e. 80% said that they did not have such authority. This shows that risk surveyor/manager even though they are the ones who have had more contact with the risks and understand them more have very little say in determining whether a risk is to be given cover by the insurer or not. Their input in terms of acceptance or declination of a risk is important and should be sought by the underwriters.

Involvement of Risk Surveyors in Acceptance or Declination of Risks



Source: Field Data – Analysis, 2003

3.4.10 Post-Loss Risk Management

Risk surveyors were asked whether they were usually involved in surveying and re-surveying risks after and following the occurrence of loss. Half of the respondents indicated they were called upon to re-survey risks after a loss while the other half were never involved. As seen in the previous chapter of literature review, the importance of re-assessing a risk after a loss is invaluable. This response coupled with the fact that insurers indicated in an earlier question that they rarely requested for surveys after the occurrence of a loss shows that insurers have a room to improve on this area.

3.4.11 Claims and Risk Management

100% of risk surveyors were affirmative that risk management reduces incidences of loss to those risks that they manage. In the same vein, 100% of insurers were positive that risk management influences the levels of loss, claim incidences and magnitudes. This influence, they indicated, was by reducing the same.

3.4.12 Risk Management Practitioners and their Organisation

Risk managers/surveyors were asked to indicate their level of formal education. 100% of the respondents said that they had attained a university degree. Other qualification were varied as follows.

From the response it appears that most of those who carry out risk management i.e. 90% for insurers have a training in insurance specifically a Diploma of the Chartered Insurance Institute, London. The diploma has some basic training on risk management but not exhaustive enough. Only two have specific training in risk management and this is the Diploma in Risk Management offered by the Institute of Risk Management, London. One respondent had an Ordinary Membership (without formal training) of the Institute of Fire Engineer of the United Kingdom. The responses above show that most risk managers and surveyors depended mainly on their experience in the insurance

industry where they were exposed to years of underwriting before they became risk consultants or just specialised in risk assessments.

Qualification	Respondents
Chartered Insurance Practitioner (CIP)	2
Chartered Insurance Institute - Associate	9
Institute of Fire Engineers (UK)	1
Institute of Risk Management (UK)	3

Table 4: Risk Manager's qualifications

Source: Field Data

The Commissioner of Insurance agreed that there is currently no focused training for risk managers/assessors/surveyors and the discipline in general. He observed that the Insurance Act concentrates mainly on the risk management involving the maintenance of solvency by insurers through investing appropriately the premium funds. The Act is neither clear nor specific on the qualification of those in or seeking to go in risk management practice. The Office of the Commissioner of Insurance has, however, formulated the following requirements to those registering or renewing registration for a risk management firm.

1. Principal Officer should have a degree or diploma in insurance from a recognised institution of higher learning or
2. Should have ACII (Associateship of the Chartered Insurance Institute) or FCII (Fellowship of the Chartered Insurance Institute) or the equivalent

These obviously are qualification requirements that do not relate to risk management. A properly focused qualification requirement can of course be formulated; perhaps the persons with such qualifications may be the issue; whether or not they are available locally.

From the risk surveyors the study sought to find out whether risk managers/surveyors/assessors in Kenya were organised in any formal group such as a common association. Sixty (60) percent of them indicated that there had been formed an Institute of Risk Surveyors and Loss Adjusters which was recently formed. Forty (40) percentage were unaware of existence of such an organisation. This showed that the Institute had not yet been adequately marketed by the founder members to their colleagues. This is an area where extra effort is needed since a larger membership for the Institute means more strength and effectiveness in achieving and furthering its objectives.

An Interview with the Honorary Secretary to the Institute confirmed the existent of an Institute formally registered and launched in year 2001 under the name Institute of Loss Adjusters & Risk Surveyors (IARS). The Institute is composite representing all insurance service providers. These are represented in the institute through the following 4 chapters:

1. Loss Adjusters and Loss Assessors
- 1 Risk Surveyors, Risk Managers & Insurance (Marine) Surveyors
- 2 Motor Loss Assessors
- 3 Insurance Investigators

As per the Institute's constitution, a risk manager/surveyor is defined as a person whose primary business is the investigation, identification and analysis of risks for the purpose of recommending risk improvement/management measures to their instructing principal.

Membership is for individuals and not corporate and is categorised as Student, Ordinary, Associate, Fellow, Retired and Honorary.

The objectives of the organisation are as follows:-

1. To promote and advance the study of the respective professions
2. To promote the efficiency and usefulness of the professions by requiring the observance of strict rules of ethics and professional conduct by members of the Institute
3. To at all times secure the association of the professions

4. To provide forum for the purpose of exchange, provision and dissemination of information
5. To publish or superintend the publication of books, newsletters, papers and other materials relating to the affairs of the institute
6. To organise and provide lectures, classes or other tuition for the benefit of members of the institute, other members of the insurance industry and others who may be deemed appropriate
7. To organise research activities to address new risks introduced in the insurance market, disaster preparedness and recovery and other areas of difficulty that may evolve in the practice of the professions
8. To establish and maintain relationship with other professional bodies like Association of Kenya Insurers, Association of Insurance Brokers, Insurance Institute of Kenya, the office of the Commissioner of Insurance, the College of Insurance and others as practice may from time to time dictate and which are related and necessary for purposes of the institute
9. To establish and maintain a common fund by means of fees, levies, donations, subscriptions, e.t.c. and such other funds as may seem proper and to apply such funds in accordance with the provision of the institute's constitution
10. To represent the interests of members in dealing with statutory controls, legal bottlenecks, regulations, standards, codes of practice, segregation, victimisation, e.t.c
11. To decide on and secure uniformity of standards, professional fees, priorities and policy on all matters common to the practice of all professions
12. To enforce strict compliance of Institute's rules of conduct which shall exist or be created from time to time or any directives of the council or other appropriately mandated committee, by members of the Institute
13. To establish divisions, branches, secretariat and any other local units/organisations and abolish these when the desired purpose is achieved
14. To establish and maintain an efficient library or libraries

