



**ADDIS ABABA UNIVERSITY OF BUSINESS AND
ECONOMICS MBA IN FINANCE SERVICE**

The effect of motor Insurance performance on the profitability

Of the insurance companies in Ethiopia

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**A Project Submitted to the Department of MBA in extension of Business and
Economics, Addis Ababa University, in Partial Fulfilment of the
Requirements for Degree of Master in financial service**

Addis Ababa, Ethiopia

June, 2020

Deceleration

I, Gofta Assefa declare that, this project entitled: The effect of motor insurance performance on the Profitability insurance companies in Ethiopia is my original work produced under the guidance of my advisor Dr. Sewale Abate and has never been published and/or submitted for any award of Degree in any other University. Any source used is duly acknowledged in this study.

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ACKNOWLEDGMENTS

I wish to thank the Almighty God for His grace throughout this journey and wish to acknowledge the support of my wife for giving me the emotional support that I needed throughout this course. I also acknowledge the support and the guidance received from Dr. Sewale Abate my advisor on this research. My appreciation is also extended to my family and friends who assisted or contributed in one way or the other to the completion of this research, especially W/t Tsigereda Kebede.

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ABRIVATIONS

ABI-	Association of British Insurer
CAGR	-Compound Annual Growth
CII	-Chartered Insurance Institute
CMTP	-Compulsory Motor Third Party
EIC-	Ethiopia Insurance Corporation
EU-	Europe Union
GDP -	Gross Domestic Product
GNP-	Gross Net Premium
GWP-	Gross Written Premium
HICs-	High Income Countries
LICs-	Low Income Countries
LR -	loss ratio
ME-	Management efficiency
MIAC-	Motor insurance acquisition cost
MICC-	Motor insurance claim cost
MIP-	Motor insurance premium
MIPG-	Motor insurance premium growth
MRC-	Motor reinsurance cost
NBE -	National Bank of Ethiopia
NCD-	No Claim Discount
RAF-	Road Accident Fund
ROA-	Return on Asset
TGIP-	Total General Insurance Premium
UK-	United Kingdom
UN-	United Nation
WHO-	World Health Organizatio

Abstract

The fundamental purpose of insurance, whether of people or of property, is protection against possible economic loss, economic loss being simply defined as the unintentional and permanent loss of something which has monetary value. Moreover, insurance is significant part of modern economy and it is huge source of employment and also The insurance sector is playing an important role in Ethiopia's economic development by promoting financial stability. However, the growth of insurance sector in the country economy at the infant stage. The major and the largest contributor for the insurance company's portfolio is the motor insurance from general insurance category of non-life Insurance Companies operating in many countries in the world. Motor insurance business is the largest sector in General Insurance category in all Ethiopian insurance companies. It constitutes more than 54.5% of the total gross written premium in the industry (Source NBE2018). However, recently the performance of motor insurance business in Ethiopia has become declined. Therefore, this study will be intended to investigate the effect of motor performance on profitability of Ethiopian Insurance Companies. The study was employed explanatory research design to examine the effects of motor insurance on the profitability companies. As per NBE quarterly bulletin of 2018, there were 17 insurance companies which operating throughout the country. Therefore, the study based on the whole population or censuses method. The researcher was used secondary data sources to accomplish his objective. The secondary source quantitative data was obtained from financial statements in the preceding six years (2013/2014-2018/2019) from the insurance companies of concerned bodies or division and collected personally. Those secondary data has been analysed Motor insurance premium, motor claims cost motor, motor acquisition cost, motor reinsurance cost, and management efficiency as an independent variable and ROA as a dependent variable by using descriptive and inferential statics. The key explanatory variables was selected to disclose the profitability measured by return on asset (ROA) from the prominent previous studies. The study findings indicate that Motor insurance acquisition cost and motor insurance claim cost (loss ratio) are negatively related with profitability of the companies and they are significantly influences on the insurance companies' profitability. Therefore; the study recommends that insurance companies should give emphasis to these factors to appropriately address profitability issues.

Key Terms: - *Ethiopian insurance companies, Motor insurance and profitability*

CHAPTER ONE

1. INTRODUCTION

1.1 Background

Insurance, as a risk transfer mechanism, has developed over several hundred years in both developed as well as developing economies in response to highly complex and sophisticated risk. The purpose of insurance is to compensate or indemnify the victim for the financial losses suffered as a result of these risks, but it does not set out to eliminate the loss and cannot stop the disaster or misfortune from happening.

Within non-life insurance transaction Motor Insurance premium takes the lion's share in the portfolio mix in many countries in the world. The experience of most developing countries also implies the significant contribution of motor insurance to the Gross Written Insurance Premium (GWP). Across Asia's emerging markets, motor insurance offers an exciting opportunity for insurance companies' growth and profitability. For several years, the sector has experienced consistent revenue gains. The combined markets of China, India, South Korea (Korea), Taiwan, Thailand, Vietnam, Malaysia and Indonesia generate in excess of US\$75billion in GWP of motor insurance in 2015 (AXCO Report, 2015). Like other most developing countries in Ghana Motor Insurance is the largest category of non-life segment which accounts about 43.7% of the Non-Life GWP and 25.4% of total market premium in 2014 (Ghanaian Insurance Industry Report, 2014). Association of Kenyan Insurers, AKI also reported motor insurance continues to account for the largest portion of the GWP at 45% in 2015, however, the class was registered loss or marginal profit in previous years up until the rate is regulated by the Insurers Association (AKI, 2015). Motor insurance is the biggest and fastest growing general insurance portfolio in the Indian market. It accounts for more than 42% of the cash flow of general insurers (Shri Vinay Verma, 2003). *Underwriters are scrutinizing their accounts more closely than any other time in recent past to drive their auto insurance portfolio in right direction towards profitability.*

As stated in Emine Öner Kaya (2015) Motor insurance, which has a significant share in the nonlife premium portfolio of the Turkish insurance industry, appears as an insurance in which competition is intense worldwide and insurance companies find it difficult to gain profit from this portfolio (Özer 2015). It is possible to state that this situation arises from the high loss

Payments and marketing costs in motor insurance (Kozak 2015) and the fact that companies make pricing according to the prices of competitive companies with the concern that they could lose market share

In a nut shell, though motor insurance business generates lion share of the business income/premiums to insurers in Ethiopia or across the world, due to reasons mentioned above, the claim cost incurred by this class of business and its acquisition cost (cost of commission) has been found to be very much significant throughout time. Therefore; the impact of motor insurance business on profitability is needless to say.

Motor insurance in Ethiopia , like all other markets is very competitive and has undergone such major changes during the last few years, which have affected and will continue to affect the way business is transacted . Almost all insurance companies in Ethiopia transact motor insurance business though the profitability of the sector at the industry level decreasing). In addition, almost most of insurance companies describe in their annual reports the contribution of the motor insurance in the company profit as negative or marginal (NBE) 2017

1.2. Motor Insurance in Ethiopia

The Ethiopian insurance industry does not have a long history of development despite the country's long history of civilization. Modern forms of insurance service which were introduced in Ethiopia by Europeans, trace their origin as far back as 1905 when the bank of Abyssinia began to transact fire and marine insurance as an agent of a foreign insurance company.

The number of insurance companies increased significantly and reached 33 in 1960. At that time insurance business like any business undertaking was classified as trade and was administered by the provisions of the commercial code. This was the only legislation in force in respect of

insurance except the maritime code of Ethiopia that was issued to govern the operations of maritime business and the related marine insurance. The law required an insurer to be a domestic company whose share capital (fully subscribed) to be not less than Birr 400,000 for a general insurance business and Birr 600,000 in the case of long - term insurance business and Birr one million to do both long - term and general insurance business. Non - Ethiopian nationals were not barred from participating in insurance business. However, the proclamation defined domestic company as a share company having its head office in Ethiopia and in the case of a company transacting a general insurance business at least 51% and in the case of a company transacting life insurance business, at least 30% of the paid-up capital must be held by Ethiopian national companies.

The nationalization of private insurance companies, the restrictions imposed on private business ventures, and management of the insurance sector had significant adverse impact on the development and growth of Ethiopian insurance industry (Hailu 2007). Starting from 1991 Ethiopian government has tried to liberalize the economy from the previous command economy of Derg regime. Government has opened its market for domestic players to operate insurance industry as far as they are complying with NBE policies and directives. The industry is closed for foreign operators. Recently government is issuing various directives which initiate the private players to develop their competitiveness in the global insurance market.

Among the notable classes of insurance business taking first position and provided to the general public is motor insurance. First introduced as part of general insurance business it is now taking the bulk share in almost most cases taking about 50% of the insurance market production. (NBE, 2016/17).

Table 1: premium Share of the industries in Different Class of Business

Class of business	Market share
Motor	55.0%
Marine	8.1%
Fire	7.0%
Engineering	8.0%
Other	22.0%

Source: (NBE 2018 Report)

1.3 Statement of the Problem

Insurance Firms in both developed and developing countries report motor insurance as the major line of business from the general insurance sector. So as, it is also reported that the class of business contribute a marginal or negative result to the profitability of firms.

According to Godwin Kwame (2013), motor insurance is the single largest class of insurance business in developing countries; however, the class of business profitability has deteriorated significantly though many insurers have a stated aim to make the class profitable. For Example in Ghana motor insurance constitutes 44% of the non-life gross written premium with a claim ratio of more than 87%. In Kenya also Association of Kenya Insurers reported the negative results of motor private insurance as the loss ratio of year 2016 was 17 times more than the figure in 2015. It is also reported motor insurance as the highest loss ratio line of business from general insurance side (www.allafrica.com).

Similar to other countries Motor Insurance is the most prevalent insurance line in Ethiopia. The business of motor insurance in Ethiopia is also not as such profitable to the insurers (NBE, 2017) The legislation of Compulsory Motor Third Party Insurance Proclamation No.559/2008 has also contributed to the volume of motor portfolio in the insurers account. Motor class of business, which constitutes the lion share of the insurers business, is not as such profitable to the insurers in Ethiopia. Almost all insurance companies describe in their annual reports that motor insurance is consistently registered a marginal or negative results. It registered the largest line in the insurers account. In 2017/2018, the industry generated TGIP of 7.9 billion, out of which motor portfolio constitutes 4.8 billion which is 54% of the total TGIP.

