

**FACTORS THAT INFLUENCE PRICING OF LIFE INSURANCE PRODUCTS: A
CASE STUDY OF ICEA LION LIFE ASSURANCE COMPANY**

BY

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UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

SUMMER 2018

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**A Project Report Submitted to the Chandaria School of Business in Partial
Fulfillment of the Requirement for the Degree of Masters in Business
Administration (MBA)**

UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

SUMMER 2018

STUDENT'S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

Signed: _____ **Date:** _____

Jerusha Abachi (ID 648992)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: _____ **Date:** _____

Marion Mbogo

Signed: _____ **Date:** _____

Dean, Chandaria School of Business

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ABSTRACT

The goal of the study was to determine which factors influence the pricing of life insurance products with the case of ICEA Lion Life Assurance Company being the focus. The study aims to tackle three research questions which include to evaluate the influence of demographics on premium pricing, to examine the influence of socio-economic factors on premium pricing and to determine the influence of regulatory framework on insurance premium pricing. The study utilised a descriptive research design and evaluated the entire population or sampling frame composed of all 9 employees of the Actuarial and Business Development Departments of the insurance company. However, only 7 respondents participated leading to a 77.78% response rate.

The study's major findings and conclusions were that demographic factors such as age, gender, occupation and the health status of a client do play a role in insurance pricing. However, socio-economic factors such as political events, changes in the economy, war and terror activities and the safety standards of an individual's work environment do not greatly impact pricing of products. But the existence of certain economic groups and lifestyle activities of an individual does. As far as the regulatory framework was concerned, the study noted that due to competitive market dynamics, not all products are strictly priced based on regulatory requirements of underwriting and claims experience.

The study recommended that insurance companies will need to now employ pure underwriting on all risks based on the laid out actuarial principles especially when it comes to group products. This is because of the changes in the risk based capital requirements expected to take place by June 2018. Thus pricing models currently being employed by insurance companies will have to be evaluated in order to ensure that they are in compliance with both regulation and the business landscape. Insurers will also need to enhance product innovation in order to guarantee that their product lines are meeting every arising need and at favourable price points. In this regard companies should seek to diversify into new market segments particularly with regard to ordinary life products which remains not fully tapped. This way they will be able to access new markets thereby growing their business segments and increasing insurance penetration within the country.

ACKNOWLEDGEMENT

My utmost appreciation and thanks goes to all my lecturers at the United States International University for their guidance that enabled me remain steadfast in my studies. I would also like to thank my family and friends who encouraged me as I pursued my degree.

ACRONYMS AND ABBREVIATIONS

IRA: Insurance Regulatory Authority

RBA: Retirement Benefits Authority

NSSF: National Social Security Fund

NHIF: National Hospital Insurance Fund

COTU: Central Organisation of Trade Unions

GLB: Graham-Leach-Bliley

AKI: Association of Kenyan Insurers

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

One aspect that enhances growth for most insurers is the price of its products which is used as a mechanism to stimulate demand and revenue growth. Ideally insurance products should strictly be priced under the guidance of recommendations of actuaries, the insurer's claims experience, non-claim expense, financial strength and the market demand. Thus, an actuary should have a good understanding of the financial landscape and challenges facing his insurance company (Pantelous & Papageorgiou, 2013) which include evaluation of the overall business strategy of the insurance company, the constantly shifting market dynamics, the increased risks of moral hazard and adverse selection arising from information asymmetries in establishing prices of the products. The insurer's ultimate objective is to ensure that it has adequate liquidity to meet without delay expected and unexpected claim liabilities. The timely settlement of claims enables an insurer build a reputation that ensures it retains existing policies as well as underwrites new business that enables it grow its capital base (Choi, Park & Ho, 2016). All or a combination of these internal company and external market factors come into play in determining premium rates. Hence, an insurer can either charge a manual rate, which are based on the rate tables, or a premium rate, which is based on changing insurance market dynamics or fluctuations.

These fluctuations are rife in the insurance market and are factors that play a major role in price determination. The premium rate, which is the market price actually charged by an insurer, is the price that takes into account all these fluctuations. One major factor that all insurers must consider is the demographic elements of the client. These elements include age, sex, race, education, income, occupation, marital status, religion, health behaviour, smoking, alcohol intake and obesity and are significant pricing factors that influence mortality (Fong, 2015). The aim behind this is determining the riskiness associated with taking on a particular life to be covered. Certain aspects of a person's health or day-to-day life experiences are dictated by these demographic elements and may imply a certain level of risk of death for that client.

Engaging in certain activities may lead to a life being too risky to be placed under insurance cover (Mishra, 2010). Someone who, for instance, drinks alcohol every day of

the week is a lot riskier than someone who eats healthy and exercises every day of the week. This similarly applies to occupations where for instance an electrician is in a riskier job than a banker who sits at a desk all day. This implies that clients are charged different premium rates because they each possess a different risk profile. An insurer is in the business of paying claims and must be in a position to meet those claims financially while ensuring a return. Hence, it may not want to take on risky clients who may threaten their bottom line. Demographics are a good method for screening out such risks before they land in the insurance portfolio. If the risks are tenable, a loading is made on the premium to cater for the additional risk associated with that life such as poor health as a result of age.

Pricing may also be dictated by regulation which is constantly changing the market's landscape. Insurance regulation is mainly categorised to cover prudentiality, market behaviour and antitrust competition. Government agencies such as the RBA provide guidelines on how annuities, personal retirement schemes or deposit and administration schemes are managed by insurers. The IRA ensures that premiums, which are income generating assets, collected by insurers are invested according to the guidelines set out by the Insurance Act Cap 487 of the Laws of Kenya so as to enable insurers generate income that meets arising liabilities in the form of claims by customers (Insurance Regulatory Authority, 2017). This ensures that insurers are not reckless in their investment decisions thereby putting at risk their customers' resources.

Alternatively, government may step in and provide insurance when the private insurance market does not provide covers at favourable price points or against certain extreme risks such as major natural disasters, health insurance, pension, workers' compensation or other obligatory liability insurance in the interest of public good (Kwon, 2013). This aspect rings true with the implementation of the NSSF Act (2013) which aims at increasing retirement savings for employees nationally. In as much as the Act encourages a retirement savings culture for Kenyans by increasing NSSF contribution levels to provide Kenyans with a decent nest egg during retirement, the government stands to compete with private insurers' who had until 2013 been the main managers of pension schemes for private organisations as well as welfare groups and individuals. Similarly, the government, despite initial opposition from trade unions such as COTU, raised NHIF contributions in 2012 for employees to enable access to affordable healthcare for all Kenyans.

Financial institutions are required by law to maintain minimum capital reserves as it ensures that the institutions are able to take on more business while ensuring efficient resource allocation so as to compete effectively. And the government determines the exact limits for the capital reserves. The idea behind it is to control risks associated with the asset structure of the financial institution in order to guarantee that it (the insurer) does not become insolvent (Ngugi & Afande, 2015). Capital reserves ensure adequate risk management by providing a cushion against future losses. These requirements guide the insurers on which insurance products to issue, of what maturities and at what price. Long term products present uncertainty for the insurer in terms of its ability to meet its obligations in relation to those products. Having a large capital base ensures that despite market shifts or a rise in claim liabilities, an insurer has the capacity to meet them. It also prevents insurers from taking on risks that they may not be able to absorb. Therefore, the products they ultimately offer will be at a price and of a risk that is in line with the insurer's risk management strategy as guided by its regulatory capital requirements. All these regulatory developments affect how insurers price their products in order to either retain or attract clientele.

Since the market for insurance in Kenya is very limited, there is a lot of competition among insurers for the few business opportunities available. In order to clinch these scarce opportunities, there has been an increase in premium undercutting in the Kenyan market by some insurers. The outcome of which is a decline in revenues, a rise in mergers of insurance firms, retrenchment of staff and folding up of some insurers (Mburu & Maina, 2016). The reason for this is that in the short term it may seem feasible to offer products at a price lower than what the competition is offering. However, in the long run when it comes to claim settlement an entity may find itself in a situation where the premiums collected are quickly wiped out by future claims. Hence, this threatens the ability of insurance firms to remain profitable and ultimately their ability to continue with their operations. Thus actuarial valuation becomes another factor that is extremely relevant in providing clear and expert guidelines in pricing products such that the insurer is able to remain profitable while still meeting its obligations to its customers.

Generally, insurance entails protection against financial consequences of and provides security against unexpected risks or events (Papis-Almansa, 2017). Insurance is generally categorised into General Insurance which is related to insurance covers for property and Life Insurance (or Assurance) which is related to insurance covers of the actual life of the

insured. If a customer enters into a contract with an insurer, (s)he is issued with a policy document, which stipulates the risks covered and promises to indemnify the insured against those risks. Insurance is, therefore, aimed at financially protecting the insured against either loss of property or the beneficiaries of the insured against death. There are also insurance products that serve as avenues for saving or investment. For these services, clients are charged premiums and “the pricing policy of insurance companies reflects assumed risk with high-risk clients charged high premiums while low-risk clients are charged low premiums to reflect the risk they bring into the insurance pool”(Alhassan, Addisson & Asamoah, 2015). The premium received are then invested in riskless capital assets with the aim of earning returns or interest (Hong, Carson & Ostaszewski, 2017).

