ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

FACTORS DETERMINING LIFE INSURANCE PREMIUM THE CASE OF ETHIOPIAN INSURANCE CORPORATION (EIC)

BY

WONDIMAGEGN MERSHA

ID No GSE/7612/14

A Project is submitted to Addis Ababa University, College of Business and Economics in Fulfillment of the Requirement for the Award of The Degree of Masters in Business Administration in Financial Service

OCTOBER, 2024

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Under supervision of Alem Hagos (PhD)

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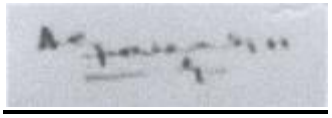
Alem Hagos (PhD)		**October 18, 2024**
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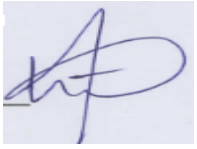
Tenkir Seifu		Nov 18, 2024
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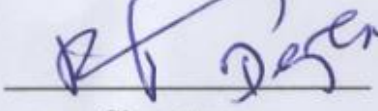
Internal Examiner	 **Signature**	18/11/2024. **Date**

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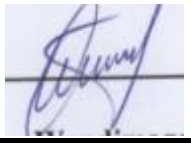

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ACRONYMS AND ABBREVIATIONS

EIC	**ETHIOPIAN INSURANCE CORPORATION**
NBE	**NATIONAL BANK OF ETHIOPIA**
LGL	**LEGEHAR GRAND LIFE**
HO	**HEAD OFFICE**
BGL	**BOLE GRAND LIFE**
LIP	**LIFE INSURANCE PRICING**
D	**DEMOGRAPHY**
CS	**CLAIM SETTLEMENT**
GR	**GOVERNMENT REGULATION**
CL	**COMPETITION LEVEL**
SPSS	**STATISTICAL PACKAGE FOR SOCIAL SCIENCE**

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ABSTRACT

Insurance pricing is a crucial aspect for insurance companies as it directly impacts their profitability. To maximize revenue, insurance firms need to stay updated on the factors influencing insurance pricing decisions. The primary objective of this study is to identify the factors that affect life insurance pricing within the life insurance sector, specifically focusing on Ethiopian Insurance Corporation in Addis Ababa, Ethiopia. The research targets both management and non-management employees of Ethiopian Insurance Corporation life insurance department, considering variables such as Demography, Claim settlement, Government regulation and Competition level as predictors of Life insurance pricing. This study employs an explanatory research design to explore the factors influencing life insurance pricing in the life insurance industry. The Data was collected through questionnaires from a census of 92 employees of Ethiopian Insurance Corporation's life insurance department. The analysis utilized Pearson correlation and multiple regression techniques via SPSS 26.0 to assess the relationships between the independent variables and life insurance pricing. Findings indicate that all identified factors contribute to life insurance pricing; however, claim settlement has the most significant impact compared to demography, competition level and government regulation. Consequently, insurance companies should develop strategies to effectively address these factors to enhance the life insurance pricing strategy of the insurance sector.

***Keywords**: Life insurance pricing, Demography, Claim settlement, Government regulation and Level of competition.*

CHAPTER ONE
INTRODUCTION

Background of the study

Insurance pricing involves determining the cost of an insurance policy, which is a crucial aspect of managing pricing strategies within insurance companies. This process includes activities like business planning, setting prices, and monitoring rate changes to ensure profitability and competitiveness in the market. Understanding customer value and avoiding long-term manipulation are key considerations in the insurance pricing cycle. Insurance pricing is a dynamic process that involves various concepts similar to corporate functions. The primary goal of pricing in the insurance sector is to realize customer value and ensure that customers are not exploited in the long term. This approach emphasizes the importance of fair and ethical pricing practices within the insurance industry (Greenwald, 2018).

According to Global Insurance Market Index Marsh (2017), fluctuations in global insurance pricing growth rates over different quarters, with a notable increase in the first quarter of 2017 compared to 2016. It mentions a drop-in insurance pricing in the United States, UK, and Asian markets, followed by a subsequent decrease in rates during the third quarter in specific regions. These variations in pricing trends across different markets reflect the dynamic nature of the insurance industry and its susceptibility to various economic factors (Greenwald, 2018).

Global statistics further reveal that shows changes in insurance property pricing and financial sector pricing during different quarters. It mentions an increase in insurance property pricing by 3.2% compared to a decrease of 2.4% in the fourth quarter, while financial and professional area pricing increased by 0.1% and decreased by 1.5% respectively in the same quarter. Additionally, in the third quarter, pricing in the financial sector and professional realm decreased by 1.4% and 1.7% respectively (Greenwald, 2018).

According to the Swiss Re Institute (2017), there is an expectation for an increase in insurance policy prices for non-life insurance and reinsurance by 2019. Additionally, the report indicates that insurance pricing has been decreasing over the past five years, leading to a projected moderate growth in the global economy starting from 2018.

South Africa stands out as a major player in the insurance market in Africa, holding a significant share of the total premiums. Other key insurance markets in Kenya, Egypt, Nigeria, and Morocco collectively contribute a large portion of the premiums (Africa Insurance Barometer, 2017).

Despite this, the overall adoption of insurance policies in Africa remains low due to challenges such as insufficient capital for insurance companies and affordability issues for potential policyholders.

Rejda (2003), insurance companies utilize historical data and thorough product research to compile diverse factors and establish a standard for assessing risk profiles. Nowadays, these companies need to adapt their risk profiles by analyzing the information in health insurance applications and comparing them with other insurers to make informed decisions regarding client eligibility and premium calculations, ultimately aiming to enhance their performance metrics. Each insurance company employs unique criteria and assumptions to determine premiums, which play a crucial role in improving their overall performance evaluations.

Significance of the Study

The study is very important in identifying the problems of factors influencing the price of life insurance products in Ethiopian Insurance Corporation. It shows how EIC formulates relevant strategies to solve the pricing of life insurance problems. Furthermore, the study is highly useful for the researchers to implement their theoretical knowledge to practical scenario and help them to acquire broader knowledge about the subject matter under the study.

Statement of the Problem

Ethiopian life insurance business sector is not developed compared to other financial services. Currently the market shares of life insurance business gradually decrease compared to the previous years. Insurance, especially life insurance, should be integrated with the country's development plans to support the growth of the emerging middle class and educated society. However, many people, including industry professionals, lack a clear understanding of the complexities of the life insurance market in Ethiopia. Historically, insurers have largely neglected life insurance, often treating it as a secondary component alongside general insurance (Mekonnen, 2015).

Observers and professionals in the Ethiopian insurance sector note that the industry remains underdeveloped despite its identified potential. There is a consensus among industry participants that professionalism in insurance has been declining as competition intensifies. Challenges such as weak organizational structures, inadequate regulatory frameworks, and a shortage of qualified professionals hinder the sector's growth. Additionally, operational profitability has significantly decreased, with price-cutting becoming the dominant strategy among players Deloitte (2021). Only those companies with strong investment portfolios are managing to stay profitable, while those with poor investments are facing financial

difficulties. Most insurance companies are generating profits primarily from investments, such as time depositsin banks. In the insurance industry, annual targets are typically set based on previous performance and overall market growth.

While most life insurance contracts are long-term and remain active as long as the insured is alive, some policies are renewable on a yearly basis. This structure gives customers the flexibility to either renew with their current insurer or switch to another company, potentially at a better price.

Demographics significantly affect the pricing of life insurance products at the Ethiopian Insurance Corporation (EIC). Age is a primary factor in life insurance pricing. Younger individuals typically pay lower premiums due to their lower risk of mortality, while older applicants face higher rates as their risk increases (Mekonnen, 2015). Statistically, gender plays a role in life expectancy and health outcomes. In Ethiopia, as in many countries, women tend to have longer life expectancies than men. This difference can lead to variations in premium pricing, with female policyholders often receiving lower rates (World Bank, 2020). The nature of a person's occupation can influence risk assessments. High-risk jobs (e.g., those involving manual labor or exposure to hazardous conditions) may result in higher premiums compared to low-risk occupations. Demographic factors related to health, such as pre-existing conditions or lifestyle choices, can affect insurance pricing. Insurers may charge higher premiums for individuals with health risks or a history of chronic illnesses.

The frequency and severity of claims filed by customers can directly influence the underwriting process. If a particular demographic shows a higher incidence of claims, it may lead to higher premiums for those customers to offset the increased risk (Mekonnen, 2015). EIC relies on past claim experiences to assess the risk associated with insuring a customer. An unfavorable claims history may result in a re-evaluation of risk, leading to higher pricing or stricter underwriting criteria for future policies (World Bank, 2020) the loss ratio, which compares the amount paid in claims to the premiums collected, is a crucial metric for insurance pricing. A high loss ratio can lead insurers to increase premiums to maintain financial stability. Customers' awareness of claim experiences can also influence their willingness to pay for policies. If they perceive a company as having a history of settling claims fairly and promptly, they may be more inclined to purchase at higher price points, affecting overall pricing strategies.

The Ethiopian insurance market is subject to strict regulatory frameworks that can limit pricing flexibility. This may prevent insurers from adjusting premiums based on risk assessments, impacting competitiveness and profitability (World Bank, 2020).

