Arab American University

Faculty of Graduate Studies

Factors Affecting the Solvency of Palestinian Insurance Companies Listed at Palestine Exchange: A Comparative Study Before and After the Implementation of New Solvency Regulations

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This thesis was submitted in partial fulfilment of the requirements for the Master`s degree in Accounting and Auditing

February / 2025

Thesis Approval

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Declaration

I declare that, except where explicit reference is made to the contribution of others, this dissertation is substantially my own work and has not been submitted for any other degree at the Arab American University or any other institution.

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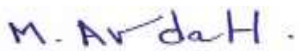
Signature: 

Date: 12/05/2025

Dedication

To my beloved mother and father, who have illuminated the long and arduous path with your satisfaction and prayers , to my dear brother and sisters who have always showered me with their love and support , to my life partner, My Dear wife, companion of the path and source of love and security , to my beloved Daughter who has illuminated life with her presence and to my Loyal friends, my pure companions.

Acknowledgement

Praise be to Allah, Lord of the Worlds, Blessed and Exalted be He, for He alone is perfection, and prayers and peace be upon our Master Muhammad, His Prophet and Trustworthy Messenger.

Praise be to Allah who blessed me with the completion of this research and I extend my sincere thanks and gratitude to my honorable supervisor, Dr. Rajeh Alawneh, who supports me in an objective manner in preparing this work.

Finally, I extend my sincere thanks and gratitude to the honorable discussion committee for being objective with me and offering me the opportunity to discuss my master's thesis.

Abstract

This critical era of globalization considers the insurance services sector as a basic constituent of both economic and societal altercation. There is no doubt that the insurance sector provides the required security against hazards that threat the growth of economy. Thus, this thesis comes to put under scrutiny the issue of financial solvency of the listed insurance companies on Palestine exchange. It then identifies the effects of profitability, liquidity, leverage, premium growth, company size and claims ratio on the insurance firms. Furthermore, it also analyzes the impact of fairness, standard of market conduct and premium growth on the recent legal changes applied by the Palestinian Capital Market Authority on solvency margin ratio. This process includes regulations on the qualifications of the minimum solvency margin, grading systems, and supervisory control based on risk assessment. Hence, the thesis relies on secondary data drawn from eight Palestinian Ics listed on Pex during the period from Q3/2020 to Q4/2022. It aims at examining the relationship between the independent variables and solvency before and following the implementation of the new regulations. The findings showed a significant changes in the determinants of solvency during two different periods. The findings also illustrate that regulatory changes, profitability and liquidity have moderate impacts on solvency. It then showed a negative impact of the high leverage and claims ratio. Premium growth and company size had conflicting effects. The updated solvency margin requirements also provide premium, profitability, liquidity and more pronounced positive influence, in addition to improve the financial management. The regulatory compliance lowered the negative effects of these metrics which indicates that leverage and claims ratios are more strictly managed. Furthermore, the study emphasizes on the fact that risks must be monitored and controlled in order to achieve the desired development and sustainability in the insurance sector. It emphasizes on supporting the domestic policy formulation of the

insurance sector in Palestine to make it possible to achieve proper balance between financial, economic, market stability on one side and the security, protection, and confidence of the investors on the other. Thus, the study findings suggest that ICs focus on maximizing profits by managing liquidity more effectively, supervising financial leverage, and practicing risk-based underwriting to remain solvent. The findings also showed that the companies may consider mergers and growth in new markets even as controlling claims ratio. The future studies will also consider the international market differentiation and other economic factors that support the financial stability.

Keywords: Palestine Capital Market Authority, Insurance Companies, Solvency, Financial Stability, Regulatory Changes.

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List of Abbreviations

Abbreviation	Definition
IAIS	International Association of Insurance Monitors’
ICs	Insurance Companies
PCMA	Palestine Capital Market Authority
PEX	Palestine Exchange
SLV	Solvency
PRO	Profitability
LIQ	Liquidity
PG	Premium Growth
CSIZE	Company Size
CL	Claims Ratio
LEV	Leverage

Chapter One
General Framework

1.1 Introduction

The insurance sector is considered as one of the most crucial constituent of economies worldwide. Consequently, this sector makes it possible to achieve economic and social stability and offer the required protection of its various types like: property insurance, life insurance which leads to enhance the economic growth globally. Thus, the insurance sector is considered as a key and fundamental constituent of this current developing era that affects the society and all aspects of life. In other words, the insurance sector is responsible for developing the main image of economic and social life. The insurance companies' investigation of solvency is one of the priorities of the private bodies and organizations supervising the insurance sector in different economies around the world. It becomes a vital economic constituent with the frequency of domestic and global financial crises. It also helps to understand most of the factors that affect the insurance company's ability to meet its long-term obligations which is a fundamental element to the broad topic area of investigating the factors influencing the insurance company solvency. In brief, various components such as financial indicators, risk management procedures, laws and regulations, economic circumstances, investment approaches, creation of products, operational efficiency, reinsurance, corporate governance, and historical performance are involved in determining an insurance company's solvency. Each of these fields adds to our understanding of the variables that influence an insurance company's capacity to stay solvent. (Almajali et al.,2012)

Doubtlessly, the financial system is considered as a vital element of the economies worldwide in terms of development, growth, and the ability to respond to various economic

influences. The insurance sector is an essential component of the financial systems of countries as it has a permanent element in the growth and development of economies. The primary objective of studies, research and the ongoing work of insurance sector oversight bodies and institutions is on the financial solvency of insurance companies. This process is achieved through exploring the factors that affect its calculation mechanism, whether they are economic or financial factors. The researcher stressed on the important role of the study findings on the companies' financial solvency, and then improving the role of insurance oversight in making basic and long-term choices that keep insurance companies stable.

Similarly, the importance of studying these variables lies in helping insurance companies mitigate future risks that they may obstacle maintaining the insured and shareholders in the company. (Madushika, 2021)

The global financial crises faced a weakening of confidence in economic systems. Thus, the need to give considerable emphasis to the components of the financial system has emerged. Consequently, the interest in the insurance sector as an essential part of the global financial system has increased to boost its growth. People already know that the lack of barriers between countries' economies and the globalization of trade altogether led to enhance the insurance sector. Consequently, it's important to identify the nature of the connections between the variables that impact insurance companies' and the ability to stay in business. (Abdel Jawad & Ayyash, 2019).

1.2 Study Problem and Questions

What are the factors that affect the solvency of insurance companies listed at Palestine Exchange before and after the Implementation of new solvency regulations?

The insurance sector faces many challenges such as the political and economic changes and fluctuations, the small size of the market, and the lack of diversity in products due to the difficulty of the situation and the social and cultural reasons related to belief in the same principle. The researcher puts under scrutiny a set of factors and variables that affect the financial solvency of insurance companies that operate in Palestine. For example, profitability, liquidity, financial leverage, the growth rate in written premiums, the size of the company, and the claims ratio. Hence, there are few studies that illustrated the indicators of the financial solvency of insurance companies especially studying the extent of impact of changing the financial solvency margin instructions issued by the supervisory authority. As a result, the Palestinian Capital Market Authority is working on updating and developing the instructions to keep up with the changes related to the market. The researcher's study of these variables is an important part in helping to properly comprehend the relationship between these variables and the financial solvency of companies. There are many reasons that stressed on the importance of understanding and studying these changes which ultimately affect the economic, investment, and financial decisions of insurance companies operating in Palestine. This will provide indicators regarding the general situation of the company and its ability to basically meet its insurance and financial commitments; and not to be exposed to any fluctuations and deteriorations that may mainly affect the insured and shareholders in these public shareholding companies.

Research Questions

The main question revolves around the following sub-questions:

1. How does profitability affect the SLV of ICs listed at PEX before and after the implementation of New Solvency Regulations?

2. How does liquidity affect the SLV of ICs listed at PEX before and after the implementation of New Solvency Regulations?

3. How does leverage affect the SLV of ICS listed at PEX before and after the implementation of New Solvency Regulations?

4. How does premium growth affect the SLV of ICs listed at PEX before and after the implementation of New Solvency Regulations?

5. How does the size of company affect the SLV of ICs listed at PEX before and after the implementation of New Solvency Regulations?

6. How does the claims ratio affect the SLV of ICs listed at PEX before and after the implementation of New Solvency Regulations?

1.3 Significance of the Study

1.3.1 The Theoretical Significance

There is no doubt that one of the most important studied topics worldwide is the insurance companies' solvency margin due to several reasons. These reasons are summarized as following: The financial aspect: The main goal of the insurance firms appear in its ability to pay the required financial obligations that may arise in the future or at any time. Accordingly, an insurance company that has an appropriate financial position is considered capable of paying its obligations. For instance, protection of the insured or policyholder: Insurance serves as a reasonable guarantee, shielding the insured from potential risks at any given time. Therefore, the company that has strong and appropriate financial solvency always acquires the public's confidence from a supervisory and regulatory perspective. The

regulatory authorities and supervisory bodies take in account the importance of the solvency margin of companies and always set it at a certain percentage or minimum. Consequently, companies adhere to the solvency margin to protect citizens from any risks they may be exposed to. The insurance sector significantly contributes to global economies and actively safeguards the social fabric. Accordingly, monitoring companies to maintain their stable financial position and strong solvency will certainly lead to preserve the insurance system and limit the financial and economic collapses that insurance companies may be exposed to. From an investment perspective, the solvency margin is considered as a vital part of the investors' view of any future project they may want to invest in. This is because companies that have strong financial solvency will certainly have appropriate and encouraging economic and financial stability for investment. (Cocozza & Di Lorenzo, 2006 ; Mehari & Aemiro, 2013; Mazviona et al., 2017).