Life insurance is aimed at protecting against both current and future risks (Emamgholipour, Arab & Mohajerzadeh, 2017). This means an individual (insured) will take out a policy to insure himself or herself against death for a certain amount of money by paying premiums or contributions worth a value less than the policy amount. In the event of death of that member, the beneficiaries receive the policy amount. The member can self-insure his or her own life and such products are categorised as individual life or be insured by an entity such as an employer or a financier (such as banks, Sacco’s or SME’s) and these products are referred to as Group Life and Group Credit. Life insurance is mainly linked to the life cycle of income and expenditure of a person. It encompasses death, disability, wealth accumulation and retirement. Hence, life insurance products are created with these events in mind and with the aim of protecting an individual and/or his beneficiaries against unexpected financial loss that may arise due to death or disability.

It helps people plan for unforeseen future events (Emamgholipour, Arab & Mohajerzadeh, 2017). The products include term life, whole life, endowments, personal retirement schemes, annuities and education policies which are commonly referred to as individual life because they are taken out by an individual and are structured according to the specifications of that individual. Then there are products for corporates such as pension plans and group life which are taken out by and paid for by corporate entities such as employers as a benefit package for employees to save for retirement or life covers for employees that compensates their beneficiaries in event of death while in the service of the employer respectively. Financiers require clients to be part of their group credit cover to safeguard their loan books against death or disability of borrowers that renders them incapable of meeting their loan repayments.

Globally, “the challenges faced in the insurance market are globalisation, deregulation of insurance institutions, intensified competition and emerging new risks” (Hsieh, Lee & Yang, 2015). Studies have shown that globalisation has a greater effect in enhancing growth of international life insurance markets as well as bridging the gap between the life insurance penetration ratios of individual countries and that of the global average (Lee and Chang 2012). This has meant that there is a uniformity in global insurance markets in the form of similar product offerings and innovation. However, each local or regional insurance market also faces its own unique set of challenges and opportunities that influence the type of business models and products they employ. Deregulation of the financial services sector in the US through the 1999 GLB Act and in light of advanced technology has led to higher rate of insurer insolvencies (Hsieh et al., 2015). But it has also led to integration of the banking and insurance sectors whereby banks serve as distribution channels for insurance companies in countries such as the US (Yuan, 2011).

Similarly, in Africa, regulation has been put in place in most countries to separate the life insurance business from non-life business. In Ghana, for example, the Insurance Act 724 of 2006 was passed in this regard (Alhassan et al., 2015). The result of which has been increased competition by the many insurers in each business line for the few customers available because insurance penetration in Africa was as low as 3.65% in 2012 compared with the global average of 6.5%. South Africa takes up the lion’s share of that proportion because it has a well-developed insurance industry. The non-life business is a major driver of the African insurance market. The African market is not so well developed because re-insurance is not as developed which limits the number of policies most African insurers can underwrite to enable increased penetration levels (Alhassan & Biekpe, 2016).

According to the AKI 2015 Annual Industry report, the insurance industry in Kenya had 51 players as at 2015 with 25 companies in the non-life (general) business, 14 in life insurance business and 12 which were composite meaning they wrote both life and non-life business. As a whole, the industry had an asset base of KES 465.98B with a penetration rate of 2.78 percent at the time and Gross Written Premium of KES 111.93B for non-life insurance and KES 61.86B for life insurance. The large business under non-life as compared to life can largely be attributed to the statutory requirement for motor vehicles to possess motor vehicle insurance as well as according to PWC Kenya, for employers to provide industrial and personal accident (mostly group medical) covers. It

can also be attributed to the “increased activities in the areas of international trade and commerce and financial institutions borrowing which also creates a sizeable demand for non-life insurance, whereas life insurance is either dependent on corporate management practices or the preferences of individuals” (Ngugi & Afande, 2015)

Overall, despite having a higher penetration level compared to its neighbours and accounting for 75 percent of the premiums collected in the region (AKI 2015 Industry report), Kenya still lags behind major countries in the world and on the continent as far as industry development is concerned. This is particularly true for life insurance. According to the AKI Industry report (2015), some of the general reasons that have contributed to the sluggish industry growth include low income levels, lack of knowledge on the importance of insurance, less extensive distribution networks and distrust by the general population for insurance. In addition, there are industry factors that do affect the competitiveness of insurance firms that include poor underwriting, premium undercutting, insurance fraud, lack of technology adoption in service delivery, misselling by agents, underdevelopment of the agency force, ballooning management expenses (2013 IRA Insurance Outlook Report). Despite these limitations, the industry contains untapped potential which provide room for exploitation. This is mainly due to the burgeoning middle class coupled with strong economic growth not just regionally but continentally as is evidenced by average GDP growth rates of above 5 percent. In addition, the discovery of mineral or commodity resources as well as legislation passed to require marine cargo to be insured locally have provided risk opportunities for insurers to cover. This is particularly true also in the areas of micro-insurance, oil and gas. By taking advantage of all these opportunities as well as leveraging the use of alternative distribution channels such as banc assurance, better marketing techniques and mobile and ICT technology platforms, the industry will continue to grow by leaps and bounds.

Being a major player in the life insurance business, ICEA Lion Life Assurance Company Ltd is thus not exempt to these business conditions. It is one of the companies that constitutes the ICEA Lion Group, which is one of the largest insurer and financial services companies in East Africa. It was first established in 1964 and was first referred to as the Insurance Company of East Africa (ICEA Lion, 2017). According to the IRA 4th Quarter Statistics of 2016, ICEA Lion Life Assurance Company had a market share of 13.04% making it the third largest life assurer in Kenya after Britam and Jubilee Life Insurance companies. Some of the products it offers includes life insurance, education,

endowment, personal retirement schemes, Work Injury Benefit Act, Group Life and Group Credit insurance covers (ICEA Lion, 2017).

Despite the existence of pricing models that guide product pricing, individual insurance firms in Kenya continue to grapple with pricing strategies for their various products given the shifting market dynamics they continually encounter. Therefore, each firm has its own set of values or factors that determine how they choose to price their own products aside from those analysed by the models. ICEA Lion Life Assurance Company Ltd, which is the focus of the study, is no different. This study thus seeks to understand what factors in general guide the pricing structure of local firms and which ones are given more weight than others in the price setting process. It will be beneficial to policy makers and practitioners to understand the impetus behind these decisions and the important role they play in determining the competitiveness of insurers. Particularly, in light of the changing global economy and consumer needs.

1.2 Statement of the Problem

Pricing of insurance products is a process that should ideally be guided by recommendations of actuaries, the insurer's claims, non-claim expense, financial strength and the market demand. However, market dynamics tend to ultimately have a bearing on premium pricing. These dynamics include poor underwriting, premium undercutting, insurance fraud, lack of technology adoption in service delivery, misselling by agents, underdevelopment of the agency force, ballooning management expenses (2013 IRA Insurance Outlook Report). This means that insurers cannot just solely settle for theoretical approaches when it comes to pricing insurance products. They must adapt to the market dynamics as listed in order to survive.

Laas, Schmeiser, and Wagner (2016) state that "in contrast to the field of actuarial (insurance) pricing, the areas of customer-specific and market based pricing and the integration of the sales channel are scarcely considered in academic literature." In Kenya, studies have been very few with regard to factors influencing pricing of insurance products by insurers. Most of the studies with regard to the Kenyan insurance industry are focussed on marketing of insurance products (Kihanya, 2013), market penetration (Ayishashe 2015), uptake of insurance products or consumer behaviour (Bashir, 2000). Therefore, this study seeks to highlight the market pricing approach in relation to the Kenyan life insurance industry by focussing on ICEA Lion Life Assurance Company Ltd.

The goal is to understand how aspects such as regulation, demographics and socio-economic factors affect determination of premium prices.

1.3 Purpose of the Study

The main objective of the study was to determine the factors that influence pricing of life insurance products with a focus on ICEA Lion Life Assurance Company

1.4 Research Objectives

1.4.1 To evaluate the influence of demographics on premium pricing

1.4.2 To examine the influence of socio-economic factors on premium pricing

1.4.3 To determine the influence of regulatory framework on insurance premium pricing

1.5 Significance of the Study

The study is significant to the following:

1.5.1 ICEA Lion Life Assurance Company

Management will be better placed to determine and understand if their pricing strategies are really influenced by internal or external factors.

1.5.2 Other Insurance Companies

The study is important in providing a guide to policy makers and practitioners on the market realities that affect the pricing mechanism used by insurers.

1.5.3 Policy Makers

Policy makers will be able to regulate the insurance market with complete knowledge of the exact pricing drivers that insurers face.

1.6 Scope of the Study

The target of the study was ICEA Lion Life Assurance Company which is headquartered in Nairobi. The business development and actuarial departments were the main focus centres. Employees in these departments were the respondents of the study as they deal regularly with clients and based on the clients' needs and their interactions are able to determine premium rates to be charged. The data collected from this group helped to investigate the factors that influence pricing strategies.