Intense competition among insurance providers can lead to price undercutting. Companies may lower premiums to attract customers, which can compromise the financial stability of the insurer and lead to inadequate pricing (Mekonnen, 2015).

Due to the above points and related issues, the study on factors affecting the price of life insurance has become a very important issue for the researchers. Therefore, the problem of this study is used to identify the most important factors affecting the price of life insurance in EIC.

Research Questions

This research paper focuses on evaluating the factors that influence life insurance pricing in the life insurance sector. Specifically, it aims to address the following questions by analyzing the variables that may impact life insurance pricing in this industry. The central theme revolves around understanding what motivates insurance companies to review their life insurance products pricing strategy. The study addresses the following structured questions:

1. How does demography impact life insurance products pricing?
2. What role does Claim settlement play in life insurance products pricing?
3. How do government regulations affect life insurance products pricing?
4. In what ways does competition level influence life insurance products pricing?

Objectives of the Study

General Objective

The main objective of the study is to investigate factors affecting life insurance pricing in Ethiopian Insurance Corporation.

Specific Objectives

i. To determine the effect of demography on life insurance pricing in Ethiopian Insurance Corporation.
ii. To determine the effect of claim settlement on life insurance pricing in Ethiopian Insurance Corporation.
iii. To establish the effect of government regulation policies on life insurance pricing in Ethiopian Insurance Corporation.
iv. To determine how level of competition affects life insurance pricing in Ethiopian Insurance Corporation.

Scope of the Study

EIC conducts life insurance business in two grand life branches and nine lower level branches to serve its customers throughout Ethiopia. These are Legehar Grand Life, Bole Grand Life, Adama life branch, Tana life branch, Hawassa Life Branch, Gibe life branch, Dire life branch, Tekeze life branch, Dedessa life branch, Bati life branch, and Gondar life branch. The research is delimited to the data obtained from these branches. The research focuses only life insurance service providers in Addis Ababa. But other cities are not be studied because it entails tremendous amount of resources**.**

Limitation of the study

The research focused on four key factors: demography, claim settlement, government regulation, and competition level. Out of the 11 life insurance branches of Ethiopian Insurance Corporation in Ethiopia, only three was chosen for this study. This research primarily examined Ethiopian Insurance Corporation employees' perceptions and did not consider the views of its customers. Data was collected using a self-administered questionnaire to assess the relationships between the study's variables.

Organization of the Study

The project is organized into five main chapters. Chapter one presents a general introduction that includes the study's background, problem statement, objectives, significance, scope, and limitation. Chapter two focuses on a literature review related to life insurance pricing and the relevant factors. Chapter three outlines the methodology used to meet the research objectives, detailing both primary data collection and analysis methods. Chapter four analyzes, summarizes, and presents the data, discussing the results in relation to the research questions. Finally, chapter five highlights the key findings, conclusions, and recommendations derived from the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter describes a review literature on factors influencing insurance pricing in the Ethiopian Insurance Corporation. It discusses relevant theories, the author's perspective on the topic, and explores the relationship between independent and dependent variables. It looked focusing on how factors like demographics, claims settlement, level of competition and regulations impact insurance premium pricing, particularly in the field of life insurance. This section is structured into focusing on theoretical frameworks, empirical reviews, and conceptual frameworks to provide a comprehensive analysis of insurance pricing determinants.

Theoretical literature

Concept of Insurance

Insurance serves as a risk management tool by reducing uncertainty for individuals or businesses (insured) through transferring specific risks to insurers. The insurer then provides compensation, at least partially, for any economic losses experienced by the insured (Pfeffer, 1956). It is a risk management tool used to protect against uncertain losses by transferring the risk to an insurer. Insurance helps individuals and the economy by encouraging long-term savings and investment in various projects, providing financial security in the face of risks and uncertainties. It involves pooling risks and sharing potential losses among policyholders, who pay premiums to cover unexpected financial losses collectively. The fundamental principle of insurance is to mitigate the impact of significant unexpected losses by spreading the risk across a group of policyholders (Rejda, 2008).

Basic Characteristics of Insurance

Based on the preceding definition, an insurance plan or arrangement typically includes the following characteristics.

a) Pooling Process

Pooling in insurance refers to the practice of spreading losses across a group of policyholders, allowing for the sharing of risks and financial burdens (Rejda, 2003). By pooling resources

and risks together, insurance companies can provide financial protection and predict future losses more accurately based on the law of large numbers. This process helps individuals and organizations mitigate the impact of unexpected losses by collectively contributing small amounts to cover potential large losses.

b) Payment of Fortuitous Losses

The second characteristic of insurance involves compensating for fortuitous losses, which are unforeseen, accidental events that happen by chance (Rejda, 2003). These losses are unexpected and occur randomly, such as slipping on ice and breaking a leg. Insurance policies do not cover intentional losses, emphasizing the importance of insuring against unforeseen events that are accidental in nature.

c) Risk Transfer

Risk transfer in insurance refers to the process of shifting a pure risk from the insured individual to the insurance company. This transfer occurs because insurers are usually in a better financial position to handle potential losses compared to the insured. Pure risks commonly transferred to insurers include risks related to premature death, poor health, disability, property damage, and liability lawsuits (Rejda, 2003).

d) Indemnification

[1]Indemnification in insurance refers to the process where the insured is compensated to restore their financial position to what it was before a covered loss occurred. For example, if your home is damaged in a fire, a homeowner's insurance policy would provide indemnification by helping you repair or rebuild your home, essentially returning you to your previous financial state. This characteristic ensures that insurance serves to mitigate financial losses and help individuals recover from unexpected events (Rejda, 2003).

Types of Insurance

Insurance can be divided into private insurance, such as life, health, property, and liability insurance, provided by private companies. On the other hand, government insurance includes social insurance programs and other plans managed by the government to address specific societal risks or needs. Private insurance caters to individual and commercial needs, while government insurance focuses on broader social welfare and risk management. (Rejda, 2003).

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[1]**Indemnification** refers to the act of compensating someone for a loss, damage, or injury they have suffered. In a legal context, indemnification typically involves one party agreeing to protect another party from any future claimsor liabilities arising from a particular transaction or situation.

Private Insurance

a. Life and Health Insurance

In the context of life insurance, this definition helps explain the purpose of life insurance as a means for a group of individuals to mitigate the financial impact life insurance operates as a cooperative strategy where a collective of individuals collaborates to reduce the financial burden resulting from the premature death of group members (R.Greene, 1977). Premature death refers to the untimely passing of the primary financial provider of a family who still has financial responsibilities such as supporting dependents, educating children, and paying off a mortgage resulting from such unexpected events (E.Rejda, 2008). Health insurance plans offer coverage for medical costs resulting from illness or injury. Additionally, insurers provide disability-income policies to offer financial assistance to individuals unable to work due to a disability, aiming to support them during periods of incapacity. These policies help individuals manage financial challenges during times of inability to work due to a disability, ensuring some level of financial stability.

b. Property and Liability Insurance

Property insurance provides protection for property owners by covering losses due to property damage, theft, or liabilities arising from injuries on the property. It ensures financial reimbursement to the property owner or renter for incurred losses and helps mitigate financial risks associated with property ownership and occupancy. This type of insurance is essential for safeguarding individuals and businesses against unforeseen events that could result in financial loss (E.Rejda, 2008).

Liability insurance offers coverage for legal costs and compensation that an insured party might have to pay if held responsible for specific situations. It does not usually cover intentional harm, contractual obligations, or criminal charges. This type of insurance safeguards individuals and businesses from financial risks related to legal claims, providing a safety net against unexpected legal expenses.

c. Government Insurance

Government insurance can be categorized into Social insurance programs and other government insurance programs.

Social Insurance

Social Insurance programs are specific government insurance schemes that stand out from other government insurance plans due to their funding structure. These programs are mainly

financed through mandatory contributions from employers, employees, or both, rather than relying primarily on government revenues. Participation in most social insurance programs is compulsory by law, with specific eligibility criteria and benefit entitlements typically defined by legislation, limiting administrative discretion in benefit allocation (Rejda, 2003).

Other Government Insurance Programs

Various government insurance programs exist at both federal and state levels, such as the Federal Employees Retirement System, federal flood insurance, and federal crop insurance. These programs differ from social insurance programs and include coverage for retirement, life insurance for veterans, and protection for savings in commercial banks. The Federal Deposit Insurance Corporation also provides insurance on checking and savings accounts, highlighting the diverse range of government insurance initiatives available to individuals and businesses (Rejda, 2003).

Theories of Insurance pricing

Financial Pricing Theory

A possibly more appropriate theoretical construct to analyze the issue of whether commissions are passed through to buyers is insurance financial pricing theory (Mclaughlin, 1998). The insurance financial pricing theory explains how insurance companies in competitive markets adjust premiums to cover potential losses, including expenses like commissions, administrative costs, and taxes. This theory suggests that in a scenario where all costs, including commissions, are passed on to buyers, insurers would aim for a 100% pass-through rate. It highlights the financial strategies used by insurers to manage risks and maintain competitiveness in the insurance market. The financial pricing theory in insurance explains how insurers in competitive markets adjust premiums to cover potential losses and earn a return on capital. This theory suggests that in competitive insurance markets, insurers pass on all costs, including commissions, to clients through pricing.