1.3.2 The Practical significance

This research includes a number of important measurements to be discussed study. It consists of profitability that affects solvency which means an insurer's capacity to create reserves and uphold its financial stability. It also includes liquidity and its capacity to pay short-term commitments. Solvency may be affected by inadequate liquidity which may make it difficult to fulfill obligations or expenses related to operations. Third, it includes the leverage that shows how much an insurer depends on debt instead of equities. If not effectively managed, high leverage can raise financial risk and even put an unnecessary strain on solvency. Fourth, the growth in premiums signifies the evolution of an insurer's operations. While expansion can lead to increased revenue and diversification, excessive or wasteful growth can deplete resources and impact solvency. Fifth, "the size", which shows that larger insurers could gain from the advantages of size and increased diversity, which

can improve solvency. This may also confront more difficult handling of risk concerns. Sixth, the claims ratio that affect the solvency of the insurance company show that the proportion of premiums that are used to pay off the company's core operations leads to high claims that could reduce the profitability and negatively affect the solvency.

1.4 Objectives of Study

The primary goal of the study is to investigate the factors influencing the SLV of ICs listed at PEX. It also aims at examining how these variables affect insurance firms' capacity to stay solvent prior to and following the implementation of new solvency requirements.

The main objective revolves around the following sub-objectives:

- Investigating the effect of profitability on the SLV of ICs listed at PEX before and after the implementation of new solvency regulations.
- Investigating the effect of liquidity on the SLV of ICs listed at PEX before and after the implementation of new solvency regulations.
- Investigating the effect of leverage on the SLV of ICs listed at PEX before and after the implementation of new solvency regulations.
- Investigating the effect of premium growth on the SLV of ICs listed at PEX before and after the implementation of new solvency regulations.
- Investigating the effect of company size on the SLV of ICs listed at PEX before and after the implementation of new solvency regulations.
- Investigating the effect of claims ratio on the SLV of ICs listed at PEX before and after the implementation of new solvency regulations.

1.5 Study Model

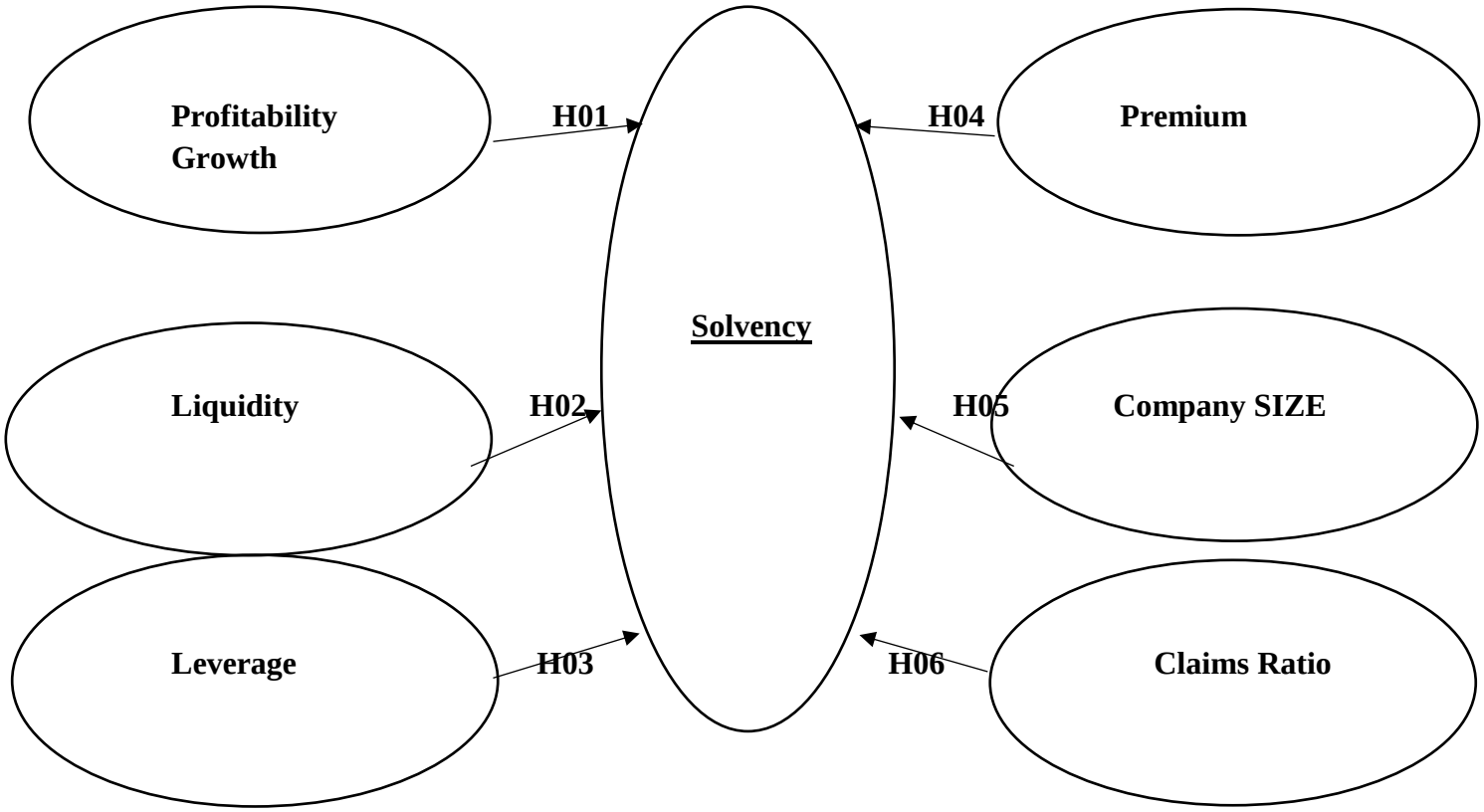

Figure 1: Study Model

Prepared by: The Author.

1.6 The Study Hypothesis

H01: Profitability & Solvency:

$H_{01.1}$: There is no statistically significant positive effect of Profitability on the SLV of ICs listed at PEX before the implementation of New Solvency Regulations.

$H_{01.2}$: There is no statistically significant positive effect of profitability on the SLV of ICs listed at PEX after the implementation of new solvency regulations.

H02: Liquidity & Solvency:

$H_{02.1}$: There is no statistically significant positive effect of liquidity on the SLV of ICs listed at PEX before the implementation of New Solvency Regulations.

$H_{02.2}$: There is no statistically significant positive effect of liquidity on the SLV of ICs listed at PEX after the implementation of new solvency regulations.

H03: Leverage & Solvency:

$H_{03.1}$: There is no statistically significant positive effect of leverage on the SLV of ICs listed at PEX before the implementation of new solvency regulations.

$H_{03.2}$: There is no statistically significant positive effect of leverage on the SLV of ICs listed at PEX after the implementation of new solvency regulations.

H04: Premium Growth & Solvency:

$H_{04.1}$: There is no statistically significant positive effect of premium growth on the SLV of ICs listed at PEX before the implementation of new solvency regulations.

$H_{04.2}$: There is no statistically significant positive effect of premium growth on the SLV of ICs listed at PEX after the implementation of new solvency regulations.

H05: Company Size & Solvency:

$H_{05.1}$: There is no statistically significant positive effect of company size on the SLV of ICs listed at PEX before the implementation of New Solvency Regulations.

$H_{05.2}$: There is no statistically significant positive effect of company size on the SLV of ICs listed at PEX after the implementation of New Solvency Regulations.

H06: Claims Ratio & Solvency:

$H_{06.1}$: There is no statistically significant positive effect of claims ratio on the SLV of ICs listed at PEX before the implementation of new solvency regulations.

$H_{06.2}$: There is no statistically significant positive effect of claims ratio on the SLV of ICs listed at PEX after the implementation of new solvency regulations.

1.7. Operational Definition

The study employs a set of independent variables to build and develop theories. The main dependent variable is the financial solvency of companies. From the researcher's point of view, these variables determined the right way to evaluate the main objective of the study represented in exploring the reality of the insurance firms in Palestine.

