UNIVERSITY OF GHANA

IMPACT OF CLAIMS COMPLAINTS ON PROFITABILITY

OF NON-LIFE INSURANCE OPERATIONS IN GHANA

BY

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DECLARATION

I hereby affirm that this submission is my personal work towards the Masters of Philosophy in Risk Management and Insurance and that, to the best of my knowledge, it contains no significant formerly published work by another person or material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

....

JOHN QUIST   **DATE**

CERTIFICATION

This is to certify that this thesis has been supervised with the laid down principles for

thesis writing at the University.

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DR. ALBERT GEMEGAH (SUPERVISOR)   **DATE**

....

DR. LORD MENSAH (CO-SUPERVISOR)   **DATE**

DEDICATION

To My Dear wife Olivia Quist and children Jayden Nii Noi Quist, Eugenia Naa

Ayorkor Quist and Samuel Nii Naakpe-Dromo Quist.

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I am very appreciative to God Almighty for His Grace and Mercy during the pursuant of this work. I thank my supervisors DR. A. Gemegah and DR. Lord Mensah for their patient supervision. I thank my family and friends for the support.

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LIST OF ABBREVIATIONS

CLA   -   Claims incurred

COMP   -   Complaints

CORR.   -   Correlation

GRP   -   Growth in premium

INY   -   Investment Yield

LEV   -   Leverage

LQD   -   Liquidity

NIC   -   National Insurance Commission

ROA   -   Return on Assets

ROE   -   Return on Equity

ABSTRACT

The purpose of the study was to determine the relationship between number of claims complaints and non-life insurer profitability in Ghana between 2010 and 2016. The focus was to find the impact of claim complaints on profitability of insurance firms in Ghana using panel data regression. The study randomly sampled 12 operating insurers and used secondary data from the National Insurance Commission (NIC) during the period 2010-2016 of the selected insurers. The study revealed that complaints correlated negatively with ROA, premium growth, claims incurred, investment yield, leverage and the lag of ROA. The study however revealed complaints was correlated positively with liquidity. The model indicated that 64% variation in ROA was explained by the independent variables. The panel fixed effect estimation result of the study revealed that there exist a significant and negative relationship between complaints and profitability of insurance companies in Ghana. The study concluded that increased number of complaints reduces ROA, lag of ROA, investments yield, growth of premium and claims incurred significantly. Empirically, complaints on the average reduce ROA by 31.3% annually. Increase in complaints however was found to increase the liquidity base of insurance companies. The study forecast that the performances of high claims paying Ghanaian non-life insurance companies would be less profitable and suggests all claims issues must be investigated before payment is made. Other variables that impacted positively on ROA were investments, growth and leverage even though their impact was insignificant except investments yield. Amongst others, the study recommended that complaints should be handle with the need attention in order to retain customers and protect long-term stream of profit because of its negative impact.

Keywords: *complaints, claims, Ghana, non-life insurance firms, premium, profitability.*

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

This study relates to the insurers main work to the general public and what the customers' expectations are when eventualities happen. The insurance business is a just assignment of the likelihood of a financial/material loss, from an insured to insurer in exchange for payment. An insurer is a company who pays the loss when it happens as stated in the policy to the insured. The insured (policyholder) is the person or entity who suffers the loss when it occurs. This relation between them brings about mutual agreement between the insured and the insurer. This is a mitigation strategy of risk management principally used to guide against the risk of indeterminate loss. The mutual agreement serves as a contract, where an amount of money is paid to the insurer by the insured. The insurer also is expected to pay for the loss when it happens to the insured. The amount paid by the insured in the contract to the insurer for insurance cover is known as premium. This premium could be paid monthly, quarterly, semi-annually or annually. Whiles the one paid to the insurance company to the insured is called benefits/claims.

The contract involves the insured forecasting certain comparatively minor loss in a payment form to the insurer in exchange for the promised made by insurer to pay compensation to the insured when financial (personal) loss happened.

The contract becomes binding through document known as insurance policy, this gives the material facts, terms of conditions and circumstances upon which compensation will be paid to the insured.

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This compensation known as claims/benefits in insurance business, can restore the claimant to its previous state or a little closer to the initial position.

The real work of every insurance company is claims settlement, which constitutes the most important aspect of the functioning of an insurance business. This claims settlement becomes very effective through proper underwriting of risk by insurers. For the purpose of this work we will focus on an issue relating to claims settlement which might affect both insurer and insured financially. One of the expectations of every insured is that when eventualities happen, claims should be settled quickly to his/her satisfaction, whilst the ultimate agenda for every insurance firm is to pay customers claims and still be in profitable business. This has not been achieved in the insurance industry in Ghana because of complexities surrounding claims payment. Claims in reality has a negative impact on insurers' profitability because cash is taking out of the company's finances because claims must be investigated thoroughly before payment is made to beneficiaries. When eventualities happen and claims benefits are rejected and the amount is kept in insured account in order to become more liquid and eventually leaving the customers dissatisfied, this can impact positively and negatively on the insurer's finances. Customer dissatisfactions lead to customer complaints which most often could have great impact on customer base of a firm thereby affecting the finances of the company. The effect of complaints could be both positive and negative on company's reputation/finances depending on how complaints are managed. When a customer is satisfied after settlement of a dispute that customer can bring in new customers to the company thereby increasing the market share of the firm leading to a positive impact on the company's finances. In the same manner, a dissatisfied customer complaint could have negative impact on the finances of the company.

In non-life insurance operations, not all insurance contracts result in claims, but in life insurance almost all contracts definitely result in claims- either at maturity or death. According to research about 85% policies in general insurance will not result in cl aims benefits due to the short term nature of non-life contracts (Qaiser, 2011).

Claims in insurance operations can have a serious economic problem for the industry and the country as a whole, if not managed well, therefore there is a need to manage claims properly. How policy holders who deserve claims are managed/handled during settlement period is of great importance to the regulator and the industry as a whole. The services being rendered during claims process will determine the attitude of the customers towards the insurer and their products after the service. The question of how the exercise above being giving out is appraised by the customers, needs to be kept in mind, because dissatisfied customer can easily cause the downfall of the company. It is also very expensive to acquire a new client than to keep an old customer.

Competitiveness in the insurance sector has increased due to globalization and advancement in technology. There is a need for companies to adopt strategies which are very competitive in order to sustain them in profitable business. This means that, the competition in the insurance market demands that companies should employ strategies to encourage new customers and maintaining existing customers through proper claims management thereby increasing their market share and profitability. According to Komunda and Oserankhoe (2012), high customer satisfaction given through counter- measures (before, during and after sales) can greatly expand the company's market shares.

Gruber (2011) posits that companies can implement integrated counter-measures customer service with embedded customer complaints managing component. The expression of dissatisfaction towards a product, service or purchasing situation, most often result in customer complaints (Nakibin, Ismail, Marimuthu & Abu-Jarad, 2011). A good customer care has enduring effects on company's profitability because a satisfied client will always transact business with the firm and also make referrals to others.

In conclusion, insurers in the country must make sure that any genuine claims are paid to the customers' satisfaction. By so doing they may get more customers to patronize their insurance products in the market, hence increasing their profitability and insurance penetration in the country.

1.2 Statement of the problem

The segregation of composite insurance in the insurance industry into life and non-life operations by the insurance Act 724 (2006) was to create competition among insurers in order to give operational excellence in the insurance industry. This was to help the regulator to properly monitor the activities of management and financial resources of the insurers which are adequate for the carrying on of the class of insurance business for which the application is made. Also, to ensure that the insurance firms will conduct their business operations in accordance with standard insurance principles in Ghana.

Despite this significant regulatory and structural changes, Ghana is still considered to have an underdeveloped insurance market, compared with other countries (NIC 2015 annual report, page 15), which can be attributed largely to the citizens' lack of

information about insurance products and services. The major problem facing the insurance industry in Ghana is low patronage of insurance products as a result of lack of insurance education and negative perception within the general public domain. Currently insurance penetration in Ghana is still very low. Insurance penetration which is defined as contribution of total insurance premiums to Gross Domestic Products (GDP), ranges between 1-2 percentage (NIC annual reports, 2015 & 2016). Conscious efforts are being made to improve the penetration rate through encouragement and development of micro-insurance as well as the enforcement of compulsory insurances in Ghana (NIC, 2015 annual report). The non-life now has two compulsory insurance products on the market namely; Third Party Motor Insurance and Fire Insurance for Private Commercial Buildings. Notwithstanding, these compulsory non-life policies in the market the industry still struggles with low penetrations rate in the country, rather negative perceptions is very high in the insurance sector.

The negative perceptions are possibly created during claims and settlement period. During this period there are a lot of disputes between claimants and the insurers, since inception of insurance, claims management have been one of the greatest challenges confronting the industry (Yusuf, 2010). These disagreements between insurers and the clients if not well addressed and leave the customer unhappy could put the reputation and finances of the company in the long run. According to Yusuf (2010) insurers that develop a reputation for fair treatment of claims will enhance the demands for their products thus increase long-term profitability. This means that the expectation that insurers will remain viable and strong in the future to meet regulatory requirement of solvency is key in treatments of customers during claims.

The non-life insurance sector in Ghana receives more claims complaints attention annually than the life insurance by Akotey and Abor (2013), the most of the issues are based on the following;

    i.   Claims repudiating by Insurers;

    ii.   Delay in settlement of claims;

    iii.   Argument over quantum and

    iv.   Delay in payment of settled claims (NIC annual reports).

According to Seth (2008), insurers must be very careful rejecting a claim under policy because claims repudiating is subjected to legal repercussions and charge. This means that claims must be investigated and paid when they are due to avoid excessive cost.

The operational and legal risks associated with the provision of insurance services may be due to improper processing of policy documents, incorrect handling of claims procedures, system failures, fraud on the part of insurance agents and employees, lack of compliance with the provisions of the Insurance Act of 2006 (Act 724) and other insurance regulations (Akotey & Abor, 2013).

In view of the above issues stated by the authors, the challenges that come with insurance operations during claims are enormous. These problems associated with claims make it very difficult for the insurance companies to verify the authenticity of the claims submitted. Therefore, the aspect of claims in insurance must be well monitored by the national regulator in order not to leave customers and insurers in jeopardy when the eventualities happen. According to Rao and Pandey (2013), the claims conduct of non-life insurers must be investigated due to the high rate of complaints, in order to curtail operational losses and ensure operational excellence.

Tseng (2017) stated that insurance companies finance may be in danger through improper claims management; this unfortunate management issue affects the adjustment of future premiums. This means that issues surrounding claims can have an adverse effect on the firm's profit if not well managed. The complaints as a result of poor claims management problem constitutes operational risk which may trigger legal risk leading to increase in claim cost, which may also cause liquidity risk for the insurance companies.