1.7 Definition of Key Terms

1.7.1 Capital Reserves

These are amounts of money set aside to settle claims that are due under any underwritten business, whether reported or unreported to the insurance company (Bates & Atkins, 2007)

1.7.2 Insurance Penetration

It is the ratio of Gross Premium to Gross Domestic Product (Ngugi & Afande, 2015)

1.7.3 Claims

These are requests by clients to be paid when the risk they had insured themselves against occurs as stipulated by the policy contract (AKI)

1.7.4 Underwriting

It is the process of evaluating the risk that a client wants insured, determining whether it is one that an insurer has the capacity to take up and then pricing it accordingly (Mwangi, 2013)

1.7.5 Micro-insurance

It is provision of insurance products to a group of people in the population who would typically not afford insurance (Mwangi, 2013)

1.7.6 Undercutting

It entails charging premiums that are lower than what the competitors are charging so as to acquire a particular business opportunity (Mwangi, 2013)

1.7.7 Time-to-claim settlement

It is the period between the time a client lodges a claim with an insurer and the time the claim is paid out by the insurer (Cummins & Nye, 1981)

1.8 Chapter Summary

The chapter addressed the different factors that affect pricing of life insurance products. It highlighted the background information to the problem, stated the problem statement, the purpose of the study and identified the research objectives that the study analysed. The chapter also discussed the significance of the study as examined within the scope of the

insurance industry. Chapter two looks at the literature review with emphasis on research in relation to factors that influence pricing strategies in the insurance industry. It provides a theoretical background for the study. Chapter three deals with the research methodology. It details the research design, data collection methods and how results are evaluated. Chapter four discusses the findings of the study and its presentation. The study concludes with chapter five where discussion, conclusion and recommendations for action and further research are underscored.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature on the factors that influence premium pricing. More specifically, it reviews the effect of demographics, socio-economic factors and regulation on insurance premium pricing with the aim of recognising and analysing available literature on areas of interest under this study. This section presents the empirical research and highlights the most relevant findings in the field of life insurance pricing.

2.2 Demographics and Insurance Pricing

Demographics consists of various types of high risk and observable characteristics (Hendren, 2013) which include age, gender, occupation and health status. These aspects provide the basis for risk classification purposes of different potential policyholders with age and gender being the most used factors. Generally, an (insurance) company will possess and utilise different (premium rate) tables for each age, sex, major line of business among others (Cox, Lin, Tian & Zuluaga, 2013). These classifications enable insurers to determine to a certain degree the anticipated claim price for each possible policyholder and thus set accordingly risk-reflective premiums. For life insurance products, insurers utilise an assortment of risk-rating features to determine the risk profile for each client. Insurers can divide policyholders into different risk groups and is referred to as risk pooling. Members within the same group will possess identical risks in the insurance pool and will thus be priced within the same premium category. Therefore, the prices indicate the costs of the expected risk associated with the insured pool (Handel, 2013).

For demographics to be considered ideal as a rating factor, it must meet the actuarial and operational criteria (Arrow, 2009). The actuarial criteria stipulates that the factor considered in risk-classification must be precise in measuring risk as well as be statistically dependable. It does not have to imply a causal relationship but only a strong correlation that has been stable over a long timeframe. This is essential in relation to the evaluation of the correlated risk and the length of time the insurance cover is then provided for. However, if every insured risk for each individual is to be correctly priced it can result in very high premiums. The procedure to ascertain accurate risk pricing for

every policyholder may be thought to be too invasive of a person's privacy. An ideal risk classification basis thus aims to be efficient under existing operational constraints. These operational constraints inform the operational criteria to be used in examining the rating factors an insurer should utilize. An insurer has to ensure that exorbitant costs are not incurred when employing different rating factors such that risk estimation and the provision of insurance becomes too expensive. Thus the rating factors implemented should be objective, verifiable and entail low transaction costs.

In private insurance markets, insurers need to earn sufficient income from premiums so that they can cover anticipated claims from the insured. This means that they must be able to calculate accurately the average expected loss, and charge a price for insurance accordingly. There are therefore two basic principles of private insurance provision based on demographics. The first, is risk based pricing where insurers have to price insurance on the basis of the risk of the insured, including the probability of a claim being made against the policy and the cost of that claim. The risk-based pricing method, which attempts to determine the exact cost for insuring each potential individual policyholder, is essential in insurance pricing. To gauge the expected claim cost for each new policyholder is daunting because it is neither viable financially or statistically ideal. The process requires an insurer to request all policyholders to undergo numerous medical and specialist tests before obtaining a life assurance policy. These underwriting costs would be transferred to the policyholder through the premium rate charged thus making the insurer less attractive to customers due to the high premiums. Therefore, most insurance pricing for products depends on the Law of Large Numbers to make statistical deductions on the life of the insured since individual assessment proves to be less cost effective. The solution to this problem is the use of risk classification that helps mitigate costs (Parsons, 2015).

The second principle, is risk solidarity within risk pools where risk is shared between individuals within risk pools and the premiums of the many pay for the losses of the few (Parsons, 2015). By placing individuals into risks groupings and pooling risks within these groups, insurers are able to settle on prices that incorporate the average of the expected claims cost that may arise in a particular risk category. The other costs taken into consideration include marketing costs, claims-handling costs and the costs of assigning potential customers into different risk pools based on their expected claims frequency and severity. Insurers can analyse a variety of attributes through various

questions on the insurance application form as well as utilizing medical underwriting tools to determine the risk profile of a potential policyholder before placing him or her in a pool; some of those attributes may be beyond the individual's control while others are. Pooling becomes a risk management strategy that enables insurers diversify risk and is premised on the idea that multiple risky events are less likely to occur to two or more individuals in a risk category at the same time unless a major catastrophe such as an earthquake happens (Frees, 2013).

There is a large host of literature demonstrating that, in a competitive insurance market, prices reflect costs in each risk pool and that such risk-based pricing is economically sound. In addition, in private insurance markets where consumers have options on which insurance levels to take up or their eventual behavior once they are insured, deviations from risk-based pricing can cause huge issues. When risk-based pricing is not utilized by insurers, major inefficiencies could arise (Bell, 2013). One of them is adverse selection which results when individuals, who are high risk but of which the insurer is unaware of, take up high levels of insurance cover or coverage with little to no deductibles (Yamamoto, Yoneyama & Kwon, 2012). This creates a tendency of low and high-risk individuals being grouped and charged the same price based on the average risk of the group, the low-risk individuals would pay a price that is higher than the risk they actually exhibit. This would mean that they would be subsidizing the individuals in the group that have a higher risk than they do. This may lead to the low-risk people leaving the group as their own policies become too expensive. The exits would cause the average risk of the remaining individuals to rise thereby threatening the financial stability of the insurer (Allais, 2011).

The other inefficiency created by not using risk-based pricing is moral hazard which is the variations in the precautions insured individuals take when covered against a certain risk such that people with a higher insurance coverage have little reason to safeguard themselves against those risks so as to avoid a loss outcome (Yamamoto et al., 2012) arising due to the event they have insured themselves against occurring. Given that policyholders are fully insured, they are more willing to engage in reckless behavior that will result in a claim payout. This is especially true in situations where premiums are set too low relative to actual cost-effective premiums for individuals with certain risk features. As people engage in massive risk-taking, overall risk levels for those individuals may increase (Allais, 2011).

2.2.1 Age

There is overwhelming evidence that points to the fact that life expectancy decreases as age increases. Therefore, age is more often used as a risk factor for life insurance and pensions pricing (Fong, 2015). Age as a risk factor assists insurers to minimize adverse choice selection since it can be quantified, is easy and inexpensive to collect and requires little effort to validate. Age supports the provision of reasonable and available insurance because the belief is that younger people have a lot longer to live than older people and thus have less health issues that may lead to death. Mishra (2010) states that in India an individual's resistance to disease and injury declines as age advances and the body grows older. The age of the client is the single most consequential factor for increased mortality. Insurance companies charge higher premiums with increasing age of applications for insurance policies. Corporations do not provide insurance policies past a certain age as the risk becomes very high. The highest age limit for buying an insurance policy in most corporations is 60 years. Some may have lower or higher ages depending on the design of the product.

2.2.2 Gender

In life insurance pricing, gender is mainly used in the pricing structure for pension products and is thus applied in a less complex manner than how it is applied, for example, in motor insurance, where a varied number of gender rating factors are used to price insurance. The simple pricing structure in life insurance works because it is combined with more detailed medical underwriting (Association of British Insurers, 2010). Gender has such a huge significance in premium pricing because many studies suggest that gender has a potent connection to mortality rate and this correlation has been proven over a long period. The fact that men have a higher mortality rate than women was detected at least as far back as 1750 when the first national census was calculated in Sweden. Gender has long been used by insurers especially in the UK in rating insurance products which cover dangers that vary between men and women.

However, according to Hector, Maxwell and Udechukwu (2013), the European Court of Justice issued a 2004 EU Gender Directive which required the equivalent treatment between men and women in the access and supply of goods and services. In as much as this directive barred insurers from employing gender in establishing premiums and benefits, it set forth an exemption clause to this principle. That is, the use of comparable variances was allowed in calculating insurance premiums and benefits where gender is a

deciding element in the evaluation of risk. This clause was later scrapped in 2011 because it was viewed as violating equal treatment between men and women (Sass & Seifried, 2014).

2.3 Socio-Economic Factors and Insurance Pricing

Socio-economic factors do affect how insurance products are priced and packaged because they affect the demand customers have for and the ability to access those products. When it comes to developing countries, life insurance uptake is limited by virtue of the financial and social cultural hurdles faced by local communities (Amu & Dickson, 2016). These hurdles include wealth or income or economic status, religious and/or ideological influences, culture, health status, social and lifestyle pressures and occupational risks. Taking into account these challenges and with the aim of expanding market share, insurers have resorted to creating products that accommodate risks associated with those challenges. These products are priced at a level that is affordable to the ordinary citizen.