Solvency (Dependent Variable): The concept solvency often refers to the capacity to meet or settle obligations. When the available capital of the company is higher than the capital required to meet the risks determined by the regulatory authorities over a specific timeframe, it is considered solvent, and calculated as The PCMA calculation forms. (Corporate Finance Institute, 2025; PCMA – Official Website, 2025)

Profitability (Independent Variable): It represents the company's ability to make profits. It is measured by the return on assets (ROA), calculated as ROA = net income before tax/Avg.total assets. (Gitman and Zutter 2015)

Liquidity (Independent Variable): It illustrates the company's ability to meet its short-term obligations, especially in the worst scenarios, calculated as: Current assets/current liabilities. (Investopedia, 2024)

Financial leverage (Independent Variable): This ratio measures the insurer's use of debt compared to its equity. A higher debt-to-equity ratio means the company is using more borrowed funds. It shows the extent of companies' dependence on debt, calculated as: Debt-to-Equity Ratio = Total Debt/Equity. (Banafa, 2016)

Premium Growth (Independent Variable): It illustrates the increase or decrease in the growth of written premiums, which may have a positive or negative role in affecting financial solvency, calculated as: Change in growth written premiums (Markonah et al., 2019.)

Company Size (Independent Variable): The size of the company is an influential factor in affecting financial solvency, calculated as: The Natural Logarithim of Total Assests. (Kaya, 2015)

Claims Ratio (Independent Variable): The Claims ratio represents the remaining profit from the insurance company's written premiums, which may have a negative impact on the company's financial solvency calculated as: Claims Ratio = Claims incurred expense / Net earned premiums + commissions received. (Kaya, 2015)

1.8 Limitations of Study

1. Time limit: Years (2020-2022) From Quarter 3/2020 To Quarter 4/2022.

2. Spatial limit: The Study rely on Eight ICs listed at PEX.

3. Objective limit: Factors Affecting the SLV of Palestine ICs listed at PEX.

Chapter Two

Theoretical Framework and Literature Review

2.1. Background

The insurance sector contributes significantly to the prosperity and development of societies and economies due to the provision of protection and security of individuals and companies. As a result, the importance of the financial solvency of any insurance company lies in its ability to meet its short- and long-term insurance obligations when risks and accidents occur. (Berhe & Kaur, 2017). In this chapter, the researcher explains previous works that put under scrutiny and analyzed the factors that affect an insurance company's ability to stay in business and do well financially. This work identifies the connections between these factors through research, the creation of scientific theories and foundations, and other useful educational sources. However, when talking about the insurance sector, we find many previous literatures and studies around the world that address several variables and their impact on financial solvency in a basic way and on other key indicators, such as profitability and financial performance like (Alomari & Azzam, 2017; Asare, 2015). In this section, the researcher discusses many studies regarding this topic and the importance of studying it. It also deals with basic and important topics related to this sector, such as profitability, liquidity, claims ratio, and many variables that formed the basic nucleus of the studies. The study also discusses these works and other related works that reached scientific results and achievements which led to enhance interest in the variables and theories that they studied and analyzed in depth. As previously mentioned, the financial solvency margin is a fundamental and main part of global insurance companies in general. This paper focuses on similar studies and earlier writings that talk about the different factors that show how important it is to be financially stable; in addition to other factors that are not independent,

which will help with studying the research topic. This study will explore a set of variables, including profitability, liquidity, financial leverage, premium growth, business volume, and claims ratio to figure out how important it is for the Palestinian insurance company to be able to offer and pay the required obligations. Particularly, the previous results will benefit from a thorough understanding and appropriate study of prior literature.

2.2 Overview of the Insurance Industry in Palestine

The Palestine Capital Market Authority regulates and supervises Palestine's insurance industry according to Palestinian Insurance Law No. (20) of 2005 and any subsequent laws that were put into effect. The authority urges the insurance sector to take in account the important role of making sure that the economic and social goals of the insurance industry are met. This goal is achieved by making sure that insurance companies continue to meet their insurance obligations and protect the rights of the holders and beneficiaries of insurance documents by keeping an eye on them and making sure they are strong and financially stable. It must also be in compliance with the International Association of Insurance Monitors' (IAIS) and meets the international practices and standards. What's more, the implementation of the risk-based supervision and control strategy, insurance of the Palestinian economy focuses more on mandatory insurance, which is due to religious culture and social traditions may not adhere to the insurance in general. This problem has diminished and begun to be strengthened among citizens, as the Capital Market Authority has granted licenses to Islamic insurance firms which will lead to strengthen the function of the insurance industry in preserving aspects of life and future development. (PCMA – Official Website, 2005.)

The Capital Market Authority released the first set of instructions, No. (1) of 2006 that explain how to figure out the value of the solvency margin, the steps, conditions, and forms needed to issue a solvency certificate. These were made in line with Article (5) of Insurance Law No. (20) of 2005. Then Instructions No. (1) of 2009 were issued, amending Instructions No. (1) of 2006 regarding determining the value of the solvency margin and its amendments, the procedures, conditions, and forms required for issuing a solvency certificate. Subsequently, Instructions No. 6 of 2020 were issued amending Instructions No. 1 of 2006 to determine the value of the solvency margin and the procedures, conditions, and forms required for issuing a solvency certificate and its amendments. This shows that the Capital Market Authority plays an essential role in maintaining the stability and growth of Palestinian capital and protecting the interests of the insured. This contributes to preserve the social fabric and strengthening the presence of the Palestinian citizen. Accordingly, it continuously updates the instructions, decisions, and regulations so that they are compatible with economic developments and changing related factors. The main changes in the instructions related to the solvency margin were represented in several matters like changing the minimum percentage required to be achieved by insurance companies to become 130% instead of 150%. Hence, this finding ensures that the company fulfills its insurance obligations, show changes related to the risk ratio related to calculating the required capital against assets, changing the classification of reinsurers. What's more, a new global classification was adopted in addition to the existing classifications which led to terminate Article 13 and replacing it completely with Article 10 for the new instructions. This stipulates new classifications for the solvency margin ratio extending from A to F, from 200% and above to 100% and below. This also changes the procedures related to failure to achieve the solvency margin ratio and dividing it into three sections. It then added a new article to seize assets that are restricted in use or burdened by a mortgage, seizure, restriction,

legal impediment, or procedural impediment that prevents their use to fulfill the company's obligations with risk weights of 100%. The Authority's linked deposit or any other linked deposits for the benefit of any of the Authority's institutions were excluded. The paragraph related to the classification of investments was also amended. It has become classified according to the applicable national accounting standards, international accounting standards, and international standards for preparing financial reports. Additionally, Article No. 5 of the original instructions has been replaced and changed so that the solvency margin ratio must be at least 130%. This is a major change to the way the solvency margin is calculated, as it now works differently for each insurance company when one buys the other where each company is given its own financial certificate. The solvency margin for the group is calculated if it meets certain conditions. This process is achieved by being registered in Palestine, being an operating company, having released audited annual financial statements in the last three years, being a public shareholding company listed on the Palestine Stock Exchange, and having control over the board of directors of the subsidiary company by 51% or more of the subscribed shares of the company. If not, the solvency margin is calculated separately for each company and treat the subsidiary companies as risk-weighted investments. (PCMA – Official Website, 2021.)

2.3 Literature Review

2.3.1 Insurance Company Performance & Solvency

Abdel Jawad & Ayyash, (2019) aimed at investigating the factors that affect the financial solvency of insurance companies in Palestine. The study problem was formed through the increasing interest in the concept of financial stability of the Palestinian insurance companies. The financial solvency margin is considered as a key indicator to show the extent of the company's ability to fulfill its obligations in the short or long term. The sector suffers

from a set of economic and political challenges. Hence, the researcher relied on secondary data represented in the financial statements of seven Palestinian insurance companies listed on the Palestine Stock Exchange for the period from 2010 to 2017, and created a linear equation to study the extent of the relationship between the variables. The dependent factor was financial solvency where it was measured through the debt ratio, which is the total liabilities over the total assets to measure the company's ability to fulfill its obligations. The independent variables were financial leverage, investment income, liquidity, and claims ratio. The results showed that there is a positive relationship between the claims ratio and financial solvency. This means that the higher the claims ratio, the higher the financial solvency ratio. As for the other factors, only they appeared. A negative relationship that is influential starting from the financial leverage means that the higher the financial leverage ratio, the more it affects the company's financial solvency. Whereas liquidity only showed a negative relationship, but it did not affect the financial solvency. This means that liquidity negatively affects the financial solvency, but in an ineffective way. Moreover, investment income showed a negative relationship that did not affect the financial solvency of companies. This means that the more investment income increases, the negative relationship appears with solvency but in an ineffective way. The researcher recommended that the interest in liquidity must be increased at companies through short-term investment to enhance the company's ability to pay short-term obligations and make more efforts to increase capital and reduce the percentage of reliance on debt in order to reduce future risks and work to manage claims efficiently and effectively to reduce the associated risks and costs. The author also suggested studying other economic factors that may affect financial solvency.