This theory describes how insurance pricing, including commissions, is ultimately borne by the insured clients in the form of premiums. The amount of commission passed on to buyers in the insurance market depends on whether the market conditions align more with micro-economic tax incidence literature or financial pricing literature. In the former, commissions are seen as dead weight costs with some monopoly profits for insurers, while in the latter, commissions are considered expenses for services rendered in competitive insurance markets (David & Cummins, 2006). This distinction influences how insurance pricing costs, including commissions, are distributed among insured clients based on the underlying market structure

and assumptions.

Winner's curse Theory

In this theory, insurers bid on policies to mitigate customer risk without knowing the exact cost of claims, leading to potential underestimation of costs and reduced profits for the winning bidders. Insurers base their bid prices on their perceived expected cost of claims, reflecting the competitive nature of the insurance market and the uncertainty surrounding claim costs. This theory was derived from the concept of auction theory. Rothwell, Jewell & Hardie (2009) applied the winner's curse concept of auction theory to setting the price of an insurance policy.

The Winner's Curse theory in insurance suggests that insurers who bid the lowest and win contracts may end up with reduced profits because they might have underestimated their costs. This theory assumes that insurance companies are similar, act independently, and compete for profitability, leading insured clients to choose the insurer offering the lowest price. This brings in uncertainty in that the premium will be based on certain distributional assumptions (Lorson & Wagner, 2012). Consequently, insurance pricing is influenced by each company's internal data, introducing uncertainty based on specific distributional assumptions.

Game Theory

Game theory, as defined by Myerson (1991), is the study of mathematical models thatanalyze conflicts and cooperation between rational decision-makers. This theory uses mathematical concepts to evaluate situations where decisions are made based on agreements between partners to influence the welfare of others. Smith (2011) introduced the concepts of game theory to general insurance actuaries, suggesting potential applications of the theory in the insurance industry. The author introduced a method inspired by Cournot's model to analyze competition between two suppliers in determining their production levels. This method provides a framework for understanding how various insurance companies compete and operate within a competitive market setting. It helps shed light on the strategies employed by insurance firms when setting prices and competing in the market place. The Cournot model in insurance pricing focuses on how insurance firms strategize their pricing decisions rather than production quantities. In this model, the auction mechanism is commonly used to determine premium rates, aligning with game theory concepts where insurers and insured parties negotiate premiums and risk coverage. This approach highlights the strategic use of fixed premium rates by insurance companies to market policies to clients, emphasizing the role of insured individuals as purchasers of insurance products.

Factors affecting life insurance pricing

Demographics and insurance pricing

Demographics, such as age, gender, occupation, and health status, are key factors used by insurance companies to classify potential policyholders based on risk levels. Demographics consist of various types of high risk and observable characteristics (Hendren, 2013) which include age, gender, occupation and health status. Insurers create different premium rate tables for each demographic category to estimate expected claim prices and set appropriate risk-based premiums (Cox, Lin, Tian &Zuluaga, 2013). By grouping policyholders with similar risks together, insurers can effectively manage and price the expected risks associated with the insured pool in products like life insurance (Handel, 2013).

a. Age

Age is a crucial factor in determining life insurance and pensions pricing due to the correlation between age and life expectancy (Fong, 2015). Younger individuals are generally considered lower risk and charged lower premiums, while older individuals face higher premiums due to increased mortality risk. Insurance companies often set age limits for policy purchases to manage the associated risks effectively.

b. Gender

The simple pricing structure in life insurance works because it is combined with more detailed medical underwriting (Association of British Insurers, 2010). In life insurance pricing, gender plays a significant role in determining premiums for pension products, with men typically facing higher premiums due to their higher mortality rates compared to women.

This gender-based pricing structure is simpler in life insurance than in motor insurance, where multiple gender rating factors are considered. Insurers use gender as a risk factor to price insurance products based on the historical correlation between gender and mortality rates, allowing for more accurate pricing and risk assessment in the insurance industry. However, according to Hector, Maxwell and Udechukwu (2013), The European Court of Justice issued a 2004 EU Gender Directive requiring equal treatment between men and women in accessing goods and services. This directive initially allowed insurers to consider gender in setting insurance premiums if there were comparable differences in risk evaluation. However, this clause was later scrapped in 2011 because it was viewed as violating equal treatment between men and women (Sass & Seifried, 2014).

c. Health and Occupation

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 (NguengFeze& Joly, 2014). Insurers use this information to assess the level of risk associated with insuring an individual. By disclosing relevant health and lifestyle information on the application form, applicants help insurers make informed decisions about setting appropriate premium rates based on the assessed risk. 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 provided by the applicant on the insurance application form is verified either through health facilities or other third-party sources with relevant records. Additionally, the insurer may require the applicant to undergo specific medical tests based on the coverage amount requested and the details provided on the application form. By combining these verification methods and medical assessments, the insurer conducts medical underwriting to assess the risk profile of the applicant and determine the appropriate premium rates for the insurance policy.

Accidents are a common risk in various occupations, with approximately 1.1 million people globally affected by work-related injuries, as reported by the International Labor Organization (ILO). Work-related accidents contribute to 30% of all work-related fatalities, while diseases account for the remaining percentage. Certain professions like construction workers, miners, and those in manufacturing plants face higher risks due to operating heavy machinery, exposure to hazardous environments, and lack of adherence to safety standards, leading to potential health issues. Insurance companies consider various factors, such as occupation-related risks, when determining life insurance premiums. Applicants in high-risk occupations may be charged extra premiums due to the increased likelihood of accidents or health issues. Underwriters categorize occupational risks based on job roles and industry types, requiring applicants in certain occupations to pay additional premiums or complete questionnaires according to underwriting guidelines.

Claim Settlement

The relationship between insurance companies' claim settlement practices and insurance pricing is a crucial aspect of the insurance industry. A study by Cummins, Doherty, and Lo (2002) examined the impact of claim settlement behavior on insurance pricing. The researchers found that insurers with more efficient and timely claim settlement processes tend

to have lower overall costs, which can lead to more competitive pricing for policyholders. Conversely, insurers with poor claim settlement practices may face higher costs due to increased litigation, regulatory fines, and reputational damage, ultimately resulting in higher insurance premiums for customers.

This relationship underscores the importance of effective claims management in determining insurance pricing strategies and maintaining profitability in the long term. Insurers that prioritize fair and efficient claims settlement processes are better positioned to offer competitive pricing while ensuring customer satisfaction and loyalty.

The basic theory of insurance states that a fair premium should be enough to cover claim costs, administrative and underwriting expenses, and a reasonable profit. Achieving this requires accurate forecasting by underwriters since insurance claims are estimated in advance. However, the uncertainty of actual outcomes compared to expectations, along with the delay in paying incurred losses, makes it challenging for insurers to accurately determine their profit or loss in a given period. Claims from previous years can impact the current year's expenses for an insurer, potentially increasing costs. This situation poses a challenge to achieving profitability in the insurance business, as claims costs form a significant portion of an insurer's expenses, affecting the overall financial performance and profitability of the company. The need for accurate forecasting and management of claims costs is crucial for insurers to maintain financial stability and profitability.

In the insurance industry, claims management is crucial for protecting the interests of insurance companies and the funds of their shareholders derived from policyholders' premiums. Insurance firms prioritize handling claims with integrity and due diligence, ensuring compliance with regulations governing claims settlements, especially in international markets. Effective claims management is a key aspect of the insurance business, emphasizing fair treatment of clients and adherence to regional rules and standards.

Regulation and Insurance Pricing

Insurance companies are regulated by rules that focus on risk-based capital requirements and oversight of pricing and product design. The major ones include risk-based capital requirements and controls on pricing and product design (Schlutter, 2014). These regulations aim to ensure that insurers maintain a level of capital that reduces the risk of default below regulatory thresholds. 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).

In the insurance industry, regulation plays a crucial role in protecting consumers from complex contracts and ensuring they understand the terms they are agreeing to. Policymakers and scholars focus on safeguarding policyholders by educating them about insurance agreements to prevent misunderstandings that insurers could exploit to avoid fulfilling claims. Additionally, Insurance Guarantee Schemes are established to cover claim obligations of insurers to policyholders, providing an extra layer of protection in case of insurer insolvency. In the insurance industry, when an insurer faces financial difficulties or bankruptcy, policyholders are protected through Insurance Guarantee Schemes. This contribution may be passed on to policyholders as a charge on the premium payment or invoiced separately through the insurer (Schmeiser & Wagner, 2013). The premium rates paid by clients are influenced by the funding obligations insurers have towards these Guarantee Schemes.

Regulations in the insurance industry aim to balance the interests of both insurers and customers. They ensure that insurers maintain financial stability while offering valuable products to customers. By setting cover limits at specific premium rates, regulations help protect insurers from excessive small claims and allow them to manage risks effectively; preventing situations where customers may feel discriminated against and seek legal action (Biener & Eling, 2012).

In competitive insurance markets, companies determine policy prices by assessing their own risk capacity and past performance.