2.3.1 Wealth Status

Following an unanticipated and catastrophic event such as the death of a breadwinner occurring within poor households, spending on food and clothing reduces significantly while other members of the family are forced to look for work in order to sustain the family. Given that this is the general social and economic landscape for many households in Africa, insurers have stepped up to cater to this demographic by introducing microinsurance. Microinsurance is the insurance protection that safeguards poor households against risks that have the potential to adversely affect their financial situation such as illness, death, poor harvest and damage to property. Insurers are aware that poor families barely have the ability to sustain themselves in their day-to-day upkeep let alone set aside any money for insurance. Therefore, the micro in microinsurance alludes to the small and affordable premiums charged for microinsurance policies which make insurance well within reach for many of these families. Insurers in developing countries offer three major microinsurance products which include credit life insurance, health insurance and last expense (funeral) insurance. Credit life refers to insurance that is taken up by a lender (any Microfinance institution, Bank or Sacco) but whose premiums are paid for by the borrower such that in the event of the death of the borrower, the insurer steps in to pay off the loan balance. With regard to health insurance, cheap yet

comprehensive covers are provided to individuals. While last expense covers are usually stand-alone insurance policy that individuals take out to cover funeral expenses, which can be significant, in the event of their own death (Ramsay & Arcila, 2013).

2.3.2 Ideological Influence

Terrorism, which is viewed as an ideological and/or political stance, has become both a social and economic issue the world over that has forced countries, businesses and individuals to adapt accordingly to the impact it has on their activities. Following the attacks of 11 September 2001 in New York, USA, terrorism has become a threat worldwide that pushed countries to form (insurance) schemes that insure against terrorism (Mushai & MacGregor, 2016). The surge in terrorism and political violence globally has meant an increase in the destruction of human life and property. Hence, the need to protect against the associated risks. Prior to 2001, very few insurance companies were willing to cover political and terrorism risks because they did not have reserves to accommodate such claims or the support of reinsurers who could cooperate in meeting those claims. But once reinsurers began to show an interest in providing the necessary cover, there has been widespread prevalence of more insurers providing terrorism and political risk covers. (Maitland, 2015).

2.3.3 Cultural Influence

The norm for most insurers is that standard premiums charged for women are lower than that for men because the mortality rate for women, in general, is lower than men since women have longer lifespans. However, there is still a huge risk associated with women when viewed from a cultural standpoint (Mishra, 2010). Women tend to have a lower socio-economic status and tend to experience violence meted out on them by men, are less educated and unemployed. The result of which has been that life insurance policies underwritten for such women applicants undergo rigid procedures. Studies done in India show that women who are salaried, wage earning or income-generating are categorized equally with men for life insurance purposes. The level of income for such women ultimately determines how much life insurance they can apply for. Generally, housewives, unemployed, unmarried dependent women or those who receive incomes from rental property or investments have access to limited amounts of life insurance. However, term life insurance is not available to dependent housewives. The applicant's other existing life insurance policies are also considered in calculating the total insurance

sum assured allowed to and premium charged for an individual based on his/her needs and financial resources. Applicants are also required to disclose details of any previous rejected or rated application to help the insurer adequately underwrite the policy (Mishra, 2010).

2.3.4 Economic Status

From an economic perspective, insurance premium are affected by inflation existing in the economy. When inflation rates increase, they result in a decline in both consumption and price adequacy in the insurance sector (Kwon, 2013). Premiums are collected with the aim of investing them in capital generating assets such that income or returns generated from those investments are utilized to meet future claim payouts. Inflation diminishes the real rate of return on those capital assets. When inflation is high, premiums charged may not be sufficient to enable insurers acquire the right capital assets and in the right proportions to generate a return. Alternatively, despite the fact that the insurer may have settled on the right premium rates to charge, they may be too high for the general public to afford since inflation will have eroded their purchasing power.

2.3.5 Health and Occupational Influence

Health and lifestyle information is also important in determining pricing of insurance premiums. Ideally insurance applicants usually complete an application form that authorizes and contains questions whose responses insurers can verify (Ngueng Feze & Joly, 2014). The questions are structured to query on the person's health and lifestyle habits. Any disclosures on the application form of facts that can materially affect how an insurer sets its premium is an important part of a sound insurance contract. The disclosures should consist of information that is thought to assist the risk assessment process carried out by insurers (Salman, Feze & Joly, 2016). The information on the application form is verified through health facilities or other third parties that have related records regarding the applicant. Alternatively, the insurer sends the applicant for a set of medical tests it recommends based on the sum assured or policy amount sought and the information on the application form. Based on these two elements, the insurer is able to carry out medical underwriting to determine the premium rates to charge.

Accidents are a common hazard in many occupations. According to the International Labour Organization (ILO), people affected by work related injuries total 1.1 million

people globally. Accidents account for 30% of all work-related deaths while diseases stands for the rest. This is particularly true for employees such as construction workers and miners who operate machines and other heavy equipment or work within dangerous environments where they face the risk of being harmed by the machinery or falling objects. Others who work in manufacturing plants may be exposed to dangerous pollutants or environments with little regard for health and safety standards thereby leading to respiratory or other health problems. These are important underwriting factors to consider when pricing life insurance. Insurance companies, therefore, charge extra premium for applicants engaged in certain occupations that expose them to a higher than average risks. All life insurance companies have occupational hazard manuals in which they list the occupations that are thought to have unfavourable effects on lifespans and health. Occupational risk in the manual is categorized according to the hierarchical designation, type of industry and the applicant's job profile. An applicant participating in one of the listed occupations is charged an additional premium even when all medical parameters and other factors are ideal. These individuals are required to complete questionnaires according to the underwriting guidelines. For some occupations, the underwriters may decide to provide the life insurance cover at standard rates while charging the accident rider at substandard rates (Mishra, 2010).

2.4 Regulation and Insurance Pricing

Insurance companies are subject to various regulatory restrictions. The major ones include risk-based capital requirements and controls on pricing and product design (Schlutter, 2014). Risk-based capital requirements are aimed at limiting the insurer's default risk to a level below what is desired by regulation. Regulation is also aimed at either controlling or encouraging insurers' behaviour in product creation, premium pricing or premium investment. It either increases or actually lowers premium rates below competitive levels by creating price floors and price ceilings respectively or by mandating which tariff rates insurers can charge. It also has the function of creating a market environment whereby insurance firms can charge premiums that meet their claims and expenses while generating sufficient profits (Kwon, 2013).

Given that most consumer groups lack the resources or proper co-ordination to fight for their own interest, policymakers and scholars are usually more focussed on protecting the consumer from very complex contracts that exist in the market today. Therefore, regulation is mostly centred on protecting policyholders and educating them so as to

avoid situations of them entering into contracts whose stipulations they do not fully understand; ignorance which insurers may exploit to avoid settling claims (Kwon, 2013). In this regard, Insurance Guarantee Schemes are also set up to cover claim obligations of insurers to policyholders. This means that when an insurer goes under or becomes bankrupt, its clients do not lose out on the policies they hold with them. Insurers are, therefore, obligated by law to contribute to this fund. This contribution may be passed on to policyholders as a charge on the premium payment or invoiced separately through the insurer (Schmeiser & Wagner, 2013). Thus the premium rates clients pay depend on the funding requirements insurers are expected to contribute towards the Guarantee Schemes.

Regulation also has a role of protecting consumers especially those in personal line businesses as well as those who take out compulsory insurance coverage from profit oriented insurers. Some insurance companies in the quest of trying to grow their revenue base may create products that are less likely to result in claim pay-outs. Therefore, the insurers end up with growing revenue streams at the expense of clients, who out of a lack of awareness, purchase these products. In order to ensure consumers are able to access products that benefit them, policy makers ensure that consumer interest is of utmost importance in product creation and pricing. Regulation is thus put in place to restrict insurers from engaging in certain types of activities and offering coverage for risks or insurance schemes where there is no need for insurance. Alternatively, regulation may forbid for profit insurance altogether or create an environment that stifles such business (Biener & Eling, 2012). This creates stability in the industry because insurers create products at prices which lower the likelihood of them facing legal action from disgruntled customers who feel they did not obtain value for money from their purchase.

Similarly, regulation has also been put in place to protect the interest of the insurer as well. The insurer needs to safeguard its asset base while still providing a beneficial product to its customers. Sometimes there can be a variation between what the insurer and customer deem as an acceptable insurance cover limit. If a customer's cover limit expectation is higher than what the insurer is willing to offer, the customer may feel that (s)he being discriminated against thereby opting for legal redress. In order to avoid such cases occurring, regulation has been put in place to allow insurers to set certain cover limits at specific premium rates that protect them against a large number of frequent, small yet unprofitable claims or to give them the right to exclude providing cover to a risky client altogether (Biener & Eling, 2012).

Regulation may also control competition in the insurance industry which is a phenomenon that affects prices. In the event that an insurer innovates a new product, it is able to enjoy first-mover advantage by setting high prices. If regulation has set high barriers to entry for competitors, it creates a time lag between entry of the new product and competing entities offering the same product. This slows down the rate at which prices come down to competitive and affordable levels for consumers (Klein, 2012). In essence, regulation can end up stifling industry growth. Ultimately, regulation encourages firms to reinvent themselves to attract and retain customers despite the limitations it puts in place. Insurance companies begin to focus on other aspects not controlled by regulation such as customer care, distribution or business process enhancement (Berry-Stolzle & Born, 2012).