Fares & Nour, (2023) comes to examine the determinants that affect the financial solvency of insurance companies in Palestine, the problem of the study was formed through the urgent

need for insurance in societies around the world. Hence, insurance constitutes an essential part of the Palestinian economy including the banking sector. Hence, the need for researchers, regulatory bodies and insurance companies to continue studying the factors affecting financial solvency to enhance the company's ability to fulfill its obligations appears on an ongoing basis in the short or long term. The researcher relied on secondary data represented in the financial statements of eight Palestinian insurance companies listed on the Palestine Stock Exchange for the period from 2012 to 2019. A multi-regression model is employed to investigate the extent of the relationship between the variables where the dependent factor was financial solvency. It was also measured through the debt ratio which is the total liabilities over the total assets that determine the company's ability to fulfill its obligations. The independent variables were profitability, investment income, liquidity, leverage and claims ratio. The findings showed that there is a positive relationship between the claims ratio and financial solvency. This means that the higher the claims ratio, the higher the financial solvency ratio. The findings also illustrated that there is a positive relationship between the financial leverage. This means that the higher the financial leverage ratio, the more it affects the company's financial solvency positively. In contrast, liquidity and profitability haven't showed significant relationship which means it doesn't affect the financial solvency. Then, the investment income showed a positive relationship that affect the financial solvency of companies. This means that the more investment income increases, the solvency positively increase. The researcher recommend that liquidity management must be enhanced among companies through short-term investment which enhances the company's ability to pay short-term obligations and working to increase capital. He also suggested studying other economic factors that may affect financial solvency and take into consideration the Solvency II regulation and investigate in this subject after the application of the IFRS17.

The study explores the issues that face the Malaysian Islamic insurance companies, represented by economic and market changes and their influence on the financial solvency of companies after the global financial crisis in 2008. The global financial crisis affects negatively all global markets and resulted in many problems. The study mostly focuses on how changes in the economy and markets impact the financial health of Islamic insurance companies from 2008 to 2012. Two methods were adopted to measure the financial solvency margin. First, the ratio of equity to assets and second, equity to technical reserves. The sample consists of 6 companies operating in the Malaysian insurance sector and the necessary information was derived from the companies' annual reports and market data through the Bloomberg website. The researcher relied on the cross-sectional technique and the time series regression model. In addition, he conducted other statistical tests represented in many issues. The researcher identified and measured the dependent factor represented by the financial solvency of companies. The independent factors were represented in the first part by factors related to the company, which are: size, growth, retention rate, return on investment, financial leverage, liquidity, and expenses. Whereas, in the second part they were represented by economic factors, which are the profit rate and the Islamic stock index. The results showed that factors like company size, growth rate, leverage, and expense ratio have a clear and significant statistical impact on the financial solvency of companies through underwriting efficiency, the strength of financial returns in investments, and the financial leverage ratio being average and logical. The study findings particularly confirmed the importance and impact of economic and market factors on the financial solvency margin of insurance companies. They contributed to deepen the understanding and the need for administrative efficiency to deal with and regulate operating and related expenses in large companies; in addition to emphasize on the need to take into account the distribution of investment portfolios through risk distribution, enhancing and developing control to

maintain the financial solvency and liquidity of companies. Thus, this process ensures their continued ability to fulfill their insurance obligations and enhance the protection of the insured due to important social role. The researcher suggested that future studies should increase the sample size and rely on additional factors and analyze the data on a quarterly basis to show more effective and influential results. (Abduh & Isma, 2017)

Noraini et al. (2018.) explores the performance of the insurance firms in Malaysia by employing the macroeconomic variables, and the return on assets (ROA) ratio. The question which guides the study is: What is the determined level of the insurance companies' performance by macroeconomic factors? The primary objective of the study comes to determine the effects that macroeconomics (GDP, CPI, IR) have on the performance of Malaysian insurance firms. It also aims to establish the correlation between GDP and performance of an insurance company. It also comes to measure the effect of CPI on the profitability, and to determine the effect of IR on the Return on Assets (ROA). The study employs a quantitative research strategy. What's more, the data collection is gathered from the annual reports of the six selected insurance companies that are listed on Bursa Malaysia, and used as a source of data from the years 1996 to 2015. The study variables are: dependent Variable: ROA, which describes the performance of the company, and independent Variables. The macroeconomic constituents are: GDP, CPI, and IR. The relationships and the effects of the independent variables on the dependent variable are computed using Pearson Correlation Coefficient and Multiple Linear Regression analysis techniques. These techniques were used for qualitative research data analysis purposes, that's in addition to employ IBM SPSS Statistics 24. What's more, correlation analysis illustrates that both GDP and CPI have a weak inverse relationship with ROA at -31.6% and -29.0%. Then, IR has a weak inverse relationship with ROA that goes unnoticed. The model reaches just 15.5% of changes in ROA. ROA can be predicted with 15.5% accuracy based on regression model.

However, investigation confirms that both GDP and IR do have influence on ROA, but these two variables do not work in the same direction because there is a negative correlation with GDP. In contrast, CPI does not significantly influence the performance of insurance services. Moreover, GDP and CPI are positively correlated with ROA, but IR negatively affects ROA. Consequently, Nigeria insurance market is still surprisingly weak in focus and there are many reasons for this finding like the influence of IGR. The research finds that macroeconomic dimensions like GDP and CPI have a negative impact on profits of insurance companies in Malaysia, whereas IR is hardly of any importance. The general principle of macroeconomics and the insurance services yield some surprises in a similar way to the case of GDP and profitability. Major studies conducted earlier illustrate that heightened GDP leads to increase insurance sector profitability, which is not the case here. There are wider relationships in terms of policies that should be taken into account when trying to formulate strategies to increase profitability. Thus, further examination of competition between economic ratios and macroeconomic variables is necessary.

The research aims at identifying the financial solvency of five Indian companies for a period extending from 2009 to 2012. The study aims at studying and evaluate the financial and general performance of the companies. The financial solvency margin expresses the insurance company as a whole because it is considered as a major factor in the company's ability to fulfill its long- and short-term insurance obligations. Thus, this reality affects the insured and the economy as a whole, where the study dealt with the mechanism of calculating the solvency margin ratio for the companies' compliance with the regulations. Consequently, the study data is gathered from laws and instructions issued by the official authorities. The researcher then developed specific mechanisms and scientific methodology to evaluate the targeted companies and compare them. The required data was also collected from the official annual reports for the specified period for five Indian companies. The

following equation was adopted for the financial solvency margin: available capital/required capital, where the minimum margin ratio equals 150%. The results showed that ICICI has the highest financial solvency ratio and followed by BIRLA, SBI, HDFC, and LIC. Hence, the findings showed that the companies should take in account the importance of maintaining the minimum solvency margin ratio due to its importance in preserving the company's existence and its ability to fulfill its obligations towards the insured in the appropriate and required manner. (Gour & Gupta, 2012).

Caporale et al. (2017.) aims to calculate the reduction model that evaluates the bankruptcy risk of General Insurance (GI) companies in the UK. According to the research results, economic and financial and firm-specific variables are significant. Insolvency risk differs amongst organizations according to their industry sectors. There is a default clustering in the GI industry. Reinsurance variables influence the insolvency risk of insurance firms. The study also addresses the implications of these results for GI firm authorities under the recently introduced Solvency II. Thus, the study analyzes the bankruptcy risk of general insurance (GI) firms in the UK by using a distinctive database. Then, the study developed specifically reduced-form model that takes into account both bankruptcy and other departure options such as company transfer.

Shius (2005), aims at exploring the market-specific and financial solvency variables at life insurance sector at the United Kingdom. Hence, the study employs panel data from 1986 to 1999, which adds to the body of work different aspects of insurance company solvency by identifying whether solvency factors stay the same over time. What's more, the study employs two data models and multiple regression analyses (one-factor fixed-effects and random-effects models) in order to quantify the relationship between the insurer's creditworthiness and other different aspects that thought to have an impact on the firm's

financial situation, Thus, this process will be useful to actuaries, business leaders, and insurer regulatory bodies.

Yakob et al. (2012.), comes to provide policyholders and consumers with the required and essential basic knowledge, and to choose insurers and Takaful operators in a comprehensive manner. Thus, the paper questions whether policyholders are be able to compensate them through measuring their solvency. The most fundamental metrics among many others are the asset-to-liability ratio, an asset to the total amount insured, and the asset-to-total-claim ratio. Thus, numerous authorities advised companies to be more trustworthy with firm assessment in order to be compliant with the nation's current legal framework.