Looked at from the perspective of the risk management discipline, the above objectives are good and appropriate for enhancing the development of risk management. Followed

with an active implementation the institute can contribute immensely in promoting risk management for the benefit of the insurance industry and the economy in general. A risk manager/surveyor can become an Associate of the Institute and be able to use the distinctive letters A.I.A.R.S after his/her name upon the satisfaction of the following criteria:-

- Not less than 30 years of age
- Is a holder of a Bachelors degree from a recognised college or university or has acquired a diploma from an Institution offering a professional course relevant to the profession
- Has a minimum of seven years experience in the profession
- Has been nominated by the Risk Manager's chapter of the Institute

3.4.13 Improvement of Risk Management Discipline

Risk Managers and insurance companies were asked to suggest ways in which the discipline and practice of risk management can be improved. The following measures were suggested.

1. Underwriters should have proper training to appreciate the role of risk management in insurance
2. The Association of Kenya Insurers and Association of Insurance Brokers of Kenya should actively organise seminars and other fora to create awareness to its members on the importance of risk management
3. The Government perhaps through the College of Insurance should introduce and tailor an appropriate risk management course to serve the local insurance industry's needs
4. Local authorities in Kenya to take steps in educating their officers and the public in risk management
5. The insurance industry to take proactive measures through both print and electronic media to sensitise and create awareness to the insuring public about the concept and the benefits of risk management

6. Insurers to begin setting up risk management divisions/departments within their organisations to provide risk management to their clients
7. The fledgling Institute for risk managers/surveyors to redouble its efforts to enhance membership and strengthen its operations so as to effectively promote the discipline not only for the industry but other sectors of the economy as well
8. Certain risk improvement requirements to be made and recognised as minimum legal requirements in respect of some risks such as warehouses, factories and other workplaces
9. The Association of Kenya Insurers to develop and maintain a risk information bureau where information can readily be accessed and borrowed by those engaged in risk management and the industry players in general

Since the Institute of Loss Adjusters and Risk Surveyors is just at its infancy and trying to stabilise for business, one can say that the above enlisted objectives are all good examples of what needs to be done to improve the discipline of risk management. So far the institute has organised two seminars and has managed to secure representation in other bodies relevant to the insurance industry such as the Insurance Institute of Kenya and College of Insurance. In addition the secretariat point out the following which they think would improve the practice of risk management

- i) Ensure all practising risk managers/surveyors have the necessary qualifications
- ii) Ensure all practising risk managers/surveyors join and are members of an independent self-regulating body such as the Institute of Loss Adjusters and Risk Surveyors
- iii) Organise educational courses in the field and set examinations for the same
- iv) Generally instil professionalism in the risk management discipline in Kenya

CHAPTER FOUR

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

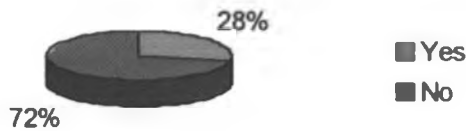
This chapter contains conclusions on the study in accordance with the data and information obtained from the field. Further it carries recommendations on ways in which the practice and profession of risk management can be enhanced and improved for the benefit of the insurance industry.

4.1.1 Risk Management Policy

It is worth noting that all insurers as well as the industry's regulator, the Commissioner of Insurance appreciate the importance and necessity of risk management discipline to the business of property and liability insurance. Risk managers observe that it is an important risk response tool and comes in handy to insurers. They agree that when adopted and properly practised it would improve the underwriting results and bring about better performance. Nevertheless, only 28% of insurers practise risk management. Seventy two (72) percent of insurers do not engage themselves in any active identification, analysis and control of the risks they take up. They basically collect premiums and pay up claims hoping to have a favourable claims ratio at the end of the insurance period or renewal time.

The office of the Commissioner of Insurance does not have a clear requirement for risk management to insurance companies. In fact the Commissioners agrees that insurers have not optimally practised risk management for maximum benefits.

Availability of a Risk Management Policy



Source: Field Data – Analysis, 2003

4.1.2 Risk Management Legislation

It is observed that all parties agree that as it is now, the current legislation governing the insurance industry i.e. Insurance Act Chapter 487 of the Laws of Kenya is wanting in regard to risk management. The only aspect of risk management it touches on is to do with the investment of the premiums collected. Its Section 50 gives a guide on the channels of investment that an insurance company may choose to invest its premium funds. This is particularly in regard to insurers of life business. The Commissioner of Insurance advised that the Act needs to be reviewed in order to include other new and viable channels of investment.

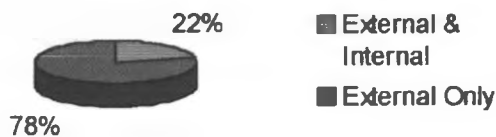
It is important that the Act is comprehensively reviewed to include a clear recognition of the aspect of risk management in the business of insurance. It needs to give a legal definition of risk management as a discipline and its practitioners clearly stipulating what an insurer needs to do to enhance its underwriting welfare by engaging reasonably significant risk management activities on the risks taken. Minimum training and qualification requirement need to be stipulated for those who wish to practice risk management either as individuals or firms.

4.1.3 Risk Identification and Analysis

From the field it is found that most insurers depend mainly on insurance brokers and agents for their source of underwriting business. They however indicate that in pre-qualifying or vetting them they do not include the aspect of the risk management skills they may or may not possess. They only consider such aspects as their capacity in terms of the volume of business they are likely to bring, creditworthiness, experience and period in business, business strategies they have adopted, registration with the Commissioner of Insurance, business and professional ethics, e.t.c.