In large and very competitive insurance markets, there are two main ways in which insurance companies competitively price their policies. An insurer can, after considering past performance of the risk, assess its own ability to undertake that particular risk entirely with or without an agreement with reinsurers, who underwrite on behalf of the insurer for a premium any excess risk beyond the insurer's capacity to take on. It may alternatively evaluate the price points of its competitors to determine the right price level to charge for a risk. The insurer that quotes the lowest price among its peers ends up clinching the business, however, this may lead to under-pricing. This aspect has led to the undercutting phenomena witnessed in the Kenyan insurance industry. Hence, competition can lead to decline in premium incomes if premium rates are too low and thus it is imperative for insurance companies to ensure that they are maintaining decent underwriting profits despite the competitive environment they operate in. To this end, insurers tend to charge lower premiums under their competitive lines while compensating for lower incomes by charging higher premiums for their other less price sensitive business lines (Berry-Stolzle & Born, 2012).

The problem with this strategy for such insurers, however, is that they may engage in certain levels of financial risk as a market-wide practice in order to achieve their ideal premium rates. This might put consumers at risk because they will purchase products from these companies which are inadequately priced, whether upwards or downwards. In order to regulate such large insurance markets, government may require that uniform prices are charged which are set by industry-rating organisations under regulatory supervision. The goal of this approach is that it ensures there is a price ceiling to prevent

insurers from obtaining higher than normal profits or in order to achieve certain societal objectives. However, unlike the regulation of other insurance products, life insurance and annuity products are indirectly regulated in that before the regulator approves a product to be put out into the market, it first determines whether the premium charged corresponds to the benefit listed in the insurance contract (Klein, 2012).

In a market with very few insurers and large barriers to entry, collusion may exist among such players. Such market conditions provide insurers the chance to set high prices if they so wish to the detriment of customers. Therefore, the government would put in place regulation that encompass antitrust laws as well as those that control price. The aim of such laws would be to ensure that in such small insurance markets, competitors are charging prices that would ideally be set in a competitive market. However, in the event that the insurers are charging higher prices in order to cover higher levels of risk and not because they are colluding, regulation enforcement of lower prices may lead to market distortions (Klein, 2012). Therefore, it is imperative for the government to determine the true cause of high prices in small insurance markets because intervention can have the potential to improve or unintentionally worsen market conditions. Hence, when government intervention is not strategic, it is the consumers who are forced to bear the burden.

Insurance is not just a private market product but can also be provided by government. Government may opt to provide insurance when the private insurance market does not offer covers at optimal price points or against certain risks that the public might be in need of or required to have by law (Kwon, 2013). There are instances where government will institute social policy programs that are aimed at improving the welfare of its citizens. Such programs may cover the aspects of health, education and retirement. The major incentive is to improve accessibility by the public to some of these social services. Therefore, government can implement legislation that guarantees that insurance charges to access such services through social insurance are minimal enough to ensure that the ordinary citizen is able to afford. Social insurance premiums are paid to government and they are low because they are subsidised by taxpayers through the taxes they pay. This way the public is able to access cheap insurance coverage while minimising adverse selection for national government insurance providers (Biener & Eling, 2012). Examples of such providers locally include NSSF which aims at increasing retirement savings for

employees nationally. There is also NHIF which allows for employees and self-employed people access to affordable healthcare.

2.5 Chapter Summary

Chapter two has elaborated each of the factors that influence premium pricing as has been listed in chapter one. The literature has helped highlight how these factors are implemented in the premium rate making process. Chapter three puts forward the research methodology that was picked with regard to the research aim discussed in chapter one. The research variables in chapter two help determine the type of research methodology used.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the research methodology that the study utilises. The chapter begins by elaborating the research design, then the study population, sample design and data collection methods. The research procedure is also described in terms of the pre-testing process used. The chapter also describes the different data analysis methods used.

3.2 Research Design

The design is the guide that assists in obtaining solutions to the research problem. It stipulates how data is collected and analysed with regard to the research problem (Kothari, 2008). The study used a descriptive research design because it is ideal as it defines a variable based on the data collected and compiled from a study. Given that the research problem focussed on a case study, descriptive studies is the best design as it presents the data collected using questionnaires in a tabulation format that represents the actual factors considered in pricing life insurance products.

3.3 Population and Sampling Design

3.3.1 Population

The population is described by Cooper and Schindler (2014) as the total elements on which the study makes inferences and is generally subjects that are under investigation. The population of the study comprised of all the 9 employees who work in the Business Development and Actuarial Departments of the ICEA Lion Life Assurance Company Ltd.

3.3.2 Sampling Design and Sample Size

3.3.2.1 Sampling Frame

The sampling frame is basically the whole population from which the sample is drawn (Cooper & Schindler, 2014). The sampling frame of the study comprised all the 9 employees who work in the Business Development and Actuarial Departments of the ICEA Lion Life Assurance Company Ltd which are the only two main departments that determine the pricing strategy of the company.

3.3.2.2 Sampling Techniques

Sampling techniques entail the decision on the number of units selected from the sampling frame and conclusions from which are inferred to the general population

(Kothari, 2008). The sampling techniques utilised depends on the variables being researched. Given the small size of the sampling frame, the study investigated the entire sampling frame or population to answer the research problem. Therefore, no sampling techniques were utilised.

3.3.2.3 Sample Size

A sample is the subset of the sampling frame that is selected using sampling techniques and conclusions from which are inferred to the general population (Kothari, 2008). Given the small sampling frame that was utilised, the entire frame was analysed in the study instead of just a sample from it.

3.4 Data Collection Methods

Primary data was the major source and it was collected from the population under investigation using questionnaires. Questionnaires contain standardised questions that are administered to individuals with the aim of discerning who they are and what they do as well as their opinion on an issue (Malhotra & Birks, 2007). The questionnaires included closed ended questions. They were forwarded to the relevant participants either through email or hard copy and the responses were received within a week of distributing the questionnaire.

3.5 Research Procedures

In order to pretest the questionnaires, a pilot study was carried out to ensure that they were an effective tool in gleaning the required information in relation to the research. The study was administered randomly on 5 employees, across the junior to senior management levels, who work in the Life Assurance Company but are not part of the departments of interest. As soon as the questionnaires were determined to be effective they were forwarded to the target population for completion. It entailed an introductory letter highlighting the aim of the study and a promise of confidentiality for the respondents on the information they provided in the questionnaire.

3.6 Data Analysis Methods

The data was obtained by use of questionnaires and analysed first to ensure only relevant data was captured. The relevant data was be coded to enable classification so as to guarantee that when it was keyed into the Statistical Package for Social Sciences (SPSS), it was ideal for analysis. This data was then analysed using descriptive statistics. The results were presented in, tables, pie-chart and bar-graph formats to enable interpretation.

3.7 Chapter Summary

This chapter has focussed on the research methodology pursued with emphasis being on the descriptive research design implemented as well as the population and sampling design. It has also described the data collection and data analysis methods used. Chapter four presents the results and findings of the study.

CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter highlights the analysis and findings of the study as per the research questions. The first section discusses the general information. The second section examines how demographics affect insurance pricing. The third section provides findings on how socio-economic factors affect insurance pricing. The fourth section discusses the effect of regulation on insurance pricing.

4.1.1 Response Rate

Nine questionnaires were distributed and 7 were completed and returned. Hence, a response rate of approximately 78% was achieved as shown in the Table 4.1 below.

Table 4.1: Response Rate

Questionnaires	Number	Percentage
Filled and Completed	7	77.78
Not Completed	2	22.22
Total	9	100

4.2 General Information

This section shows the data on the general information of the respondents who took part in the study.

4.2.1. Gender

The study aimed to determine the gender of the respondents. 43% of the respondents were male while 57% of them were female. This is highlighted in Figure 4.1 below.

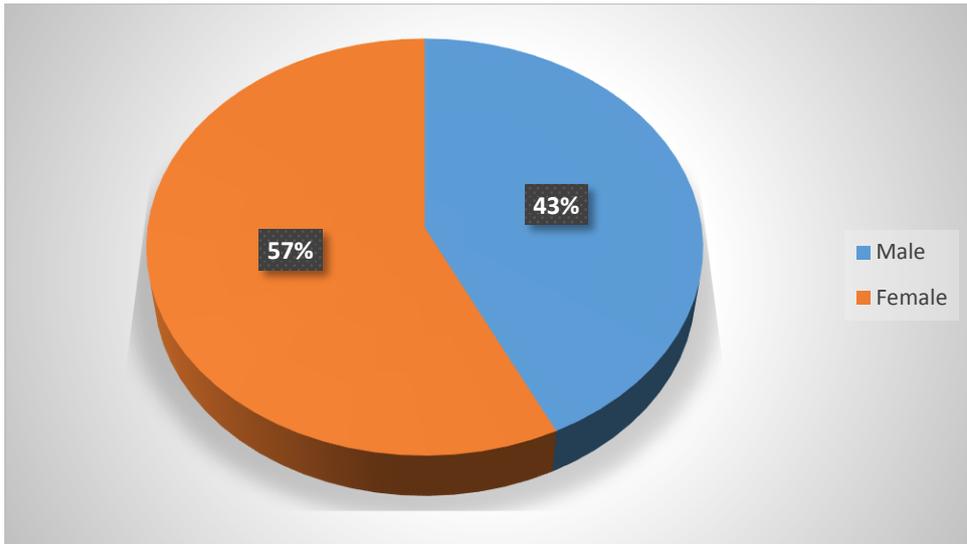


Figure 4.1: Gender

4.2.2 Level of Education

The study aimed at determining the education level of the respondents. The study showed that 29% of the respondents had a graduate level of education while 71% had an undergraduate which is summarised in Figure 4.2 below. The results suggest that the company has preference of hiring people with a university level of education.