Literature shows that most the studies are conducted on the banking sectors. However few studies are conducted on the insurance sector. Also in Ethiopia, There are few studies which examined profitability of insurance company's determinants. Due to the significant contribution of motor insurance to the TGIP in the industry on one hand and its unsatisfactory result on the other hand pushed various researchers to conduct various studies related with motor insurance Those studies focused on more or less motor vehicle accidents. Such as the causes of motor vehicle accidents and possible counter measures on Addis Ababa -Shashemene Roads (Segni, 2007); Analysis of traffic accidents in Addis Ababa (Samuel, 2006), The evaluation of motor risks and status of motor

insurance in Ethiopia (NBE, 2004) and Taxi traffic accidents in Addis Ababa (Mebratu, 2002) and also the absence of empirical studies in insurance companies concerning the effect of motor insurance on profitability and lack of examination their financial performance against profitability .Therefore, the motivates of the researcher to conduct the study was the motor class of business has a major share in comparison with other class of business in the industry. It involves high claim cost, marketing expenses in the form of commission payments to insurance agents and brokers and it also represents the principal share in terms of GWP in the industry, a clear insight/assessment about the impact of motor insurance of the profitability of the insurance companies will be found essential to the researcher to conduct a study. In addition, lack of empirical researches which focus on the examination of motor insurance effect on profitability of insurance firm .so as, the researcher attempts to fill such gaps in empirical evidence.

1.4. Research hypothesis

The study tested the following research hypotheses formulated based on prior empirical literature.

- H1. Motor insurance growth premium has a positive and significant effect on profitability of the companies. (MIGP).
- H2. Motor insurance Reinsurance cost has a negative and a significant effect on profitability of the companies (MIRC).
- H3 Motor insurance claim cost or loss ratio has a negative and a significant effect on profitability (MICC) OR (LR).
- H4. motor insurance acquisition cost has a negative and a significant effect on profitability of the companies (MIAC).
- H5. Management efficiency has a positive and a significant effect on profitability of the companies (ME).

1.5 General Objective

The general objective of the study is to examine the effect of Motor Insurance on the profitability of the Insurance companies in Ethiopia.

1.6 Specific Objectives

- To examine the effect of motor insurance premium growth on the profitability of insurance companies.
- To examine the effect of motor claim cost on the profitability of insurance companies .
- To examine the effect of motor acquisition cost on the profitability of insurance companies
- To examine the effect of motor reinsurance cost on the profitability of insurance companies
- To examine the effect of management efficiency on the profitability of insurance companies

1.7 Scope and Limitation of the Research

The study mainly focused on to examine the effect of motor insurance on the profitability of the insurance companies in Ethiopia based on secondary data of the six years preceding audited financial data (2013/2014-2018/2019). As per NBE quarterly bulletin of 2018, there were 17 (1 public and 16 private) insurance companies which operating throughout the country. Therefore, the study based on the whole population or censuses method .since Motor Insurance is the most prevalent and has a lion share of insurance line in the industry and also not as such profitable to the insurers. Profit almost most of insurance companies describe in their annual reports the contribution of the motor insurance in the company profit as negative or marginal (NBE 2017). It registered the largest line in the insurers account which was 2017/2018, the industry generated TGIP of 7.9 billion, out of which motor portfolio constitutes 4.8 billion which is 54% of the total TGIP. The limitation of the study was the absence of flexible accessible data base. It means some insurance companies IT system weren't retrieve data in a proper way and lack of updated empirical studies.

1.8 Significance of the study

This paper will mainly focused on to examine the effect of Motor Insurance performance on profitability of the insurance companies and the output of the research will be expected to have the insurance companies should give emphasise to these factor to appropriately address profitability issue in order to increase a significant contribution to a company profit. It may invite other researchers to conduct further research and identify the problems associated in the proper performance of the motor account and will find out remedial solutions It may contribute to improve the performance of motor insurance toward a significant underwriting result

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2. Theoretical and Conceptual Literature Review

This Section is divided mainly in two sections; the first section dealt with the theoretical review which discuss about the Concept of Profitability, Definition of insurance ,Motor Insurance, Types of Motor Insurance, Motor Insurance Premium Rating, Cost of Claims Management, Acquisition and Administration Costs, Reinsurance Premium and Motor Insurance in Ethiopia. The second section presented empirical studies on the performance of motor insurance.

2.1 Theoretical Literature Review

2.1.1 The Concept of Profitability

Profitability is important to investors and management in determining the future success of a business. Goudreau (1992) mentioned that performance of financial institutions is measurable in several categories which include profit growth, employee growth, asset growth or any other type of variable an investor or management thinks is an important indicator of future success to the company According to Kearney (2010) most of the insurance companies use the combined ratio to measure the success of their underwriting activities. The combined ratio is a profitability ratio that indicates whether an insurer has made an underwriting loss or gain from all of its business activities. Although the combined ratio is the most-often-cited measure of underwriting success, the results that it produces are generally subject to an additional analysis of its components. Changes in premium volume, major catastrophic losses, moral and physical hazards, and delays in loss reporting can distort the combined ratio, making it difficult to evaluate the effectiveness of underwriting. Without a clear understanding of their underwriting performance of each business unit, insurers may not be able to respond to conditions that affect their performance.

An insurer's profits depend heavily on the premium revenue the insurer generates from the sale of its business portfolios. Insurance companies use premium rates based on the insured's loss exposures to determine the premium to charge for insurance policies. Insurers must charge premiums to have the funds necessary to make loss payments. In fact, an insurer's total revenue

(premiums and investment income) must equal or exceed the amount needed to pay for losses, to cover its costs of doing business and profit for the investor. Investment profit also depends, in part, on premium revenue that creates the funds used for investment.

According to the study by Swiss Re (2008), Profits are determined first by underwriting performance (losses and expenses, which are affected by product pricing, risk selection, claims management, and marketing and administrative expenses); and second, by investment performance, which is a function of asset allocation and asset management as well as asset leverage. The first division of the decomposition shows that an insurer's ROE is determined by earnings after taxes realized for each unit of net premiums (or profit margin) and by the amount of capital funds used to finance and secure the risk exposure of each premium unit (solvency). That is why most researchers use ROA as a measure of profitability in financial institutions.

It is therefore imperative to identify the impact of these factors as it can help insurance companies to take action on what will increase their profitability or ROA and investors to forecast the profitability of the companies.

2.1.2 Definition of Insurance

Insurance is a mechanism that ensures an individual to thrive on adverse consequences by compensation the individual, his/her loss financially even individual in the world and all activates connected with him/her be if life profession, business, travel or any other pursuits are subject to unforeseen and uncalled of hazards or dangers. The benefits that an individual enjoys in his life by owning a car or house or a factory can be snatched by sudden accident which can render even the individual immobile, and his/her family vulnerable. At his/her critical juncture only insurance helps him/her not only to survive but recover his/her life in a normal manner, which would otherwise be unthinkable. (Gangly, 2002:1)

2.1.3 Definition and Concept of Motor Insurance

Motor insurance indemnifies motor vehicle damage caused by accidental occurrences and indemnifies the insured party in the event that it is legally liable to pay compensation to third party. Now a day itself, not a day goes by without dramatic news of serious car, bus or truck crashes making headlines somewhere in the world. In Ethiopia, as the study by Person (2007)

shows, road traffic accidents are a huge public health and development problem. Its situation requires immediate decisions and actions in order to curb the growing problem. Otherwise, it will get worse from day-to-day as motorization and population increase rapidly.

The study of World Health Organization (WHO) estimated that 1.17 million deaths occur each year worldwide due to road traffic accident. A breakdown of the figures indicates that more than 70% of the deaths occurred in developing countries. The increased rate of traffic accident has been attributed to population explosion and increased motorization. Increased motorization may be characterized briefly as the “automotive revolution”, that is the motorization of urban population especially in developing countries. Traffic crashes also has an impact on the economy of developing countries at an estimated cost of 1-2 percent of country’s GNP per annum. Causes of motor vehicle crashes are multi- factorial and involve the interaction of a number of pre-crash factors that include people, vehicles and road environment. Human error is estimated to account for between 64% and 95% of all causes of traffic crashes in developing countries. A high prevalence of old vehicles that often carry many more people than they are designed to carry lack of safety belt, and helmet use, poor road design and maintenance and the traffic mix on roads are other factors that contribute to the high rate of crashes in less developing countries. Similarly in Ethiopia, as a study conducted by NUECA, 2009 indicated that more than 90% of the traffic accidents were caused by human errors, about which almost all 89% of the causes are drivers. Factors that may contribute to the costliness of motor insurance are: - premium charged is based on unhealthy competition of insurers and the absence of statistical information and qualified personnel forces companies to charge a premium even if it is not profitable, rather it is just to take the customer. It is more of traditional practice. As indicated above the prevalence of traffic accident every day put the insurance companies in expensive claim costs of motor insurance, the other important factor is most motor insurance business has been generated by insurance brokers and or agents. As a result, the cost of business acquisition/commission payments and administration would be high.

2.1.4 Motor Insurance Premium Rating

The role of healthy competition in a business environment is indispensable for economic growth and development. Also in the insurance industry an insurer must normally compete in order to satisfy its customers thereby realizing reasonable profit by charging reasonable, adequate and fair

prices. The determination of premium (insurance price) initially emanates from the law and some business considerations. For example in many parts of the world, CTP insurance premiums will be set by tariffs and formed part of the regulations of the motor legislation. The rates set by the tariff are the maximum that could be charged by insurance companies and was considered low for most types of vehicles, especially private saloon cars.