It is observed that most insurance companies i.e. 75% do not find the proposal forms adequate to capture all the relevant information required on a particular risk. Nevertheless, even with this response, only 55% of these insurer resort to other means of identifying, analysing and attempting to control the risks associated with the property or liability they have chosen to underwrite. Twenty two (22) percent of these insurers rely on both internally and externally sourced services of risk surveyors/managers with 78% depending on external surveyors only. In addition to this there has been found no clearly defined means or policy on what category of risks should be surveyed by risk managers. Most underwriters use their own intuition and judgement to determine what risks to commission a survey on.

Reliance on External and/or Internal Risk Managers



Source: Field Data – Analysis, 2003

All risk surveyors only use the physical visit and inspection of risk as their method of risk identification with only a few combining it with use of checklists. This shows that risk

managers have not yet expanded or refined their tools of risk analysis and do not put in use a wider range of risk analysis/measurement methods appropriate to suit different types of risks.

All risk surveyors use the Estimated Maximum Loss method of risk analysis even with the availability of two others. This also shows that risk managers have not yet expanded or refined their tools of risk analysis and do not put in use a wider range of risk analysis/measurement methods appropriate to suit different types of risks.

4.1.4 Information and Communication in Risk Management

In risk management information and communication is very important. Risk Management involves gathering data, processing it into worthwhile information and communicating the same to the relevant parties for appropriate action. This is basically what is involved in the three main elements of risk management i.e. risk identification, analysis and recommendation for the control of the risks found. When communicating their findings to their principals for the risk consultants and the underwriting department for the internal one all risk surveyors/manager use written reports. Others means of communication which are used are physical consultative meetings and discussions. Others used but in small scale are ordinary correspondence and telephone advices and discussions.

Although all risk surveyors indicated that they obtained all the information required in their risk management exercises 60% expressed their concern that the means of information storage and retrieval was not adequately efficient and needed improvement. Only 50% of the insurers have computerised information storage and retrieval system but none has any particular computer program specifically for underwriting and risk management. Computerisation and information system in insurance companies is one area where improvement is greatly required.

4.1.5 Valuation of Assets and Risk Management

None of the risk surveyors has any skill that can assist them in determining what values to attach on the risks they are surveying or managing. They would not be able to advise on whether the values declared by the proposers of insurance for property or liability risks are adequate or not. Such knowledge would be vital in arriving at reasonable recommendations for risk control as this has a great bearing on the values at stake. It also helps in avoiding instances of under-valuation or over-valuation for ulterior motives by potential policyholders.

4.1.6 Risk Control and Reinsurance

It can be concluded that risk surveyors are largely not involved in the exercise of risk control. Only 40% of the risk consultants and in-house risk managers/surveyors go to the extent of recommending and ensuring that the appropriate risk control measures are implemented. The above shows that risk managers/surveyors, although they could have an invaluable input in the risk control element of risk management, their usefulness is not substantially exploited in that area. In the same way, although all insurers agree that risk management is important in considering co-insurance and re-insurance, they do not involve their risk managers in such programs.

4.1.7 Acceptance or Declinature of Risks

Most of the risk surveyors, i.e. 80% are not involved or are not allowed to determine whether a risk should be accepted for underwriting or not. This shows that risk managers even though they are the ones who have had more contact with the risks and understand them more have little say in determining whether a risk is to be given cover by the insurer or not. Their input in terms of acceptance or declinature of a risk is important and should be sought by the underwriters.

4.1.8 Claims Incidences and Post-Loss Risk Management

Insurers and risk managers alike agree that risk management ends up reducing claim incidences. This positive influence needs to be enhanced by ensuring that risk management is practised by all insurance industry players.

As stated in the second chapter, the importance of re-assessing a risk after a loss is invaluable. It can be extremely useful after the loss has just occurred in way of salvaging the subject matter of insurance to forestall further loss or preparing for future eventualities. In this area of post-loss risk management it has been found that only a half of the risk managers are involved. This is an area where improvement is needed.

4.1.9 Risk Management Practitioners and their Organisation

It is clear that all persons engaged in risk management whether as independent consultants or in-house employees are well educated. They have a university degree as a minimum academic qualification. Most of them have further professional qualification in insurance such as Chartered Insurance Institute diploma, Chartered Insurance Practitioner certificate, Associateship of the Institute of Arbitrators, Institute of Risk Management diploma, Membership of the Association of Fire Engineers of the United Kingdom, e.t.c. The underlying fact is that risk managers in Kenya do not have a harmonised and common training and qualification requirements. The available qualifications appear haphazard and unco-ordinated. The Insurance Act has no provision for this neither has much been done much to address the issue.

The risk surveyors/managers have recently joined hand with other insurance service providers i.e. Loss Adjusters, Loss Assessors, Motor Assessors and Investigators to register and establish Institute of Loss Adjusters and Risk Surveyors (IARS). The objectives of the institute are quite comprehensive as listed in chapter three and are well aimed at enhancing the development of risk management as an important part of the insurance business.

4.2 Recommendations

In order to encourage the adoption of the practice of risk management by Kenyan insurers and other players for the benefit of the industry and the economy at large this study recommends the following:

4.2.1 Kenyan insurance underwriters should have proper training in respect of risk management to ensure that they appreciate the concept of risk management in insurance. In the same vein, the Association of Kenya Insurers and Association of Insurance Brokers of Kenya should actively organise seminars and other fora to create awareness to its members on the importance of risk management. In addition, the government, through the College of Insurance, should introduce and tailor an appropriate risk management course to serve the local insurance industry's needs.

4.2.2 Although insurers appreciate the importance of risk management in their underwriting, claims and other aspects of their businesses they have not been proactive enough to incorporate it in their operations. It is recommended that insurers formulate clear risk management policies and allocated resources toward the same. They could set up risk management divisions/departments within their organisations or clearly stipulate how to involve external risk consultants to provide risk management services to them and/or their clients. Underwriters should strive to make comprehensive use of risk managers/surveyors. Their involvement in deciding the acceptability or declinature of proposed or to-be-renewed risks is of paramount benefit as is their engagement in risk control and advising on co-insurance and re-insurance programs. Involvement of risk surveyors/managers in risk control should also stretch to include claims and post-loss surveys/assessment/management. Further, insurance industry, perhaps through the Association of Kenya Insurers and the Association of Insurance Brokers, should take proactive measures through both print and electronic media to sensitise and create awareness to the insuring public about the concept and the benefits of risk management.