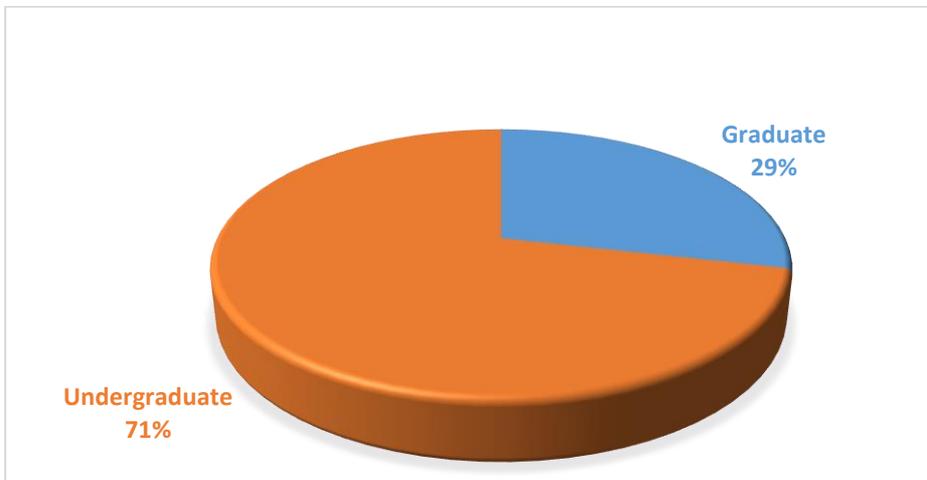


Figure 4.2: Level of Education

4.2.3 Department

The study wanted to determine the department the respondent worked in. The biggest number of respondents came from the Business Development department accounting for 6 out of the 7 respondents as shown in Figure 4.3 below. The reason for this is that the Actuarial department is a fledgling department that is growing.

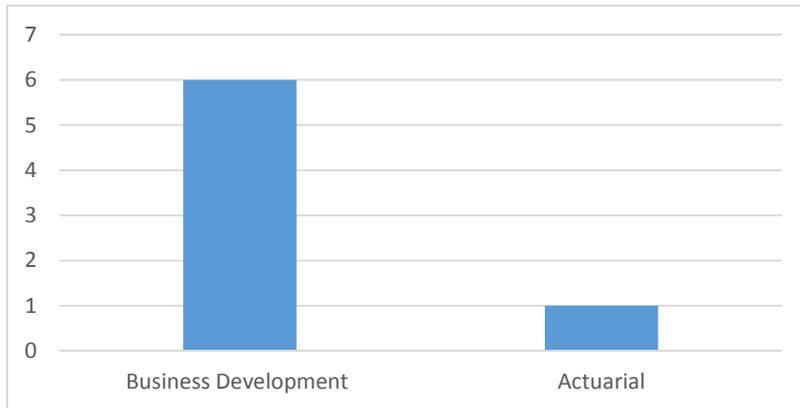


Figure 4.3: Department

4.2.4 Work Experience

The study sought to establish the work experience of the respondents. 57% of the respondents had work experience of 10 years and above, 14% had work experience of 5 to 10 years, 14% had 3 to 5 years work experience while 14% had less than 3 years of experience as shown in Figure 4.4 below.

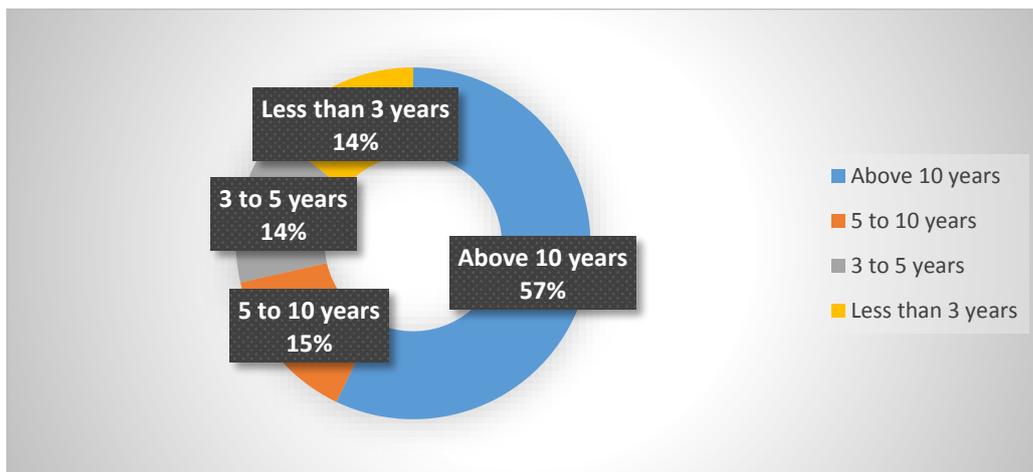


Figure 4.4 Work Experience

4.3 Demographics and Insurance Pricing

The goal of the first objective was to determine whether demographic factors do affect how insurance products are priced. The study utilised a five point Likert scale. Participants of the study were asked to answer questions on the basis of the following ratings: not at all (1), little extent (2), moderate extent (3), great extent (4) and very great extent (5).

4.3.1. Descriptive Results for Age

Table 4.2 below shows the descriptive results for age. The aim of the study was to evaluate whether age played a major role in insurance pricing. On average, a majority of the respondents with a mean of 3.57 acknowledged that age did play a somewhat significant role in life insurance pricing rates. They also concurred with a mean of 4.71 that age was more prevalently applied in ordinary life as opposed to group products and with a mean of 3.71 that younger policyholders are charged lower premium rates than older ones. The highest standard deviation was present in the aspect of whether age played a major role in determining premium rates applied (0.535). However, in both the aspects of the prevalent use of age in ordinary life products over group products and younger policy holder being charged lower premium rates over older ones the standard deviation was 0.488. Hence, there was little variation between the responses given by respondents.

Table 4.2 Descriptive Results for Age

VARIABLE	MEA	SD
	N	
Age plays a significant role determining premium rates applied	3.57	0.535
The use of age is more prevalent in ordinary life products than in group products	4.71	0.488
Younger policyholders are charged lower premium rates than older ones	3.71	0.488

4.3.2 Descriptive Results for Gender

The study wanted to determine whether gender was used in insurance pricing. Gender was minimally used in setting insurance rates (1.29). However, when evaluating certain product pricing to a certain extent female clients were viewed as less riskier candidates

than men (3.43). This was mainly the case or common when pricing ordinary life products as opposed to group life or credit products (4.86). This is shown in Table 4.3 below.

The element that women are considered less risky insurance candidates than men had the highest standard deviation of 0.787 while that of the use of gender being more prevalent in ordinary life products than in group products had the lowest standard deviation of 0.378. This highlights that there was some divergence in the responses given by the respondents

Table 4.3: Descriptive Results for Gender

VARIABLE	MEAN	SD
A client's gender affects the premium rates (s)he is charged	1.29	0.488
Women are less risky insurance candidates than men	3.43	0.787
The use of gender is more prevalent in ordinary life products than group products	4.86	0.378

4.3.3 Descriptive Results for Occupation

The goal of the study was to establish whether a client's occupation was factored into pricing an insurance product. To a great extent certain occupations were viewed as being riskier than others in pricing insurance products (4.71). Hence, people who undertake such risky occupations are charged a higher premium to reflect the associated risk (4.57). However, only to a moderate extent are people in certain occupations pooled and charged a similar rate (3.86) as is reflected in Table 4.4 below.

The results reveal that people in certain occupations are pooled and charged a similar rate had the highest standard deviation of 0.69 while certain occupations are viewed as being riskier than others in insurance pricing had the lowest standard deviation of 0.488. This shows that there was a slight variation in responses.

Table 4.4 Descriptive Results for Occupation

VARIABLE	MEAN	SD
Certain occupations are viewed as being riskier than others in insurance pricing	4.71	0.488
Riskier occupations are charged a higher premium to reflect the	4.57	0.535

associated risk		
People in certain occupations are pooled and charged a similar rate	3.86	0.690

4.3.4 Descriptive Results for Health Status

The study sought to determine whether the health status of an individual affected how much insurance premiums (s)he is charged. To a moderate extent medical underwriting provides a basis for charging certain rates (3.0) while to a great extent existence of certain diseases resulted in certain premium rates being charged (4.43). This also means that there are certain health conditions that result in exclusion of insurance coverage (4.71). This is shown in Table 4.5 below.

According to the results, medical underwriting provides a basis for charging certain rates had the highest standard deviation of 0.816 while there are certain health conditions that result in exclusion of insurance coverage had the lowest standard deviation of 0.488. This means there was a slightly high variation in responses.

Table 4.5 Descriptive Results for Health Status

VARIABLE	MEAN	SD
Medical underwriting provides a basis for charging certain rates	3.00	0.816
Existence of certain diseases result in certain premium rates being charged	4.43	0.787
There are certain health conditions that result in exclusion of insurance coverage	4.71	0.488

4.4 Socio-Economic Factors and Insurance Pricing

The goal of the second objective was to determine whether socio-economic factors do affect how insurance products are priced. The study utilised a five point Likert scale. Participants of the study were asked to answer questions on the basis of the following ratings: not at all (1), little extent (2), moderate extent (3), great extent (4) and very great extent (5).

4.4.1 Descriptive Results for Socio-Economic Factors

The study wanted to determine whether different socio-economic factors affect premium pricing. To a little extent are different economic groups charges different premium rates (3.71), do political events affect premium rates charged (1.57), do changes in the economy affect premium rates charged (1.86), do the lifestyle activities of an individual

affect the premium rates (s)he is charged (3.43), do war and terror activities affect premium rates charged (1.57) or do safety standards of an individual’s work environment affect the premium rates charged (2.00). This is reflected in Table 4.6 below.