The researcher addressed the variables that have an effect on the financial health of insurance companies in Zimbabwe. This is because the insurance sector there is considered as a vital sector of the country's economic system. It also contributes to offer stability to the financial and economic sectors from risks and develops the economy. Unequivocally, The economies of countries worldwide suffered from the global crisis in 2008, which negatively affected the insurance sector in Zimbabwe. This effect is represented by high inflation and large external debt which led to limit the financial health of companies in general. The researcher's objectives were determined to identify the factors that may affect the financial performance of companies. It also measured the effects related to these factors in order to control them and try to direct them in the right way to achieve the company's goals, improve its profitability, preserve its existence and the rights of the insured, and finally to come up with effective and positive recommendations to improve the financial performance of companies. The researcher employed a sample of 20 insurance companies in Zimbabwe for the years 2010 to 2014. The obtained data is secondary through financial statements, and the data was analyzed by studying the correlation between the variables and identifying and

determining the relationship. Linear equation was also created to determine the strength and direction of the relationship between the dependent factor which is the financial performance that was measured through return on assets, and with the independent factors. These factors are financial leverage, premium growth, expense ratio, claims ratio, company size, liquidity, retention ratio, inflation, and capital size. The secondary data was also examined through factor analysis to determine the impact of independent factors on the financial performance of companies. The statistical analysis illustrates that 61% of the model created by the researcher explains the relationship between the variables and the financial performance. The claims ratio appeared as the largest variable affecting financial performance. They then followed by the claims ratio and liquidity. Finally, the findings illustrated that the small companies of insurance sector in Zimbabwe can manage their operations efficiently and effectively, and offer the required obligations to the insured through their management in an appropriate manner and better than the large companies of the same sector. In the end, the researcher illustrated the fact that the management of technical and operational expenses, compensation management and liquidity are the main factors in the company's financial and economic capacity. The findings also showed that large companies suffer from an incompetence in managing their operational and technical affairs appropriately. The findings recommend the companies' managements should pay more attention on the financial leverage and liquidity management to help maintain the continuity and existence of the company, and certainly then manage its compensation in an appropriate manner and protect and preserve the rights of the insured. (Mazviona et al., 2017).

2.3.2 Profitability

Dorina et al. (2016), explained the financial performance of insurance companies in Albania, highlighting its relevance as a crucial financial indicator of the effectiveness, and illustrates the viability of a financial institution. The profitability of these companies over the years were not stable. This fact prompts the analysis of some internal factors that influence the companies' financial results. However, the internal factors encompass the equilibrium growth rate, the volume of liabilities, liquidity, fixed assets, company size, and capital volume, that are expected to influence the company's profitability in a positive or negative manner. The primary objective of the research comes to assess the role of internal factors on the profitability of insurance companies in Albania. The analysis targets internal factors within the scope of a company instead of macroeconomic factors in order to devise measures that can enhance profitability. For this purpose, the researcher employed a quantitative approach based on seven selected non-life and life insurance companies during the period from 2008 to 2013. The data was collected from dependable sources such as annual reports, publications from the Financial Supervisory Authority (FSA), and the National Registration Center (NRC). Statistical software was utilized to carry out descriptive and correlation analyses on the relationships between the dependent variable (Return on Assets, ROA) and independent variables. The results show that the average profitability of insurance companies in Albania during the period of the study was -0.3%, which indicates negative performance. Growth rate exhibited a positive and statistically significant correlation with ROA. It also suggests that increasing of total collected premiums improves profit more by increasing investment and market share. In fact, liabilities and liquidity had a detrimental effect on profitability. consequently, increased financial liabilities elevates the financial risks, but excess liquidity suggests underinvestment. Fixed assets also had a negative correlation which reveals that higher levels of fixed assets lead to

inefficiency and decreased profitability. Company size and capital volume were positively correlated with ROA. However, the relationship was weak which indicates that their impact is not sufficient. Hence, the study findings conclude that the internal factors such as the growth rate, liabilities, liquidity, and fixed assets impact the profit of Albanian insurance companies. It recommends the insurers to retain optimal capital structures to minimize financial risks, maintain a healthy liquidity while investing, and prevent excessive investment into fixed assets. The growth strategies should include an increasing in the diversity of premium sources, and should also include public awareness on the benefits of insurance. The research suggests that more studies should investigate the relevance of external macroeconomic factors on the profitability of the insurance industry.

The study comes to identify the variables that affect the financial stability of Takaful insurance companies in Saudi Arabia. The study objectives are achieved by studying the following independent variables: The age of the company refers to its establishment date. Company size: through the natural logarithm of assets; loss ratio: net incurred compensation to net earned premiums; Retention ratio: net written premiums to total written premiums, Risk level: net written premiums to equity, The rate of return on assets measures the premium growth ratio and its impact on profitability. The researcher sought to enhance literary studies on the role of Islamic law in insurance in general. The Saudi Takaful insurance sector is distinguished by the strength of the legislation and laws issued to regulate it. The researcher sought to study the level of profitability of Islamic insurance companies within the conceptual framework of Islamic law. The OLS method was used to analyze the financial data obtained by the researcher from the quarterly financial reports of the six major Saudi insurance companies. The researcher reveals that the age and size of the company, the premium growth rate, and the loss ratio have a fundamental impact on the company’s

profitability. The researcher also concluded that it is necessary to enhance the regulatory and corrective measures of the Saudi insurance sector. (Guendouz & Ouassaf, 2018).

The research analyzes the factors influencing the performance of insurance businesses in Ethiopia, and emphasizing firm-specific attributes. Return on Assets (ROA) is used as a performance measure. The study put under scrutiny nine selected insurance companies from 2005 to 2010. The regression analysis is employed to explore the effects of size, leverage, tangibility, loss ratio, premium growth, liquidity, and age on the firm's performance. The results demonstrate that size, leverage, and tangibility significantly impact performance. However, an increased loss ratio adversely affects it. The report offers insights for the insurance sector to enhance its financial stability and performance. It employed a quantitative research methodology to analyze a sample of nine Ethiopian insurance businesses from 2005 to 2010. The data is taken from the audited annual reports of insurance companies and the National Bank of Ethiopia. Regression analysis is utilized to evaluate the correlation between firm-specific characteristics and the performance of insurance businesses. (Mehari & Aemiro, 2013).

However, Turkish non-life insurance companies explored a set of variables that affect the ability to earn money from 2006 to 2013. It used financial data from 24 non-life insurance companies. The study measured how firm-specific factors affect profitability of non-life insurance companies in Turkey. It also concentrated on twenty-four companies in the year 2006 to 2013. The purpose of the research comes to isolate important internal parameters such as company size, company age, loss ratio, insurance leverage ratio, current ratio, premium growth motive, motor insurance, and premium retention ratio and their association with profitability. A combination of qualitative content analysis of financial reports, quantitative technique analysis of the profitability, index of the technical ratio and the sales

ratio were also used. Data was collected from financial statements, Insurance Association of Turkey, and Under-secretariat of Treasury. Reliability tests were conducted statistically on the data to remove effects of heteroskedasticity and ensure reliability of data. The results suggest that company profitability is highly correlated with company size and premium growth rate. Beyond doubt, larger companies that presumed to achieve economies of scale, and execute well marketing expansion strategies are more capable to increase their profits. The depreciation, company age, loss ratio, and current ratio show a negative correlation with profitability, meaning that older companies face a trouble in adjusting for new market conditions, lower profitability justifies high underwriting risks, and high liquidity is a sign of inefficient asset utilization. There was no observed impact for the share of motor insurance and the premium retention ratio at the Turkish insurance industry, and non-life sector specifically. The study findings suggest that managers should pay more attention on business expansion, risk management and active liquidity as means of increasing profitability. This case was particularly of interest by Turkey non-life insurances. Thus, Subtropical studies are suggested to be extended in the scope of external macroeconomic studies by ISSA member countries. (Kaya, 2015).

The study illustrated the internal factors to help understand determinants like the company size, capital adequacy, leverage ratio, liquidity ratio, loss ratio, as well as external factors like market share, GDP growth rate and inflation rate. However, Ethiopian insurers are confronted with wide range of internal and external factors that influence their operation system. There are factors that can be controlled by the operational management, such as operational efficiency and internal processes. There are also other factors like inflation, economic growth, which are out of the management's control. It is important to identify these factors and assess the profitability of the company to ensure that the sector is made profitable, competitive, able to service debt and attract investment. The quantitative study

involved assessment of panel data from 17 Ethiopian insurance companies in the years 2005-06 to 2014-15. The primary data is collected from the annual reports of the National Bank of Ethiopia and the insurance companies themselves. The model is chosen from the Hausman test is employed to focus on changes in the ROA (return on assets) value. Also, firm size, capital adequacy, the leverage ratio, liquidity ratio, loss ratio, market share, GDP growth and inflation rate are treated as independent variables. The study findings illustrate the following points: the size of insurance firms shows that profitability increases with firm size because large incurrence companies can achieve better economic scales and greater market power. However, positive relationship between capital adequacy and the ROA means that firms with adequate capital are able to invest in more opportunities and are more resistant to adverse economic conditions. The increase in GDP growth rate in economic activity leads to increase the demand for insurance services which leads to greater profitability. The study also showed that there is a negative relationship between the profitability and liquidity which means that ROA can decrease due to excessive liquidity if resources are not properly utilized. Finally, the findings observed an insignificant correlation between leverage ratios, loss ratios, market shares, and inflation rates which have minimal influences on the gained profits. The fixed effects model is 39.7% of the total profitability variance was achieved within companies, and with percentage that reached 46.46 fraction percent. In Conclusion, the study evaluates the major determinants of profitability in Ethiopian insurance industry. It stresses on the role of increasing capital adequacy, proper management of liquidity, and effective policy utilization. Even as leverage and loss ratios seem to negatively impact the capital management and operational efficiency, it is still very insignificant. The research is beneficial to insurers, policymakers, and regulators in delivering a stronger and more profitable insurance industry. (Berhe & Kaur, 2017).