The various literature show that most of the studies are conducted on claims pertaining to fraud during claims settlement to check the finances of the firm internally. However, few studies have been done on complaints on the firm's finances. Those researches which looked at how complaints affect the customer base of a firm, hence profitability. This means the previous studies have looked at the issue broadly, but this work will be quantitative and focus on the insurance claims complaints on the profitability.

The future profit of a company is determined through customer satisfaction (Storbacka, Strandvik & Grönroos, 1994). This means that a satisfied customer could impact on the finances of a firm positively in the long run whiles dissatisfied customers complaints could have a great effect on company's finances in a long term. This issue of customer complaints having effect on future revenue of firms has not received enough empirical investigation especially on profitability of insurance companies. The customer claims complaints and its impact on insurer's profit has not received any academic attention in Ghana. This work tries to bridge such research gaps in empirical confirmation, according to Tseng (2017), improper claims management may pose a great danger on finances of insurances firms.

1.3 Main objectives of the study

The main research objective is to determine whether there is significant relationship between number of complaints as a result of claims management and non-life insurer profitability in Ghana between 2010 and 2016 and find out how the number of claims complaints impact on insurers' profitability in Ghana. The focus is on the non-life insurance firms because of the huge number of claims complaints receive by the regulator annually. The short-term nature of insurance contracts makes it possible to examine the impact of customer claims complaints on the firm's finances.

1.4 Specific objectives

    i. To determine the relationship connecting the profitability of insurance companies and number of customer claims complaints.

    ii. To find the extent of impact that number of complaints as a result of claims management can cause to profitability of insurance firms in Ghana.

1.5 Research questions

    i. Can large number of number of complaints as a result of claims management have negative impact on the insurer's profit?

    ii. Is the basis for rejection of claims a deliberate strategy to control insurer liquidity?

1.6 Method adopted

In order to accomplish the objectives and finding solutions to the questions asked in this research, a quantitative research method approach will be adopted for this study. The research method adopted comprises of purposive assessment of financial

statements from the selected insurance companies in Ghana and NIC annual reports on their complaints and financial indicators. The selection was done for a targeted population consists of twelve (12) insurance companies which deal in non-life operations. The total number of insurance companies for this study is twelve and also seven (7) years observations were made. Hence twelve by seven, gives eighty-four (84) total observations are included.

1.7 Limitation and scope

Although there are two main popular insurance operations in the country namely life and non-life. This study basically centers solely on the impact that number of complaints could impose on non-life insurance operations profitability in Ghana. In the process of the researcher trying to ascertain the scope of this study, the horizon of the study confined merely on measurement of number of complaints on non-life operations profitability, quantitatively in Ghana without specific overall performance instrument for measurement. Including effects of customer switching on profitability would be valuable in this work. The scope of this work is small due to problem of constraints on the researcher, this calls for limitation on the work.

1.8 The expected outcome and significance of the study

The study is being carried out because researchers have not given needed consideration to this subject in Ghana. The research so far conducted about profitability in Ghanaian firms previously by Boadi, Antwi and Lartey (2013) focused on the composite form of insurance operations. The work also used only financial performance indicator variables without any non-financial data that can affect future

profit of insurers. Therefore, number of complaints and its impact on the non-life insurance operations profitability in Ghana will be achieved by empirical evidence and the same time investigate the NIC indicators on insurers' profit.

The results of the study will further help many entities:

Insurers: insurer interested in the financial impact that complaints on their firms' profits and ensuring relevant actions to improve the claims management performance and make non-conflicting decisions during claims.

NIC: Regulator interested in knowing extent of complaints on the insurance companies' financial performance and also those who are managing complaints positively or negatively. This will help the regulator to take solid measures to curb down crises of insolvency in those firms managing claims poorly.

Customers: interested customers will know the abilities of insurance companies about claims payment, based on the impact of complaints on the companies' profit.

This research work will have important role to play in throwing enough light on how to better understand the low patronage of insurance and low penetration of insurance in Ghana. The insurance industry in Ghana, which is made up of the regulator (NIC), the insurers and the customers, this study gives insightful position in providing a greater platform for decision. For further research in this area, this research will help potential researchers to carry on their future work successfully.

1.9 Structure of the study

The rest of this paper is structured as follows: Chapter two will mainly focus on the previous studies by looking at issues with claims complaints and profitability, the

factors that affect profitability in insurance companies so as to review appropriate literature. Chapter three looks at research design, development of methodology and hypotheses. The chapter four presents analysis, findings and results and the chapter five presents summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This part of the work will explore the related and the relevant studies conducted earlier in this area.

It will actually focus on previously researched studies about the profitability, customer complaints, customers' satisfaction and effects of complaints on firms' finances. Literature was retrieved from journals, web articles, books, news reports and other sources considered to be credible.

2.2 Challenges in insurance industry in Ghana

Aggressive marketing and sales are often associated with high profit in every business operation. This means that marketing and sales are very important aspect in business. It is proven and tested by modern researchers that good customer service has a more lasting effect on profitability of business.

Ghanaian insurance industry has grown in the following aspects, annual premiums increment from customers and also increase in number of insurance firms. As of the year 2016 there were twenty-eight non-life insurance operators register in Ghana, the list at Appendix B. With more and more people being exposed to different insurance firms/products and various customer treatments. Modern customers are very conscious of their rights and will always request for quality service.

Despite this growth in the insurance industry, there is problem of very low insurance penetration in the country. The total insurance premiums contribution to Gross Domestic Product (GDP) is often used to measure insurance penetration in a country.

According to NIC (2015 & 2016) annual reports, the current penetration rate is between 1-2%, so efforts to increase the rate are being made through encouragement and development of micro-insurance and enforcement of compulsory insurance in the country.

This low penetration of insurance in the country is parallel with high rate of claims complaints against insurers in the industry. These complaints are mainly due to improper management of claims related issues.

Tseng (2017) stated that managing claims poorly may have negative effects on insurers' finance and also disturb the adjustment of premiums in the future. This means that claims must be managed well to keep the firm in a profitable business always. Also, customers should be treated well during claims period in order to maintain them to avoid reduction in future premiums.

According to Rao and Pandey (2013), the claims conduct of non-life insurers must be investigated due to high rate of complaints in that sector, in order to curtail poor operational performance. This means that causes of operational losses must be known.

According to Seth (2008), insurers must be very careful when rejecting a claim under policy because legal implications and cost are attached to claims repudiation.

The insurers that improve fair treatment of claims will enhance the demands for their insurance products and thus increase long-term profitability (Yusuf, 2010). Therefore, treatment of customers can be measured through insurance claims ratio.

The international acceptable standard for insurance claims ratio ranges between 60-80 percent of all expenses in the retail sector. The ratio for claims incurred is computed as a net amount of claims incurred divided by net amount of premiums earned. This ratio serves as an indicator of fair treatment of customers through payments of claims. The ratio is also serving as a bench mark for how much policyholders received in return for each Cedi of premium paid for insurance cover. The annual average claims ratios for insurance industry in Ghana for seven years ranges between 28% - 46%. When the ratio is below the range 60% - 80% is not good for the international acceptable standard (NIC annual reports). For more Ghanaians to be interested and confidence in the insurance sector the ratio must be improve drastically. This is because one of the main business of insurers is claims settlement. This low ratio value is contemporaneous with high customers' complaints reported to the national regulator concerning claims.

Akotey and Abor (2013) posit that large number of complaints made against insurers by customers to the national regulator during claims settlement, may have a great consequence for the industry.

According to *COMPLAINTS AND SETTLEMENTS BUREAU (CSB)* section of NIC annual reports, mostly customers' complaints are in the following areas with respect to the non-life sector of the industry;

i.   Insurers repudiating of claims,

ii.   Settlement of claims delay,

iii.   Dispute over quantum and

iv.   Delayed payment of settled claims.

Denying customers benefits frequently and paying claims below international requirement generates possible negative opinion in the general public domain about insurance operations in Ghana.

Customers' Complaints concerning non-life insurance claims is thrice that of life insurance claims. According to Rao and Pandey (2013), such attitude of general insurers regarding claims warrant an investigation to curtail operational losses and ensure operational excellence.

These complaints are due to poor claims management. This management problem may have negative effects on both insurance companies' finance and future premiums (Tseng, 2017). Adjusting the future premiums may also have effect on the solvency of the insurer as a result of supply and demand principles of insurance products in the market.

The challenge confronting the insurance industry in Ghana is lack of sufficient personnel with requisite risk management skills in the insurance sector to manage risk proactive (Akotey & Abor, 2013). This means that most of their risk like customer claims complaints are dealt with by reactive response through regulatory directives.

2.3 The complaints and settlement bureau procedure

The insurers whom complaints are made against, were officially informed in writing. The nature of the complaints will provide direction for resolution, by requesting to respond, or meeting with the complainant(s) and NIC officers.

The aim of the Bureau is to receive the necessary co-operation from insurers and petitioners in order to solve the dispute.

2.3.1 Customers' complaints

An expression of dissatisfaction by customer about the service standard, actions or lack of action by an organization to an individual is term as complaints (Mensah, 2016). Tronvoll (2012) posits that it brings about negative communication to service or products by individuals in the market.

How customers' grievances are managed by companies can creates a danger to the business operations in the long term (Robert-Lombard, 2011). Complaints handled nicely increases customer satisfactions and customer loyalty may create new opportunities for growth, while handling it badly brings about customer dissatisfaction which might lead to bad reputation the company.

One of the fundamental maintenances of profit and long-term sustainability of the company can be achieved through proper claims management in the insurance industry which leads to customer satisfaction, policy renewal and customer retention (Yusuf & Dansu, 2014). Since the year 2010, the NIC has consistently reported that a proper claims management system will be made up of the following, review of the claims performance, monitoring of claims expenses, legal costs, settlement costs, compromises and future payments plans and minimising the delays and disputes surrounding claims payment. Clearly this means that claims of insurance firms in Ghana are not managing well per the annual complaints' reports

The claims management plays an important role in differentiating a company from its competitors. It must monitor claims costs and gives claims services beyond the customers expectation but also at the same time operating without exceeding budget.

The actual integrity and honesty of an insurance company is at test when claims arise. According to Kishan (2006), true nature of insurer is brought to light when claims matters emerge.