4.2.3 The fledgling Institute for risk managers/surveyors should redouble its efforts to enhance membership – ideally all risk managers/surveyors should be incorporated as members - and strengthen its operations so as to effectively promote the discipline not only for the industry but other sectors of the economy as well. Through it, professionalism should be inculcated among the present and future risk surveyors/assessors/managers. This could be by imposing strict rules, requirements and regulations to enhance professionalism. Programmes on Continuing Professional Development could be formulated and followed up consistently.

4.2.4 There is certainly a need for insurers, risk managers/surveyors to lobby for the review the Insurance Act Cap 487 by parliament to reflect the need of risk management by the insurance industry. This includes the legal recognition and requirement of the practice of risk among insurers outside the investment of premium funds. Further, it should define the practitioners of risk management and put down minimum academic and professional requirements of risk managers/surveyors management. It could go ahead and legally recognise the existence of a self-regulating body for the practitioners of risk management such as the Institute of Loss Adjusters and Risk Managers. This would give the relevant parties in the discipline the impetus to enforce and enhance professionalism in the discipline of risk management. In addition, as part of recognising the need for management of risks, certain risk control and improvement requirements could be made and recognised as minimum legal requirements for some risks such as warehouses, learning institutions, factories and other workplaces.

4.2.5 Computerisation and upgrading of the insurer's information systems should be carried out to enhance their capacities to effectively and efficiently store, analyse and retrieve data and information for the benefit of entering appropriate risk management programs. The Association of Kenya Insurers could help in this area by taking the initiative to develop and maintain a risk information bureau where information can readily be accessed and borrowed by those engaged in risk management and the industry players in general.

4.3 Areas of Further Study

This study could be regarded as maiden on the subject of the management of property and liability risks in the realm of insurance business in Kenya. It has been made broad enough so as to include almost all aspects of risk management and property and liability risks. Each constituent aspect of risk management can be separately studied. Below are some examples.

1. Risk Measurement and Valuation of property risks
2. Information Technology and Computerisation in Risk Management
3. Underwriting and Risk Management
4. Risk Management and Claims Incidences in property risks

BIBLIOGRAPHY

- Bannister, J; "The Role of Risk Management in Underwriting", Info RM,
March/April 2002
- Berstein, P (1996); "The New Religion of Risk Management", Havard
Business Review, March-April 1996
- Butterworths, M (2000); "The Emerging Role of the Risk Manager",
Financial Times, 25th April 2000 pp 8-9
- Crockford, N (1986); An Introduction to Risk Management; Woolhead Ltd,
Cambridge
- Diacon, S. R (1984); Success in Insurance; John Murray Publishers Ltd,
London
- Dickson, G. C. A (1981); Risk Analysis; Witherby & Co. Ltd, London
- Dickson, G. C. A (1990); Risk & Insurance; Witherby & Co. Ltd, London
- Fayol, H (1949); General and Industrial Management; Pitmans Publishing
Corporation, New York
- Flanagan, R & Norman G (1985); Corporate Risk Management; Mc Graw
Hill Book Company, New York

- Gichunge, H (2000); Risk Management in the Building Industry in Kenya:
An Analysis of Time and Cost Risks; PhD Thesis, University of
Nairobi
- Gordon, C. A & Dickson, M (1984); Introduction to Insurance - The CII
Tuition Service Study Course, London
- Irukwu, J. O (1991); Risk Management in Developing Countries; Witherby
& Co Ltd, London
- Kaloki, F. K (2000); "The Real Estate Insurance", The Kenya Surveyor Vol.
8 No. 1 pp 12-15
- Kirkrand, A. S (1994); "Why do we worry when scientists say there is no
risk", Disaster Prevention and Management, Vol. 3 No. 2; MCB
University Press, Bradford
- Margaret, D (1997); Insurance: Non-Marine; An Introduction; Witherby &
Co. Ltd, London
- Mugenda, O & Mugenda, A (1999); Research Methods: Qualitative and
Quantitative Approaches; Nairobi African Centre for Technology Studies
(ACTS), Nairobi
- Oundo, W. O (2003); Risk Management Practices in the Management of
Real Property in Kenya: A survey of Commercial Properties in
Nairobi; Unpublished M A Thesis, University of Nairobi
- Parker, T (1990); Never Trust a Calm Dog and Other Rules of Thumb;
Hamper Collins, New York

- Rafey, J (1994); Risk Analysis in Project Management; E & F N Spon,
London
- Rowe, W. D (1977); An Anatomy of Risk; John Wiley Interscience, New
York
- South African Property Education Trust (2001); Risk Management in
Property – Edited by Cloete C. E; Business Print Centre,
Pretoria
- Stopez S. E; “Risk Management Information System: A geography of
Risk”, Risk and Insurance, April 1998
- Toit, G. S & Rooyen, H. S (1998); Risk Management; University of South
Africa, Pretoria
- Underwood, G (1989); The Security of Buildings; Butterworths, London
- Vaughan, E. J & Elliot, C M (1978); Fundamentals of Risk and Insurance;
John Wiley & Sons Ltd, New York
- Vaughan, E & Vaughan, T (1995); Essentials of Insurance; John Wiley
Sons Inc., New York
- Wenlee, T (1988); Multinationals Risk Assessment and Management;
Quorum Books, New York
- Way, G. M & Rainbird, J (1991); Property Insurance: Risk Assessment &
Control - The Chartered Insurance Institute Service Study
Course 620; Bath Press, Bath Avon