They can choose to handle the risk independently or involve reinsurers for excess coverage. Alternatively, they may analyze competitors' pricing to set their own rates, potentially leading to under pricing if they offer the lowest prices to attract customers. This slows down the rate at which prices come down to competitive and affordable levels for consumers (Klein, 2012). However, this competitive pricing strategy canresult in a decline in premium incomes if rates become too low.

The goal of regulating insurance pricing is to establish a price ceiling to prevent insurers from making excessive profits or to align with societal goals. Unlike other insurance products, life insurance and annuity products are indirectly regulated by ensuring that the premiums charged match the benefits outlined in the insurance contract before approval for market release. This oversight aims to protect consumers and maintain fairness in the insurance

market. 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).

Government can provide insurance when private insurance options are not affordable or do not cover certain necessary risks. In such cases, the government may introduce social policy programs to enhance public welfare by offering insurance for areas like health, education, and retirement. These programs aim to make essential services more accessible to the public by ensuring that insurance costs are kept low through legislation and subsidies, allowing ordinary citizens to afford coverage. 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). Social insurance premiums are payments made to the government for insurance coverage, and they are kept low because they are subsidized by taxpayers through their taxes. This system allows the public to access affordable insurance while reducing the risk of adverse selection for government insurance providers.

Level of Competition

In the competitive non-life insurance market, insurers are facing intense competition, leading them to develop complex pricing strategies to enhance profitability through efficient market segmentation. This makes the comparison of an insurer's prices with its competitors‟ prices more difficult and less transparent (Biver, Lecuivre, & Marechal, 2017).

The need for strategic pricing analysis is crucial for insurers to navigate the competitive landscape effectively and optimize their market positioning for improved financial performance.

Moreover, Biver, Lecuivre, & Marechal (2017) stipulated that being able to identify the price of the competition is a must for an insurance company as it enables to assess its position (ranking) on the target segments the company has defined. This information helps companies make informed decisions on pricing, discounts, and life insurance pricing strategies based on market dynamics and competition within the industry. Understanding competitor pricing allows insurance companies to stay competitive and responsive to market changes.

Mwangi (2013) studied the positioning strategies in the insurance industry and identified various elements that can be used by the companies to competitively position themselves in the industry. Companies can opt to lead the market in terms of pricing or use pricing

strategies to convey a higher brand and product value. Despite price regulations, companies may strategically under price their products to gain a competitive edge in the market.

Micu (2012) identified three strategies for pricing one being "Cost Plus" second being "Customer Driven‟ and lastly "Competition-Driven Pricing‟ In cost plus, the price is set after considering all costs plus a mark-up for profit. Customer Driven strategy aligns pricing with market conditions, while Competition-Driven Pricing allows prices to be influenced by competitive forces in the market. Companies are now developing products and marketing strategies to align with their pricing objectives, emphasizing the importance of integrating pricing strategies with overall business strategies.

Insurance companies may lower their rates initially to attract customers, with the intention of raising them later to cover potential losses. This strategy is based on the idea that insurers can adjust rates quickly in response to market conditions. As competition intensifies in the insurance industry, companies may lower prices to attract more clients, leading to a decrease in the overall price of insurance policies.

Insurance policy buyers‟ benefits policyholders based on rates. Insurers are more likely to reduce their rates when they know they can quickly raise them later to compensate for losses (Bonner, 2018). To gain a competitive edge, insurers are turning to price optimization to understand demand at different price points and determine the best pricing strategy for improved profitability.

2.2 Review of the Empirical Literature

International Studies

Life insurance pricing is a critical aspect of the insurance industry, impacting both insurers and policyholders. This literature review aims to examine the empirical studies related to life insurance pricing and identify key findings, trends, and gaps in the existing research. Underwriting factors and policy provisions affect the pricing of life insurance products David F. Babbel and Craig B. Merrill (1998). The authors analyze data from a large sample of life insurance policies to determine the impact of various factors on pricing decisions by insurance companies. Factors such as age, gender, health status, and policy features all play a significant role in determining the cost of life insurance coverage Babbel and Craig B. Merrill (1998). This study provides valuable insights into the complex pricing mechanisms used in the life insurance industry and highlights the importance of underwriting and policy design in

determining premiums.

Michael Hoy and Michael Schlesinger (1993) studied that the determinants of life insurance demand. This study examines the factors influencing life insurance demand in various countries and provides insights into the pricing strategies of life insurance products. The authors analyze data from multiple countries to identify common trends and differences in life insurance pricing. Their findings contribute to the empirical literature on life insurance pricing and offer valuable insights for policymakers and industry practitioners.

Robert Klein and Howard Kunreuther (2005) studied that an overview of the market and key considerations of life insurance products pricing. This study provides a comprehensive overview of the factors that influence life insurance pricing, including mortality risk, interest rates, expenses, and competition. The authors analyze the pricing strategies used by insurers to attract customers and manage risks effectively. They also discuss the impact of regulatory changes and market trends on life insurance pricing.

These studies, along with others in the field of life insurance pricing, contribute to a deeper understanding of the factors influencing pricing decisions in the industry and offer valuable insights for insurers, regulators, and consumers alike.

Local Studies

There is limited empirical literature specifically focused on life insurance pricing in Ethiopia. However, Mesfin Belay (2017) studied about factors affecting life insurance demand in Ethiopia. In this study, the author examines the factors influencing the demand for life insurance in Ethiopia, including pricing considerations. The research highlights the importance of factors such as income levels, education, awareness, and trust in insurance companies in shaping consumer behavior towards life insurance products in the Ethiopian market.

Getu (2016) studied about the challenges and prospects of life insurance business in Ethiopia. While this study focuses more broadly on challenges and prospects in the Ethiopian life insurance industry, it also touches upon pricing strategies and considerations. The author discusses issues related to premium setting, risk assessment, and competition in the market, shedding light on the complexities of pricing life insurance products in Ethiopia. These studies provide valuable insights into the unique challenges and opportunities facing the life insurance industry in Ethiopia, including pricing dynamics. Further research in this area could help insurers, regulators, and policymakers better understand how to effectively price

life insurance products to meet the needs of Ethiopian consumers.

Conceptual framework, the study model and hypothesis of the study

Conceptual framework of the study

The conceptual framework of this study is developed based on main determinants of life insurance pricing which are stated in most studies. Different studies suggest that several factors such demographics, claims settlement, government regulation and level of competition are considered important factors that determine life insurance pricing. The researcher developed the following conceptual framework.

Dependent and Independent Variables: A variable is defined as a concept that can assume various quantitative values. When one variable is influenced by or results from another, it is referred to as the dependent variable. Conversely, the variable that precedes and influences the dependent variable is known as the independent variable (Kothari, 2004).

The conceptual model outlined below illustrates that the primary focus of this study is the dependent variable, Life Insurance Pricing. This variable's variation is examined in relation to four independent variables: Demographics, Claim Settlement, Government Regulation, and Level of Competition. The proposed model and its corresponding hypotheses are evaluated within the context of the life insurance industry in Addis Ababa, Ethiopia.

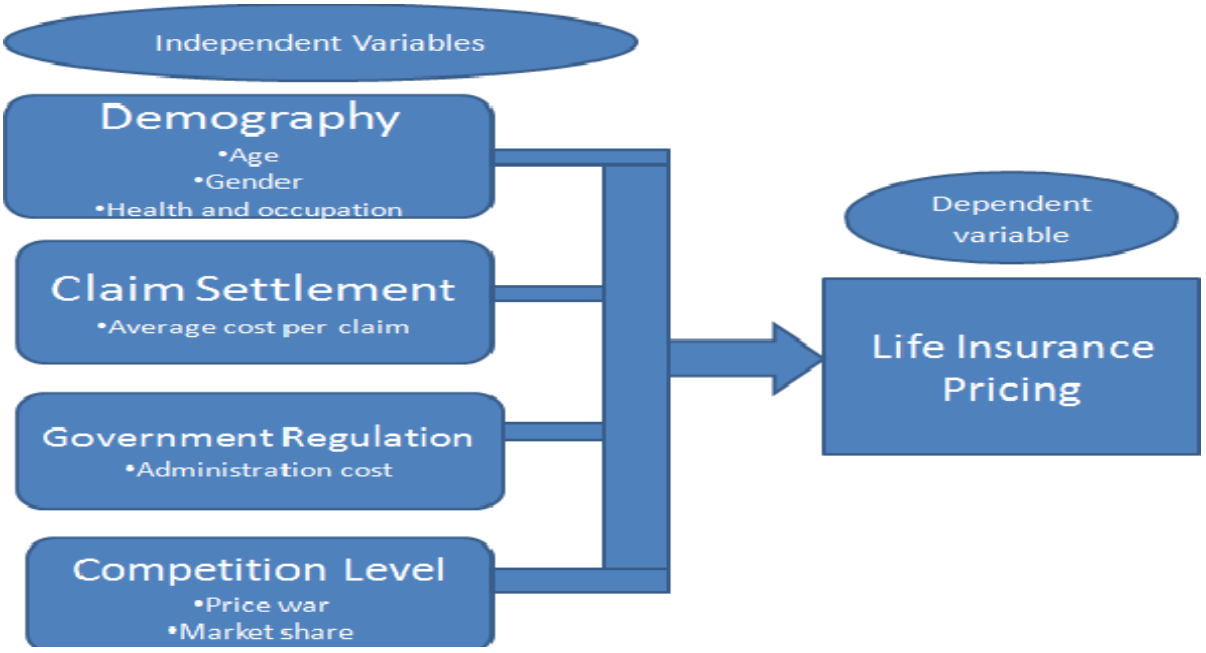

Figure 2.1 Conceptual Framework

The study Model

Dependent and independent variables of the Model

Life Insurance Pricing (LIP) is dependent variable in the study. The independent variables which affect the pricing of life insurance are Demography (D), Claim Settlement (CS), Government Regulation (GR), and Level of Competition (LC).