Almajali et al. (2012), determines the most crucial determinants of the financial performance of Amman Stock Exchange-listed Jordanian insurance companies' during the period 2002-2007. The study investigates management competence as an internal key drives for other factors like – leverage, liquidity, size and age of the corporation – and their relationship with profitability as determined by Return on Assets (ROA). The findings showed that the insurance industry is crucial for Jordan. However, the financial performance has not been in par with other industries such as banking and is trailing behind. The majority of insurance companies perform poorly, with only a few generating substantial income. The study addresses the problem of examining what the core factors are for financial performance and why there is weakness. As a result, solutions may mitigate this situation in the future. Hence, the researcher relies on the use of secondary data derived from the financial reports and accounts of Jordanian insurance companies and the Amman Stock Exchange, Sample: All of the 25 insurance firms shown in the Amman Stock market were sampled from the year 2002 – 2007. The study variables were: Dependent Variable: The financial health of the firm was established via the Return on Assets (ROA) metric, independent Variables: Management Competence Index, leverage, liquidity, company age, and size. The study developed and tested a set of hypotheses rigorous multiple regression techniques which provided insight into the nature of the relationships, data accuracy and dependability were achieved by performing statistical analysis including mean, standard deviation, T-tests, VIF, and variance inflation factors. The study Findings conclude that leverage has a positive and statistically significant influence with financial performance. This finding means that firms with some leverage ratios are better positioned to provide incentives for managerial effort and receive favorable tax treatment. The findings also showed that liquidity has positive and significant impact on financial performance. However, it is easier for companies to fulfill the required obligations when an appropriate

level of liquidity is maintained. What's more, company size has positive and significant influence on financial performance. For instance, more sizable firms own additional resources, and cost efficiency are expected to be more profitable. In contrast, company age has negative and statistically insignificant from zero in terms of financial performance. It is not guaranteed that older companies perform better than younger ones. Management Competence Index also has positive and significant financial performance effect was recorded. In fact, well-educated people who manage firms usually foresee better results. The researcher recommends a set of enhancements including company asset enhancement. This means that greater asset bases will strengthen competitive and financial power, and leverage Optimization. Carefully selected debt management is central in reducing risks and increasing returns; in addition to suggest management prioritization. Thus, Well-trained people should be in the top management for better decision outcomes, maintain liquidity resources to a level that obligations can be met but not unnecessarily resources wasted, and foster competition. The weak correlation between performance and company age is good news for potential new business entrants.

Insurance services are currently integrated into the wider finance sector, as well as the insurance industry. This plays a key role in Pakistan's provider economic system. The study explored the profitability indicators in Pakistani insurance companies. It also investigates how firm-specific variables, such as the maturity level, size, volume of capital, leverage ratio, and loss ratio influence sales and profits. The return on assets (ROA), which is described as before-tax profit divided by total assets is found to be a critical indicator for insurance corporate profitability (TA). Profitability is a dependent variable so that size, capital volume, leverage, and loss ratio seem to be independent. The study findings provide a summary of Pakistani insurance companies' financing efficiency. ROA and another five factors like the company's age, size, volume of capital, leverage, and loss ratio were created

to figure out what element accurately represents the profitability of Pakistani insurance companies. The analysis, however, shows a negative relationship between leverage ratio and loss ratio as independent factors and profit growth which support the last two hypotheses. The study concluded that size, capital volume, and leverage all have a favorable influence on ROA. In contrast, leverage and loss ratio both have a negative effect. (Malik, 2011)

The critical data inputs for Olaosebikan's, (2013), investigates the factors that influence the profitability of Nigerian micro-life private insurers. The required data are taken from the yearly audited financials of insurance companies produced by the Nigerian Insurers Association (NIA) and the NAICOM. Reinsurance and profitability have a strong inverse relationship. This finding suggests that reinsurance inside the micro-life insurance industry at the Nigerian market is highly expensive and reflects an increasing risk involved with covering the lifestyles of limited individuals. The study main objective comes to determine the variables that affect the profitability of Kenyan combination insurance businesses. The primary goal of the study was to ascertain the effects of claims costs, agency charges, reinsurance costs, and market penetration on profit growth. Eventually, an evaluation of the four factors included in the study's objectives verify that the prescribed empirical model significantly explained the original research question by illuminating the prediction model's strong foundation and the existence of a sequential relationship among the independent and dependent variables. As a result, both the short- and long-term effects of the data suggest that the described model might be the most practical solution to the problem of determining and quantifying income in the insurance business.

Liargovas & Skandalis (2010), illustrates the impact of financial performance on Greece operating firms. The performance explains the ability of an organization to work, grow and

develop. For decision makers, understanding the determinants of performance is very useful. The Greek economy, categorized by economic and structural volatility is rather unique in this regard. The authors, via the analysis of the empirical evidence attempt to show how different internal and external factors that affect firm performance in the manufacturing industry. However, the financial records of some Greek manufacturing companies during a certain period are analyzed in this study. Also, numerous opinions were taken in account regarding the assessment of a company's performance and the specific elements that contribute to its success. A panel data model and an 8-year time-series data were used to measure the impact of the three variables (Return on Sales, Return on Assets, and Return on Equity) on a firm's success. Regression analysis also was used to measure the relationships between dependent and independent variables and diagnostic tests of data validity and robustness of results. Dependent Variable: The financial performance is evaluated in terms of return on assets (ROA) and profitability ratios. Independent Variables: The size of the firm, its leverage, liquidity and capital structure, as well as some macroeconomic variables such as GDP growth and inflation. The findings suggest that there are differences in performance across sectors; stressing that approaches should be customized to each industry characteristics. The study determined that the size, liquidity position, and proper allocation of resources are very important factors in improving the financial performance of Greek manufacturing firms. It has been noticed that intense financial leverage has a negative consequence on performance and thus prudent management of funding is necessary. The study recommends that firms should pay more attention to the operational efficiency measures, the structure of the capital, and in taking advantage of economic growth in order to improve the firm level sustainability and competitiveness.

Farhan et al. (2021) , comes to explore the factors that affect the profitability of life insurance companies in the Kingdom of Saudi Arabia. Profitability is affected by

underwriting or investing. A huge gap between the apparent profits and actual profits in the statements of such highly profitable life insurance companies has been found. This gap emphasizes the greater problem of how to measure profitability and identify its determinants, let alone try and forecast its future. We seek to fill this gap by identifying these affecting factors and develop recommendations for a fair profit allocation system to the policyholders. The major issue of the Saudi insurance space is shown in the form of the gap between the actual profits vis a vis the profits showcased in the financial statements. This gap makes it difficult to ascertain the determinants of profitability. This finding elicits the following question: "How does the net earned premiums, reinsurance commissions, net paid claims, underwriting expenses, and some other factors like the controllable expenses of the life insurance companies affect the profitability of life insurance companies as measured by their ROA?" Thus, the study seeks to solve these relationships by providing a solution and identifying the key variables that generally increase the profitability of life insurance companies operating in Saudi Arabia. The specific objectives are: Evaluating the degree/scale of impact that each variable has on the profitability, formulating suggestions regarding the fair share of profits to be allocated, adding to the existing knowledge .The researcher uses mixed methods consists of descriptive method by evaluating the theoretical frameworks and factors of profitability. The study also employs the quantitative method that uses factor analysis to multi correlating data into dependent grouped sets. Data during the years 2016–2020 was collected from three Saudi Life Insurance Companies. Independent variables consist of Net Earned Premiums, Reinsurance Commissions, Net Paid Claims, Underwriting Expenses, etc. The dependent variable is ROA, statistical methods carried out to establish data level of stability. Suitability includes tests of normality (Jarque-Bera),Variance Inflation Factor (VIF) to test multi-collinearity, Durbin-Watson and others tested for autocorrelation. The two key factors investment activities and premiums explain

61.33% of the variability profitability. The first factor includes net earned premiums, investment profit, changes to mathematical reserve and underwriting expenses. The findings show that mixed relationships were seen. The second factor includes reinsurance commissions, net paid claims, and general administrative expenses. Only net paid claims show an opposed relationship. The study verifies the positive relationship that exists between investment activities, premiums, and profitability as well as the negative impact of administrative expenses and commissions on profitably. In conclusion, profits yield greatly from a combination of both positive and negative relationships among different factors. The factor analysis method classifies accurately these elements into segments in order to get easy understanding. Hence, the researcher recommends to pay more attention to understand the factors contributing to increase profitability, establishing unbiased and fair mechanisms for profit allocation to policyholders, applying statistical approaches in a company's strategic planning and increasing the openness of its finances.