The premium charged to the insured must represent the risk introduced to the insurance company and allow an acceptable level of profit margin. There is standard practice to base the insurance premium on the vehicle type, and many countries also consider geographical location. For example in the UK government allow premiums to be set by the insurers and many factors can influence the price. UK insurers offer premium reductions on the basis of age, sex, additional driver training, and just recently, an insurer is offering to charge on the basis of mileage with a black box fitted to the vehicle. Other countries use penalties to discourage drink driving. In the UK, drivers convicted of a drink driving conviction will experience difficulty in finding an insurer and their premiums will double in price. The impact of a drink driving conviction will also affect the insurance premium for several years (Thomas 2002).

The bonus mauls system is also adopted by some motor insurers in some parts of the world. It refers to the use of premium discounts for claim-free driving and surcharges for crash involvement. On the other hand, there are also penalties on claim compensation if policy holders are found to have contributed to the crash (or casualty severity), or if they have breached their policy conditions.

Insurance companies typically set premiums depending on the amount of risk the insured valuable as of being damaged, lost, stolen or injured. For instance, with car insurance, premiums may be based on the age and sex of the main driver and their driving experience and accident or traffic conviction record; who else may be driving the vehicle; where the vehicle is used or kept; what the vehicle is used for, for instance if the vehicle is used for business purposes, as this may mean it will be driven more and is more likely to be involved in an accident; the vehicle's value, if the car is an exotic import with expensive and hard-to-get parts; and Previous claims record (CGU 2004).

The price of insurance is important for different reasons, first it has a direct impact on the amount of revenue the insurer earns, second it affects the volume of policies the insurer sold and finally the premium must cover anticipated claims and other expenses (Morley 2009).

According to the market survey of UK retail motor insurance (2010), price discipline and the ability to select risk precisely were identified as the most important factors in maximizing company's profit. So as we understand from the above statement charging effective price ensure that the company will get underwriting profit and wise selection of risk will also help to minimize the loss and expense of the company (Ernest & Young 2010).

Similarly, the effect of inadequate price on an insurance program will ultimately have a cash flow deficit if the assessment charged to household or firm in conjunction with other sources of income is less than expected costs of insuring it (Brixi & Schick 2002).

It is clear from the above statement that the insurer will not be able to cover the expected losses and expenses if prices are inadequate. And this leads the insurer to become insolvent and discourage the investors.

2.1.5 Cost of Claims Management

Claims and loss handling is the materialized utility of insurance; it is the actual "product" paid for. Efficient claims management is critical for achieving customer loyalty (thus retention), and helps for increasing wallet share and generating positive word of mouth. It is also an opportunity to liaise with third party service providers and minimize losses. In managing the claims handling function, insurers seek to balance the elements of customer satisfaction, administrative handling expenses, and claims overpayment leakages. As part of this balancing act, fraudulent insurance practices are a major business risk that must be managed and overcome (CEA 2007).

Components of motor claims relate to bodily injuries, deaths and property damages are: cost of labour, cost of vehicles and spare parts, level of value added tax (VAT), medical costs, court awards, fraudulent claims and administration cost in handling claims (Demertriou 2002).

Quarterly journal of Chartered Insurance Institute (CII) was illustrated the claims liability of automobile products as "with automobile components, claims in this area tend to be infrequent but significant, with routine claims climbing into the tens of millions of pounds" (Gibson 2010, P.36).

According to the survey conducted in Cyprus, the main reason for the negative underwriting results of motor insurance market was identified as increased cost of claims due to increased cost of

medical expense, increased cost of legal expenses, increased cost of labour, increased cost of spare parts, increased court awards, increased number of fraudulent claims and increase in VAT (Demertriou 2002).

The study conducted in Iran shows that, the third party motor insurance is unprofitable and risky business in insurance companies. The reasons for high third-party insurance losses were identified as increasing severity and frequency of losses: due to the increasing number of vehicles, increasing risky behaviours in young driver, increasing acceleration vehicles, poor quality of some domestic cars i.e. bad quality of domestic cars such as the lack of equipped with safety systems as ABS brakes and airbags nonstandard of these cars is the reasons for the increasing financial losses, as well as becoming the financial losses to lives and property losses and finally, existence of lots of cars without insurance in the country i.e. according to the law of large numbers, whatever insured population is greater in result insurance companies will have a greater chance of success in loss management (Asli 2012).

2.1.6 Acquisition and Administration Costs

The second most important costs and expense that affect the profitability of insurance company is the high commission rates paid to the agents/brokers who introduce the business to insurance companies, and direct and indirect administration costs in relation with this class of business.

The cost of acquiring business depends very much on the way business is sourced to the companies. Most of the motor insurance business is introduced to insurance companies through agents and/or brokers who are remunerated by way of commissions of at least 20%, which is considered high (Demertriou 2002). The cost of policy administration and handling claims are the other most important factors that have a negative impact on the profitability of insurance company.

2.1.7 Reinsurance Premium

A reinsurance transaction is an agreement between two or more parties, the reinsured or the ceding company and the reinsurer. The reinsurer agrees to accept a certain fixed share of the reinsurer's risk up on terms as set out in the agreement. The purpose of reinsurance is purely technical. It is a means that an insurance company uses to reduce, from the point of view of possible material losses, the perils that it has accepted. When insurance companies seek financial security and their

practice of insuring risks is termed reinsurance. However; in most cases, the reinsurer does not underwrite individual risks. The reinsurer underwrites the insurance company and its ability to underwrite soundly. Thus, reinsurance is insurance of insurance companies. Mainly there are two types of reinsurance arrangement, proportional and non-proportional reinsurance arrangement. For the proportional arrangement the premium which is paid by the insurers and the claims payment by the reinsurers are proportionate. However, under non proportional arrangement the premium is computed based on the cover limit that the insurance companies are wished to purchase, the premium and claims payment are not proportionate (Wikipedia 2017). For Motor insurance a non-proportional reinsurance is suitable due to the magnitude and the nature of the business. Hence, the reinsurance premium of motor insurance mainly depend on the performance of the business expect at the establishment year of the company. In the case of new companies reinsurers use the trend of the industry performance in the country to compute the reinsurance premium. Due to the adverse performance of motor insurance in many countries reinsurers often offered a reinsurance premium which is adjustable at the end of the fiscal year based on the volume of business underwritten and loss ratio (The journal of Risk and Insurance 1998)

2.2 Empirical Reviews

Rapid urbanization in developing countries presents tremendous challenges to the transport systems of expanding cities if they are to meet the access and mobility needs of their communities and provide them with a sustainable, safe and healthy environment. A report of World Bank (2002) showed that urban populations in developing countries will grow at more than 6% per annum and that, within generation, more than a half of the developing world's population, and a third of its poor, will live in cities.

As the growth of registered vehicles always outnumber population growth and new roads are constructed, travel risks and traffic exposure grow at a much faster rate with rising motorization and expanding road network (Sensarma, Balani, and Rawat, 2011).

Liyan, Donghui, Farborz & Anhui (2010), attempted to study the relationship between insurance development and economic growth by employing Gaussian Mixture Model (GMM) which is a probabilistic model on a dynamic panel data set of seventy seven economies. Insurance density was used to measure the development of insurance. Controlled by a simple conditioning

information set and policy information set, they drew a conclusion that insurance development was positively correlated with economic growth. The sample was then divided into developed and developing economies. For the developing economies, the overall insurance development, life and non-life insurance development played a much more important role than they did for the developed economies.

Donghui, Fariborz, Pascal & Timothy (2007) examined the determinants of Motor Insurance consumption. Consistent with previous results, the study found a significant positive income elasticity of motor insurance demand. Demand increased with the number of vehicles, and frequency of claims and economic status. The country's level of financial development and its insurance market's degree of competition appeared to stimulate motor insurance sales, whereas low level of awareness and lack of compulsory legal requirement decrease consumption. Conclusively, motor insurance demand was better explained when the product market and socioeconomic factors were jointly considered depicting an income to those insurers.

According to Thomas (2002), the economic health of the motor insurance industry will affect both its attractiveness to investors and the likelihood of investment in road safety activities. Unfortunately, though motor insurance constitute a lion share of the GWP of non life insurance, the performance too often appears to be a loss making business in both HICs and LICs. In India, recent loss ratios (claim cost ratio to premium income) have been reported to be as high as 189 per cent. In 1998, South Africa's RAF deficit was reported to be doubling every three to five years, with the premium paid at the time estimated to be only 40 per cent of that needed (Joffe 1998).

In Ghana, the fund for victims of uninsured/untraced vehicles has had to pay for the outstanding claims of the insurance companies which have gone bankrupt (Thomas 2002). Similarly, Dorfman (2009), would also argued that "Automobile accidents cause billions of dollars in annual damage, including destroyed property, medical and funeral expenses, and loss of income."

According to the study conducted in Asia, motor insurance is the largest class of non-life business mainly because of its compulsory by law. However the findings of the study revealed that motor class of business are consistently recorded adverse/negative effects on the insurance company results. The main causes of the negative results have been identified as low premium rates charged,

increased cost of claims, high acquisition and administration costs, and inadequate investment income (Demertriou 2002).

Swiss Re (2008) depicts, insurance Profits are primarily determined by underwriting performance i.e. losses and expenses, which are affected by product pricing, risk selection, claims management, and marketing and administrative expenses; and second, by investment. However, the current market environment for motor insurance sales, which exhibits harsh competition in many European countries. Stagnating market growth, premium erosions, and persistently high claims costs render automobile insurance, especially third-party liability, a business less and less attractive for insurance companies. In Europe, this especially holds true for mature insurance markets, although this sector is still growing in the new member states (Ippisch 2010).

According to the Reuters report, the Ethiopian insurance industry is relatively under developed in comparison to that of other African countries. The nation recorded strong economic growth during the review period (2008-2012). Gross Domestic Product (GDP) at current prices posted a Compound Annual Growth Rate (CAGR) of 30.8% during the review period and is projected to record a CAGR of 16.7% over the forecast period (2012-2017). However, the country is still ranked among the poorest in the world, indeed half of the population lives below the poverty line. Nevertheless, driven by economic growth, the insurance industry recorded a CAGR of 27% during the review period and is anticipated to value ETB 6.8 billion (US\$387.8 million) in 2017 (Reuters 2014).