Y= LIP (Life Insurance Pricing)

Functional forms of models: -

LIP is the function of **D, CS, GR,** and **LC**

LIP=f (D+ CS+GR+LC)

Regression equation: -

LIP**= β_0 + β_1D + β_2CS + β_3GR + β_4 LC** + U

Where: -LIP is dependent variable

D, CS, GR and LC are the independent variables

U is the stochastic disturbance term may well represent all those factors that affect Life insurance pricing but are not taken into account explicitly.

The coefficients β_1, β_2, $\beta_3$and β_4 are partial regression coefficients.

β is the intercept term. It gives the mean or average effect on LIP of all the variables excluded from the model, although its Mechanical interpretation is the average value of LIP when all explanatory variables are set equal to zero.

Research hypothesis

For this study, the following hypotheses are developed and tested using the data gathered from sample respondents.

Ha1: There is positive relationship between Demography and life insurance pricing.
Ho1: There is no positive relationship between Demography and life insurance pricing.

Ha2: There is a positive relationship between Claim Settlement and life insurance pricing.
Ho2: There is no positive relationship between Claim Settlement and life insurance pricing.
Ha3: There is a positive relationship between Government Regulation and life insurance pricing. Ho3: There is no positive relationship between Government Regulation and life

insurance pricing.

Ha4: There is a positive relationship between Competition and life insurance pricing.
Ho4: There is no positive relationship between Competition and life insurance pricing.

Definition of Factors

i. **Life insurance pricing** refers to the process of determining the premium amounts that policyholders must pay for life insurance coverage, based on various factors such as age, health, risk assessment, and market conditions. This pricing aims to ensure that the premiums collected are sufficient to cover future claims and administrative costs while allowing for a profit margin Rejda, G. E., & Miller, M. J. (2017).

ii. **Demography** is the statistical study of populations, focusing on the structure, distribution, and trends in population size and composition, including factors such as birth rates, death rates, migration, and aging Weeks, J. R. (2012).

iii. **Claim settlement** is the process through which an insurance company reviews and processes a claim made by a policyholder or beneficiary after the insured event occurs, typically resulting in the payment of the death benefit or other agreed-upon amounts Rejda, G. E., & Miller, M. J. (2017).

iii. Government regulation refers to the rules and guidelines established by governmental bodies to control or manage activities within various sectors, including business and industry, aimed at protecting public interests, ensuring fairness, and promoting safety and welfare Stiglitz, J. E. (2000).

Iv. Level of Competition among insurance service providers refers to the rivalry between companies in the insurance market to attract and retain customers by offering better products, prices, services, and overall value. This competition can drive innovation and improve service quality while influencing pricing strategies within the industry Skipper, H. D., & Kwon, W. J. (2007).

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter describes the research methodology employed for the study. It contains the research approach, method, design, population and sampling, data collection instrument and data analysis techniques. On top of that, validity, reliability and ethical consideration of the study are also embodied in this chapter.

Research Design

The research design used descriptive and explanatory research design using quantitative approach. It employs a cross-sectional design, gathering data from the population at a single point in time. The findings explain how each independent variable relates to the dependent variable, establishinga causal framework.

Target Population

To assess the influence of the independent variables on the dependent variable within the Ethiopian Insurance Corporation, it is essential to define an appropriate population. The researcher has determined that the total population for this study consists of employees in the life insurance department and head office of the company. Currently, there are around 92 active employees in the life and health insurance department and head office located in Addis Ababa. Consequently, the researcher has opted to include all employees from this department and office in Addis Ababa as the focus of the study. Thus, the target population for this research comprises the employees of the Ethiopian Insurance Corporation working in the life and health insurance department and head office in Addis Ababa.

Sampling Design

Based on data from Ethiopian Insurance Corporation Marketing & Business Development Department, the Life & Health Department operates three branches in Addis Ababa, serving a total of 92 employees. Therefore, the population size for this study is 92, and the sampling method utilized is a census survey. However, only 75 employees are filled and returned the questionnaire for the analysis.

Sample size determination

The sample size is determined using a simplified formula to calculate sample size Yamane (1967:886)

$$n = \frac{\boldsymbol{N}}{\boldsymbol{1 + N\,(e^2)}} \qquad n = \frac{\boldsymbol{92}}{\boldsymbol{1 + 92(0.05)2}}$$

Approximately n=75

Where

N = is the population size of life insurance employees in Addis Ababa.

$\boldsymbol{n}$ = is the sample size

e = assume that the level of precession e = 0.05

Table 3.1: Sample Distribution Table

	Business Sector	**Total Population**	**Proportion**	**Number of Sample**
1	LGL	34	0.37	28
2	BGL	34	0.37	28
3	HO	24	0.26	19
	Total	**92**	**1.00**	**75**

Types of Data, Sources of Data and Data Collection Method

Types of Data

The research utilizes both primary and secondary data. Primary data gathered from the sample using Likert scale questions, while secondary data includes industry reports, the company's annual reports, and internal data.

Data Sources

a. Primary Data

Primary data is gathered from employees of EIC three branches in Addis Ababa, forming the foundation of the research's quantitative analysis. This data is collected through questionnaires.

b. Secondary Data

Recognizing the significance of secondary data alongside primary data, the researcher has gathered crucial information from various secondary sources. Data branches were obtained from the company's annual and quarterly reports. Additional secondary sources include books, research papers (both published and unpublished), online resources, and articles from various magazines.

Instruments of Data Collection

The instrument of the study is a written questionnaire which is adopted from other[2]research study Abachi (2018). It consists of both closed and open ended. Questionnaire format, sequence and instructions is evaluated prior to the data collection to increase validity and reliability of the instrument.

Procedures of Data Collection

The study follows the following steps to get cooperation of participant and administer the instrument. Before directly approaching the participants, efforts are made to get the cooperation of Ethiopian Insurance Corporation to create conducive conditions for undertaking the procedures. In the first contact with respondent's mail pre contact letter is given to the participants to get their cooperation, next questionnaire is distributed to respondents. Filled questionnaires are collected through outlook mail of EIC. After collecting the questionnaires follow-up for uncollected questionnaires are made through phone if there are any.

Method of Data Analysis

Once the necessary data has been gathered, inferential analysis is conducted in three stages using the Statistical Package for Social Science (SPSS) version 26. In the first stage, descriptive statistics, including frequencies, is employed to summarize the categorical variables, primarily focusing on demographic data. In the second stage, the relationship between each independent variable and the dependent variable are evaluated using cross-tabulation. Finally, after identifying which independent variables significantly correlate with life insurance pricing through the previous methods, their combined effect on pricing is examined using binary logistic regression. All independent variables are analyzed in relation to the dependent variable (life insurance pricing) to ascertain which ones show a significant association. A 95% confidence interval (CI) is utilized to gauge the strength of these associations, with a significance threshold set at $p = 0.05$.

[2]Factors that influence pricing of life insurance products: a case study of ICEA lion life assurance Company. "UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA" JerushaAbachi (2018).

Validity and Reliability

Validity

Validity established by demonstrating that the questionnaire's outcomes align with theoretical predictions. To assess criterion Validity refers to the degree to which a measure accurately captures what it is intended to measure. There are various types of validity, each assessed differently: content validity, criterion-related validity, construct validity, and face validity. For a questionnaire to be effective it must possess validity; that is, it should accurately reflect the constructs it aims to measure. Among these types, content, construct, and criterion-related validity are particularly relevant for questionnaires (Rogers, 1995). Content validity examines whether the questions encompass the full range of behaviors associated with the dimension being studied. Construct validity is -related validity, the results from the questionnaire are correlated with those from an established measure. To ensure construct validity in this research instrument, the researcher utilized items from previously validated measures used in other countries. To enhance content validity, a pilot test of the questionnaire was conducted, gathering feedback from branch managers of selected branches from two long term insurance branches and head office employees of Ethiopian Insurance Corporation. This pilot test allowed the researcher to evaluate whether the items effectively addressed the research questions and whether the statements were clear and understandable to respondents.

Reliability

Reliability refers to a measure's capacity to yield consistent results when the same assessment is repeated under the same conditions. Greater variability in outcomes indicates lower reliability. A questionnaire is considered reliable if it produces closely aligned results during testing and retesting; conversely, significant variation in responses suggests unreliability (Rogers, 1995). A widely used method for assessing reliability is Cronbach's alpha. According to Kline (1999), as cited by Field (2005), a commonly accepted threshold of .8 is ideal for cognitive assessments like intelligence tests, while a cut-off of .7 is more appropriate for ability tests. Kline also notes that for psychological constructs, values below .7 may be expected due to the inherent diversity of the constructs being measured.