The highest standard deviation of 0.756 was found in the element of whether different economic groups are charged different premium rates while the lowest standard deviation of 0.535 was found in both the aspects of political events do affect premium rates charged and lifestyle activities of an individual do affect the premium rates a person is charged.

Table 4.6 Descriptive Results for Socio-Economic Factors

VARIABLE	MEAN	SD
Different economic groups are charged different premium rates	3.71	0.756
Political events do affect premium rates charged	1.57	0.535
Changes in the economy do affect rates charged	1.86	0.690
Lifestyle activities of an individual do affect the premium rates (s)he is charged	3.43	0.535
War and terror activities do affect the premium rates charged	1.57	0.787
Safety standards of an individual's work environment affects the premium rates charged	2.00	0.577

4.5 Regulation and Insurance Pricing

The third objective aimed at determining whether regulation does affect insurance premium pricing. The study utilised a five point Likert scale. Participants of the study were asked to answer questions on the basis of the following ratings: not at all (1), little extent (2), moderate extent (3), great extent (4) and very great extent (5).

4.5.1 Descriptive Results for Regulation

The study aimed at finding out whether regulation had an effect on insurance pricing. Only to a little extent must all products be priced based on regulatory requirements of underwriting and claims experience (2.57) and to a limited extent that regulatory pricing restrictions only apply to Personal Retirement and ordinary life products (1.43).

The standard deviation was the same for both the aspect of all products must be priced based on regulatory requirements of underwriting and claims experience (0.535) and the element of regulatory pricing restrictions only apply to Personal Retirement and ordinary

life products (0.535). This means that there were no variations in the responses given by the respondents. Table 4.7 below reflects the details.

Table 4.7 Descriptive Results for Regulation

VARIABLE	MEAN	SD
All products must be priced based on regulatory requirements of underwriting and claims experience	2.57	0.535
Regulatory pricing restrictions only apply to Personal Retirement and ordinary life products because of the influence of market dynamics on other products	1.43	0.535

4.6 Chapter Summary

This chapter highlighted the results and findings of the study. Section one analysed the general information on the respondents, section two reviewed the effect of demographic factors on insurance pricing, section three looked at how socio-economic factors affect insurance pricing, and section four analysed the effect of regulation on insurance pricing. Chapter five discusses the findings, conclusions and recommendations.

CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the results obtained from the data analysis carried out and summarises them. The results are discussed in light of relevant and related literature. Thus, the chapter highlights the discussion, conclusions and recommendations for further studies.

5.2 Summary of the Study

The goal of the study was to determine which factors influence the pricing of life insurance products with the case of ICEA Lion Life Assurance Company being the focus. The study aimed to tackle three research questions which include to evaluate the influence of demographics on premium pricing, to examine the influence of socio-economic factors on premium pricing and to determine the influence of regulatory framework on insurance premium pricing.

The study utilised a descriptive research design. This design is ideal for the study since the research problem involves a case study and the design presents the data (gathered using questionnaires) in a tabulation or graphical format that shows the actual factors that are taken into account in pricing of life insurance products. The study population or sampling frame was composed of all 9 employees of the Actuarial and Business Development Departments of the insurance company. However, only 7 respondents participated leading to a 77.78% response rate.

The first objective sought to determine the effect of demographic factors on insurance pricing. With regard to the demographic factor of age, respondents agreed to a moderate extent that age played a significant part in determining premium rates applied and that young policyholders are charged lower premium rates than older ones. They also agreed to a great extent that the use of age was more prevalent in ordinary life products than in group products. For the gender factor, respondents agreed to a limited extent that a client's gender affected the premium rates (s)he is charged. However, they did agree to a moderate extent that women are less risky insurance candidates than men. They also concurred to a great extent that the use of gender is more prevalent in ordinary life products than group products. With reference to occupation as a factor, participants acknowledged to a great extent that certain occupations are viewed as being riskier than

others in insurance pricing and riskier occupations are charged a higher premium to reflect the associated risk. Thus, they agreed to a moderate extent that people in certain occupations are pooled and charged a similar rate. With regard to health status, the respondents concurred to a great extent that the existence of certain diseases resulted in certain premium rates being charged and that certain health conditions resulted in exclusion of insurance coverage. They also agreed to a moderate extent that medical underwriting provided a basis for charging certain rates.

The second objective aimed to examine the influence of socio-economic factors on premium pricing. The respondents acknowledged to a limited extent that different economic groups are charged different premium rates, that political events, changes in the economy, war and terror activities and the lifestyle activities of an individual do affect the premium rates (s)he is charged. Nonetheless, they did agree to a little extent that safety standards of an individual's work environment affects the premium rates charged.

The third objective's goal was to determine the influence of regulatory framework on insurance premium pricing. The participants agreed to a limited extent that all products must be priced based on regulatory requirements of underwriting and claims experience and that regulatory pricing restrictions only apply to Personal Retirement and ordinary life products because of the influence of market dynamics on other products.

5.3 Discussion

5.3.1 Demographic Factors and Insurance Pricing

The first objective aimed to determine the effect of demographic factors on insurance pricing. A majority of the respondents agreed to a moderate extent that age did play a significant role in establishing premium rates applied and that younger policyholders were charged lower premium rates than older ones. This is supported by Fong (2015) who states that age is more often used as a risk factor for life insurance and pensions pricing. The reason for this is that age allows insurers the opportunity or a basis of reducing adverse choice selection because it is a factor that can be quantified, is easy and inexpensive to collect and requires little effort to validate. Mishra (2010) also agrees with the important role of age in insurance pricing because his study in India highlights that an individual's resistance to disease and injury declines as age advances and the body grows older. Thus, age supports the provision of adequate insurance coverage because the belief is that younger people have a lot longer to live than older people and thus have less health

issues that may lead to death. This means that the age of the client is a notable factor for increased mortality. Hence, insurance companies charge higher premiums with increasing age of applications for insurance policies.

Moreover, the study determined that the respondents agreed to a limited extent that a client's gender affects the premium rates (s)he is charged. Therefore, there is no major gender bias in insurance pricing. Hector, Maxwell and Udechukwu (2013) state that the European Court of Justice issued a 2004 EU Gender Directive which required the equivalent treatment between men and women in the access and supply of goods and services. Consequently, they concur that in the provision of insurance services gender is not a major determinant of premium rates in life insurance except under very unique circumstances. In life insurance pricing, for instance, gender is mainly used in the pricing structure for pension products and is thus applied in a less complex manner than how it is applied, for example, in motor insurance, where a varied number of gender rating factors are used to price insurance. There is limited use of gender in the simple pricing structure of life insurance and this is possible because the pricing mechanism is combined with more detailed medical underwriting (Association of British Insurers, 2010).

In addition, the study participants agreed to a moderate extent that medical underwriting provides a basis for charging certain rates. The underwriting process is carried out in order to verify information disclosures made on applications forms completed by clients seeking insurance coverage. These disclosures, which include health and lifestyle information, can then be ascertained to be true by the insurer through medical evaluation of clients at designated health facilities or evaluation of medical records by other third parties that have the related records regarding the client. The study by Salman, Feze and Joly (2016) agrees that disclosures should consist of information that is thought to assist the risk assessment process carried out by insurers. Any declarations on the application form of elements that can significantly affect how an insurer sets its premium is a principal part of an effective insurance contract. It is on this basis that an insurer can determine whether to provide or decline cover and at what premium rates to provide the cover.

5.3.2 Socio-Economic Factors and Insurance Pricing

The second objective sought to determine if socio-economic factors affected insurance pricing. The participants agreed to a moderate extent that different economic groups are

charged different premium rates. Ramsay and Arcila (2013) agree that microinsurance is an example of insurance protection that is specifically designed to safeguard poor households or lower socio-economic groups against risks that have the potential to adversely affect their financial situation such as illness, death, poor harvest and damage to property. Insurers are aware that poor families barely have the ability to sustain themselves in their day-to-day upkeep let alone set aside any money for insurance. Therefore, small and affordable premiums are charged for microinsurance policies which make insurance well within reach for many of these families. The goal for an insurer is to broaden the market base and cater to every market segment available. Hence, the products offered are priced at different price points to cater to the various market needs. Thus microinsurance is catered towards poor households while normal premium rate products are charged towards corporates and wealthier households.

In addition, the respondents concurred to a moderate extent that lifestyle activities of an individual do affect the premium rates (s)he is charged. Health and lifestyle information is very important in determining pricing of insurance premiums. According to the study by Ngueng Feze and Joly (2014), insurance applicants should complete an application form that authorizes and contains questions whose responses insurers can verify. The questions are structured to query on the person's health and lifestyle habits. If there are any activities that do highlight risky behavior, then an individual's may be loaded (charged additional premium) to cover the risk. People tend to engage in practices that put them at risk of injury, death or disease. If insurers are not cautious about evaluating risks before onboarding them they may end up charging inadequate premium rates and/or paying costly claims as a result of not carrying out proper due diligence. In order to avoid such situations, insurers require clients to disclose all their lifestyle activities so that they can adequately price their products.