Thomas A. (2012) asserted that motor insurance is the most prevalent insurance line in the world. Similarly in Ethiopia motor insurance constitutes the largest portion in non-life insurance. In 2006/07, Ethiopian insurance companies generated a total premium income of almost USD 44 million or 46% of all general insurance premiums from motor class of business. Despite the large proportion that motor insurance constitutes of all general insurance premiums, it is reported the class of business as a loss leader for most insurance companies (NBE 2011).

There is an active and competitive motor insurance market for people of all ages, with up to seventy providers competing for business (Haddrill, 2006). Motor insurance is a difficult class of business to manage but, with the appropriate strategies and operations in place, the rewards are there (Ernst and Young, 2011). The environment in motor insurance today is dominated by

fierce competition for market share in some developing Countries. The lower prices not only increased clients' price sensitivity but have also raised their expectations of service, and it is witnessed that an unprecedented tendency on the part of clients to switch insurers on the basis of such criteria. However, one aspect is affecting everyone concerned: claims expenditure is rising all the time (Gönülal, 2009).

Most markets have compulsory motor insurance in place, with varied restrictions on way foreign insurers carry out their business. (Ernest and Young, 2011).The global motor insurance market grew by 3.3% in 2010 to reach a value of \$525.8 billion. In 2015 the global motor insurance market is forecasted to have a value of \$613.9 billion, an increase value. The global motor insurance market has a very large volume of customers, as motor insurance is compulsory in most countries. (Data monitor report, 2010)The United States motor insurance market grew by 0.5% in 2010 to reach a value of \$189.6 billion. In 2015, the United States motor insurance market is forecast to have a value of \$185.1 billion, a decrease of 2.4% since2010. Personal motor vehicle is the largest segment of motor insurance market in the United States, accounting for 83.7% of the market's total value. The United States accounts for 36.0% of the global motor insurance market value. (ibid) In 2010, the Asia-Pacific (Australia, china, India, Japan, New Zealand, Singapore, South Korea, Taiwan, and Thailand) motor insurance market has a value of \$ 125.9 billion. Private motor vehicle is the largest segment of motor insurance market in the Asia- Pacific, accounting for 81.3% of the market's total value. Japan accounts for 38.2%of the Asia-Pacific motor insurance market value. This market has a very large volume of customers, as motor insurance is compulsory in Asia-Pacific countries. It had a growth rate of 6.4% for the last five years and it will grow by 7.3% for the coming three years. (ibid) The European (consists of Western Europe and Eastern Europe) motor insurance market in 2010 has reached a value of \$163.8% billion. . Private motor vehicle is the largest segment of motor insurance market in the Europe, accounting for 72.9% of the market's total value. The European motor insurance market has a very large volume of customers, as motor insurance is compulsory in most countries. (ibid)

Motor insurance in Kenya is governed by the Insurance Motor Vehicle Third Party Risks Act. Chapter 405, of the Kenya insurance Act provide compulsory insurance to protect the public for road traffic injuries arising from the use of motor vehicles and to forestall the effects of adverse selection on the insurers (Kenya insurance law,2014) Following the act, all Kenya insurance

companies started to underwrite Public Service Vehicles (PSV'S) besides other conventional insurance cover to ensure compliance by motor vehicle owners. These companies have however, faced enormous challenges in the underwriting of PSV insurance business and a situation that has from time to time threatened to destabilize the entire insurance industry. This has made insurers reluctant to underwrite this business as a result of high loss ratios. In due time, the Government introduced compulsory motor pool in 1985 which also failed and was abolished in 1989 (Macharia,2009).

The insurance industry in Kenya was in a crisis particularly CTP motor insurance since the year 1989. It has been under close scrutiny with little or no action in all aspects. Among others; the main contributory factor has been the premium rate determination and monitoring, lack of integrated data and co-operation between the insurance industry. (ibid) For these and other reason Kenya insurance industries were faced wave of collapse and a crisis in the country, as there was no insurance provider for CTP motor insurance, particularly PSV “matatu”, which is unregulated in nature. The collapse of insurance companies has diverse implications on innocent third parties, other insurers, policyholders, suppliers of goods and services and the industry at large. This continues to stir erosion of consumer confidence towards the insurance industry (ibid).

The effects of an insurance company's collapse are now dealt with under the Policyholder's Compensation Fund established by Insurance Regulations of 2004. The fund contributions are 0.25% of the premium payable by the policy holder per insurance policy and a similar amount by the insurer. The Fund was established for the primary purpose of providing compensation to the individual policyholders up to a maximum of 100,000 Kenya shilling, provided that insurance company that has been declared insolvent and was operational in January 2005. Its' secondary purpose is that of increasing the confidence of the general public in the insurance sector (Sammy.M,2014).

Therefore, Kenya motor third party liability insurance has the major challenges for insurance companies, owner of motor vehicles, innocent third party road victims and the policy makers' in general. The situation is more serious due to the unregulated operation PSV'S and inadequate premium rate determination and subjective method for personal injury claim compensation. This problem will be expected to improve with the implementation of Policyholder's Compensation

Fund and structured compensation liability schedule. In addition the introduction of phased premium adjustments and establishing optimal regulatory system on PSV'S operation is an ending solution. These require maintaining proper balance between the interest of the public and the insurance company. (Kenya Insurance Law, 2013).

Motor insurance is generally measured non-life insurers' strongest class of business in terms of premium volume and promotion tool. Its result is thus likely to have a particularly strong impact on the overall result. In most markets, it is characterized by high Competition and cyclical fluctuations in results. World Bank studies in Africa, Central Asia, and Europe have shown that motor insurance premiums represent at least 30 percent of all nonlife premium income. Kenya Insurance Law, 2013).

2.2.1 Types of Cover Given In Motor Insurance in Ethiopia

The most popular types of cover offered by insurance companies in Ethiopia include:-

A. **The road traffic act (Ethiopian third party risk):** In Ethiopia, until recent times there was no compulsory third party motor insurance .Recently however the council of representatives has adopted a proclamation, proclamation No559/2008 to this effect.

Accordingly, compulsory third party motor insurance limit of liability as given in article 16 of this proclamation as follows

🚦 Birr 40,000 - in case of death

🚦 Birr 15,000 - in case of bodily injury; and

🚦 Birr 100,000 - in case of property damage

This does not mean the victims 'right to claim' is jeopardized. The Act requires one to have third party motor insurance and had to present to the legal body while requested. This proclamation sets out the minimum cover for third party liability in respect of death and bodily injury as well as third party property up to a limited amount. The cover further stipulated that an injured person will get medical help in government hospitals up to birr 1,000 immediately even if it is not uninsured because the medical center can get refund from the insurance fund. Like other developed countries,

when an accident occurs by unknown drivers (untraced drivers) and uninsured vehicles, a bureau established by levies from insurance companies and government contribution will handle claims in this case. A bureau is established in the proclamation.

B. Third party only This could be a possible cover which the market may bring to give some additional covers in addition to compulsory insurance. Probably it may cover additional costs and expenses as well as it may have additional cover legal liability to third party property and persons apart from that is given by road traffic act.

C. Third party, fire and theft cover:-This policy extends the third party cover to incorporate covers that relates to the policy holder's own vehicle or motorcycle .The additional covers include theft and fire risks. Theft includes intention of permanently depriving of a thing from its place. In motor insurance, it also includes loss or damage due to unauthorized use of motor vehicles such as joy riding. Fire includes external fire, fire resulting from wear and tear, mechanical or electrical breakdown or failures.

D. Comprehensive Motor Insurance:- It is wider cover than those given from (a) to (c). The cover include, apart from given above, accidental damage due to collision or overturning to the vehicle insured.

The main motor insurance policy covers include

✚ Loss of or damage to the insured car and accessories or spare parts

Accidental collision or overturning to insured vehicle to consequent upon insured perils.

Loss due to fire, external explosion, self-ignition, lightning.

✚ Theft or attempted theft.

✚ Malicious act.

✚ Whilst in transit (including the process of loading and unloading, incidental to such transit) by road, Liability at Ethiopian law for compensation including law costs for death of or bodily

injury to any person caused by the use of any motor vehicles as well as damage to any other person's property as described in the schedule (Fund office manual,2011)

2.3 Summary of the Literature Review and knowledge Gap

Review of literatures showed that most the studies are conducted on the banking sectors especially in the developed countries around the world and in some emerging countries like Pakistan, India and Taiwan. Besides, in Ethiopia most of the researches focused on banks and other non-financial sectors rather than insurance companies. However few studies are conducted on the insurance which have been examined determinants of profitability of insurance company's. However, Due to the significant contribution of motor insurance to the total general insurance premium (TGIP) in the industry on one hand and its unsatisfactory result on the other hand pushed various researchers to conduct various studies related with motor insurance Those studies focused on more or less motor vehicle accidents. Such as the causes of motor vehicle accidents and possible counter measures on Addis Ababa -Shashemene Roads (Segni, 2007); Analysis of traffic accidents in Addis Ababa (Samuel, 2006), The evaluation of motor risks and status of motor insurance in Ethiopia (NBE, 2004) and Taxi traffic accidents in Addis Ababa (Mebratu, 2002) are some of the studies that considers the engineering and road safety aspects of road traffic accidents in Ethiopia. Therefore, to the researcher's knowledge factors like the effect of *motor insurance on the profitability of insurer* have not been adequately addressed by previous studies. Therefore, the study attempted to fill this gap and augment its own possible contribution to the existing related literature. This study looked the impact of motor insurance performance on profitability of insurance companies. The chapter appreciates the citation and efforts of different authors on aspects that affect the performance of motor insurance and its effect on profitability. According to the references and authors work referred above motor insurance performance is affected by Motor Insurance Premium, Motor Insurance Claims Cost, Motor Insurance Reinsurance Cost, Motor Insurance Acquisition cost and Management Efficiency. Accordingly, the meaning and applicability of the terms were elaborated by referring the work of various writers. In addition, the chapter illustrated the meaning of motor insurance, its type and also the emergence and growth of motor insurance in Ethiopia by citing various authors' work. The chapter also reviewed empirical studies which are related to the top

CHAPTER THREE

RESEARCH DESIGN & METHODOLOGY

3. Introductory Paragraph

This chapter provides the details steps and procedures will be used to conduct the analysis of determinants of motor insurance on the insurance companies profitability. The method and procedures includes the approach will be adopted to examine the effect of motor insurance on profitability under the following Subheadings: Research Design, Target Population and Sampling Technique, Data Collection, Data Analysis, Description of Variables and Operation of the Study Variables and also this study will be constructing empirical model with identification and measurement of its components, measurement and selection of variables, expected relations between the dependent and independent variables.