Normality Testing

One of the most important assumptions for parametric tests is that the data are from normally distributed populations. The researcher checked normality of the data using an objective test of skewness and kurtosis statistics. For an ideal normality, the values of skewness and

kurtosis should be zero. Positive values of skewness indicate a pile-up of scores on the left of the distribution, whereas negative values of skewness indicate a pile-up of scores on the right of the distribution. Positive values of kurtosis indicate a pointy distribution whereas negative values of kurtosis indicate a flat distribution (Field, 2005). Normality skewness statistics value less than 2 and kurtosis statistics value less than 6 is acceptable. Refer to the skewness and kurtosis statistics values shown below, all values fall below 2 and 6 ceiling. Thus, the data is taken as a normally distributed one.

Table 4.8 Skewness and Kurtosis statistics of all variables

Variables	Skewness	Kurtosis
Demography	1.254	5.321
Claim Settlement	1.352	5.472
Government Regulation	1.354	4.983
Competition Level	1.791	5.741
Life insurance Pricing	1.896	5.721

(Source: own survey 2024) Dependent Variable: Life insurance pricing

Ethical Considerations

In research, it is crucial for researchers to uphold their responsibilities to both study participants and the broader academic community Ethical guidelines often emphasize the importance of conducting research with integrity and transparency, ensuring that findings are reported honestly, and that any potential conflicts of interest are disclosed Israel. When involving human subjects, researchers must respect their rights, dignity, privacy, and sensitivities. The American Educational Research Association emphasizes these principles. To honor these ethical standards, participants are informed about several important points:

- Their right to withdraw from the study at any time.
- The purpose of the research presented in clear and accessible language.
- Assurance of confidentiality regarding their identities and data. Additionally, in accordance with professional ethics, appropriate statistical methods are employed to analyze the data and report findings honestly.

CHAPTER FOUR

RESULTS AND FINDINGS

INTRODUCTION

This chapter in a research study that presents the analysis and results based on specific research questions. It includes sections on general information, the impact of demographics on life insurance pricing, the influence of claim settlement, the effect of government regulations and the influence of competition on life insurance pricing. Each section reaches into different aspects related to insurance pricing and its various influencing factors.

This chapter is broadly categorized into three sections. The first section explores the respondents' profile. The second section deals with multicollinearity analysis which shows whether an overlap or sharing of predictive power of independent variables is observed or not. The third section shows a brief description of the regression output and hypothesis testing result.

Review of respondents' response rate

Out of ninety-two questionnaires distributed, seventy-five were completed and returned, resulting in a response rate of approximately 81.5%. This information is presented in Table 4.1, indicating the percentage of questionnaires filled and completed versus those not completed. This data helps assess the level of engagement and participation in the study.

Table 4.1 Response Rate

Category	Frequency	Percentage
Returned	75	81.5%
Not returned	12	13%
Spoilt	5	5.5%
Total	92	100

(Source: own survey 2024)

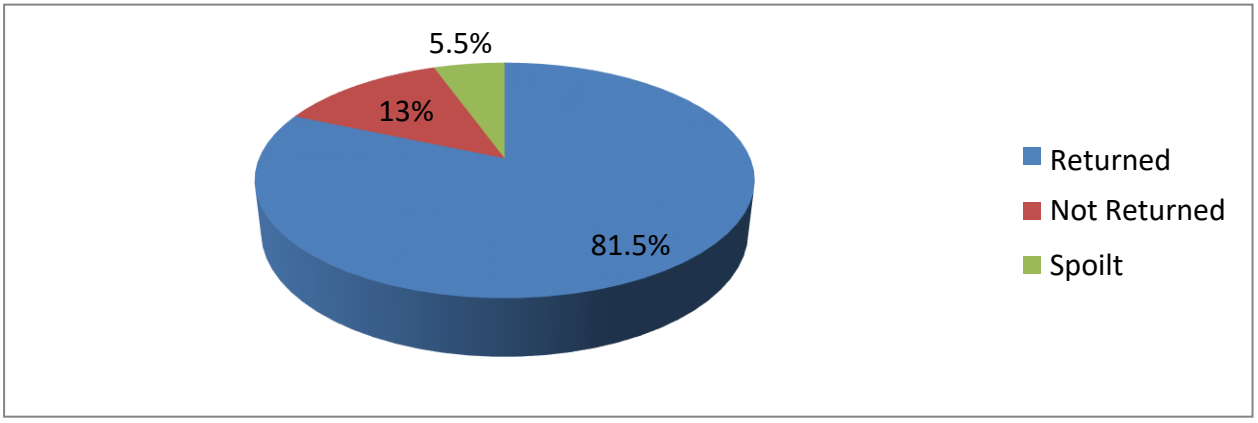

Figure 4.1 Response Rate

Review of respondent's profile

The questionnaires were distributed to the respondents who are eligibly available at the counter of selected branches. The demographic characteristic consists of gender, age, educational back ground, work experience and current position. This aspect of the analysis deals with the personal data which is briefly described through table's found below.

Table 4.2 Summary of Demographic Date

Respondents		**Frequency**	**Percent**
Gender	Male	38	50.7
	Female	37	49.3
Age	20-25 years	2	2.7
	26-30 years	13	17.3
	31-40 years	34	45.3
	>40 years	26	34.7
Educational Level	Diploma	7	9.3
	Degree	62	82.7
	MBA/MSC	6	8
Experience	3-5 years	5	6.7
	6-8 years	9	12
	9 years and Above	61	81.3
Position	Managerial	13	17.3
	Non-Managerial	62	82.7

(Source: own survey 2024)

Out of the 75 respondents, 50.7 percent were male respondents and the rest 49.3 percent were female respondents. Among the respondents, 45.3 percent of the respondents were between the age of 30 and 41 years. Next, 34.7 percent of the respondents were above 40 years. The largest number of respondents on the educational background field of the demography data was BA/BSC degree holders which accounts for 82.7 percent. Next, 8 percent of the respondents were MBA/BSC holders. The rest of the respondents were diploma holder which accounts 9.3 percent. 82.7 percent of the respondents on the position of non-managerial, rest of the respondents were managerial position which accounts 17.3 percent. Among the respondents, 81.3percent of the respondents were the experience of 9 years and above. Next, 12 percent of the respondents were 6-8 years. The rest 6.7 percent of the respondents' experience was 3-5 years.

Descriptive Analysis/Inferential Analysis

Table 4.3 ANOVA

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	37.714	4	9.428	113.674	.000[b]
	Residual	5.806	70	.083		
	Total	43.520	74			

a. Dependent Variable: Life Insurance Pricing

b. Predictors: (Constant), Competition Level, Government Regulation, Claim Settlement, Demography

The ANOVA table indicates a significant relationship between the predicting variables and the underlying factors that influence Life Insurance Pricing (LIP). As shown in Table 4.3, the significance level is 0.000, which is below the 0.05 threshold, confirming that the results are statistically significant and demonstrating a strong impact of the independent variables on Life Insurance Pricing. The F-value is reported as 113.674, with a significance level of 0.000. Since this significance level is less than 0.05, we can assert that there is over a 95% confidence in the predictions made by the model, with a probability of error below 5%. Consequently, the model is deemed significant and exhibits a linear relationship in multiple regression analysis, indicating that the variation explained by the model is unlikely to be due to random chance.

Correlation Analysis (Pearson Correlation Analysis)

The correlation coefficient is an effective way to summarize the relationship between two variables with a single value ranging from -1 to +1 (Field, 2005). In this study, Pearson's correlation coefficient was applied to analyze the relationships among all independent and dependent variables. Field (2005) provides guidelines for interpreting the strength of these relationships: a correlation coefficient (r) between .01 and .29 indicates a weak relationship; between .30 and .49 suggests a moderate relationship; and a value greater than .50 signifies a strong relationship.

In this research, bivariate Pearson correlation was employed to assess the relationships between each independent variable and the dependent variable, utilizing a two-tailed test for statistical significance.

Table 4.4 Pearson Correlation Analysis

	Variables	**Significant at 0.05 level (2-tailed)**
LIP	Life Insurance Pricing	*0.00*
D	Demography	0.757**
CS	Claim Settlement	0.498**
GR	Government Regulation	0.310**
CL	Competition Level	0.712**
**Correlation is significant at the 0.001 level (2-tailed)		
*Correlation is significant at the 0.005 level (2-tailed)		

The results indicate that Life Insurance Pricing is significantly correlated with four independent variables: Demography (D) with a correlation coefficient of r = 0.757, Claim Settlement (CS) at r = 0.498, Government Regulation (GR) at r = 0.310, and Level of Competition) at r = 0.712. Among these, Demography shows the strongest positive correlation with Life Insurance Pricing, closely followed by Competition Level also shows strong positive correlation with Life Insurance Pricing. Claim Settlement share level of significance at 0.498 in relation to Life Insurance Pricing, while Government Regulation demonstrates a significant correlation of 0.310.

Multicollinearity

Researchers' outline commonly used thresholds for assessing multicollinearity among independent variables, specifically through Tolerance and Variance Inflation Factor (VIF)

values. A Tolerance value above 0.2 and a VIF below 10 are generally considered acceptable.