Respondents also agreed to a little extent that war and terror activities affect premium rates charged. Mushai and MacGregor (2016) concur because they note that following the attacks of 11 September 2001 in New York, USA, terrorism has become a threat worldwide that pushed countries to form (insurance) schemes that insure against terrorism. The surge in terrorism and political violence globally has meant an increase in the destruction of human life and property. Hence, the need to protect against the associated risks. It has forced countries, businesses and individuals to adapt accordingly to the impact it has on their activities. Therefore, its prevalence has meant that insurers

have incorporated it as part of the risks that it covers at its standard premium rates or at no additional charge. Prior to 2001, very few insurance companies were willing to cover political and terrorism risks because they did not have reserves to accommodate such claims or the support of reinsurers who could cooperate in meeting those claims. But once reinsurers began to show an interest in providing the necessary cover, there has been widespread prevalence of more insurers providing terrorism and political risk covers. (Maitland, 2015).

5.3.3 Regulation and Insurance Pricing

The third objective's goal was to determine if regulation affected insurance pricing. Respondents agreed to a little extent that all products must be priced based on regulatory requirements of underwriting and claims experience. Essentially, regulation encourages firms to reinvent themselves to attract and retain customers despite the limitations it puts in place. Hence, based on their study, Berry-Stolzle and Born (2012) determine that insurance companies begin to focus on other aspects not controlled by regulation such as customer care, distribution or business process enhancement in order to maintain profitability despite the regulatory environment. Regulation can restrict an insurer in its operations particularly with regard to its pricing mechanisms. In order to protect its bottom line, an insurer finds ways to circumvent regulation while still operating within the regulatory framework but in a way that allows it to beneficially alter one or various aspects of its business model. This way they are able to ensure that premium rates remain feasible despite regulatory restrictions.

Despite the restrictions regulation may put in place for insurers, it also protects the interest of the insurer. In such instances, an insurer may not be too quick to bypass such regulation. The insurer needs to safeguard its asset base while still providing a beneficial product to its customers. Sometimes there can be a variation between what the insurance company and customer deem as an acceptable insurance cover limit. If a customer's cover limit expectation is higher than what the insurer is willing to offer, the customer may feel that (s)he being discriminated against thereby opting for legal redress. In order to avoid such cases occurring, regulation has been put in place to allow insurers to set certain cover limits at specific premium rates that protect them against a large number of frequent, small yet unprofitable claims or to give them the right to exclude providing cover to a risky client altogether (Biener & Eling, 2012).

Respondents agreed to a limited extent that regulatory pricing restrictions only apply to Personal Retirement and ordinary life products. Klein (2012) agrees with the respondents because his study highlights that, unlike the regulation of other insurance products, life insurance and annuity products are indirectly regulated in that before the regulator approves a product to be put out into the market, it first determines whether the premium charged corresponds to the benefit listed in the insurance contract. Thus all products are essentially subjected to some form of regulatory restriction, whether directly or indirectly. Government, therefore, may require that in large insurance markets, uniform prices are charged which are set by industry-rating organisations under regulatory supervision. The goal of this approach is to ensure there is a price ceiling to prevent insurers from obtaining higher than normal profits or in order to achieve certain societal objectives. The hope of employing this strategy is to ensure insurers are not engaging in certain levels of financial risk as a market-wide practice in order to achieve their ideal premium rates. This is because such practices may put consumers at risk of purchasing products from these companies which are inadequately priced, whether upwards or downwards.

5.4 Conclusion

5.4.1 Demographic Factors and Insurance Pricing

Age, gender, occupation and health status of a client do play a role in insurance pricing. Aging, occupational and health risks are evaluated during the underwriting process to guarantee the insurer is able to account financially for any claim arising from them. However, the use of age and gender is more prevalent in pricing of ordinary life products than group products. The reason is that the market for group products is extremely small and competitive and thus some insurers in the Kenyan market are engaging in a lot of premium undercutting, whereby insurers charge lower than the required profitable rates in order to acquire insurance business. Therefore, this market is moving towards charging unit (same) rates across the board for all clients in group schemes without accounting for age or gender instead of pricing strictly based on the rate tables. Age and gender can thus be employed effectively in ordinary life product pricing because individual clients seek their own insurance covers which are evaluated independently. Thus, rate tables can be successfully applied because all insurers adhere to the same pricing strategy for these products.

5.4.2 Socio-Economic Factors and Insurance Pricing

Political events, changes in the economy, war and terror activities and the safety standards of an individual's work environment do not greatly impact pricing of products. However, the existence of certain economic groups and lifestyle activities of an individual does. Products such as credit life and last expense covers are catered to certain economic groups who are charged certain specific rates. As far as lifestyle is concerned, any activities that show risky behavior result in higher than average premiums.

5.4.3 Regulation and Insurance Pricing

Due to competitive market dynamics, it means that not all products are strictly priced based on regulatory requirements of underwriting and claims experience. Thus regulatory pricing restrictions only apply to a limited extent on Personal Retirement and ordinary life products.

5.5 Recommendations

5.5.1 Recommendations for Improvement

5.5.1.1 Demographic Factors and Insurance Pricing

The government intends to raise the minimum capital for long-term insurance business to Kshs. 400 million by June 2018 with the goal of ensuring life insurers adhere to risk-based capital requirements in their operations. With the introduction of capital based pricing insurers cannot take on risks that their own capital base cannot accommodate. Insurance companies will need to now employ pure underwriting on all risks based on the laid out actuarial principles especially when it comes to group products. Given the competitive market environment, insurers have deviated slightly from observing these principles in their pricing strategy for those specific products.

5.5.1.2 Socio-Economic Factors and Insurance Pricing

The Kenyan market is constantly evolving especially with the rise of a burgeoning middle class due to the rapidly growing economy. This situation has resulted in changes in the tastes and preferences of the population which means there are new wants and needs that have to be catered to. Insurers need to enhance product innovation in order to guarantee that their product lines are meeting every arising need and at favourable price points. This way they will be able to access new or untapped markets thereby growing their business segments and increasing insurance penetration within the country.

5.5.1.3 Regulation and Insurance Pricing

With the eventual introduction of risk-based capital requirements for insurance companies, the pricing models currently being employed by insurance companies will have to be evaluated in order to ensure that they are in compliance with both regulation and the business landscape.

5.5.2 Recommendation for Further Studies

The objective of the study was to investigate the factors that influence the pricing of life insurance products with a focus on ICEA Lion Life Assurance Ltd. There is need to carry out an industry-wide research study to determine what factors influence pricing amongst other insurance players as well as the strategies they employ to ensure profitability through their pricing structure.

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APPENDICES

Appendix 1: Introduction Letter

Jerusha Abachi

United States International University

P.O. Box 14634-00800,

Nairobi.

To Whom It May Concern

RE:REQUEST TO COLLECT DATA ON ICEA LION'S PRICING STRATEGY

I am undertaking a research project to determine the factors that influence pricing of Life insurance products at your organisation. This is in partial fulfilment of the requirement of the Master of Business Administration (MBA) degree in Finance program which I am undertaking at the United States International University.

ICEA Lion has been selected for the study based on its role in the achievement of the objective of this study. I, therefore, kindly request your participation in the collection of data through the attached questionnaire.

This is an academic research and so the information gathered during the research process will be used strictly for academic use and will be treated with utmost confidentiality.

Your support will be greatly appreciated.

Thank you in advance.

Jerusha Abachi

MBA Student,

United States International University – Africa

Appendix II: Research Questionnaire

This questionnaire is designed to collect data on the factors that influence pricing of life insurance products with a focus on ICEA Lion Life Assurance Company Ltd. Please respond to all the questions truthfully and to the best of your understanding. The information will be utilised for academic purposes only and will be treated as confidential.

Section 1: General Information

1. Please indicate your gender

Male

Female

2. Indicate your level of education

Diploma Level

Undergraduate Level

Graduate Level

Postgraduate Level

3. Which department do you work in?

Business Development

Actuarial

4. How long has your work experience been?

Under 3 Years

3-5 Years

5-10 Years

Above 10 Years

5. To what extent do you agree with the following statements that revolve around pricing of insurance products.....

(1-Not at all, 2-little extent, 3-moderate extent, 4-great extent, 5- very great extent)

		1	2	3	4	5
Section 2	Demographics					
	Age					
1	Age plays a significant role in determining premium rates applied					
2	The use of age is more prevalent in ordinary life products than in group products					
3	Younger policyholders are charged lower premium rates than older ones					
	Gender					
1	A client's gender affects the premium rates (s)he is charged					
2	Women are less risky insurance candidates than men					
3	The use of gender is more prevalent in ordinary life products than group products					
	Occupation					
1	Certain occupations are viewed as being riskier than others in insurance pricing					
2	Riskier occupations are charged a higher premium to reflect the associated risk					
3	People in certain occupations are pooled and charged a similar rate					
	Health Status					
1	Medical underwriting provides a basis for charging certain rates					
2	Existence of certain diseases result in certain premium rates being charged					
3	There are certain health conditions that result in exclusion of insurance coverage					
Section 3	Socio -Economic Factors					
1	Different economic groups are charged different premium rates					
2	Political events do affect premium rates charged					
3	Changes in the economy do affect rates charged					
4	Lifestyle activities of an individual do affect the premium rates (s)he is charged					
5	War and terror activities do affect the premium rates charged					
6	Safety standards of an individual's work environment affects the premium rates charged					
Section 4	Regulation					
1	All products must be priced based on regulatory requirements of underwriting and claims experience					
2	Regulatory pricing restrictions only apply to Personal Retirement and ordinary life products because of the influence					

	of market dynamics on other products						

THANK YOU FOR TAKING PART IN THE STUDY