This means that to uphold the actual image of insurance industry in Ghana effective claims management system must be enforce to promote competitions among insurance firms to ensure operational excellence. This mean that operational excellence in business operations cannot be compromise at all, because the public judgment of each insurer is based on it. Insurance claims management which is one of the measures of operational excellence has been a bigger challenge in the industry. When claims occur, most often there are a lot of disagreements between the parties involved (insurer and insured). According to Boadi et al. (2013), the disagreements during claims section is due to the improper understanding of insurance policy by the insured.

The insured misapprehension of insurance policies may be due to little knowledge about insurance in Ghana. The insurance policy is made up of legal complexity which in effective brings about misunderstanding and litigation during claims. Also, customers lack knowledge in finance in order to evaluate insurance policy's cost properly. Most often in Ghana the disagreements are on the following aspects;

    i.   Repudiation of claim by Insurers;

    ii.   Delay in settlement of claims;

    iii.   Dispute over quantum and

    iv.   Delay in payment of settled claims. (NIC)

The above cases are sometimes used to cheat the insured deliberately to deny him/her claims payment. According to Caron and Dionne (1999) and Lustig (2011), some

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insurers intentionally delayed the payment of claims as if it is a fraud, in order to take the direct compensation. Seth (2008) gave a caveat that, insurers must be thoughtful when rejecting a policy liability, because claims repudiating is associated with legal implications and cost.

Any insurance claims must not be excluded when it falls within the coverage but rather should be paid and paid in full (Oza, 2008) because of the mutual nature of the insurance contracts. These mean that any denial of customers' claims might result in a dispute among the parties. This could leave a customer(s) in a dissatisfied condition, which will definitely let the customer complain either to friends or the industry regulator.

According to Yusuf and Dansu (2014), a good claims management must be "proactive in recognizing and paying legitimate claims, assessing accurately the reserve associated with each claim, reporting regularly, minimizing unnecessary costs, avoiding protracted legal dispute, dealing with claimants courteously and, wherever possible, handling claims expeditiously" .

These complaints against insurers by insureds are mostly been managed through regulatory compliance (reactive approach) instead of managing at the insurers office level (proactive) in Ghana. According to Akotey and Abor (2013), risk management through reactive can affects the growth in the insurance industry in terms of market share and hence adverse effect on profitability. Therefore, Ghanaian insurance firms should approach risk management strategically by using proactive method especially when dealing with claims.

The proactive nature of claims management must basically focus on ensuring the client's satisfaction. So that claims disputes that occur between insurer and claimant

during claims settlement instances could be resolve amicably in order to ensure customer loyalty.

The systematic way of problems handling of customers' complaints by companies in customer relations is known as complaint management (Jeschke, Jaccard & Bond, 2000). Researchers found that dissatisfied customers would make complaints at the service (Ro, 2014; Ro & Wong, 2012). The expectations of customers about services rendering may not always be at par with the services they received because customers' complaints are inevitable. Moreover, companies' reputation could be impacted negatively through customer complaints (Ro, 2014).

Other studies previously indicate that companies and employees' reputations have negative relationship with customer complaints (Brewer, 2007; Davidow, 2003). Komunda and Oserankhoe (2012) acknowledge that customer complaints should be taken seriously because the dissatisfied customers can make switch to another firm/service or make complaints to the official authority.

The fact that customer complaints are very likely to affect the reputation of companies and employees adversely, attitudes of the employees could be affected by their perceptions of customer complaints. Since customer complaints are threats to the insurance companies, and can ruin the insurance companies' reputations and profitability, must therefore be given a serious attention in this era of technological advancement. Following Lovelock and Wirtz (2004) more investment should go into complaints handling efforts which will help to retain customers and protect long-term stream of profit.

In insurance number of customers is very paramount because when the number of people in the portfolio is large the expected losses become less, so any act like

customer complaints that will influence the number of customers must be considered serious.

2.4 Profitability

In general, market business activities are between buyers and sellers. The insurance market is beyond the usual norm because it has three major actors: Sellers (insurers, their agents and brokers); Buyers (individuals and businesses); and Regulators. Regulation made may have effects on both insurance buyers and sellers in a way. In other words, the activities in the market are governed by the regulations of the regulator.

This structure in the insurance market brings about competition among companies, thereby each firm trying to maintain existing insureds and acquiring new members in order to increase its market share. Sometimes there is competition among insurance agents and brokers, they also compete directly with insurers for business. Thus the insurance market is highly competitive, losing a customer can cost insurers greatly in the near future.

Literature states that it is very costly to acquire new clients than to keep old ones. This means that to remain profitable you need to be in good relation with your customers always. According to Yu and Tung (2013), life insurers create customer loyalty and in order to increase their profitability. There are so many arguments in the service quality literature with a lot of assumptions made about how quality service can leads to profitability. Furtherance to these assumptions, Storbacka, Strandvik and Grönroos (1994) suggests that empirical research should be conducted in order to substantiate the assumptions.

The most integral part of the market is regulation supervised by the national regulator.

For insurance companies to remain in active business in the market always, they must have competitive advantage as a common weapon among themselves and also play according to the rules of the market (regulations). The survivor of every business entity is based on profit that it makes in the market space. So, the regulator from time to time measures the solvency level of the companies making sure that they remain in a profitable business.

The greatest thing insurance companies should know is that going forward in this era of technological advancement, their existence is anchored on how the customers' complaints are managed, because a dissatisfied client could be bad publicity for the company.

However, customer complaints may serve as a double-edge sword: on the one hand there is a favorable opportunity to regain customers through proper handling; on the other hand, a poor handling procedure can alienate customers forever.

The initial finances of every insurance company depend on the premium taking from the customers during underwriting in the market, this means that reduction in customer base would have adverse effect on the profit of the insurance company. Every insurance firm with large number of people in its insurance pool will certainly make profit because expected claims always is less. This is due to the principle of large numbers.

The insurers' profits is firstly determined by their performance in underwriting and secondly from investment output, which is proceeds from asset allocation and asset

management (Swiss, 2008). This means that source of underwriting should be well managed by fair treatment of customers.

Profit in general is the difference between gross income earned and the total expenses related to earning the income. This is one of the main reasons for operating business and it also helps to keep business in existence. Furthermore, it is expected to meet the required return by owners and all stockholders.

In furtherance, profitability means that activities of an organization been able to generate excess profit into the enterprise. It also tells how management competently use all the resources available in the firm to compete actively in the market to make profit. According to Kaguri (2013), profitability is the return earned on an investment in the market. Efficiency of a firm is often proxy by profitability, which is regarded as a measure of management efficiency. Sometimes it is used as an indicator for operational excellence in an industry.

Profitability is a variable use to represents owner`s wealth in financial management (Malik, 2011). This means that owners' wealth should be maximized all the time.

All firms' shareholders are particular about profitability, which depict a sign of performance/excellence in the industry.

The profitability of every company brings about public confident about the company and the industry within which it operates.

According to Gebremariyam (2014), profitability of insurance firms could be influenced by both external and internal factors. This means internal factors can determine the strength weakness of the insurer's specific characteristic, whilst the external factors concerned with the opportunities and threats (for example,

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complaints) in the external environment. However, profitability in most literatures, with regard to insurance companies is often expressed in as a function of internal variables (Gebremariyam, 2014).

The internal variables were used for profitability by Boadi et al. (2013) in Ghana are growth, liquidity, leverage, tangibility, size and risk.

According to Kasturi (2006), insurance company financial performance is normally expressed in net earned premium, profitability from underwriting activities, annual turnover, return on investment and return on equity. These measures can be classified as profit performance measures and investment performance measures.

This means that finances of insurance companies mainly depend on the premium and investment income, this presupposes that reduction in customer base would have adverse effect on the business operations of the companies and the industry.

According to scholars every insurer must charge the premium that is just sufficient to fund its expected costs and provide insurance company owners with a fair return on their invested capital. This premium is known as fair premium (Harrington & Niehaus, 2006) and it is up of expected claim costs; investments income that can be earned on premiums prior to payment of claims and administrative costs; administrative costs; and the fair profit loading.

In general, insurers' profits are mainly anchored on premiums from the insured. This means that anything that will cause change in customer base will have negative impact on the company's profit. Therefore, customer claims complaints which can affect the portfolio number must be manage with care to avoid impact on the premium.

An increase in customer retention by 5 per cent will give arise of profits from 25 to 100 per cent (Fredericks & Salter, 1995). This means that there is a greater need to handle customers' complaints proactively to maintain their loyalty always, hence getting their lasting effects on profitability.

All firms are particular about profitability, which depict a sign of performance in an industry in which it confined within.

Claims management may have effect on future premiums (Tseng, 2017). This effect could be contraction or expansion in premium growth. When customers patronize the insurance product it brings about expansion whilst contraction is as a result of non-patronizing of insurance policies. Contraction in premium may be as result of dissatisfaction of aggrieved customers responding to the product in the market. The poor management of claims may lead to customer complaints, according to Rao and Pandey (2013) complaints bring about losses to insurance operations and Akotey and Abor (2013) posits that complaints is very bad for the insurance industry in Ghana. In Ghana customer complaints against non-life insurers have been on four main issues, among them is Claims rejection by insurance companies. According to Seth (2008), claims rejection come with its own cost. The cost comes as a result of legalities according to Seth, but there are more costs that associate with rejection of claims among these is reduction in insurance policyholders in the company thereby reducing premium inflows into the firm. Another cost is spending money on acquiring new customers, to minimise this cost customer loyalty should be the main objective of every insurer in this 21st Century. The loyalty could be achieved through proper payment of claims to customers, according to Yusuf (2010) fair treatment of customers during claims brings about customer satisfaction which often leads to long-

term profitability. In the same vein bad treatment meted out to customers during claims could create problem about long-term profitability.

The above authors make it clear that there are issues with insurance claims. One of the issues discussed by most of them is customer complaints. They realized that it has effect on the insurers' operations, which is a fact but how this impact on the operations of the insurance companies quantitatively have never been discussed by these researchers. Another defect with their work was that the variables which were used by these authors especially premium, profitability and claims incurred were not having any model relation with complaints.

The researcher through literature review realized that customer complaints may implicit/explicit impact on insurance companies' profitability. This work therefore seeks to bring the relationship between the variables and the impact of the customer claims complaints on profitability of non-life insurance operations in Ghana.

The number of customer complaints is being added in order to ascertain the risk associated with poor management of customers' grievances during claims period.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The chapter three will detail the research method used in execution of the work. This includes approach to the research design, population, sample and sampling techniques and techniques for data analysis for the study.

This also examines former findings in literature and applies the results in current practical settings of the non-life insurance companies in Ghana. The chapter also provides the set of stages and techniques used to conduct the analysis of impact of complaints on non-life insurance profitability in Ghana. It also uses the adopted approach to inspect financial indicators effect on profitability. The objectives of the paper can achieve via the research method been carrying out and availability of relevant information.