3.1 Research Design

The research design was employed explanatory research to achieve this research objective which are to examine Motor Insurance performance on the profitability of Ethiopian Insurance companies. The research mainly will focus on quantitative secondary source of data.

3.2. Population and sampling Technique of the Study

The researcher was used secondary data sources. The secondary data was collected from the national bank and the consolidated financial statements of the companies' .this data comprised 6 years data (2013/2014-2018/2019)

3.3 Sample Design of the Study

3.3.1 Target Population, Sampling Mechanism and Sample size

The population refers to the entire group of people, events or things of interest that the researcher interested to investigate (Sekaran, 2003). As per NBE quarterly bulletin of 2018, there were 17 (1

public and 16 private) insurance companies which operating throughout the country. In terms of ownership, all insurance companies except the Ethiopian Insurance Corporation (EIC), are privately owned. Therefore, the study based on the whole population or censuses method rather than sampling method

In context to this, the target population of the current study employed all insurance companies operating in Ethiopia which have a license from NBE to underwrite a non-life or general insurance business as a target population, with audited financial statements from the 2013/2014 to 2018/2019. In order to make conclusion, about the target population a researcher determine the sample size which have paramount importance in the study. Therefore, all (17) insurance companies included in the research.

3.3.2 Data Type and Source

To comply with the study objectives, the researcher will be focused on secondary data, which will be obtained from audited financial statement of consolidate data of the companies from year 2013/2014-2018/2019 financial statement. The data are collected personally

3.4 Data Analysis

The Secondary data are analysed based on descriptive analysis and regression analysis. The descriptive analysis of study variables will be followed by the correlation analysis between dependent and independent variables. The descriptive statistics will be dealt with an overview of all variables in the study based on the mean, minimum, maximum value, and standard deviation of the variables. This section shows how variables will be related with each other. Test of normality of data and panel data regression analysis will be conducted to examine the effect of independent variables on the profitability which is described by ROA (dependent variable).

3.5 Conceptual framework

The conceptual framework will be developed to explain the determinants of profitability. By summarizing previous studies, motor claim cost, motor reinsurance cost, managerial efficiency, motor insurance premium growth, motor insurance acquisition cost, will be selected to be included

as independent variables that expected to influence the profitability as measured by ROA. There are three approaches to conduct any research: Qualitative, Quantitative and Mixed approaches (Creswell 2009). Quantitative research is a means for testing objective theories by examining the relationship among variables. On the other hand, qualitative research approach is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem with intent of developing a theory or pattern inductively. Finally, mixed methods approach is an approach in which the researchers will emphasize the research problem and use all approaches available to understand it.

In this study quantitative approach will be employed to ensure effectiveness of the research process and meet the objective of the research. The quantitative research approach, which constructed an econometric model will be used to identify and measure the determinants of profitability. Specifically, multiple regression analysis will be adopted to measure the effect of determinants on profitability. The use of multiple regressions considers the simultaneous relationships amongst the multiple numbers of independent and dependent variables found across the regression model, therefore will be best suited to the nature of the study.

Therefore to comply with the objective of this research, the study will be based on quantitative data. Quantitative data will be constructed an econometric model to identify and measure the determinants of motor on profitability and their level of significance.

The conceptual frame work of this study shows the linkage between independent variables to the dependent variable as shown as below figure

3. 6 Analytical Model

General multiple panel regression model has been applied in consideration of five independent variables for the period of from 20013/2014 to 2018/2019 of secondary data source.

Model

$$Y_1 = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Where;

Y_1 is Return on Asset

X_1 is Motor Insurance Reinsurance Premium Cost

X_2 is Motor Insurance Premium Growth,

X_3 is Motor Insurance Claim Ratio/Loss Ratio,

X_4 is Motor Insurance Acquisition Cost, and

X_5 is Management Efficiency

Dependent variable

ROA:- Return on asset

Independent Variable

MIPG:- motor insurance premium growth

MIRC:___ motor insurance reinsurance cost

MICC:- motor insurance claim cost or loss ratio

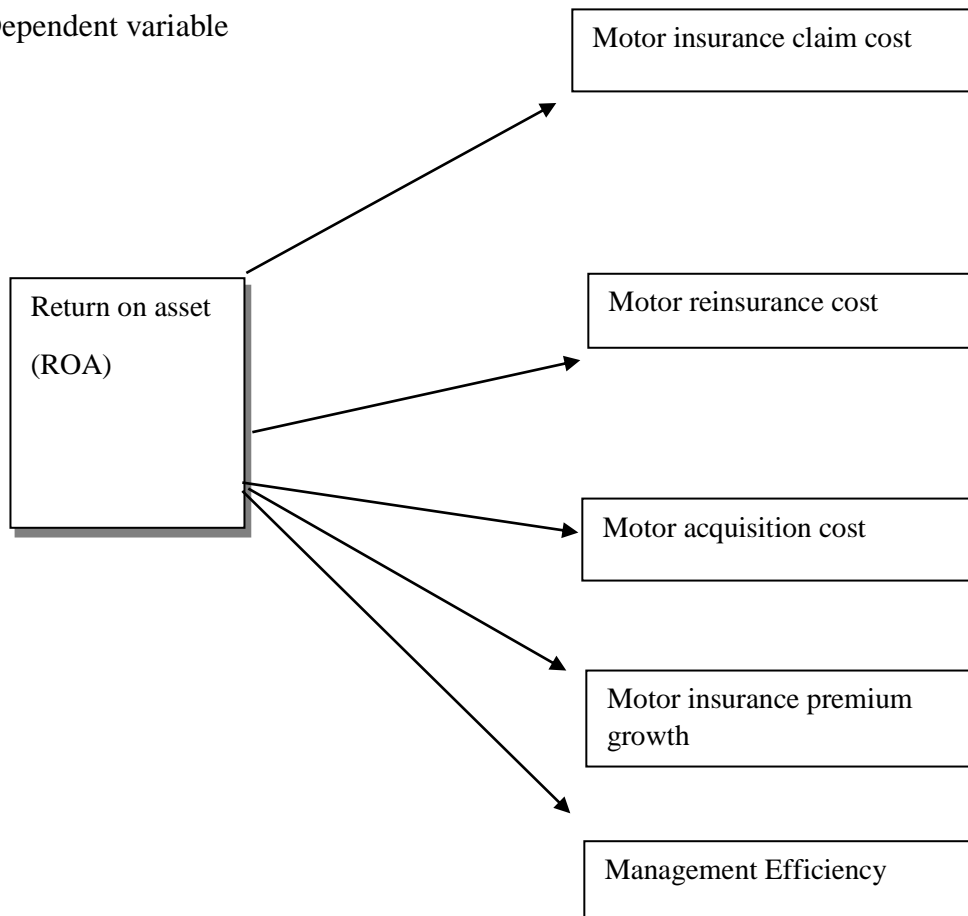
MIAC:- motor insurance acquisition cost

ME :_ management efficiency

Figure 1. Conceptual frame work

Independent Variable

Dependent variable



Source :- Self developed

3.6.1 Dependent variable.

Dependent variable is the regress and, effect variable, or explained variable; whereas Independent variable is the regress or, causal variable, or explanatory variable (Chris Brook2008). The most commonly used profitability ratios are net profit margin, return on assets (ROA) and return on equity. The return on total assets ratio represents one of the most used methods of quantifying financial performance. It was developed in 1919 by DuPont and it emphasizes the company's ability to efficiently use its assets Maria, 2014). ROA reflects the ability of insurance's management to generate profits from the insurances 'assets, although it may be biased due to off-balance-sheet activities. In most of the previous studies on insurance sector,

return on assets (ROA) is being used as a proxy of profitability (Ahmed, 2011); (Al-Shami, 2008); (Malik, 2011); (Lee, 2014).

Therefore this study has attempted to measure profitability by using ROA similar to most of the aforementioned researchers. $ROA = \text{Net profit before tax} / \text{Total Assets}$. In this study, therefore, profitability as proxied by ROA (return on assets) is the dependent variable.

The study relies on the commonly used measure of performance, which is return on assets (ROA) to depict the profit of the insurance companies. Return on total assets (ROA) is calculated as net profit before tax by total assets. It is considered as the most important single ratio in comparing the efficiency and financial performance of insurance companies since it indicates the returns generated from the assets that Insurers owns. Goudreau (1992).

The formula is as follows:

$$ROA = \text{Net profit before tax (t)} / \text{Total Assets (t)}$$

3.6.2 Independent variables

The choice of independent variables is based on their theoretical relationship with the dependent variable. Various literatures described the performance of motor insurance if highly affected by the premium and claims costs. According to Swiss Re (2008) report the performance of motor insurance is highly affected by premium, claims, reinsurance cost and acquisition cost and by management efficiency. Hence, the independent variables are determined accordingly. The independent variables chosen for the analysis is expected to bring variation on dependent variable. The following are the independent variables used for the study;

Motor Insurance Claims Cost (MICC) – *The expense incurred by the insurance company to pay the insured in order to indemnify the financial loss due to accident and sudden loss.* Claims ratio or loss ratio (LOR) of motor insurance claims of insurance companies for 6 years, which is described as

$$\text{MIC} = \text{MIC}(t) / \text{MIP}(t)$$

The underwriting risk emphasizes the efficiency of the insurers underwriting activity and it was **measured through the losses incurred divided by annual premium earned**

Motor Insurance Reinsurance premium/cost (MIRC) – Motor insurance reinsurance cost of the EIC 6 years over the written motor insurance premium

$$\text{MIRC} = \text{MIRC}(t) / \text{MIP}(t)$$

Insurance companies reinsure a certain amount of the risk underwritten in order to reduce bankruptcy risk in case of high losses. Although reinsurance improves the stability of the insurance company through risk dispersion, achievement of solvency requirements, risk profile equilibration and growth of the underwriting capacity, it involves a certain cost.