Multicollinearity arises when there are high correlations among a group of predictor variables, meaning that two or more predictors share a significant amount of the same information. The multicollinearity findings for this study are detailed below for further discussion.

Table 4.5 Multicollinearity table

Variables	Tolerance	VIF
Demography	**0.276**	**3.623**
Claim Settlement	**0.905**	**1.104**
Government Regulation	**0.972**	**1.028**
Competition Level	**0.286**	**3.491**

Multicollinearity can undermine the validity of multiple regression analysis by influencing the statistical significance of beta coefficients. In this study, all VIF values are significantly below 10, and the tolerance statistics are well above 0.2. This indicates that there is no concern regarding collinearity in the data. The analysis focuses on the relationship between the dependent variable, Life Insurance Pricing, and four independent variables: Demography, Claim settlement, Government regulation, and Level of competition.

Multiple Linear Regressions

Table 4.6 Multiple Linear Regressions table

Coefficients[a]

Model		Un-standardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.150	.150		.998	.322
	Demography	.230	.052	.367	4.413	.000
	Claim Settlement	.277	.028	.448	9.772	.000
	Government Regulation	.233	.028	.368	8.321	.000
	Competition Level	.230	.053	.353	4.325	.000

a. Dependent Variable: Life Insurance Pricing

Correlations are valuable research instruments, but they do not provide insights into the predictive capabilities of variables (Field, 2005). To complement the correlation analysis, a regression analysis was conducted. This regression analysis aims to explore the significance of the independent variables in forecasting the dependent variable, thereby addressing the second research question. The results of this regression analysis are presented in Table 4.6. Regression analysis is a statistical technique used to explain and forecast the dependent variable based on the independent variables. Essentially, it employs a predictive model to estimate the values of the dependent variable from the independent variables.

R-squared/Goodness of Fit

To investigate the factors influencing life insurance pricing, a multiple linear regression analysis was performed. In this analysis, life Insurance pricing served as the dependent variable, while four key factors were treated as independent variables.

Table 4.7 R-squared/Goodness of Fit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931[a]	.867	.859	.288

a. Predictors: (Constant), Competition Level, Government Regulation, Claim Settlement, Demography

The results of the regression model, summarized in Table 4.7, indicate the proportion of variance in life Insurance pricing explained by these factors through the coefficient of determination, R^2. The R^2 value of 0.867 indicates that 86.7% of the variation in life Insurance pricing can be attributed to the independent variables' demography, claim settlement, government regulation, and level of competition. This suggests that these explanatory variables significantly impact life Insurance pricing, while the remaining 13.3% of the variance is influenced by other factors not covered in this study, such as internal customer requirements or the role of intermediaries like insurance brokers. Generally, the analysis revealed that all independent variables significantly affect life Insurance pricing. All were significant, with a p-value of less than 0.05 thresholds for statistical significance at a 95% confidence level.

Model Equation

The analysis reveals how each independent variable—Demography, Claim Settlement, Government, Competition Regulation and Level of Competition—affects the dependent

variable, Life insurance Pricing. All four of these explanatory variables were found to significantly influence life insurance pricing. As shown in Table 4.6, the regression analysis presents the un- standardized coefficients (Beta) and significance (Sig) values for these variables: Demography (0.230), Claim Settlement (0.277), Government Regulation (0.233) and Level of Competition (0.230).

Life Insurance Pricing = 0.150 + 0.230 Demography + 0.277 Claim Settlement + 0.233 Government Regulation + 0.230 Level of Competition

Figure 2. Model Equation

The significance levels for the variable's demography, claim settlement, Government regulation, and Competition level are 0.000, 0.000, 0.000, and 0.000, respectively. All of the four variables have a significant influence on life insurance pricing. Thus, we can conclude that Demography, Claim settlement, Government regulation, and Competition level are significant factors in determining life insurance pricing.

CHAPTER FIVE
DISCUSSION, SUMMARY, CONCLUSION AND RECOMMENDATION

Introduction

This chapter covers five key areas: a summary of statistical analyses, major findings, implications, limitations, and recommendations for future research. Additionally, it provides a conclusion for the entire research project, offering insights for policymakers and future researchers to enhance their understanding of the determinants of life insurance pricing in Ethiopian Insurance Corporation.

The results indicate that all tested variables are reliable overall. Life insurance pricing is significantly and positively correlated with Demography, claim settlement, government regulation and level of competition.

Discussions of Major Findings

Based on the literature review, previous research has established that demography, claim settlement, government regulation and level of competition all have a positive relationship with life insurance pricing.

Hypothesis 1 (H01): There is no positive relationship between demography and life insurance pricing.

The analysis indicates that demography indeed has a significant positive impact on life insurance pricing. The null hypothesis (H0) is rejected, as the multiple linear regressions yieldeda p-value of 0.000, which is below the significance threshold of 0.05. This aligns with findings from the literature review.

Similarly, Milevsky, M. A., & Promislow, S. D. (2001) noted that a significant relationship between demographic factors (such as age, gender, income, and education level) and the pricing of life insurance policies. Specifically, younger individuals may experience lower premiums due to lower risk profiles, while older individuals may face higher premiums due to increased health risks. Additionally, higher income and education levels are hypothesized to correlate with increased life insurance coverage and varying pricing strategies.

Hypothesis 2 (H02): **There is no positive relationship between Claim settlement and life insurance pricing.**

The analysis confirms that claim settlement positively influences life insurance pricing; the p-value from the multiple linear regressions is 0.000, which is significantly lower than the alpha level of 0.05. Therefore, H02 is rejected.

This finding is consistent with recent research indicating that claim settlement influences the life insurance pricing. Similarly, Outreville (1990), noted that the relationship between insurance claim settlement and life insurance pricing is significant as it directly affects the risk assessment and financial stability of insurance companies. When insurers evaluate life insurance policies, they consider the historical data of claims settlements to determine the likelihood of future claims and the associated costs.

H03: No Positive Relationship between Government Regulation and Life insurance pricing. The analysis confirms that government regulation positively influences life insurance pricing; the p-value from the multiple linear regression is 0.000, which is significantly lower than the alpha level of 0.05. Therefore, H03 is rejected. This finding is consistent with recent research indicating that government regulation influences the life insurance pricing.

Authority, (2019) noted that government regulation significantly affects insurance pricing, with stricter regulatory environments leading to higher compliance costs for insurers, which in turn results in increased premiums for policyholders. Conversely, a more flexible regulatory framework may foster competition and drive down pricing.

H04: No Positive Relationship between Competition level and Life insurance pricing. The analysis confirms that competition level positively influences life insurance pricing; the p- value from the multiple linear regression is 0.000, which is significantly lower than the alpha level of 0.05. Therefore, H04 is rejected. This finding is consistent with recent research indicating that competition level influences the life insurance pricing.

Cummins, J. D., & Venard, B. (2007) noted that higher levels of competition in the life insurance market lead to lower pricing of life insurance premiums, as insurers are incentivized to offer more attractive rates and benefits to capture a larger market share.

Table 5.1 Hypotheses Testing

Hypothesis	Coefficients	Significance Level	Alternate Hypothesis	Null Hypothesis
(H01): There is no positive relationship between demography and life insurance pricing.	0.230	0.000	Accepted	Rejected
(H02): There is no positive relationship between Claim settlement and life insurance pricing.	0.277	0.000	Accepted	Rejected
H03: No Positive Relationship between Government Regulation and Life insurance pricing.	0.233	0.000	Accepted	Rejected
H04: No Positive Relationship between Competition level and Life insurance pricing.	0.230	0.000	Accepted	Rejected

Summary of Major Findings

The primary aim of this study is to identify the factors that affect life insurance pricing within the life insurance sector in Ethiopian Insurance Corporation. The research focuses on life insurance products pricing to explore the relationships between various independent variables, including demography, claim settlement, government regulation and competition level.

Using a questionnaire, the researcher collected data from respondents who indicated their level of agreement or disagreement by selecting one of five options on a Likert scale. The study employed the Pearson correlation coefficient to measure the direction and strength of the association between the independent variables and life insurance pricing. Additionally, multiple regression analysis was utilized to assess the relative importance of these independent variables in predicting life insurance pricing.

Regarding the demographic profile of participants, there is a notable male majority. Most respondents fall within the age range of 31 to 40 years. The largest number of respondents on the educational background field of the demography data was BA/BSC degree holders which accounts for 82.7 percent. Next, 9.3 percent of the respondent's data was diploma holders. The rest of the respondents were MBA/BSC holders which accounts 8 percent. 82.7 percent of the respondents on the position of non-managerial, rest of the respondents were

Managerial which accounts 17.3 percent, 81.3 percent of the respondents was the experience of above 9 years. Next, 12 percent of the respondents were the experience of above 6-8 years. The rest 6.7 percent of the respondents' experience was 3-5 years.

The Pearson correlation coefficient indicates that demography (r = .000), claim settlement (r = .000), government regulation (r = .000), and competition level (r = .000) all exhibit statistically significant positive correlations with life insurance pricing, thereby supporting all four alternative hypotheses of the research. The strongest correlation is observed for claim settlement, followed by government regulation, demography and competition level. All correlations are significant at the .05 level (2-tailed). From the multiple regression analysis, the regression weights suggest that all independent variables—demography (β = .230), claim settlement (β = .277), government regulation (β = .233) and competition level (β = .230)—are predictors of life insurance pricing. Among these, claim settlement emerge as the most influential factor affecting life insurance pricing in the life insurance sector in Addis Ababa, particularly within Ethiopian Insurance Corporation.