Wilkinson, S (1992); Physical Control of Risks; Witherby & Co. Ltd,
Aylesbury Street, London

William, C. A & Heinous R. M (1989); Risk Management and Insurance;
Mc Graw Hill, New York

The Insurance Act Cap 487, 1988 Edition, Laws of Kenya

The Institute of Risk Management Website

Report from the Commissioner of Insurance, Department of Insurance,
Ministry of Finance, 2001

“Insurers turn underwriting losses into gain”; Daily Nation; August 12th 2003

Appendix A

QUESTIONNAIRE TO RISK MANAGERS/SURVEYORS/ASSESSORS

Introduction

The interviewer is an M A student currently carrying out a research on Risk Management in the Insurance Industry. This particularly is in reference to Fire, Special Perils, Consequential Loss/Business Interruption, All Risks (including industrial), Theft/ Burglary and Public Liability risks.

The following questions are strictly intended for the purpose of gathering requisite data and information and will be used as such.

Kindly answer all the questions as clearly as possible.

Questions

1. How long have you practised risk management?
No. of years _____ No. of months _____

2. What percentage of your works is made up of assignments from insurance companies? (approximate)
Percentage _____

3. What is your educational training?
University degree
College Diploma
Other: (please specify): _____

4. Please state any specific qualification you have with respect to risk management and surveys in insurance industry.

5. How important, in your opinion, is insurance among risk response tools? (please tick as appropriate)
 Very Important
 Important
 Less important
 Not important

6. Do you consider risk management practice necessary to risk takers in the insurance industry? (please tick as appropriate)

- Yes
 No

7. In the whole spectrum of risk management, are you involved in the following? (Tick as appropriate)

Risk Element	Yes	No
Risk identification		
Risk Analysis/Measurement		
Risk Control		

8. At what stage in the underwriting process are you usually involved as a risk surveyor/manager? (Please tick as appropriate)

Stage	Very often	Often	Rarely	Never
Before underwriting				
Just after underwriting				
During period of cover				
During renewal				
After occurrence of loss				

9. Are you ever involved in the management of the following risks?

Risk Type	Yes	No
Fire Risk		
Special Risks		
Consequential Loss Risk		
All Risks (including industrial)		
Theft/Burglary Risk		
Public Liability		

10. Would you consider yourself adequately trained to identify, measure and help control the following risks?

Risk Type	Yes	No
Fire Risk		
Special Risks		
Consequential Loss Risk		
All Risks (including industrial)		
Theft/Burglary Risk		
Public Liability		

11. Which of the following methods of risk identification do you usually use?

- Physical Inspection
- Checklists
- Organisational Charts
- Flow charts
- Hazard and Operability Studies (HAZOP)
- Other(s) (Please specify): _____

12. Which of the following risk analysis techniques do you usually use?

- Fault Trees
- Hazard Analysis
- E. M. L (Estimated Maximum Loss)
- Other(s) (Please specify): _____

13. In your risk management/assessment tasks are you able to determine the potential sums insured?

- Yes
- No

If No, how do you arrive at the sums insured? Please explain: _____

14. (a) Following risk identification and measurement how, if at all, are you involved in risk control? Please explain briefly.

(b) Do you follow up on any risk minimisation or avoidance programs recommended?

- Yes
- No

15. Are you involved in the formulation of the re-insurance programs of the insurance company?

- Yes
- No

16. Do you usually have the authority to direct acceptance or declination of underwriting business?

- Yes
- No

17. (a) Are you usually called upon for post-loss surveys for risks you had surveyed before?

- Yes
- No

(b) Do you consider that risk management reduces incidences of loss to those risks that you manage?

- Yes
- No

18. State how you communicate your information to your principals?

19. (a) When carrying out risk management do you usually have adequate information from both the insurer and the insured to be?

- Yes
- No

(b) Do you feel that insurers have efficient means of storing and retrieving information for purpose of risk management?

- Yes
- No

21. Are Risk Managers/surveyors/assessors in Kenya organised in any formal group such as a common association?

- Yes
- No

22. What would you recommend to improve the practice of risk management in the insurance industry?

1. _____
2. _____
3. _____
4. _____
5. _____

Appendix B

QUESTIONNAIRE TO INSURANCE COMPANIES

Introduction

The interviewer is an M A student currently carrying out a research on Risk Management in the Insurance Industry. This particularly is in reference to Fire, Special Perils, Consequential Loss/Business Interruption, All Risks (including industrial), Theft/ Burglary and Public Liability risks.

The following questions are strictly intended for the purpose of gathering requisite data and information and will be used as such.

Kindly answer all the questions as clearly as possible.

Note: Part E of the questionnaire is to be completed by the internal risk assessor/manager/surveyor where he/she is available.

Questions

PART A

1. Kindly state your position and period of service in the company?
Position: _____ Period (years/months): _____
2. When was the company established to undertake general insurance business?
Year: _____
3. Kindly indicate whether or not you underwrite the following risks (Tick as appropriate).

Risk Type	Yes	No
Fire		
Special perils		
Consequential loss/ Loss of profits		
Theft/ Burglary		
All Risks (including industrial)		
Public liability		

4. Please indicate below your source of the business you underwrite above in order of importance (with 1 as most important and 5 as least important in that descending order)
 Direct marketing
 Brokers
 Agents
 Co-insurance
 Sister firms/organisations
 Others (please specify): _____

PART B

5. (a) As a risk taker do you think that risk management (of existing and potential risks) is important in the running of your business?

- Yes
- No

(b) Do you have any risk management policy?

- Yes
- No

If Yes, explain briefly what it entails.

(c) If No, would you consider future active management of the risk you have underwritten?

- Yes
- No
- May be

6. (a) Do you engage a risk manager/surveyor/assessor in your company?

- Yes
- No

(b) If Yes, how many.