2.3.3 Liquidity

The study aims at investigating the role and importance of general insurance, specifically liability and property insurance in the United States. The study illustrates that these companies play the desired role in creating liquidity by investigating the relationship between creating liquidity and the insured details, especially the amount of capital. The study sample consists of companies from the period 1998 to 2007. Official data published by the American National Insurance Association was used. The financial position of companies was classified as low liquidity, medium liquidity, and illiquid based on transfer time and cost. This data was analyzed using a linear equation to examine the relationships. The study findings showed that companies with small capital create more liquidity than companies with large capital, as the surplus ratio is negatively related to liquidity creation.

Finally, the study explored the role of capital and business diversity in influencing liquidity creation. (Ling Ho, 2013)

The study identifies the relationship between liquidity and solvency of non-life insurance companies in the Italian insurance sector. The study paid more attention on renewing and developing methods of calculating the solvency of companies, as it is used to be calculated using old traditional methods that may not reflect the real reality of the company and actually need to be developed and improved from his point of view. It is known that the solvency margin is considered as the main challenge for any insurance company. It always seeks to maintain its ability to offer the required insurance obligations arising from the essence of its business in the best way and as quickly as possible to preserve the interest of the insured and their satisfaction; in addition to the positive reputation of a company. The researcher paid a great attention to develop and test a modern model that mainly contains the cash flows of companies and applies it to Italian companies by setting specific scenarios to measure the company's ability and to meet its obligations through managing incoming and outgoing cash flows. However, the researcher faced some obstacles like how to figure out if this model can accurately predict the company's ability and financial solvency better than the methods that were used. Hence, the research method relied on a model that included a set of determinants that were shown in internal and external cash flows, such as premiums received, compensation paid, operating expenses, investment revenues, and many economic factors over a 20-year period, such as inflation, interest rates, discounts, and the sale of assets. What's more, the study takes in account additional hypotheses and determinants associated with related risks. From 1990 to 1994, data from 11 financially unstable companies and 95 financially stable companies in the Italian insurance sector was used. Different scenarios were put into action, where each one based on the company's past performance and future assumptions. The study findings showed the success of the model

developed by the researcher. The model helped in determining the financial solvency better and more accurately than the traditional methods and revealed many defects and problems related to them due to their inability to determine the actual situation of the company accurately. The researcher recommends that the current methods should be replaced with the model he created. The findings also showed that the new method is able to predict a company's financial solvency accurately, in the near future and in the short term. The study findings also illustrated that the short-term cash liquidity is considered as an important part of any insurance company. (Ceccarelli, 2004).

Incapable corporations of offering and paying its bills and required obligations on time and consistently ignore its commitments to credit, service, and commodities providers are considered to be tired or insolvent. They often maintain liquidity costly, but can reduce the consequences of unforeseen cash-flow disruptions. Flexibility is defined as having enough cash money or relatively close assets to pay financial obligations. Since maximizing profitability is the major objective of every business, the researcher seeks to examine the connection between liquidity and profitability among insurance firms in Kenya. Many researchers have concentrated on the variables that impact the insurance profitability of the business over the past century. One possible explanation for this is that policyholders' profit growth has a direct effect on policyholders, shareholders, prospective buyers, employees, and other stakeholders. This study evaluated the profit growth of non-life insurance carriers using two variables. The first variable is the specialized profitability ratio which evaluates the efficiency of an insurance company's key insurance operations, while the main rival is the sales profitability. The 49 insurance firms in Kenya made up the study's population, which was evaluated using multiple linear regression models. The report's results indicate that businesses that possess enough financial cash face lower failure due to their ability to secure funding during challenging times. In insurance companies, there is an unfavorably

meaningful correlation between leverage ratio and return on equity. (Return on equity (ROE) stands for profitability, while quick ratio stands for liquidity.) Therefore, insurance providers can limit their potential losses to unforeseen ones. (Ngwili, 2013)

2.3.4 Leverage

The researcher explored the factors that affect the capital structure (leverage) of private Ethiopian insurance companies that aren't listed on the stock market. The study achieved the desired objectives by exploring how liquidity, business risk, company size, and profitability affect the capital structure and the companies' ability to finance themselves. Hence, the study employed a specific method that is based on exploring the relationship between the above-mentioned independent variables and the independent variable itself, which is leverage. Many previous literary studies have previously addressed the study of financial leverage of companies listed on the stock market in developing countries, but unlisted companies have not been studied in an appropriate and sufficient manner, especially Ethiopian insurance companies. The study also showed that the market suffers from the presence of active markets and the ability to make decisions related to investment or to the capital structure. The researcher relied on secondary data from the financial statements of 8 insurance companies from the period 2002 to 2011. Descriptive statistics were used to provide an overview of the subject, and relying on linear equations and statistical methodologies that help in examining the possibility of having relationship between the variables. The study found that the variables liquidity and business risks are negatively affected by the capital variable (leverage), and the variables size and profitability are also positively affected by the capital variable (leverage). (Regasa, 2014)

Kramaric et al. (2017), analyzes the variables that impact the profitability of the insurance industry in four selected Central & Eastern European countries—Croatia, Slovenia,

Hungary, and Poland– for the years from 2010 and 2014. The study findings showed that the contributions of insurance companies lead to financial stability, economic growth and risk coverage. The importance of insurance markets is on the rise in these countries, yet the profitability remains inconsistent across the board due to the firm specifics, industry specifics, and macroeconomic factors. The primary objective of the study is to ascertain and understand the underlying reasons behind the degree of profitability, as indicated by return on assets (ROA) and return on equity (ROE), resulting from factors such as firm size and type, reinsurance dependence, combined ratio, ownership structure, firm age, organizational form, and GDP per capita growth. The study performs unit root estimation tests with panel data from over 137 insurance companies from the four countries. Thus, 595 observations were made. The dependent variables for the study were return on assets (ROA) and return on equity (ROE). The independent variables accounted for firm specific (size, reinsurance share, organizational form), industry specific (ownership type) and macroeconomic variables (real GDP per capita growth). The analysis was done through stationarity tests, multicollinearity tests, heteroscedasticity tests, as well as robust statistical methods. The accuracy of the results was verified with these methods, which is essential for ensuring valid outcomes. Random-effects models were adopted after considering F-tests, Breusch-Pagan Lagrange Multiplier tests, and Hausman tests, that justified the usage of these models. The results show that the age of the company has a significant and positive influence on profitability. This suggests that older companies enjoy greater experience, reputation, and customer loyalty. Growth of real GDP per capita has a positive effect on profitability, but it is only influential in the context of the ROE model. This underlines the importance of insurance‘s economic environment. Other factors, such as company size and share of liabilities ceded to reinsurance, had no noticeable effect on profitability. These findings support the argument that macroeconomic environment and age of the organization are the

main determinants of insurance market performance in the targeted region. The analysis illustrated that profitability in the insurance industry is dominated by microeconomics and unit-specific variables. The findings also showed that older units and those situated in economically favorable regions perform better. The study recommends that policies and managerial work makers should pay more attention towards reducing instability in the economy and took advantage of the age of the organization to increase profits. The limitations of the study stem from its time frame (2010-2014), along with accounting-based measures but more scrutiny could be placed on equity changes, and conduct the analysis in other countries.

The idea of "financial leverage" describes how much companies rely on debt and external funding through loans and facilities. The company's goal is to cover costs and expenses from external funding sources by guaranteeing its assets and properties and retaining its ownership rights. The company also wants to make money from the outside funding it receives to pay for borrowing costs and basic operating costs and help it make profits. The researcher aims at exploring the impact of some fixed factors or determinants on the financial performance of Kenyan insurance companies. The study collected secondary data from a community of 52 companies operating in the market around 10 years from 2010 to 2018. What's more, the study developed methodologies and set hypotheses that are related to the financial performance and through determinants represented by the dependent factor which is financial performance. It was measured by the rate of return on assets (profitability), and with regard to the independent factors represented by liquidity (current assets / current liabilities), financial leverage (total debts / total assets). The study use of specific hypotheses and methods to do scientific statistical analyses led to illustrate that a company's financial performance is negatively affected by its financial leverage. The same was true for liquidity: the more liquidity there is, the worse the financial performance of

Kenyan insurance companies. In conclusion, the study findings proves that the Kenyan insurance sector is unprofitable and is not considered a safe place for investment. (Kamau, 2021).

Banafa (2015), aims at examining the effect of leverage, liquidity, and firm size on the financial health of non-financed firms in Kenya from 2009–2013, where focus was given to the Nairobi Securities Exchange (NSE). The study put under scrutiny 42 firms' panel data obtained from annual reports spread over five years and employs descriptive and inferential statistical analysis including panel regression models to test the relationships. The study's dependent and independent variables are operational as follows: Leverage, which is measured as the debt-to-equity ratio. Liquidity, which is operational as the current assets to current liabilities ratio. Firm size, defined in terms of market capitalization, and ROA and ROE. The operational efficiency indicators are receivables and payables days. The most significant contribution, both in resource-based view and in strategic management, is the recognition of the effect of firm's debt on performance of financial activities. High levels of debt to equity financing has a negative impact on firm's financial performance ratios. What's more, liquidity is found to negatively affect profit as well. This finding indicates that holding more than a threshold current assets leads to less efficient returns. It is observed that firm size has a positive but statistically insignificant impact. This fact suggests that larger firms make benefit from economies of scale but fail to convert it into higher profitability. Reserve imbalance that affects receivable accounts and payable accounts were found to have paradoxical consequences on financial performance and marking the area of receivables dramatically affect the profit margins. The study findings show that financial performance of non-financial business in Kenya is affected by leverage and liquidity management. However, the study suggests that the managers should enhance their capital structures by increasing equity financing and utilizing working capital effectively. It also recommends

that policymakers and regulators should make more efforts to promote sound financial practices, and future studies need to add macroeconomics and larger sample sizes to better inform analysis. What's more, the study explored the non-financial business phenomena in emerging markets and provide valuable insights on enhancing profitability and sustainability.