This work is basically based on quantitative research survey which will help to obtain objectives of this research. An econometric model to identify and measure the impact of complaints on insurance companies' profitability was constructed based on existing ones in literature. The panel regression analysis was adopted to measure the impact of complaints on profitability by using STATA 2014 software.

3.2 Research approach

In business and Social researches there two popular approaches used by researchers: deductive and inductive. The former is on creation of theory on the basis of the available literature, as well as existing findings and test it through observation. The later where observation was made, then devise theory as a result of the data analysis.

The previous findings in the literature were examined and apply to the model in non-life insurance companies. Therefore, deductive research method used by the researcher in order to achieve the objective.

3.3 Research method

The method used to carry out this research was used because of the objectives of the paper and the availability of relevant information. To achieve the objective of this research, the paper used quantitative research, which constructed an econometric model to identify and measure the Impact of number of complaints and NIC financial indicators on profitability. The Panel regression is adopted to measure the effect of these variables on profitability. The use of multiple regression brings the relationships between the multiple numbers of independent and dependent variables found across the model. The consequence of using multiple regressions is that the impact of the independent variables on dependent variables can be done at the same time. It also gives the associative relationships between variables in terms of the relative importance of the independent variables and predicted values of the dependent variables.

To determine other factors which could potentially and clearly have impact on profitability of insurance companies in Ghana was done through literature search. The thorough searched of former studies and NIC reports, liquidity, leverage, growth, claims incurred and investment yield were often selected as explanatory variables for the model, for the purpose of this work number of complaints was included in the model to determine its impact on profitability. The interactions among these variables selected will be examine by using of the model.

3.4 Data and data sources

Data is a collection of raw facts. Data source is a place where data is collected from, this source could either be a primary or secondary source. The data from secondary source can be group into internal and external data. The internal data are the ones retrieved within an organization whilst external data consist of secondary data acquired from outside an organization.

This work made use of secondary data because of data availability and data reliability. The secondary data were obtained from National Insurance Commission (NIC) of Ghana. The data about annual financial reports of individual insurance companies and report of annual complaints were applied to realize the research objectives. The advantage of using secondary data is the higher quality data compared with primary data collected by researchers themselves (Li, 2007). The permanence and viability of the data make secondary data more open to public scrutiny. This gives more enhancement to the reliability of the data.

The principal source of the secondary data for this paper are individual insurance companies' annual reports obtained from NIC, which gives complete database insurance companies in Ghana.

The data on twelve (12) insurance companies in Ghana operating over the last seven (7) years were collected and analyzed using balanced panel. The name of selected companies and the graph of number of complaints against them can be found in appendix A. The Panel data was selected by the researcher in order to meet the research objectives. The panel can address a whole range of issues and tackle more complex problems than would be possible with pure time-series or pure cross-

sectional data alone. Secondly, it is able to examine how variables, or the relationships between them change dynamically (over time).

The popularity of longitudinal data analysis using Panel data is increasing among social and behavioral science researchers (Li, 2007). Since this study is being done among several insurance companies on one particular issue, periodically observed over a defined time frame then Panel data analysis is the best. With repeated observations of enough cross-sections, panel analysis permits the researcher to study the dynamics of change with short time series.

3.5 Sampling mechanism

The sampling is the process of choosing from a universal set a subset of data to enable the researcher to complete study, after which the outcomes of the research can be used for generalization.

According to Creswell (2009), sampling is the selection of subgroups from statistical populations to enable estimation of characteristics for the whole population.

Sampling from population can be done in two main ways; first and foremost, the unbiased type where each population elements has an equally likelihood chance of being part of the sample (Probability method) and secondly the biased type elements of the population are chosen in a non-random way (purposive/non-probability). Purposive sampling helps researchers to select elements of a population that are perceived by the researcher to possess desirable qualities and knowledge vital to the achievement of the study.

According to Yin (2005), researchers can select subjects in sampling technique for accessibility and proximity convenient.

The purposive sampling was employed so that the research objectives and research questions purpose were achieved. All insurance companies in existence and transacting non-life business from the period 2010 to 2016. Twelve (12) insurance companies which have been operating for seven years were selected from the NIC registered insurance companies and the remaining companies were excluded. The seven years was used due to data availability on non-life insurance in Ghana. The study sampling included all insurers who have more official complaints against them with respect to the years under review. Seven years period is presumed to be applicable to this work, because at least five years is mostly used in literatures in line with finance.

3.6 Analysis of data

Analysis of data in this section basically is on descriptive statistics and panel regression correlation matrix. This means that, this part of the work focuses on descriptive of variables analysis and the relationship between variables. It will also discuss the correlation between variables in the model. The outcome of the various analysis will establish the main findings of the study.

3.6.1 Descriptive statistics analysis

The analysis of all variables in the sample are achieved through descriptive statistics. In this section, the central tendency (mean) which will help to determine the average complaints against a company, the dispersion (standard deviation) and minimum and

maximum which will also help in determination of variations in the data for the period 2010 to 2016 were generated for the study.

3.6.2 The correlation analysis

This section will show the level of association among variables used in the model. The analysis will tell the extent of relation, important of the correlation of the selected variables in respect of the research.

3.6.3 Analysis of panel regression

The analysis in this section will discover relationship among dependent and independent variables in the model. There will be examination of relationship between non-life insurance companies' profitability in Ghana and explanatory variables such as number of complaints, leverage, liquidity, growth, claims incurred, investment yield and previous year profitability of the companies. The above enumerated variables were calculated as ratio to control the disparities created by size of data.

The panel regression outcome gives an equality, which symbolizes the estimation of a variable (profitability) from a number of independent variables (number of complaints, leverage, liquidity, growth, claims incurred, investment yield and previous year profitability of the companies). The robust panel regression analysis can be fixed effect or random effect model. The fixed effects regression model is used when a researcher want to control for omitted variables that differ between cases but are constant over time. The changes in the variables help for estimation of the effects of the independent variables on dependent variable. Otherwise random effect estimation model is used when researchers want to control for variables omission that change over time but are constant between cases. It uses the variation among cases to

estimate the effect of the omission independent variables on dependent variable. The model to be use in this research will be determined by the help of Hausman test.

3.7 Empirical model design

The literature discussed so far come to the conclusion that the appropriate functional form for testing is a linear relation though there are conflicting views by researchers. Swiss (2008) acknowledges that model specification tests are conducted on results that support linear functions. The panel data regression model will be used for identification of relationship between the non-life insurance profitability and number of complaints, leverage, growth, liquidity, claims and investment yield. The dependent variable (profitability) and the seven independent variables (number of complaints, leverage, investment yield, claims, growth, liquidity and previous profitability) will be analysed.

The general norm for model to be accepted and used in research work must go through Hausman's test. The model that will give better *p*-values and also is statistically significant is most efficient estimator. Based on Hausman test result the fixed effect panel regression model is the best estimator. The Hausman test the null hypothesis that the coefficients estimated by the efficient random effects estimator are the same as the ones estimated by the consistent fixed effect estimator. If *p*-value of Chi-Square is greater than 0.05 then random effects model is used and if otherwise fixed effect model.

The general linear panel model below will be use to estimate, the parameters:

$$ROA_{it} = \alpha_i + \beta'X_{it} + \lambda_t + \varepsilon_{it} \qquad \text{(3.1)}$$

α_i is individual-specific, time-invariant effects which are fixed over time, whereas λ_t is a time-varying random component

ROA_{it} denotes return on assets (profitability) of individual insurance companies (i) for time t; β' is the coefficient of X_{it}, X_{it} denotes insurance specific variables with respect to time t, ε_{it} is the disturbance term.

Inserting the explanatory variables (number of complaints, leverage, investment yield, claims, growth, liquidity and previous profitability) into the above model will help to examining the interaction between the variables. The findings will determine whether number of complaints is more significant in relation to profitability of insurance companies and its corresponding to the evidence in existed literatures.

3.8 Choosing of variables and measurement

The work is empirical thus attempts to examine the impact of number of complaints and at the time test implicit effects of NIC financial indicators on profits of insurance companies' measurement of profitability. According to literature, complaints by customers are threats which can ruin reputations and profitability of insurance companies. According to Al-Shami (2008), profitability is important in measuring of firm's performance. Profitability serves as indicator for firm's ability to use company's assets and investment funds to generate extra income.

This research concentrates on non-life insurance profitability in Ghana based on impact of customers' complaints. However, seven characteristics are used as determinants of impact. Searched through previous studies, shown that ratio is used to measure leverage, liquidity, investment and profitability, this implies that every variable in the model must be in the form of ratio. Malik (2011), Al-Shami (2008) and Ahmed, Zulfgar and Usman (2011) used ratio in measuring insurance company's financial performance. The using of ratio index in measuring of performance is of principal benefits, because it greatest compensates disparities created by size (Li, 2007).

In conformity with previous studies that examined the profitability factors of insurance companies, where financial ratios were used as a measurement for variables. In specific, the dependent variable (profitability) is proxy by ROA ratio. Reviewing literatures suggest that the following explanatory variables (leverage, investment yield, claims, growth, liquidity and previous profitability) exert strong impact on profitability. Therefore, the above variables were combined with number of complaints in the adopted model to investigate the impact on the insurer profitability.

The details of variables to be used for the work are as follows:

3.8.1 Profitability

Profitability can be measured in many different ways according to previous studies. This variable is often measured by using financial ratio of net income to total assets is use as measurement of profitability (ROA). According to NIC, the ROA ratio is use as index for the insurer general profitability. The utilization of assets of the company by management to generate returns for the stakeholders is often measured by this ratio, sometime uses measurement for efficiency. This ratio was used because of the short-

term nature of non-life insurance contract, because the net income does not depend on equity returns.

3.8.2 Leverage

The financing of a company's assets can be done in many ways, the most popular one is by debt method. Financing with low debt than equity is considered to be lowly leveraged. The total debt to total equity value of the company measured the level of leverage. If the ratio is more than one then the company is geared towards debt. In this work leverage would be proxy by Net insurance risk. The net insurance risk gives the ability or capacity of the insurer's capital and surplus to absorb unforeseen shocks. It is simply computed as a ratio of net written premium earned to equity, because the premiums in insurers' books is debt.