Motor Insurance Premium Growth (MIPG) – *The amount received by insurance companies from their customer to provide insurance cover .It is the amount before any deduction.* Motor insurance premium growth of insurance companies for 6 years described as

$$\text{MIPG} = \text{MIP}(t) - \text{MIP}(t-1) / \text{MIP}(t-1)$$

Motor Insurance Acquisition Cost (MIAC)- *The expense incurred by the insurance companies in order to get a business from the broker or agent. The payment to the broker or agent is in the form of commission.* Motor insurance acquisition cost of for 6 years over the written motor insurance premium.

$$\text{MIAC} = \text{MIAC}(t) / \text{MIP}(t)$$

Management Efficiency (ME) – is measured operating expense of the insurance companies for 6 years over the gross written premium

$$\text{ME} = \text{Operating Expense}(t) / \text{Gross Premium}(t)$$

CHAPTER FOUR

4. DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Overview

This chapter presents the findings of the research in accordance to the research objectives and hypothesis. The analyses and interpretation of the data collected from the companies are presented. It begins with Descriptive analysis and correlation analysis for the research variable. The normality test of the dependent variable and assesses the assumptions of regression analysis. Finally the result of hypothesis test through multiple regression analysis which tries to find out the influence of dependent variables (motor insurance reinsurance premium cost, motor insurance premium growth, motor insurance claim ratio/loss ratio, motor insurance acquisition cost, and management efficiency) on the dependent variable (return on asset).

4.2 Descriptive Statistics

Descriptive statistics concern the development of certain indices from the raw data. These provide the mean scores, standard deviations and N for each subgroup. Inspecting the pattern of these values will also give us an indication of the impact of our independent variables (Pallant, 2005). The following table shows the mean and standard deviation scores of variables obtained from the collected data.

Table 4.1:- Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
ROA	102	-.01	.20	.0684	.04366
MIRPC	102	.01	.91	.2323	.18612
MIPG	102	.44	1.43	.7951	.13959
LR	102	.08	.90	.0690	.05936
MIAC	102	.01	.40	.0601	.05677
ME	102	.12	1.11	.3948	.21472
Valid N (listwise)	102				

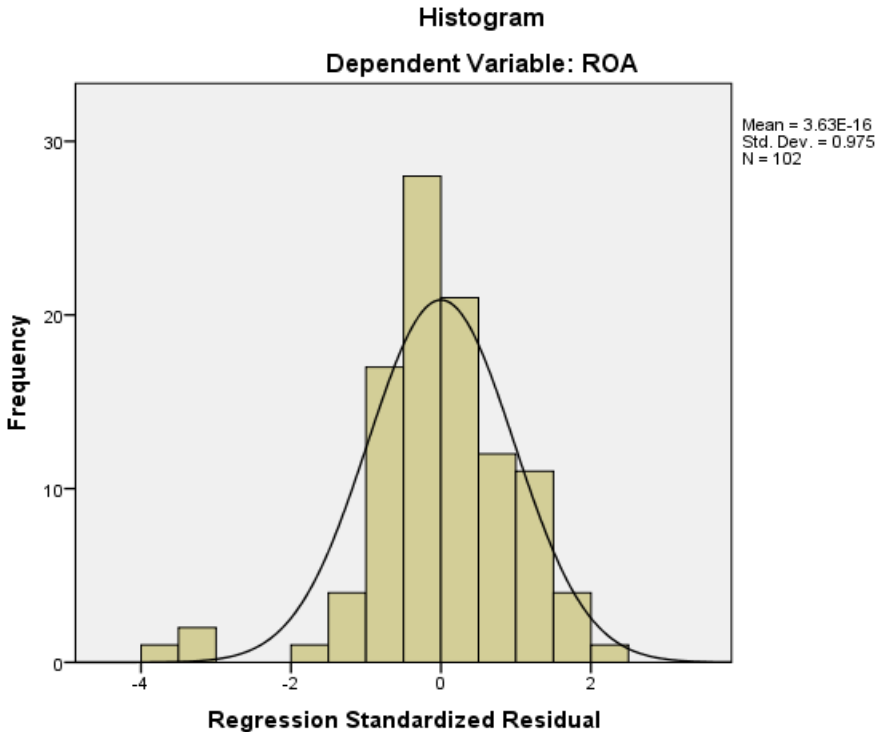
The result of Table 4.1 showed that the sample insurance company on average registered a mean value of 0.0684 with standard deviation of 0.04366 implying that companies can register 6.84% an average profit on each additional unit of asset. The maximum and minimum values of ROA were 0.20 and -0.01 respectively. That means the most profitable insurance earned 0.20 of net income from a single birr of asset investment. And the losses incurred by insurance are a loss of 0.01 cents on each birr of asset investment. Motor Insurance Reinsurance Cost had a mean of 0.2323 with a standard deviation of 0.18612 this imply that the low variation of motor reinsurance it means low risk of reinsurance dependencies among insurance companies. The Growth of Motor Insurance Premium (MIPG) registered average ratio of 0.7951 with a standard deviation of 0.13959 this imply that the moderate variation of growth motor insurance among insurance companies . The mean of Motor Insurance Claim ratio was 0.0690 with standard deviation of 0.05936. The average value of loss ratio/ risk as measured by the ratio of incurred claims to earned premiums is 0.0690 with a standard deviation of 0.05936. Therefore, it indicates that, the Ethiopian insurance companies are low risky.

Motor Insurance Acquisition Cost registered a mean of 0.0601 with standard deviation of 0.05677 13959 this imply that the low variation of g Motor Insurance Acquisition Cost among insurance companies while Management Efficiency had a mean value of 0.3948 with standard deviation of 0.21472 this imply that the low variation of Management Efficiency among insurance companies The mean value 0.39 indicates that insurance companies are efficient because their operating expense per unit of operating return is low, which means for 0.39 birr operating expense there is one birr operating income.

The result of the above descriptive statistics implied that there is no considerable variation among the value of independent variables of the sample insurance companies as the standard deviation for all independent variables showed less than 0.5. The mean values of all the variables ranges from minimum of 0.0601 for MIAC to 0.7951 MIPG and this also implies that the model of multiple regression analysis will be lead into significant results indicating the strength of data and also The result from the descriptive statics indicates that the motor insurance in Ethiopia insurance companies operated within a margin profit of .20 with a possible loss of -0.01 on each unit of asset

4.3 Normality Test

Normality of distribution can be tested by using histogram with a normal curve. In general the figure below shows that the variable return on asset is normally distributed.



If skewness is equal to 0, the data are perfectly symmetrical. But a skewness of exactly zero is quite unlikely for real-world data (Brown, 2011). As George and Mallery (2010) put a generally acceptable range for skewness and kurtosis for further analyses is between the ranges of ± 2.0 . Others extend the range of kurtosis up to ± 3.0 .

Kurtosis statistics is used to measure the peakedness of the distribution. The reference standard is a normal distribution, which has a kurtosis of 3 and the lower bound is -3 (Brown, 2011). The following table shows the skewness and kurtosis statistics of the distribution.

Table 4.2:- Skewness and Kurtosis

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ROA	102	-.01	.20	.0684	.04366	.741	.239	-.113	.474
MIRPC	102	.01	.91	.2323	.18612	1.321	.239	1.777	.474
MIPG	102	.44	1.43	.7951	.13959	1.243	.239	4.316	.474
LR	102	.08	.90	.0690	.05936	3.836	.239	26.567	.474
MIAC	102	.01	.40	.0601	.05677	3.098	.239	14.357	.474
ME	102	.12	1.11	.3948	.21472	1.171	.239	1.075	.474
Valid N (listwise)	102								

The above table indicates that most variables are under the acceptable range of skewness which is between the ranges of ± 3 . The overall distribution is reflected as normal which is presented on the histogram.