Number: _____

7. (a) What is their level of background training?

- High school Certificate
- College Diploma/Certificate
- University Degree
- Other(s) (please specify): _____

(b) Please state any specific qualification they have with respect to risk management/survey/assessment.

8. Do you think that the above stated qualifications are adequate for the tasks involved?
- Yes
 - No
9. (a) Is there a set pre-qualification of the brokers and agents you accept business from?
- Yes
 - No

(b) If Yes, kindly state the main factors that determine the broker/agent from whom to accept business?

10. (a) In considering acceptance or declinature of risks do you consider proposal forms as adequate source of the information required?
- Yes
 - No

(b) If No what other sources of information do you rely on?

- Site visits by underwriters
 - Surveyors' reports
 - Investigation reports
 - Valuation reports
 - Adjuster's reports
 - Meetings and discussion with client
 - Other(s) (please specify): _____
-
-
-

11. In the whole spectrum of risk management do you think that you are involved in the following for the risks undertaken?

Task	Yes	No
Risk Identification		
Risk Analysis/Masurement		
Risk Control		

12. (a) Do you use consultants (external) for the above tasks?

Yes

No

(b) If Yes, what criteria do you use to pre-qualify them? Kindly explain.

(c) Are you satisfied with the service they render?

Yes

No

(d) If No, kindly give some of the areas where improvement is needed?

PART C

13. (a) Is there a set limit or category for risks for which you involve a risk surveyor/assessor?

Yes

No

(b) If Yes, kindly state the limit in Kenya shillings per unit of exposure.

14. On the basis of the above limit, at what stage of underwriting/insurance cover and frequency do you request for risk surveys/assessment? (Tick as appropriate)

Stage	Always	Often	Normally	Rarely	Never
Before underwriting					
Just after underwriting					
During period of cover					
During renewal					
After occurrence of loss					

15. (a) In managing your risks do you usually have an adequate access to and amount of information and data?
- Yes
 - No
- (b) Do you have a computerised method of data storage and retrieval?
- Yes
 - No
- (c) Do you have a specifically designed computer program or computer aided program for purposes of risk management?
- Yes
 - No
16. How is risk management an important influencing factor in your decisions to co-insurer and re-insurer?
- Very important
 - Important
 - Less important
 - Not important
17. Does awareness and practice of risk management influence your choice of co-insurers?
- Yes
 - No
18. (a) In the overall how does management of proposed and underwritten risks influence levels of premium?
- Reduce
 - Increase
 - Constant (no influence)
19. (a) Do you consider that risk management influences the levels of loss and claims incidences and magnitudes?
- Yes
 - No
- (b) If Yes, in what direction?
- Reduce
 - Increase
 - No significant influence

PART D

20. Being a part of it, do you think that the insurance industry has recognised and is optimally adopting risk management as part of insurance business?

- Yes
 No

21. In your opinion, are those who carry out risk management/assessment for the industry sufficiently qualified for the task?

- Yes
 No

22. What recommendations would you make for the enhancement of the practice of risk management in the industry?

1. _____
2. _____
3. _____
4. _____
5. _____

PART E

This part to be completed by the internal risk manager/surveyor/assessor (where engaged).

23. How long have you been involved in risk management/assessment?

No. of years _____ Months _____

24. Are you ever involved in the management of the following risks? (Tick as appropriate)

Type of risk	Yes	No
Fire Risk		
Special Risks		
Consequential Loss Risk		
All Risks (including industrial)		
Theft/Burglary Risk		
Public Liability		

25. Would you consider yourself adequately trained to identify, measure and help control the above risks?

- Yes
- No

26. At what stage of underwriting/insurance cover and frequency are you involved in carrying out risk surveys/assessment?

Stage	Always	Often	Normally	Rarely	Never
Before underwriting					
Just after underwriting					
During period of cover					
During renewal					
After occurrence of loss					

27. In risk identification which of the following methods do you usually use?

- Physical Inspection
- Checklists
- Organisational Charts
- Flow charts
- Hazard and Operability Studies (HAZOP)
- Other(s) (Please specify): _____

28. Which of the following risk analysis techniques do you usually use?

- Fault Trees
- Hazard Analysis
- E. M. L (Estimated Maximum Loss)
- Other(s) (Please specify): _____

29. In your risk management/assessment tasks are you able to determine the potential sums insured?

- Yes
- No

If No, how do you arrive at the sums insured. Please explain: _____

30. (a) Following risk identification and measurement how, if at all, are you involved in risk control? Please explain briefly.

(b) Do you follow up on any risk prevention, minimisation or avoidance programs recommended?

- Yes
- No

31. Are you involved in the formulation of the re-insurance programs of the insurance company?

- Yes
- No

32. Do you usually have the authority to direct acceptance or declinature of underwriting business?

- Yes
- No

33. (a) For the company you are working for, do you usually have adequate information to be able to come up with reasonable risk management programs?

- Yes
- No

(b) Do you feel that there is in place an efficient means of storing and retrieving information for purpose of risk management?

- Yes
- No

34. Are Risk Managers in Kenya organised in any formal group such as a common association?

- Yes
- No

35. What would you recommend to improve the practice of risk management in the insurance industry?

1. _____

2. _____

3. _____

4. _____

Appendix C

INTERVIEW WITH THE COMMISSIONER OF INSURANCE

Introduction

The interviewer is an M A student currently carrying out a research on risk management in Kenya's Insurance Sector. This is particularly in reference to Fire, Special Perils, Consequential Loss/Business Interruption, All Risks (including Industrial), Theft/Burglary and Public Liability risks.

The following questions are strictly intended for the purpose of gathering the requisite data and information and will be used as such.

Kindly answer all the questions.