The adjusted R-squared value of .859 indicates that 85.9% of the variability in life insurance pricing can be explained by the independent variables included in the conceptual model.

Conclusion

This research paper focuses on identifying the factors that influence life insurance pricing in the life insurance sector. The findings suggest that demography, claim settlement, government regulation, and competition level all have a positive impact on life insurance pricing. However, other factors such as political instability, inflation, internal client requirements, and intermediary barriers may also play a role in affecting pricing. This study acknowledges certain limitations and hopes that future research can address these challenges through various recommendations or alternative approaches.

Recommendation

Based on the key findings of the research, the researcher proposes the following recommendations:

a. Demography: With a regression coefficient of 0.230 (23%), there is a significant relationship between demography and life insurance pricing. Insurance companies should consider several demographic factors when setting their premium of life insurance. Such as Age, Gender, Health status, occupation etc …

b. Claim settlement: The regression coefficient of 0.277 (27.7%) indicates that enhancing claim settlement can positively affect life insurance pricing. Insurance companies consider claim settlement for life insurance pricing, companies should take into account several key factors:

- **Claims History**: Analyzing past claims data can help identify trends in mortality and claim types, influencing future pricing.
- **Settlement Ratios**: Understanding the proportion of claims settled versus denied helps assess risk and manage expectations.
- **Fraud Risk**: Evaluating the potential for fraudulent claims can impact pricing strategies and reserve requirements.
- **Policy Features**: The presence of features like accelerated benefits or riders can affect the likelihood and timing of claims.

c. Government Regulation: With a regression coefficient of 0.233 (23.3%) indicates that enhancing government regulation can positively affect life insurance pricing. When considering government regulation for life insurance pricing, insurance companies should take into account the following factors:

- **Compliance Requirements**: Understanding state and federal regulations regarding pricing, including rate approval processes and required disclosures.
- **Solvency Standards**: Ensuring that pricing strategies support the company's ability to meet future claims and maintain financial stability.
- **Consumer Protection Laws**: Adhering to regulations that protect consumers from unfair practices, which can influence pricing structures.
- **Market Conduct Regulations**: Following rules regarding advertising, sales practices and policy issuance that can affect how products are priced.
- **Risk Classification Standards**: Being aware of regulations that dictate how insurers can classify risks, ensuring compliance with anti-discrimination laws.
- **Tax Implications:** Understanding how tax laws impact pricing and reserve requirements.
- **Reporting and Transparency:** Complying with requirements for reporting financial data and pricing structures to regulatory bodies.

By considering these factors, insurers can ensure that their pricing strategies are compliant, competitive, and sustainable in a regulated environment.

d. Competition Level: A regression coefficient of 0.230(23%) suggests that understanding competition level is crucial for life insurance pricing. When considering competition levels for life insurance pricing, companies should focus on several key aspects:

- **Market Analysis**: Assessing competitor pricing strategies, product offerings, and market share to identify competitive positioning.
- **Product Differentiation**: Understanding how unique features or benefits (e.g., riders, coverage options) can justify pricing compared to competitors.
- **Consumer Preferences**: Analyzing customer needs and preferences to tailor products and pricing that resonate with target demographics.
- **Technological Advancements**: Evaluating the impact of technology on underwriting and pricing efficiency, as well as how competitors are leveraging tech.
- **Distribution Channels:** Considering how competitors reach customers (e.g., agents, online platforms) and adjusting pricing to remain attractive across channels. By implementing these strategies, insurance companies can effectively enhance life insurance pricing rates.

Future Research Directions

This study is constrained to four independent factors influencing life insurance pricing in the life insurance sector of Addis Ababa, Ethiopia. The findings indicate that these factors account for only 85.9% of the variance in life insurance pricing. Future research should explore additional variables to gain a more comprehensive understanding of life insurance pricing in the Ethiopian life insurance market, addressing the remaining 14.1%.

Additionally, this research was conducted exclusively in Addis Ababa. Future studies should aim to include insurance companies from regions outside Addis Ababa to provide a more holistic view of the topic within the Ethiopian context.

Furthermore, this research focused solely on insurance company employees' perceptions and did not take into account the views of insurance company customers. Future investigations should incorporate perspectives from both customers and company staff to identify any discrepancies in their perceptions.

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Appendix: RESEARCH QUESTIONNAIRE

Post Graduate Program

Department of Masters of Business Administration Life Insurance Pricing Survey

Dear Respondents,

I am a student at Addis Ababa University College of Business and Economics conducting a research study on the ***"The factors determining life insurance premium: The case of Ethiopian Insurance Corporation (EIC)."***

I kindly request your assistance in data collection by completing the questionnaire provided. Please be assured that all information gathered will be treated with the utmost confidentiality and will not be shared with any external parties. Your responses can be indicated by placing atick (√) in the relevant box or providing detailed explanations in the space provided.

Don't hesitate to reach out if you have any questions. You can contact me at the following: Phone: 0911 443833 or via email at wondemersha1574@gmail.com."

SECTION I

PERSONALINFORMATION

1. Gender Male [ ] Female [ ]

2. Age Bracket 20 – 25 [ ] 26 – 30 [ ]

   31 – 40 [ ] Above 40 [ ]

3. Highest Level of Education Certificate [ ] Diploma [ ]

   BA/BSC [ ] Masters [ ] PHD [ ]

4. How long have you worked at Ethiopian Insurance Corporation?

   2 years and below [ ] 3 – 5 years [ ]

   6 – 8 years [ ] 9 years and above [ ]

5. What is your current position?

   Managerial [ ] Non-Managerial [ ]

SECTION II

DEMOGRAPHICS

1. Please indicate whether you agree or disagree with the following statements concerning suggestions for demography for life insurance pricing in Ethiopian Insurance Corporation. (Please rate on a scale of 1 to 5 where, **1= Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree and 5=Strongly Agree)**

		1	2	3	4	5
	DEMOGRAPHY					
1	Age plays a significant role in determining premium rates applied					
2	A client's gender affects the premium rates(s) he/she is charged					
3	Certain occupations are viewed as being riskier than others in insurancepricing.					
4	Medical underwriting provides a basis for charging certain rates.					
5	Women are less risky life insurance candidates than men.					

SECTION III

1. Please indicate whether you agree or disagree with the following statements concerning suggestions for claim settlement for life insurance pricing in Ethiopian Insurance Corporation. (Please rate on a scale of 1 to 5 where, **1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree and 5=Strongly Agree)**

Statement	**1**	**2**	**3**	**4**	**5**
Claims settlement has impact on life insurance pricing					
Dispensing with certain requirements such as age proof and legal evidence of title for claims up to a specified amount.					
In appropriate cases, the investigation of early claims for small sums assured as is waived.					
Claim ratio has changed the renewal premium rate of life and health insurance products.					
Senior officials should be established to examine and reassess claim appeals at a higher level.					

SECTION IV

GOVERNMENT REGULATION POLICIES

1. Please specify whether you agree or disagree with the following statements regarding the influence of government regulation policies on life insurance pricing. (Rate on a scale of 1 to 5 where; 1= Strongly Disagree, 2= Disagree, 3=Undecided, 4=Agree and 5=Strongly Agree)

Statement	**1**	**2**	**3**	**4**	**5**
Government regulation of life insurance pricing influences the competitiveness of insurance markets.					
Life insurance pricing and regulations should safeguard the insurance investment from the influence of social and political factors.					
Ethiopian Insurance Corporation's life insurance rating is based on government regulation.					
In order to remain profitable, insurance companies must acquaint themselves with and adhere to government regulations.					
Government regulation policies affect life insurance pricing in Ethiopian insurance sector					

SECTION V

LEVEL OF COMPETITION

1. Below are statements on how level of competition affects life insurance pricing in the Ethiopian Insurance Corporation. Kindly tick appropriate statement based on your opinion on each statement: Key:**1= Strongly Disagree, 2= Disagree, 3=Undecided, 4=Agree and 5=Strongly Agree**

Statement	**1**	**2**	**3**	**4**	**5**
Competition is influential on setting life insurance pricingmodel in the insurance sectors.					
Ethiopian Insurance Corporation must consider the pricing of its competitors to evaluate its position in the target market segments.					
Ethiopian Insurance Corporation needs to consistently identify and enhance its key strengths to maintain a competitive edge."					
Even though insurance prices are heavily regulated, Ethiopian Insurance Corporation still finds ways to offer underpriced products in order to outperform its competitors.					
Intense competition will lead to a decrease in insurance policy prices.					

SECTION VI

LIFE INSURANCE PRICING

1. Please explain the approach to pricing strategy for life insurance in its operational activities Kindly tick appropriate statement based on your opinion on each statement: Key:**1= Strongly Disagree, 2= Disagree, 3=Undecided, 4=Agree and 5=Strongly Agree**

Statement	**1**	**2**	**3**	**4**	**5**
EIC has Life insurance pricing strategy to its operational activities					

Thank you for taking the time to complete the questionnaire!