H_1: *A negative relationship exists between leverage and profitability for Ghanaian non-life insurance companies.*

3.8.3 Growth

The percentage change in size in company's total assets over a period is term as growth. The total assets approach of measuring of growth mostly creates disparities in data because the companies were not established at the same time, because of this the premiums generated by the company's assets is used to measure growth. The growth is represented by change in net earned premiums in this work. The growth could be in a form of expansion or contraction in the company's current net premiums compares with the previous year's net premiums. The suggested relationship between growth and profitability;

H_2: *The growth and profitability of non-life insurance have a positive relationship in Ghana.*

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3.8.4 Liquidity

The payment of future obligations such as operating expenditures and losses/benefits can be determine through total assets to total liabilities (in their current form). This work will make use of technical reserve in place of the usual ratio current assets to current liabilities. It is an indicator of whether sufficient liquid assets are being held to cover the technical provisions, as claims should be paid as and when they fall due.

To paid claims when they fall due, there must be sufficient liquid assets held to cover the technical provisions. Liquidity is used as an indicator for claims payment.

H_3: *The liquidity and non-life insurance companies' profitability relationship is negative.*

3.8.5 Investment yield

This calculates the rate of excess amount made on the company's investments. It is calculated by dividing the income from the investments by the initial total investments. It is often used as a mark for company's investment portfolio in terms of quality. It was measured as ratio in order to deal with the disparities that might occur in the data.

An investment will yield a reasonably good return when there is less risk associated with it.

H_4: *There exists positive linear relation among investment yield and non-life insurance companies' profitability in Ghana.*

3.8.6 Claims incurred

The underwriting efficiency is measured by the ratio which is the percentage of claims incurred to Gross Premiums. The lower the ratio means better the underwriting

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efficiency. When policyholders are not benefiting enough from the premiums they pay claims ratio becomes very low.

H_5: *Claims incurred and profitability of non-life insurance companies in Ghana are connected negatively.*

3.8.7 Number of complaints

The number of complaints received by complaints and settlement bureau unit of NIC from the public against some Insurance Companies. In the model it was measured as a ratio of number of complaints against a company in a year to the total number of complaints against all non-life insurance companies in Ghana per year. The ratio helped to deal will extreme outliers in the number of complaints which might cause a distortion in the result of this work. The proposed expected relation between complaints and profitability is stated below.

H_6: *The relationship among number of complaints and profitability of non-life insurance companies is negative in Ghana.*

In conclusion the above variables were chosen and measured according to Ghana's National Insurance Commission way of measuring of financial ratios. The variables used in this work with the exception of complaints, all were often use as financial indicators in determining the solvency of insurance firms in Ghana. The number of complaints against non-life insurance firms will be combined with the above well-known variables to determine the impact of the profitability of the firms with the help of the Robust Panel Regression Model.

Most often the profit of every firm could have an effect on the subsequent year, because of this a dynamic model will be used in this work.

A dynamic model specification with each year previous profitability of dependent variable was used so that persistency of profit can be captured along with time.

According to Brooks (2008), lag values of variables often capture the dynamic structure in the dependent variable that might be as a result of a number of factors such as inertia of the dependent variable and overreactions. This yields the following dynamic model specification:

$$ROA_{i,t} = \alpha_i + \gamma ROA_{i,t-1} + \beta' X_{it} + \lambda_t + \varepsilon_{it} \qquad \textbf{(3.2)}$$

where $ROA_{i,t-1}$ is profitability lagged for a period and γ measures the mean reversion speed. The range for the speed is between 0 and 1 which shows persistency of profits. Specifically, values close to zero denote a high speed of adjustment and imply relatively competitive market structure, while a value closer to 1 implies slower mean reversion, and therefore, less competitive markets (Ayele, 2012). This means that all things been equal average of current profit to that of previous profit should be close to each other and also move in the same direction. When the value of the mean reversion is closer to zero then the current profit is far less than the previous profit, also when closer to one then the current profit and the previous profit are almost at par.

Substituting all the explanatory variables into model (3.2) stated above, the expanded equation is as follows:

$$ROA_{it} = \alpha_i + \gamma ROA_{it-1} + \beta_1 Comp_{it} + \beta_2 Cla_{it} + \beta_3 \, INY_{it} + \beta_4 Lev_{it} +$$
$$\beta_5 GRP_{it} + \beta_6 LQD_{it} + \lambda_t + \varepsilon_{it} \qquad \textbf{(3.3)}$$

The meaning of variables in the model are as follows:

1. $ROA_{i,t}$ is individual insurance company profitability at time t. The return on assets (ROA) is used to measure profitability and is the ratio of net profit to total assets. My justification of using ROA as proxy for non-life profitability of insurance companies is because of it risk capturing ability which return on equity (ROE) disregards for financial leverage and risks (claims and complaints). Furthermore, short term nature associated with non-life contracts makes it more feasible using ROA for measurement of insurance companies' profitability. Since profits are generated over the years unlike the stock of total assets. This ratio was measured as yearly average, with the average value of assets of consecutive years as a denominator.

2. α_i is individual-specific, time-invariant effects which are fixed over time

3. *Comp*: the variable complaints against company was measured as ratio of number of complaints in each year against a firm to the total number of complaints per year (from 2010-2016).

4. *Cla*: Claims ratio is calculated as the net claims incurred divided by the Net Earned Premiums.

5. *Lev*: is leverage ratio and for this variable the proxy is the ratio of net premium to equity value of the company.

6. *INY*: Investment yield ratio gives a reasonable indication of the return of the investment portfolio. It is calculated by dividing the investment income by the total investments.

7. *GRP*: Growth is simply the change in size of the company. This ratio measures growth or contraction in the company's net premium over the previous year.

8. *LQD*: Liquidity (Current assets divided by current liabilities). It is an indicator of whether sufficient liquid assets are being held to cover the technical provisions, as claims should be able to be paid as and when they fall due.

9. $\gamma, \beta_1, \beta_2, \ldots, \beta_6$: coefficients of independent variables

10. ε_{it}: disturbance term.

11. i is specific insurance company (i = 1, 2, 3, …, 12).

How profitability is expected to relate with number of complaints, growth, leverage ratio, liquidity ratio, investment yields and claims incurred has been stated before running of the panel regression.

The significance of the hypotheses made during the variable discussion will be tested empirically with regard to the panel model.

The summary of expected result of the hypotheses stated on each independent variable is depicted as below:

Table 3.1: Expected outcome of Hypotheses

Independent variables	Dependent ROA
ROA_{it-1}	+
COMP	-
GPR	+
CLA	-
INY	+
LEV	-
LQD	-

The summary of this chapter gives the approach adopted to find the impact of number of complaints and other NIC financial performance indicators on profitability, data

type used and the data collection techniques employed, the sampling mechanism sample (size, the methods utilized to manage and analyse the data) and empirical model construction with identification and selection of variables, measurement of variables and predictable association between the variables (dependent and independent).

CHAPTER FOUR

EMPIRICAL RESULTS

4.1 Analysis and findings

This section of the work presents the results from the empirical test based on robust panel regression for testing the results of the analysis for twelve (12) non-life insurance selected in Ghana from 2010 to 2016. The study is to find the relationship between dependent variable profitability and independent variables (complaints against insurance companies, claims incurred, investment yield, leverage ratio, growth rate and liquidity ratio). Therefore, the issue stated above will be achieved through the data analysis results and its interpretation. This chapter will be divided to five sections. The first section gives descriptive statistical analysis of variables used in the study; second part provides analysis throughout; the third section discusses the analysis of correlation matrix for dependent and independent variables followed by testing of hypotheses in the fourth section; the fifth section lays down the panel regression results analysis which establish the main findings of this study and presents model application and eventually the chapter summary.

4.2 Descriptive statistics analysis

This part of the study presents analysis of all variables used in the model for the work, that empirical results from the descriptive analysis. The attributes of the variables used in the model are presented vividly in this section of the work. The outputs of the descriptive analysis can be found in table 4.1.

Table 4.1 below gives a total number of eighty-four (84) valid observations for all variable except ROA_{it-1} and CLA with 72 and 82 observations respectively which is due to lack of data

Table 4.1: Descriptive statistics

Variable	Obs.	Mean (%)	Std. Dev. (%)	Min (%)	Max (%)
ROA	84.000	4.738	12.203	-44.000	73.000
ROA_{it-1}	72.000	4.014	12.918	-44.000	73.000
COMP	84.000	6.933	7.577	0.000	35.176
GPR	84.000	26.798	24.400	-34.000	114.000
CLA	84.000	37.134	15.217	12.000	85.000
INY	84.000	14.417	16.299	3.000	151.000
LEV	84.000	130.226	69.184	-184.000	297.000
LQD	84.000	126.655	87.233	24.000	518.000

Source: NIC

The table 4.1 above depicts descriptive statistics for the number of complaints and the rest of the independent variables and non-life insurance companies' profitability (ROA) in Ghana.

The descriptive statistics about the variables are in terms of mean, standard deviation, minimum and maximum. From the table 4.1 average previous profitability as measured by ROA_{it-1} is 4.014% with a standard deviation of 12.920% which shows how volatile the non-life insurance companies' profitability are across each other. The average profit obtained for the insurers in the previous year was 4.014% meaning a firm can make profit above or below the average value. From the standard deviation value most firms would not be able to achieve the average value due to high volatility around it.

On average, the companies earned 4.738% annually as ROA with standard deviation of 12.200% as indicated in the table. The profitability of companies was very volatile which implies that, while other companies made abnormal or high profits, other companies recorded very low ROA because the maximum is 73.000 and the minimum is -44.000 from table 4.1. The mean value for complaint (COMP) was 6.933. On the average, companies recorded approximately 7% of the total complaints made against non-life insurers. The standard deviation of 7.577% indicates wide variations in the average complaints. As the table indicates, some companies did not record any complaints in some years at all because the minimum for number of complaints is 0.000, while others recorded as high as 35.176% of the total complaints made. Therefore, the high complaint among twelve (12) insurance companies could have great impact on non-life insurance companies' profitability, the regression results will determine the level of impact.

The value of mean for leverage is 130.226%, with standard deviation of 69.184%. This showed that the average debt incurred by insurers for financing their activities was a little over 130% relative to the total asset or ownership of the companies. This means that a shareholder in non-life insurance may owe above or below GHC 130 per share when the company is liquidated. The premium being a source of income and debt to insurers may be with high deviation looking at the standard deviation of 69.184% for leverage. The maximum of debt to equity recorded by an insurer was 297%. The values give indications that leverage in non-life comes with high uncertainty.

From table 4.1 above, the value of mean for premium growth is 26.798%, which indicates annual premium increment across firms and the standard deviation value for

variable is 24.40% which shows that variations among firms are significant. The average value of 26.798% for growth means that a firm can realized growth above or below the stated average. The average value will be very difficult to be obtained by the companies due to the high standard deviation value of 24.40%. The high volatility around growth might be the cause of low insurance penetration in the country.