Questions

1. How many general insurance companies are currently registered?

Number: _____

2. Would you say that these are enough for the current state of economy?

Yes
 No

3. As the regulator of the industry do you think risk management is necessary to the industry?

Yes
 No

Please elaborate: _____

4. Does your office have any requirement(s) on risk management to insurance companies?

Yes
 No

If Yes, please explain. _____

5. (a) Do Kenyan insurers recognise and incorporate risk management in the running of their businesses?

- Yes
 No

(b) If yes, is this, in your opinion, at an optimal level?

- Yes
 No

6. In your opinion, does the Insurance Act adequately capture the need and encourage the practice of risk management in the industry?

- Yes
 No

If Yes, please explain: _____

7. How many risk managers are registered now?

Number: _____

8. (a) Do you think that this number is enough for the industry?

- Yes
 No

(b) If No, what would approximately be the ideal number (firms/individuals)?

Number: _____

9. What qualifications do you require of them? Kindly explain.

10. In your opinion do you think the registered risk managers adequately possess the requisite qualifications/expertise.

- Yes
 No

11. If No, what, in brief, would you recommend as their qualifications?

12. Do you encounter the problem of unqualified and unregistered persons or firms practising risk management?

- Yes
 No

13. What changes to the current legislation and practice would you recommend to enhance risk management in the insurance industry? Kindly explain.

1.

2.

3.

4.

5.

Appendix D

THE INTERVIEW

1. **Name of the Institute:**

Institute of Loss Adjusters & Risk Surveyors (IARS)

2. **Year of registration/launch**

Registered on 3rd January 2001 & launched on 18th October 2001

3. **Categories of membership and number of members per each category**

The institute represents all insurance service providers. Hence, it has 4 Chapters as follows

1. Loss Adjusters & Loss Assessors Chapter (20 members)
2. Risk surveyors, Risk managers & Insurance (Marine) Surveyors Chapter (10 members)
3. Motor Loss Assessors Chapter (15 members)
4. Insurance Investigators Chapter (7 members)

NB

- ◆ Membership is for individual not corporate
- ◆ We have been asking for as many members to join as possible

The members are categorised as either

1. Student
2. Ordinary
3. Associate
4. Fellow
5. Retired
6. Honorary

For details please see extracts from constitution (pls note there have been a few changes)

4. **Objectives of the Institute – particularly with regard to Risk Surveyors/Managers.**

For details please see extracts from constitution

5. **Entry (qualification) requirement(s) for risk surveyors/managers.**

For details please see extracts from constitution

6. What are some of the institute's achievements so far with respect to your objectives particularly in regard to risk management in the industry?

- ◆ Organised seminars though not exclusively for Risk Managers
- ◆ Articles in our quarterly journal
- ◆ Representation in other bodies e.g. IJK, College of Insurance and workshops etc by external bodies

7. What, if any, are your immediate and future plans with regard to the practice of risk management in the insurance industry?

- ◆ Ensure all practising Risk Managers/Surveyors have necessary qualifications
- ◆ Ensure all practising Risk Managers/Surveyors are members of the Institute
- ◆ Set entry criteria for new and practising Risk Managers/Surveyors
- ◆ Organise educational courses in the field and set examinations for the same
- ◆ Promote professionalism in the practice

8. (a) Does the current legislation on the insurance industry and its regulation sufficiently address the concerns of insurance service provision?

No

(b) If not, what specific issues would you wish were addressed?

1. Ensure the Insurance Act defines the service providers correctly according to field of practice
2. Legal recognition of the Institute as the self-regulatory body for service providers.
3. IARS to become the licensing/vetting body for all service providers.
4. Set minimum and reasonable/realistic qualifications for service providers.

2.1.3. Motor Assessors/Investigators

2.2. Each of the above professions will be known as a CHAPTER of the Institute.

3. REGISTERED OFFICE

3.1. The registered offices of the Institute shall be the office of the Secretary General of the Institute at the appointed time.

4. AIMS AND OBJECTS

4.1. The aims and objects of the Institute shall be as stated hereunder:-

- 4.1.1. To promote and advance the study of the respective professions of the three Chapters of the Institute.
- 4.1.2. To promote the efficiency and usefulness of the said professions by requiring the observance of strict rules of ethic and professional conduct by members of the Institute.
- 4.1.3. To at all times secure the association of the professions herein stated.
- 4.1.4. To provide forum for the purpose of exchange, provision and dissemination of information.
- 4.1.5. To publish or superintend the publication of books, newsletters, papers and other materials relating to the affairs of the institute.
- 4.1.6. To organize and provide lectures, classes or other tuition for the benefit of members of the institute, other members of the insurance industry, and others who may be deemed appropriate.
- 4.1.7. To organize research activities to address new risks introduced in the insurance market, disaster preparedness and recovery, and other areas of difficulty that may evolve in the practice of the professions herein stated.
- 4.1.8. To establish and maintain relationship with other professional bodies like Association of Kenya Insurers; Association of Insurance Brokers; Insurance Institute of Kenya; the office of the Commissioner of Insurance; the College of Insurance and others as practice may from time to time dictate and which are related and necessary for purposes of the Institute.
- 4.1.9. To establish and maintain a common fund by means of fees, levies, donations, subscriptions etc and such other funds as may seem proper and to apply such funds in accordance with the provision of this constitution,

including remuneration of any employees of the Institute, sitting officials and others as may by resolution be sanctioned by the Council.

- 4.1.10. To represent the interests of members in dealing with statutory controls, legal bottlenecks, regulations, standards, codes of practice, segregation, victimization etc.
- 4.1.11. To decide on and secure uniformity of standards, professional fees, priorities and policy on all matters common to the practice of all professions stated herein.
- 4.1.12. To enforce strict compliance of Institute rules of conduct, which shall exist or be created from time to time, or any directives of the Council or other appropriately mandated committee, by members of the Institute.
- 4.1.13. To establish divisions, branches, secretariat and any other local units/organizations and abolish these when the desired purpose is achieved.
- 4.1.14. To establish and maintain an efficient library or libraries.