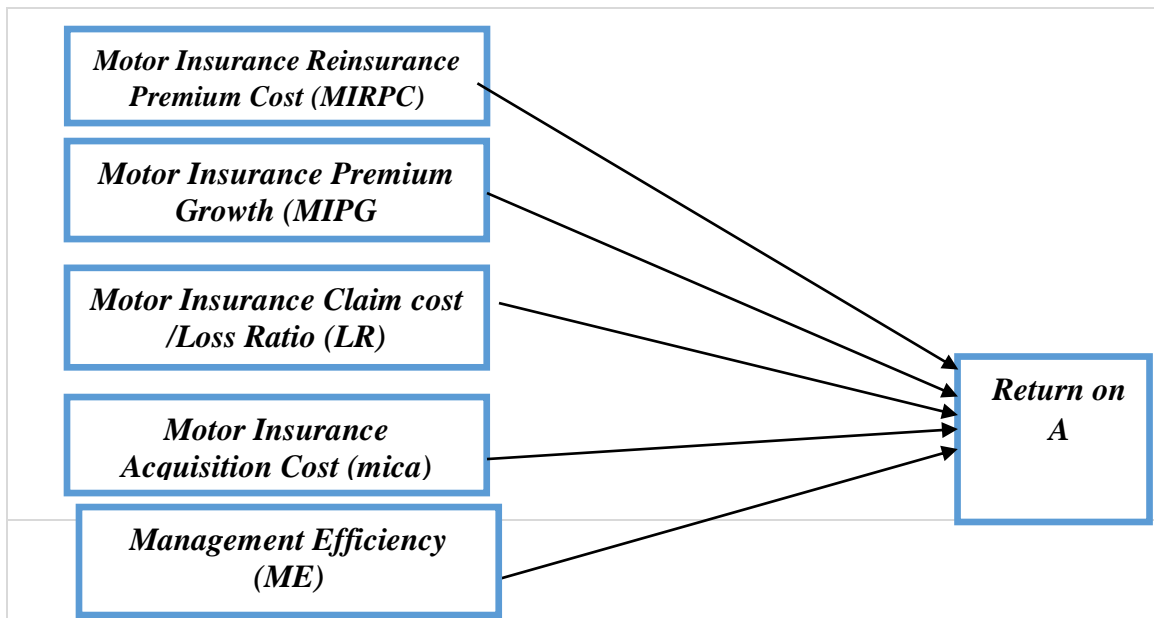


Figure 4.1: Conceptual Framework

4.4 Assumptions of Regression Analysis

4.4.1 Testing Multicollinearity

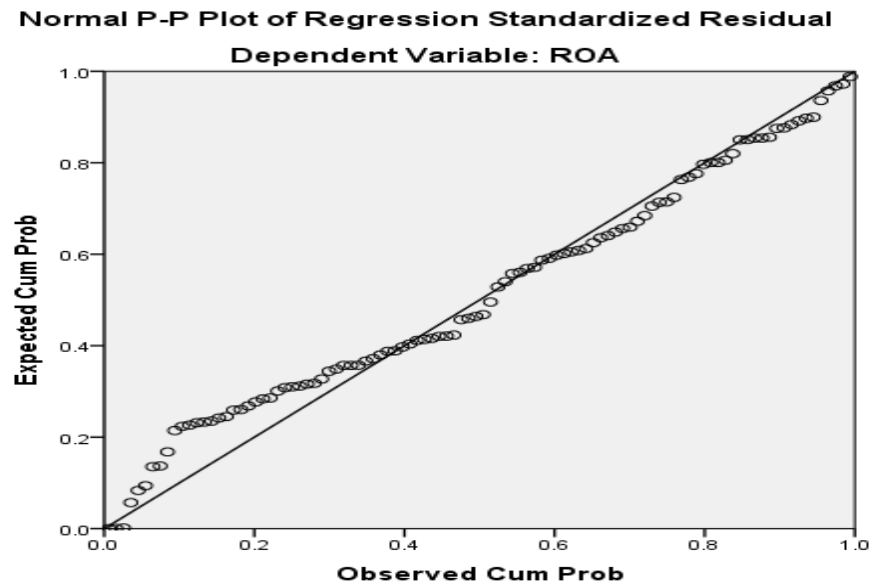
In multiple regression analysis, the regression coefficients (viz., b_1 b_2) become less reliable as the degree of correlation between the independent variables (viz., X_1 , X_2) increases. If there is a high degree of correlation between independent variables, we have a problem of what is commonly described as the problem of multicollinearity (Kotari, 2004). Fortunately, collinearity is relatively easy to detect by calculating the tolerance or VIF (Variance Inflation Factor). A tolerance of below 0.10 indicates that (multi) collinearity is a problem. The VIF is just the reciprocal value of the tolerance. Thus, VIF values above ten indicate collinearity issues (Mooi and Sarstedt, 2011). According to this measurement none of the variables tolerance level is below 0.10 and their VIF above ten. So, there is no a multicollinearity problem with the variable (see table 4. 2 below).

Table 4. 3:- Collinearity Statistics

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	MIRPC	.867	1.154
	MIPG	.917	1.091
	LR	.829	1.206
	MIAC	.842	1.188
	ME	.834	1.198
a. Dependent Variable: ROA			

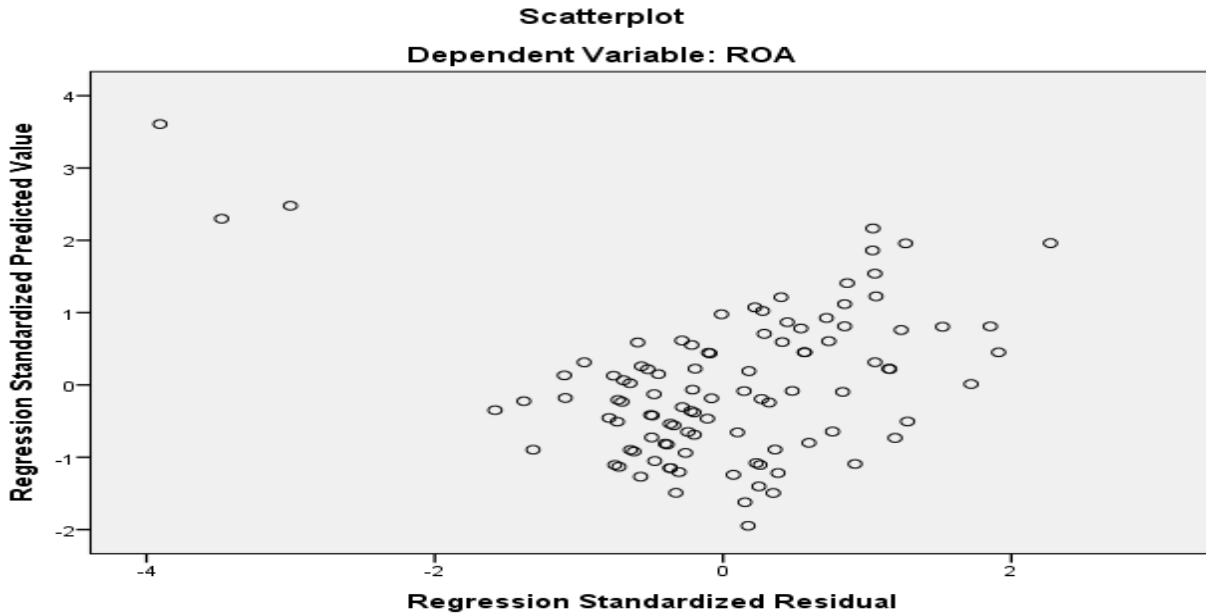
4.4.2 Checking for Linearity

The regression model can be expressed in a linear way. Checking the linearity between y and x variables can be done by plotting the independent variables against the dependent variable (Mooi & Sarstedt, 2011). As the below figure shows the relationship of independent variables with the dependent variable is linear.



4.4.3 Homoscedasticity

It refers the variance of the errors which should be constant. To test for this, we plot the errors against the dependent variable (Mooi & Sarstedt, 2011).



For the dependent variable the plot indicates the response seems concentrated in a specific area with some outliers. These shows the errors are constant throughout the observations.

4.4 Correlation Analysis

A correlation is a measure of how strongly two variables relate to each other. Correlation coefficients are frequently used to describe data because they are relatively easy to use and provide a great deal of information in just a single value (Mooi & Sarstedt, 2011). Karl Pearson's coefficient of correlation or simple correlation is the most widely used method of measuring the degree of relationship between two variables (Kotari, 2004). The calculated value of the correlation coefficient ranges from -1 to 1, where -1 indicates a perfect negative relation (the relationship is perfectly linear) and 1 indicates a perfectly positive relationship. A correlation coefficient of 0 indicates that there is no correlation (Mooi & Sarstedt, 2011).

Table 4.4 shows the Pearson correlation result with its significant level. When we see the correlation of Motor Insurance Reinsurance Premium Cost (MIRPC) it has significant positive correlation with Return on Asset. But when we see the correlation of Motor Insurance Acquisition

Cost (MIAC) and Loss Ratio (LR) as well as Management efficiency (ME) and motor insurance premium growth (MIPG) have a significant negative correlation with Return on Asset.

Table 4.4:- Correlation Analysis

		Correlations					
		ROA	MIRPC	MIPG	LR	MIAC	ME
ROA	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	102					
MIRP C	Pearson Correlation	.338**	1				
	Sig. (2-tailed)	.001					
	N	102	102				
MIPG	Pearson Correlation	-.221*	.050	1			
	Sig. (2-tailed)	.026	.620				
	N	102	102	102			
LR	Pearson Correlation	-.562**	-.285**	-.075	1		
	Sig. (2-tailed)	.000	.004	.454			
	N	102	102	102	102		
MIAC	Pearson Correlation	-.533**	-.177	-.167	.292**	1	
	Sig. (2-tailed)	.000	.075	.092	.003		
	N	102	102	102	102	102	
ME	Pearson Correlation	-.229*	.214*	-.238*	-.163	.166	1
	Sig. (2-tailed)	.021	.031	.016	.101	.096	
	N	102	102	102	102	102	102

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

* . Correlation is significant at the 0.05 level (2-tailed).

4.5 Regression Analysis

Regression analysis is one of the most frequently used tools in market research. In its simplest form, regression analysis allows market researchers to analyze relationships between one independent and one dependent variable. In marketing applications, the dependent variable is usually the outcome we care about, while the independent variables

are the instruments we have to achieve those outcomes with. It can also help make predictions (Mooi and Sarstedt, 2011).

The following tables are excerpted from SPSS in order to perform a regression analysis between independent variables (Motor Insurance Reinsurance Premium Cost, Motor Insurance Premium Growth, Motor Insurance Claim Cost/Loss Ratio, Motor Insurance Acquisition Cost and Management Efficiency) and dependent variable Return on Asset.

Table 4.5:- Variables Entered/Removed

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	ME, LR, MIPG, MIRPC, MIAC ^b		. Enter

a. Dependent Variable: ROA

b. All requested variables entered.

Table 4.6:- Model Summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.748 ^a	.559	.536	.02974

a. Predictors: (Constant), ME, LR, MIPG, MIRPC, MIAC

b. Dependent Variable: ROA

The model for this regression was: $ROA = a + b1X1 + b2X2 + b3X3 + b4X4 + b5X5 + e$

From the model summary result we can see that independent variable explain the dependent variable with a percentage of 55.9. In cross-sectional designs, values of around 0.30 are common while for exploratory research, using cross-sectional data; values of 0.10 are typical (Mooi & Sarstedt, 2011).