The average claims incurred ratio has become 37.134% with a standard deviation 15.217% which is very significant. The mean of 37.134% indicates non-life firms could be paying claims below or above the average value. This average value which is below the required standard ratio comes with high variation.

The investment yield mean value is 14.417% with standard deviation value of 16.299% indicating very high variation among investment yield in non-life insurance. In a similar manner liquidity ratio mean value is 126.655% with associated standard deviation of 87.233% which gives a confirmation of high volatility in non-life insurance company's liquidity. This high rate of liquidity shows that the companies have sufficient cash to pay claims well or for investment. Over the past seven years, the average rate of the profitability of insurance companies in Ghana has been 4.738% with a standard deviation of 12.203%. This average value of 4.738% implies that a company could make a profit below or above average but with high the profitability of insurance. This low average of profitability could also be the high rate of liquidity exhibited by the companies. Furthermore, the past seven (7) years, the average of complaints against insurance company is 6.933% with standard deviation 7.577%. The average value 6.933% indicates that complaints may be above or below average, which could create problems for insurers because of the variability around it. The

variations in the number of complaints may affect profitability of non-life insurance operations in Ghana, the study was therefore conducted to determine its impact.

4.3 Correlation analysis

The strength and the nature of the linear relationship between variables in models are determined through analysis of correlation coefficients. The correlation coefficient values are often between the interval -1 and 1. The table 4.2 depicts the range of values for correlation coefficient and the level of strength of the relationship among variables

Table 4.2: Correlation Coefficient range of values and level of strength

Corr. Coefficient	Strength
1	Perfect
0.91-0.99	Strongest
0.7-0.9	Stronger
0.61-0.69	Strong
0.4-0.6	Moderate
0.1-0.3	Weak
0.01-0.09	Very weak

Source: Researcher's calculation, 2018

4.3.1 Analysis of correlation among return on asset and independent variables

The return on assets shows non-life insurance administration capacity in making good uses of existing assets to creates profits and is used measuring of profitability. It may have positively or negatively correlation with the independent variables. The table 4.4 gives correlation matrix between profitability (ROA) and explanatory variables

(previous return on assets, number of complaints, growth in premium, leverage, liquidity, claims and investment yield).

From Table 4.4, the sign between the dependent variable and the independent ones are illustrated in the Table 4.3.

Table 4.3 Correlation Signs

Independent Variable	Dependent ROA
ROA_{it-1}	+
COMP	-
GPR	+
CLA	-
INY	+
LEV	+
LQD	-

Source: Researcher's calculation, 2018.

Below is the table of correlation between ROA (dependent variable) and independent variables (ROA_{it-1}, COMP, GPR, CLA, INY, LEV and LQD)

Table 4.4: Correlation matrix between ROA and independent variables

	ROA	ROA_{it-1}	COMP	GPR	CLA	INY	LEV	LQD
ROA	1.000							
ROA_{it-1}	0.230	1.000						
COMP	-0.149	-0.182	1.000					
GPR	0.198	0.125	-0.194	1.000				
CLA	-0.080	-0.022	-0.105	-0.171	1.000			
INY	0.670	-0.043	-0.086	-0.004	0.117	1.000		
LEV	0.149	-0.048	-0.155	0.248	-0.212	-0.058	1.000	
LQD	-0.547	-0.351	0.287	-0.129	-0.122	-0.170	-0.047	1.000

Source: Researcher's calculation, 2018.

Table 4.4 shows that negative correlation exists between complaints, claims incurred and liquidity with profitability. The strength of correction between profitability with

number of complaints, claims incurred and liquidity are negatively weak, very negatively weak and negatively moderate respectively. The impact of the three variables mentioned above could be very significant on profitability.

There exists positive correlation between previous return on assets, growth rate, investment yield and leverage with profitability. From the Table 4.3, we realize that there is a weak negative relation between complaints and ROA, where the correlation coefficient is 0.149. This implies that increase in complaints will reduce profitability ROA provided the relationship between them is statistically significant.

The correlation coefficient value of 0.080 implies that negatively very weak correlation between ROA and claims incurred. From Table 4.4 above there is a moderate negative relation between liquidity and ROA with coefficient of 0.547. The correlation coefficient of 0.230 indicates positively weak correlation between ROA and the previous returns on assets. There is important strong positive correlation between ROA and investment showed by the correlation coefficient of 0.670. The correlation between ROA and premium growth is positively weak, the value representing this is 0.198. The relationship that exists between leverage and ROA is positively very minimum and is denoted by numerical value of 0.149.

4.3.2 Correlation among independent variables

The explanatory variables correlation between previous return on assets, number of complaints, growth, claims, leverage, liquidity and investment yield are presented and analysed in this section of the study. From the Table 4.5 below, the previous return on assets with liquidity and complaints with liquidity have coefficient of -0.351 and 0.287 respectively. These correlations are moderate when compared to other

independent variables in the model. There is no problem of multicollinearity since the coefficients are below 0.70.

Table 4.5 Correlation among independent variables

Variable	ROA$_{it-1}$	COMP	GPR	CLA	INY	LEV	LQD
ROA$_{it-1}$	1.000						
COMP	-0.182	1.000					
GPR	0.125	-0.194	1.000				
CLA	-0.022	-0.105	-0.171	1.000			
INY	-0.043	-0.086	-0.004	0.117	1.00		
LEV	-0.048	-0.155	0.284	-0.212	-0.058	1.00	
LQD	-0.351	0.287	-0.129	-0.122	-0.170	-0.047	1.000

Source: Researcher's calculation, 2018.

From the above Table 4.5, the previous return on assets is negatively related with all independent variables except growth in premium (GPR). Complaint has a negative correlation coefficient value with previous return on assets, growth, claims ratio, investment yield and leverage and a positive correlation coefficient value with liquidity.

Growth is negatively correlated with claims ratio, investment yield and liquidity, but it is positively correlated with leverage. Claims has a positive correlation coefficient with investment yield. However, it correlates negatively with the other independent variables. The investment yield is negatively related with all independent variables except claims. The positive relation between claims and investment yield might mean that insurers who pay claims well get more premiums from their customers

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subsequently and channeled portion into investment. The leverage relates negatively with independent variables whilst positive with growth.

The correlation between complaints and liquidity is positive. The correlation coefficients between liquidity and the rest of the independent variables are negative. The positive relation between complaints and liquidity presupposed that things which are done to increase liquidity will be done at the customers' expense during claims. Also, the liquidity in the firms is control by refusing customers benefits.

4.4 Regression results analysis and discussions

This part of the study examines results from the panel regression model for non-life insurance profitability measurement and the variables; previous profitability, number of complaints, growth, claims incurred, investment yield, leverage and liquidity. Generally, there are two main models for estimation of data in panel approach which are often used in empirical researches namely random effects and fixed effects models. The researchers employed one of the panel data model approaches. Therefore, the researcher first performed Hausman test to determine the selection of appropriate model for the work.

4.4.1 Hausman test

Hausman test is used to select which of the panel data models, fixed effects model or random effects model, which is the most appropriate, to determine the variation of the dependent variable ROA) through the variation of the independent variables. Hausman test is always conduct on a random effects model, and therefore in our case Hausman test was conducted on the model to select the most appropriate one.

Tested hypotheses are:

H_0: random effects model is more appropriate

H_1: fixed effects model is more appropriate.

Table 4.6: Hausman test results

TEST	Chi^2 value	Probability
difference in coefficients	14.78	0.039**

Source: Researcher's calculation, 2018.

The choice between the fixed effects and the random effects model was achieved through the Hausman test. From the test results the null hypothesis was rejected due to the chi-square value which is 5% level of significant for profitability measure.

This means fixed effects is suitable and should be preferred to random effects estimator in measuring profitability. The fixed effect was selected over the random effect model because the p-value is less than 0.05 ($p < 0.05$), signifying that the fixed effects model is more appropriate for determination of variation of the profitability of non-life insurance companies in Ghana. However, despite that fixed effects model has higher level of determination ($R^2 = 0.72$), it presents problems that violate the basic assumptions of the regression model.

4.4.1.1 Fixed effect model

The panel model for this work had high determination of variation and was statistically significant, but violates the assumptions of the classical regression model. In order to solve this problem, a better model where our variable of interest may also become significant was adopted, we run fixed effect regression with 'robust' option to correct the anomalies in the data set. The fixed effect model is stated below:

$$ROA_{it} = \alpha + \gamma ROA_{it-1} + \beta_1 Comp_{it} + \beta_2 Cla_{it} + \beta_3\, I\, NY_{it} + \beta_4 Lev_{it} +$$

$$\beta_5 GRP_{it} + \beta_6 LQD_{it} + \varepsilon_{it} \qquad\qquad (4.1)$$

The details of the panel regression are given below.

Table 4.7: Fixed effect panel results ($R^2 = 0.64$)

Variable	Coef.	Robust Std. Err.	t	P>t	[95% Conf.	Interval]
ROA$_{it-1}$	-0.066	0.113	-0.58	0.571	-0.316	0.183
COMP	-0.313	0.167	-1.88	0.087**	-0.680	0.053
GPR	0.040	0.030	1.32	0.213	-0.027	0.106
CLA	-0.116	0.044	-2.65	0.023**	-0.213	-0.020
INY	0.421	0.043	9.75	0.000*	0.326	0.516
LEV	0.021	0.015	1.43	0.180	-0.011	0.053
LQD	-0.058	0.017	-3.44	0.006*	-0.095	-0.021
_cons	8.861	3.399	2.61	0.024**	1.381	16.342

* 1% reliability, **5% reliability
Source: Researcher's calculation, 2018.

The above model is statistically significant and therefore has high determination of 64% ($R^2 = .64$). The coefficient of determination shows that 64% of the variations in non-life operations profitability in our country were explained by the independent variables' variations in the model. The remaining 36% of variations in the non-life profitability can be explained by unknown variables not included in the study. Therefore, the profitability of insurance companies in Ghana can be impacted by these independent variables taken together.

Independent variables such as number of complaints, claims incurred and liquidity have a statistically significant negative relationship with profitability. Previous returns on assets gives a non-significant negative relationship with profitability. Variables such as growth rate and leverage have a positively non-statistically significant, whilst investment yield has statistically significant relationship with profitability of insurance companies in Ghana. The model above shows that an increase in

complaints, claims incurred and liquidity will cause a decrease in the profitability of insurance companies, and an increase in the investment yield of the companies will cause an increase in their profitability.