5. MEMBERSHIP

- 5.1. Membership of the Institute shall be open to persons engaged in the following professions:
 - 5.1.1. Loss Adjusting
 - 5.1.2. Loss Assessing
 - 5.1.3. Risk Surveying
 - 5.1.4. Risk Management
 - 5.1.5. Insurance Surveying
 - 5.1.6. Motor Assessing
 - 5.1.7. Insurance Investigations

6. DEFINITIONS OF PROFESSIONS

- 6.1. The professions indicated above are defined as follows:-

6.1.1. LOSS ADJUSTING

The term shall mean persons engaged in loss adjusting practice which shall be one in which the primary business is the investigation, management, quantification, validation and resolution of losses (whether insured or not) arising from any contingency, acting on instructions from a principal.

6.1.2. LOSS ASSESSING

The term shall have the same meaning as that of Loss Adjusting, except that the role will be that of acting for an insured person, body or organization.

6.1.3. RISK SURVEYING

The term shall mean persons whose primary business is the investigation, identification and analysis of risks insured for the purposes of recommending improvement of the risk and other measures to their principals.

6.1.4. RISK MANAGEMENT

The term shall mean persons, whose primary business is the investigation, identification and analysis of risks insured and recommending risk management measures to their principals.

6.1.5. INSURANCE SURVEYING

The term shall mean persons whose primary business in Marine Insurance business is surveying or assessing the losses, acting on instructions from a Principal.

6.1.6. MOTOR ASSESSING

The term shall mean persons, whose primary business is the investigation, management, quantification, valuation and resolution of motor vehicle damage losses acting on behalf of a principal.

6.1.7. INSURANCE INVESTIGATION

The term shall mean persons, firms or companies whose primary business is the carrying out of investigations into insurance claims acting for a principal.

7. CATEGORIES OF MEMBERSHIP

7.1. The membership of the Institute shall be divided into five categories to be styled:

- 7.1.1. Ordinary
- 7.1.2. Associate
- 7.1.3. Fellow

- 7.1.4. Retired
- 7.1.5. Honorary

7.2. A person shall be eligible for admission as an Ordinary member of the Institute if he:

- 7.2.1. is not less than 21 years of age, and
- 7.2.2. is engaged in accordance with Articles 6.1.1. to 6.1.7 and
- 7.2.3. has a minimum of three years of experience in the profession as described in the above noted Articles, and
- 7.2.4. has at least a Certificate of Proficiency (COP) awarded by the College of Insurance or an equivalent or higher relevant professional qualification, and
- 7.2.5. has been nominated by a chapter or branch of the Council, and
- 7.2.6. has the support of at least two thirds of the votes carried at the respective Executive Committee meeting and thereafter at the council meeting.

7.3. A person shall be eligible for admission as an Associate of the Institute if he:

- 7.3.1. is not less than 30 years of age, and
- 7.3.2. is engaged in accordance with Articles 6.1.1. to 6.1.7, and
- 7.3.3. is a holder of Bachelors degree from a recognized college or university or has acquired a diploma of Associateship from an institution offering a professional course relevant to the profession described in the above noted articles, and
- 7.3.4. has a minimum of seven years of experience in the profession as described in the above noted Articles, and
- 7.3.5. has been nominated by a chapter or branch of the Council, and
- 7.3.6. has the support of at least two thirds of the votes carried at the respective Executive Committee meeting and thereafter at the Council meeting

7.4. A person shall be eligible for admission as a Fellow of the Institute if he:

- 7.4.1. is not less than 40 years of age, and
- 7.4.2. is engaged in accordance with Articles 6.1.1. to 6.1.7. and
- 7.4.3. has a minimum of twelve years of experience in the profession as described in the above noted Articles, and
- 7.4.4. has been an Associate of the Institute for at least five years next before the date of his application, and
- 7.4.5. has been continuously in practice in his profession whilst he has been an Associate as aforesaid, and
- 7.4.6. is a principal or Executive Officer of the firm functioning the profession as described in the above Articles, and
- 7.4.7. has complied with the requirements of Continuing Professional Development (CPD) as laid out from time to time by the Council, and
- 7.4.8. has been nominated by a chapter or branch of the Council, and

- 7.4.9. has the support of at least two thirds of the votes carried at the respective Executive Committee meetings and thereafter at the Council meetings

Note

A member's entitlement to retain the status of Fellow shall be conditional, inter alia, upon that member's continued compliance with the requirements for Continuing Professional Development as laid down from time to time by the council.

- 7.5. A person shall be eligible for admission as a Retired member of the Institute if he:
- 7.5.1. was a member of the Institute, and
 - 7.5.2. has retired from gainful employment, and
 - 7.5.3. has been nominated by a chapter or branch of the Council, and
 - 7.5.4. has the support of at least two thirds of the votes carried at the respective Executive Committee meetings and thereafter at the Council meeting.
- 7.6. The Institute may elect any person to be an Honorary member of the Institute subject to that person's consent and irrespective of whether such person is eligible for admission as member of the Institute.
- 7.6.1. Such an honour shall be granted for outstanding contribution to the institute.

8. **USE OF DISTINCTIVE LETTERS AND TITLES**

- 8.1. A Fellow of the Institute may use after his name the distinctive letters F.I.A.R.S.; an Associate may use the distinctive letters A.I.A.R.S. No other category of member shall use any letters or words to indicate his connections with the Institute.
- 8.2. Any Fellow or Associate who has retired from gainful employment shall be entitled to be enrolled as a Retired member and he can continue to use distinctive letters applicable to his qualification.

9. **APPLICATIONS**

- 9.1. Every person seeking to be enrolled or admitted as a member or to be transferred to a different class of membership shall make written application to the Secretary General of the Institute on the applicable form prescribed by the Council. The form shall embody an undertaking to conform with the provisions of the constitution and the standing orders in so far as they apply to the applicant.