Table 4.7:- ANOVA

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.108	5	.022	24.326	.000 ^b
	Residual	.085	96	.001		
	Total	.193	101			

a. Dependent Variable: ROA

b. Predictors: (Constant), ME, LR, MIPG, MIRPC, MIAC

The table below shows the constant, beta, and significance level of each variable. As the constant and B values are known the model will be:

$$ROA = 0.102 + 0.023X1 - 0.057X2 - 0.026X3 - 0.327X4 - 0.054X5 + 0.05$$

Table 4.8:- Multiple Regression Result

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	.102	.021		4.831	.000
	MIRPC	.023	.017	-.096	-1.322	.189
	MIPG	-.057	.022	-.181	-2.556	.012
	LR	-.260	.055	.354	4.758	.000
	MIAC	-.327	.057	.426	5.764	.000
	ME	-.054	.015	-.264	-3.558	.001

a. Dependent Variable: ROA

As we can see from the above table four of the five independent variables have a significant influence on the dependent variable. Which are, Motor Insurance Premium Growth (sig 0.012) and Management Efficiency (sig 0.001)) as well as Loss Ratio (0.000) & Motor Insurance Acquisition Cost (0.000) have a negative significant influence on Return of Asset .But motor insurance reinsurance premium cost is insignificant influence .

Hypothesis Accepted

- H3 and H4 Motor insurance claim cost or loss ratio and Motor insurance acquisition cost respectively have negatively impact on profitability of insurance companies in Ethiopia.
- Motor insurance claim cost (loss ratio) and Motor insurance acquisition **cost** are negatively related on profitability and influences statically significant on the profitability.

Motor Insurance Reinsurance Premium Cost (MIRPC)

As presented on table 4.8 the coefficient of motor insurance reinsurance premium cost (MIRPC) is positive with (0.23) and it is statistically insignificant effect of profitability for

insurance companies in Ethiopia. Insurance companies reinsure a certain amount of the risk underwritten in order to reduce bankruptcy risk in the case of high losses. Although reinsurance improves the stability of the insurance company through risk dispersion, achievement of solvency requirements, risk profile equilibration and growth of the underwriting capacity, it involves a certain cost. Therefore, a positive connection between the motor insurance reinsurance cost and the insurer's financial performance is not expected this supports the outcome of the study result.

Motor Insurance Premium Growth (MIPG)

The coefficient of motor insurance premium growth (*MIPG*) is a negative with (-0.057) and it is statistically significant effective on profitability for insurance companies. However, The result of the study supports the findings of Chen and Wong (2004). Therefore, a negative connection between the motor insurance premium growth and the insurer's financial performance is not expected this supports the outcome of the study result because other study showed that Yuqi Li (2007) in UK and Hamadin Ahmed Ali Al- Shami (2008) in UAE of their investigation found a positive and statistically significant relationship between growth and profitability of insurance companies.

Motor Insurance Claim cost /Loss Ratio (LR)

As stated on table 4.8 the coefficient of motor insurance claim cost or loss ratio is negative with (-0.260) and it is statistically highly significant determinants of profitability for insurance companies in Ethiopia with the probability of (0.0000) at one percent significance level. According to the nature of the insurance industry, the ratio of net claims paid in net premiums earned (loss ratio) is used as a proxy to measure the risk of the insurance companies in Ethiopia. This shows that insurers that underwrite risky business will need to ensure that good standards of management are applied to mitigate their exposure to underwriting losses ex-ante and maximize returns on invested assets ex-post. Otherwise, they will turn out to be poor performers. Excessive risk-taking could adversely affect the performance of insurance companies. Malik (2011) and Ahmed et al. (2011) also found the same result. Therefore, a negative connection between the

motor insurance claim cost or loss ratio and the insurer's financial performance is expected this supports the outcome of the study result.

Motor Insurance Acquisition Cost (MIAC)

As presented on table 4.8 the coefficient of motor insurance acquisition cost (MIAC) is positive with (-0.327) and it is statistically significant effect of profitability for insurance companies in Ethiopia. The cost of acquiring business depends very much on the way business is sourced to the companies. Most of the motor insurance business is introduced to insurance companies through agents and/or brokers who are remunerated by way of commissions of at least 20%, which is considered high handling claims are the other most important factors that have a negative impact on the profitability of insurance company (Demertriou 2002). Therefore, a negative connection between the motor insurance acquisition cost and the insurer's financial performance is expected this supports the outcome of the study result.

Management Efficiency (ME)

As presented on table 4.8 the coefficient of management efficiency (ME) is negative with (-0.54) it is statistically insignificant effect of profitability for insurance companies in Ethiopia. Hence the level of education of professionals affects the assessment of the competence and thus the company's ability to achieve future success. Management competency is a multidimensional concept and a number of well documented attempts have been made in the literature to define it. More specifically, the popularity of the term competence can be attributed to (Boyatzis, 1982). In "The Competent Manager"(Boyatzis ,1982) defines competence as "an underlying characteristic of a person", stating it could be, "motive, trait, skill, aspect of one's self-image or social role, or a body of knowledge . Therefore, a negative connection between the management efficiency and the insurance company's profitability is not expected this supports the outcome of the study result.

CHAPTER FIVE

5. Summary of the major finding and RECOMMENDATION

5.1 Introduction

The objective of the study was to examine the effect of motor insurance on profitability of the Insurance companies in Ethiopia for the period of 2013/2014 to 2018/2019. In addition, this study explicated the following specific objectives: to explore the major factors of insurance company profitability, to examine the effect of motor insurance on profitability and to provide possible recommendations to interested users of the research outcome.

In this study quantitative approach was employed to ensure effectiveness of the research process and meet the objective of the research. Multiple regression analysis was used to measure the effect of motor insurance determinants on profitability.

This study used to measure profitability by using ROA similar to most of the aforementioned researchers. $ROA = \text{Net profit before tax} / \text{Total Assets}$. In this study, therefore, profitability as proxied by ROA (return on assets) is the dependent variable. To measure the predictor variables of insurance companies' profitability, five measures were used as independent variables which were identified by the researcher. The variables were motor insurance reinsurance cost, motor insurance premium growth, motor claim cost or Loss ratio, motor insurance acquisition cost, management efficiency.

Besides Demertriou 2002 the study conducted in Asia, motor insurance is the largest class of non-life business mainly because of its compulsory by law. However the findings of the study revealed that motor class of business are consistently recorded adverse/negative effects on the insurance company results. The main causes of the negative results have been identified as low premium rates charged, increased cost of claims, high acquisition and administration costs.

In Ghana, the fund for victims of uninsured/untraced vehicles has had to pay for the outstanding claims of the insurance companies which have gone bankrupt (Thomas 2002). Similarly, Dorfman (2009), would also argued that "Automobile accidents cause billions of dollars in annual damage, including destroyed property, medical and funeral expenses, and loss of income and negatively impact on the insurance companies profitability .

5.2 Summary of finding

The result of the descriptive statistics implied that there is no considerable variation among the value of independent variables of the insurance company as the standard deviation for all independent variables showed less than 0.5. The mean values of all the variables ranges from minimum of 0.0601 for Motor insurance acquisition cost MIAC to a 0.79751Motor insurance Premium growth MIPG. The result from the descriptive statics indicates that the motor insurance in Ethiopia insurance companies operated within a margin profit of .20 and with a possible loss of -01 on each unit of asset.

The secondary data result established an adjusted R-squared of 0.536 between the Motor insurance firm's profitability and the explanatory variables (Motor Insurance Premium, Motor Insurance Claim, Motor Insurance Acquisition Cost, Motor Insurance Reinsurance Cost and Management Efficiency). This implies that 53.6% of the insurance companies' profitability is as a result of Motor insurance performance.

In this study it was found that Ethiopian insurers' profitability was affected by the independent variables included at different level of significance. Accordingly, the findings showed that The Motor insurance acquisition cost and motor insurance claim cost (loss ratio) are negatively related with profitability and significantly influence the profitability of the companies.

5.3 Recommendation

According to the finding of the study the motor insurance claim cost (loss ratio) and the motor insurance acquisition cost are significantly affect the profitability of the insurance companies and they have a negative relationship with the profitability of the companies . Therefore, the

researcher has drawn the following recommendations:

Management bodies of insurance companies should strive to give an emphasis and to adopt strategy those motor insurance factor on profitability such as motor insurance claim cost (loss ratio) and motor insurance acquisition cost.

In order to properly manage the motor claim cost (loss ratio) and acquisition cost, the researcher recommends the insurance companies should try to minimize the influence of underwriting risk by adopt a risk management strategy that looks at the link between all aspects of the company's business line, better actuarial and risk analysis, better risk differentiation strategy, better pricing, and better retention to achieve superior profitability by increasing the insurers premium rates.

Insurers should diversify their portfolio mix by creating public awareness and selling different customized insurance products to the society in order to minimize their motor insurance dependability.

Insurer should reduce the agent and broker commission tariff significantly in order to be optimum the acquisition cost

The researcher has advice insurance companies design a system to sell motor insurance through their direct channel other than selling via agent & broker

Insurer are better to encourage and provide incentive to the intermediaries in order to diversify their portfolio mix instead of concentrate on motor insurance.

Insurance companies should set adequate premium tariff which would be accommodates commission tariff properly.

5.4 Recommendation for Future Research

This study focuses mainly on the effect of motor insurance performance on profitability and the finding of the study show the R-squared and the adjusted R-squared value was 53.6 % and 55.9 % respectively which are indicate the total variability of determinants of insurance company profitability was explained by the variables in the model. Almost all insurance companies describe in their annual reports that motor insurance is consistently registered a marginal or negative

results. It registered the largest line in the insurers account. In 2017/2018, the industry generated TGIP of 7.9 billion, out of which motor portfolio constitutes 4.8 billion which is 54% of the total TGIP and 80% of claim settlement has been effected to motor class of business from the proportion of total non-life claim settlement. Therefore, In order to increase the contribution of motor insurance to the profitability of the company. The researcher believe that this study can be more robust, if future researchers conduct a study on this area. First, by taking evidence from other industries, increasing the number of observations through the use of large sample size and longer years of data, Finally, In the study the variables used in the statistical analysis did not cover all factors that could affect insurers' profitability. Thus, future research should focus on some other dimensions of non-financial/qualitative aspects such as the effect of management quality, the quality of manpower, work ethics, effect of morale hazard(behaviour of insured's after they get insured- insured may exhibit carelessness in their behaviour because of holding insurance policy) and moral hazards(before or after insurance, insured's may conceal some important information to the insurer to win some unfair advantage), public attitude towards the concept of insurance.

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