Correspondingly, an upsurge of one per cent (1%) on complaints will bring a decline of 31.3% on ROA; an increase of 1% on liquidity will induce a decrease of 5.8% on ROA, an increase of 1% on claims incurred of insurance companies would cause a 11.6% reduction of their ROA and an increase of 1% in the investment yield will cause an increase of 42.1% on the profitability of insurance companies.

In conclusion, the following can impact profitability greatly number of complaints, claims incurred, liquidity and investment yield. The number of complaints, claims incurred and liquidity give negative impact whilst investment yield gives positive impact on profitability.

4.5 Summary of findings

Number of complaints

The panel fixed effect results of the regression show negative significant relationship between number of complaints and insurance companies' profitability in Ghana with coefficient 0.0313, t-statistics -1.88 and p-value of 0.087. This shows the results for number of complaints from the regression is reliable with the hypothesis formulated.

The above result for complaints is related with the discovery of different researchers. For instance, Akotey and Abor (2013) qualitatively suggests significant impact of complaints by customers against insurance firms on their profitability. Awara (2010) also suggests that complaints have significant effect on profitability. In addition, Mensah (2016) from the regression results, complaints has negative perceptions

towards a firm. The complaints are as a result of customer dissatisfaction which confirmed the converse of the research of Anderson, Fornell and Lehmann (1994), which states that customer satisfaction of an enterprise is positively correlated with its current profitability. From the authors it obvious complaints always impact on profit.

Firm growth

There is positive and non-statistically significant relationship between growth rate and profitability of insurance companies in Ghana. The regression coefficient of growth is 0.040, t-statistics is 1.32 and p-value is 0.213. Hence the hypothesis about the relationship is perfectly answered based on results.

The insurance companies having more capacity to acquire more premium over the years due to compulsory insurance stand the chances of being profitable for the reason that they do have internal capacity though it depends on their ability to exploit external opportunities.

The following researchers; Gebremariyam (2014) and Ayele (2012) found a positive relationship among growth and profitability of insurance companies, but statistically significant.

The growth rate of premium in Ghana between the years 2010-2016 was 0.04 per cent is somehow good for the firms because, scholars posit that rapid growth of premium volume is one of the causal factors in insolvency. Therefore, being excessively obsessive about the increase in the volume of the gross written premiums especially in an economic downturn may lead to the negligence of other important targets and self-destruction by (Kaya, 2015).

Claims incurred

This ratio is one of the most important performance indicators for insurance companies in Ghana both life and non-life. Sometimes represented by loss ratio, which is also expressed as the underwriting risk in the relevant literature, demonstrates the effectiveness of the underwriting activities of insurance companies. In this study, claims ratio is calculated by dividing the incurred claims with the earned premiums. In general, all insurance companies wish that their premiums increase, and that the claims they are required to compensate decrease. Accordingly, the expected effect of claims ratio on profitability is negative.

According to the results of the robust fixed effect regression analysis show that there is a negative and statistically significant relationship between claims ratio and profitability of insurance companies in Ghana with a regression coefficient of -0.116, t-statistics of -2.65   and p-value of 0.023 as expected by the hypothesis.

This result establishes that higher claims incurred will lower profitability. The negative relationship between claims incurred and profitability has been confirmed in empirical literature by the following authors Kaya (2015), Gebremariyam (2014), Burca and Batrînca (2014), Doğan (2013), Malik (2011), Mehari and Aemiro (2013), (Pervan, Ćurak and Marijanovic, 2012). Consequently, the claims ratio has a very important impact on profitability of non-life insurance companies in the industry.

Insurance leverage ratio

Insurance leverage is defined as reserves to surplus by Chen and Wong (2004). This ratio demonstrates the potential impact of deficiencies in technical reserves due to occurrence of unexpected losses on the equity (Adams & Buckle, 2003). In this research work, insurance leverage ratio is computed by dividing the net technical

reserves to the equity. Capital structure literature suggested that as the leverage increases up to an optimum point, so will the firm value and after surpassing this optimum level, the firm value will be declined and the likelihood of insolvency will increase depending on the increased leverage (Carson & Hoyt, 1995). Therefore, it is expected that excessive insurance leverage may have a negative impact on profitability.

From the regression table the t-calculated significant value for leverage is 1.43 which is greater than 0.05 and with a correlation value of -0.048. This shows that there is a relationship between leverage and profitability. However, the extent of the relationship even though negative, it is still insignificant (p-value $= 0.180$) and that all other things being equal a change in leverage will have a weak effect on profitability. Thus, if an insurance company is highly geared or lowly geared there is the likelihood that its profitability will not be much affected by a unit change in leverage. The highly geared means that more than 50% of insurance firm resources are owned by outsiders whiles lowly geared indicates that the insurance firm resources owned by outsiders are less than 50%.

The result is reliable with the formulated hypothesis but contradicts findings that the relationship is significant as stated in the studies of the above authors.

Liquidity

The outcome of the regression shows that liquidity and profitability have significant relationship among them. From Table 4.8, liquidity has regression coefficient -0.058 with t-statistics -3.44 and significance value of 0.006. Hence liquidity has significant impact on non-life insurers' profitability in Ghana. The result also is consistent with the hypothesis of the study. Furthermore, the result agrees with the outcomes of Yusuf

(2014), Shiu (2004) and Chen and Wong (2004) but incongruity with the findings of Ahmed et al. (2011) and that of Boadi et al. (2013). Their studies which discovered that liquidity and return on assets (ROA) had no statistical significant relationship between them. The results from the multiple regression specified statistically significant relationship between liquidity and   profitability of insurers.

Since the results show statistical significance between these variables, it can be concluded that the liquidity ratio of a firm explains the variation in profitability of insurance companies negatively.

Investment yield

According to Swiss (2008) investment has an impact on profitability, but the level of effect was not stated. Segal (2003), also claimed that the profitability is influenced by return on investments.

4.5.1 The interpretation of the coefficients

To conclude, this section throws light on the results of the hypotheses of the regressors tested on the dependent variable (ROA). The model used in this work is scrutinized against multi-collinearity.

The empirical aspect provides comprehensive results on descriptive statistics on the variables used for work both dependent and independent variables (complaints, growth, leverage, claims incurred, investment yield and liquidity). It provides the level of association among variables. The impacts of the variables on profitability are determine through analysis of the regression results. The return on assets (ROA) is influenced positively by premium growth, investment and leverage but negatively by complaints, claims ratio and liquidity. Hence, complaints, growth, claims incurred, investment, leverage and liquidity have impact on profitability in non-life insurance

operations in Ghana. The results of the study throw light on how poor handling of dissatisfied customers can negatively impact the financial performance in Ghanaian insurance companies. The dependent variable (ROA) and the six independent variables (complaints, growth, claims incurred, investment, leverage and liquidity) used in the model to examining which variables has significant impact on profitability of non-life insurance operations in Ghana. The outcomes show that complaints, investment yield, claims incurred and liquidity impact profitability of non-life insurance operations in Ghana. The impact of number of complaints on profitability is statistically significant, one per cent increased in customer complaints will cause 31.3% decrease in profitability of insurer.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter five gives the summary of key findings in the study and draws conclusions from the analysed results. It further makes recommendations to researchers for future study in this area.

5.2 Summary of study

The impact of complaints on non-life insurance companies' profitability was the objective of this study. The work was to explore the empirical impact of complaints on profitability of the non-life insurers operations in Ghana for the seven years period from 2010 to 2016. For this objective, complaints and five other variables were selected as explanatory variables whilst return on assets (ROA) is taken as dependent variable. Secondary data were sampled from twelve (12) insurers that were operating during the period 2010-2016. Execution of descriptive statistics and panel regression analysis was made in order pronounce the impact of claims complaints on non-life insurance companies' profitability among insurance companies.

The study revealed that growth is negatively correlated with claims ratio, investment yield and liquidity, but it is positively correlated with leverage. Claims incurred has a positive correlation coefficient with investment yield whilst with the rest of the independent variables the correlation is negative. The investment yield is negatively related with all independent variables except claims. The leverage is negatively related with all independent variables except growth. The correlation among liquidity and complaint was positive. Liquidity has a negative correlation with the remaining independent variables.

The results of panel regression analysis disclose that complaints have negative statistically significant relationship with profitability. The value of coefficient for Comp specifies that in increase in complaints against insurers will decrease the ROA. The coefficient of GPR in the regression model indicates that an upsurge in growth will increase ROA. From the regression coefficient of CLA implies that as claims incurred escalation will bring decrease in ROA. The coefficient for INY in the panel regression infers that an increase in investment yield will increase ROA.

The coefficient of Lev in the model indicates that an increase in leverage will cause increase in ROA. The LQD coefficient in the panel regression model shows that whenever liquidity ratio goes up, ROA will reduce. The coefficient for $ROA_{i,t-1}$ is the speed of mean reversion. The value obtained shows that profits are not persistent, since value lies outside the given range for persistency.

5.3 Conclusions

The R-square value specifies that profitability of insurance companies depends largely on the independent variables used for this work. Therefore, it implies that complaints and the other variables impact on non-life insurance companies' profitability in Ghana is very relevant. On average over sixty percentage of the impact on profitability of the companies was captured by the independent variables used in the work whilst less than forty percentage of variation was explained by unknown variables.

The negative coefficient of liquidity variable shows that there exists negative relationship. This relationship between ROA and liquidity is however statistically significant. Insurance companies with a lot of liquid assets are advice to find any available investment alternative. From the findings liquidity has negative impact on profitability. This also shows how risk management practices are poorly been used in

the companies to control liquidity. Also, the positive relationship between liquidity and complaints is a very serious risk which should be taken with keen interest by insurers, because it gives a perception that causes of complaints are been used to managed liquidity.

The investment yield coefficient is statistically significant and positive at 1% level. This foretells that profitability of insurance company's large assets in investment instrument are better than the ones with small assets in their investment portfolio. The relationship between investment yield and ROA been positive implies that investment yield can be used as indicator that insurance companies that invest in short term investment are better placed than their counterparts who invest less.

The coefficients of explanatory variables, premium growth and leverage are positive values. However, premium growth and leverage are not statistically significant. Therefore, growth and leverage are not explanatory variables which impact the profit of insurance companies in Ghana over seven years.

Claims incurred relates negatively and significantly with the non-life insurance company's profitability. This forecasts that Ghanaian non-life insurance companies that pay more claims are going to be less profitable and suggests that all claims issues must be investigated before payment is made. The claims incurred ratio level of the insurance companies affect their profitability negatively, which agrees with the hypothesis made earlier.

In effect poor management of complaints by insurers will decrease annual profits which may lead to solvency problem in the future and insurance penetration in Ghana. Furthermore because of the positive relationship between complaints and liquidity, an

increase in the former will cause arise in the latter which has a negative impact on insurers' profitability.

This research confirms the significant impact of customer complaints on profitability of non-life insurance companies in Ghana. It is an evidence of how customers' complaints negatively affect the insurance sector in Ghana.

5.4 Recommendations and future research

The research strongly confirmed negative impact of complaints (non-financial data) on non-life insurance sector profitability in Ghana. This impact definitely will have an influence on the companies' capital requirements which may later disturb the solvency regime. If the NIC standard solvency regime requirements are not met, this can force an insurance firm to liquidation.

Complaints should be handled with seriousness in order to maintain customers, hence thereby protecting the long-term stream of profit because of its negative impact. Opportunities in customer complaints should rather be exploited to make the companies more profitable always.

The most important role plays by the insurance industry in Ghanaian economy, later researches should emphasis on effect of customer satisfaction and switching on insurers' profit that would provide better intuitions for both insurers and the insurance regulator (NIC). Further issue that could be examined in future research include effect of operational expense on claims payment and profitability of insurance companies (both life and non-life). These are essential concerns for insurance growth in Ghana.

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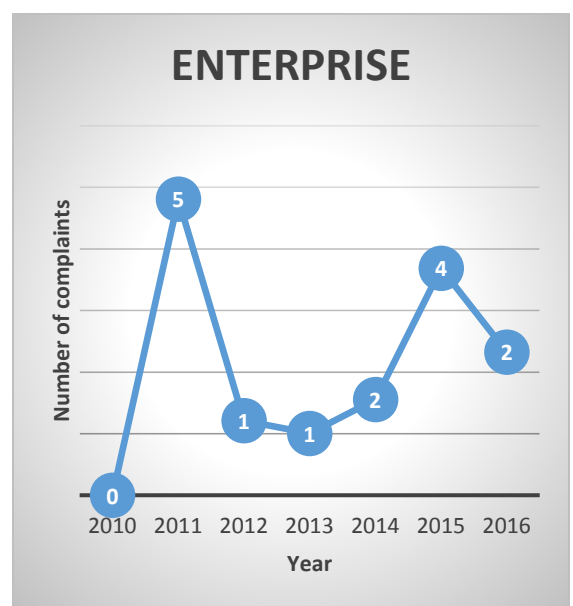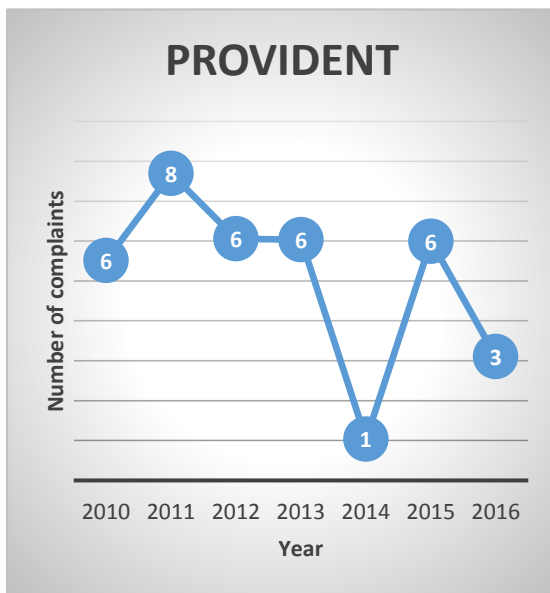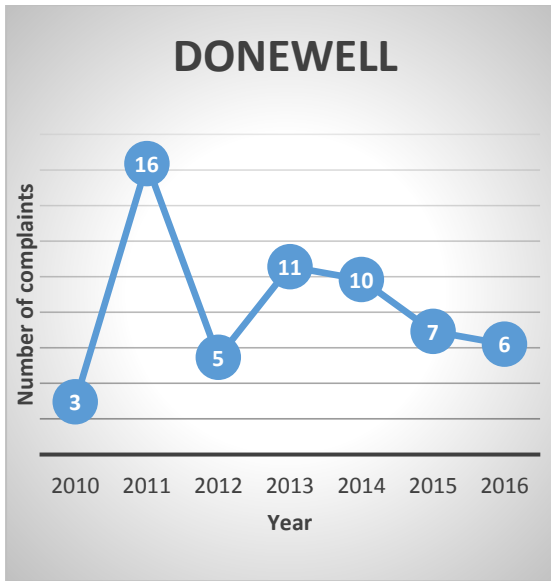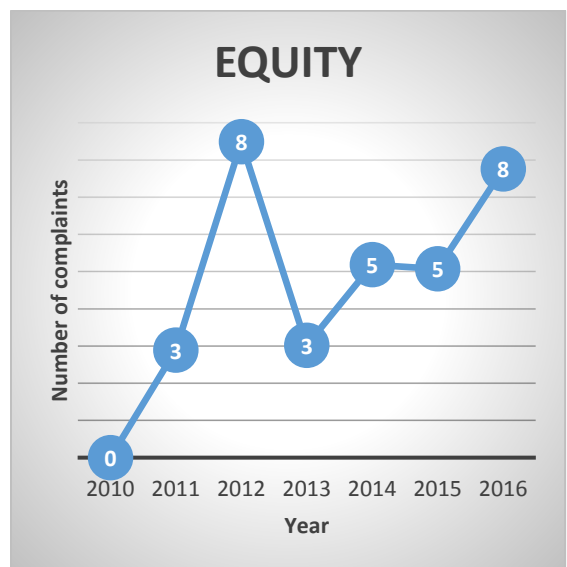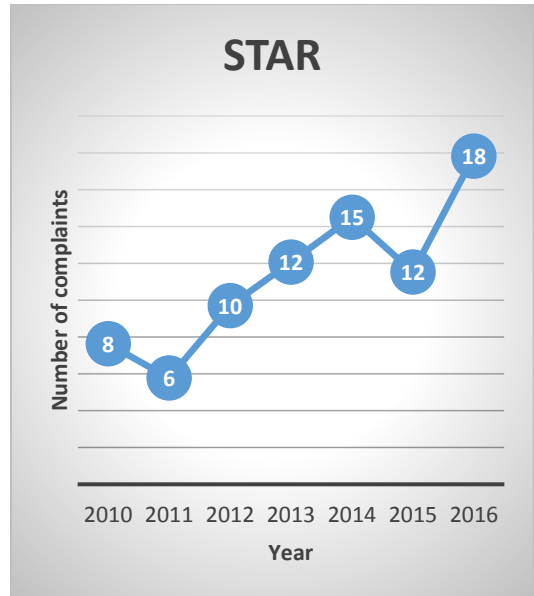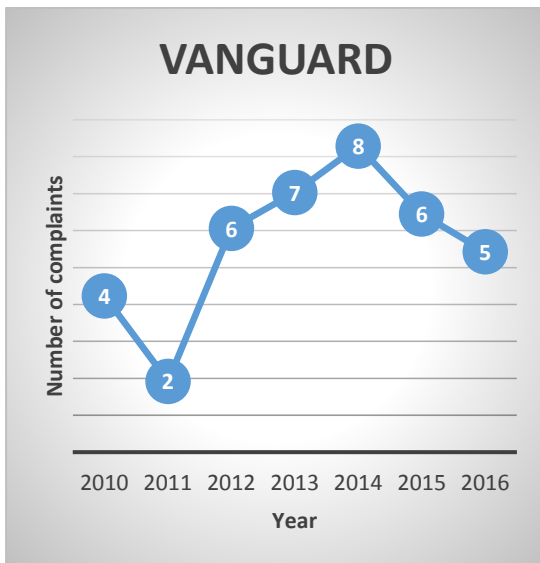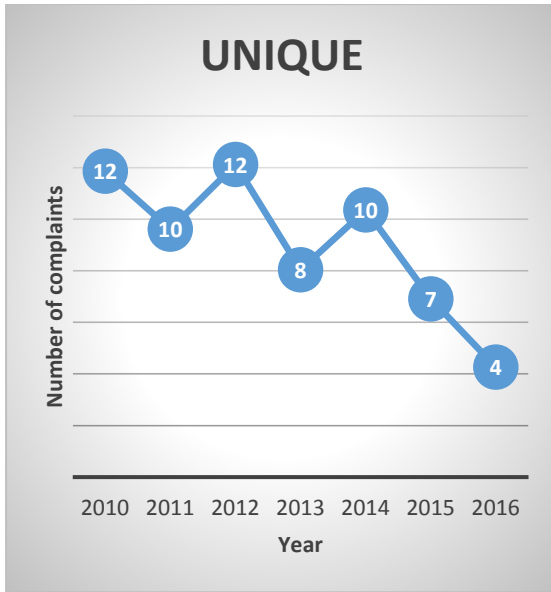
APPENDICES

APPENDIX A

List of non-life insurance companies used for the work

1. Donewell insurance
2. Enterprise insurance
3. Equity insurance
4. Glico insurance
5. NSIA insurance
6. Phoenix insurance
7. Provident insurance
8. Quality insurance
9. Star Assurance
10. SIC insurance
11. Unique insurance
12. Vanguard insuranc

GRAPH OF NUMBER OF COMPLIANTS FOR THE TWELVE (12) COMPANIES

DONEWELL

NSIA

PROVIDENT

ENTERPRISE

68

SIC

STAR

QUALITY

EQUITY

UNIQUE

PHOENIX

VANGUARD

GLICO

APPENDIX B

Non-life Companies in Ghana (NIC 2016)

1. Activa International Insurance Company Limited

2. Allianz Insurance Company Limited

3. Best Assurance Company Limited

4. Donewell Insurance Company Limited

5. Enterprise Insurance Company Limited

6. Equity Assurance Company Limited

7. Ghana Union Assurance Company Limited

8. Glico General Insurance Company Limited

9. Heritage Insurance Company Limited

10. Hollard Insurance Company Limited

11. Imperial General Insurance Company Limited

12. Millennium Insurance Company Ltd

13. NSIA Ghana Insurance Company

14. Phoenix Insurance Company

15. Prime Insurance Company Limited

16. Priority Insurance Company Limited

17. Provident Insurance Company Limited

18. Quality Insurance Company Limited

19. RegencyNEM Insurance Ghana Ltd

20. Saham Insurance Company Limited

21. SIC Insurance Company Limited

22. Star Assurance Company Limited

23. Unique Insurance Company Ltd

24. Vanguard Assurance Company Limited

25. Wapic Insurance (Gh.) Limited

Reinsurers:

1. Ghana Reinsurance Company Limited

2. Mainstream Reinsurance Company Limited

3. GN Reinsurance