Khanqah (2012), comes to investigate the impact of working capital management policies on firm profitability and value. The paper gathered data from 28 Iranian companies listed on the Tehran Stock Exchange from 2005 to 2009. The research highlights the critical role of the working capital management in balancing profitability and liquidity. The study suggests that excessive current assets can lead to substandard returns. In contrast, insufficient liquidity can threaten solvency. There is a lack of empirical evidence on how aggressive and conservative working capital policies affect firms in an emerging market like Iran. Firms rely heavily on short-term financing due to an underdeveloped bond market. The study comes to evaluate the effects of aggressive and conservative investment and financing policies on profitability that measured by Return on Assets (ROA), and firm value, assessed using Tobin's Q. The methodology adopts Weinraub and Visscher’s approaches to categorize firms’ working capital policies. Aggressive investment policies (AIP) are characterized by low investment in current assets that relate to total assets. Aggressive financing policies (AFP) involve higher reliance on short-term liabilities. Conservative policies reflect the opposite. The study employs regression analysis with independent variables including investment and financing policy ratios, firm size, sales growth, and leverage. The dependent variables are ROA and Tobin’s Q, represent profitability and firm value. Data was analyzed using SPSS and Excel, ensuring robust statistical tests for multi-co-linearity and other biases. The findings reveal that conservative investment policies, which involve higher current assets, negatively impact profitability and firm value.

Aggressive investment policies lead to better financial performance. Conversely, aggressive financing policies, which depend heavily on short-term debt, are detrimental to both profitability and firm value. This finding suggests that over-reliance on short-term financing increases financial risk. Firm size positively affects profitability and value, reflecting economies of scale. Leverage negatively impacts performance due to higher financial costs. Sales growth significantly enhances profitability without an impact on firm value. The study recommends that optimal working capital management requires a balanced approach to both investment and financing policies. Firms should avoid excessive reliance on either short-term liabilities or current assets to ensure sustainable profitability and value creation. Policymakers are encouraged to develop financial markets to reduce firms' dependence on short-term loans. The study enriches the literatures by offering insights related to the emerging markets. It also recommends more future research on macroeconomic factors to gain better comprehensive analysis.

2.3.5 Premium Growth

The study objective comes to identify potential variables that influence the underwriting ability of South African life insurance and non-life insurance providers. The study also comes to gain a deep understanding of the insurance sector by studying the most appropriate and globally recognized financial indicators for the South African insurance market. The study variables are explained as follows: The performance of the variable, underwriting factor, and other independent factors, which are: the size of the company represented by the total assets, profitability through return on equity, the retention ratio (re-insurance) the size of the premiums retained by the company, return on investment, underwriting risk, financial solvency that represents the financial health of the company, the premium growth rate, market share. These variables were measured financially by employing appropriate

equations for the period from 2013 to 2019. The results showed that the company size, market share and return on investment are positively and fundamentally affected by the quality and ability of underwriting. The results also showed that the growth rate in premiums is weakly affected by the sector. Also, the relationship is positive between the retention ratio; especially for the non-life branch, and completely opposite for the life branch. In addition, it showed a negative correlation among underwriting risk and underwriting performance. Underwriting success was positively correlated with market share and profitability. The relationship regarding financial solvency was positive, clear and fundamentally affected by underwriting performance. The stressed on the urgent need to pay more attention to the quality and performance of underwriting so that the company can maintain its market share, financial solvency and profitability in a fundamental way. (Horvey & Mensah, 2024).

Markonah et al. (2019.) explores the consequences of both corporate governance as well as insurance premium growth on the overall financial performance of insurance firms in Indonesia. the research is based on the revenues of Indonesia insurance firms and used SEM with partial least square. The study measured the corporate governance of sample firms in accordance to transparency, accountability, fairness, and independence. The firm increment is also treated as a percentage of a change in the broad premiums within particular consecutive years. Finally, the company's growth is assessed by total assets changes, which is the most common for firm-level analysis. The study findings showed a highly positive correlation of finances with corporation governance performance. Further, "governance practices' including transparency and accountability have a direct influence on performance by increasing stakeholder trust and their support to operational efficiency. The growth in the rate of premium collection corresponds to the growth in assets of the company suggests an

increase in the expansion of the firm. Moreover, growth of a company greatly helps improve the financial returns of the company and serves as an important media that integrates corporate governance. Then, growth in premiums and profitability, good governance and proper growth in the premiums allows for better accumulation of resources which improves the financial results of the firm. Company growth is a factor that explains the relationship between corporate governance and financial performance, on one hand, and the relationship between growth in premiums and financial performance on the other hand, which shows the importance of this construct as a mediator for profitability. The insurance companies that under review were found to benefit most from corporate governance and premium growth which improved the financial performance. Insurance firms should strengthen governance mechanisms wherein transparency and accountability are considered as a key factor. The firms should also initiate and develop suitable strategies to ensure permanent premium growth. The firm should also take steps to minimize any occurred conflict created by the payment of dividends and the reinvestment of profits to provide constant increase in assets which will enhance the financial performance and profitability.

Dutta (2014) The investigation focuses on the relationship between growth in net premiums and profit levels in India’s general insurance business after liberalization. The study aims at exploring one major problem that explained as follows: The constant increasing growth in net profits is not accompanied by a consistent growth in profitability which seems to be declining frequently. This phenomenon is worrying because it invokes the consequences of hyper competition, de-tariffing, and increasing claim ratios as adversely affecting the net income of insurers. The study dealt with this issue by exploring the relationship between profitability and changes in premium. It also identifies the reasons for these phenomena by employing a quantitative approach. What's more, secondary data from 2000 to 2012 was

gathered from the Insurance Regulatory and Development Authority (IRDA) of India. The correlation and regression statistical methods were used as an attempt to determine the relationship between profitability and net premiums. The industry's growth is described using net premiums, whereas net profit after tax signifies profitability. In details, the data analysis incorporated outside data such as altered reinsurance losses, changes in claim ratios, the effects of de-tariffing, and other pertinent factors as they relate to the claims ratios. The findings of the study indicate that the general insurance sector exhibited positive shifts in net premiums, and achieves an expansion of 41% on average within the parameters of the investigated timeline. In contrast, the profitability was recorded to be highly volatile, showing declining growth for certain durations. Premise profitability was identified to have a regression net with claim payments that moved in the opposite direction of the profitability correlation: net premiums and profitability with a correlation coefficient value of -0.297. This means that higher premiums led to lower profits. Some of the key factors include greater claim ratios as a result of natural catastrophes, aggressive competition leading to lower prices, and higher reinsurance rates following global events including the attack on the World Trade Center. Further, the balance of premium over-claims indicates that there is no effective premium correlating with the profit margin in a business, noting that only 8% of the premium profit can change the total value profitability. Thus, the study findings recommend that decision-makers in India should expand and enhance the general insurance sector which leads to better economic growth. However, modern-day practices such as fierce competition and undercutting pricing tend to lower profitability. It also stressed on the importance of including actuarial pricing, underwriting, and offering different products to address various markets. Distribution expansion alongside periodic supervision by the IRDA will help in improving market efficiency and offer the needed protection to the policyholders.

Arena (2008), comes to explore the ability of and effect of the activity in the insurance market in enhancing the economic growth. The study targets 55 industrial and developing countries between the years 1976 and 2004. The study objective comes to systematically evaluate these causal relations by means of insurance premiums. These means are taken as proxies of the market activity. Analyzing the difference between impacts of life and non-life insurance on GMM technique of dynamic panel data models that solve the problems of endogeneity and unobserved heterogeneity with the use of GMM. The primary dependent variable is represented as the growth rate of real GDP per capita, while life and non-life insurance premiums represented as a percentage of GDP that constitutes explanatory variables together with other banking and stock market development, trade intensity, inflation, and human capital. The required analysis conducted on the collected data from global sources such as the World Bank and OECD identified all forms of relationships codes including Linear and Non-Linear ones and made a distinction between insurance activity and economic growth.

The study findings confirmed the hypothesis that there is an existence of a robust and statistically significant relationship between economic growth and insurance market activity. What's more, the findings illustrated that life insurance is particularly strong and has a positive impact on growth at high income countries. Non-life insurance enhances the growth at both high income countries and developing countries, but the latter shows higher Non-life insurance effectiveness. Non-linear analysis indicates that life insurance is more effective to lower levels of economic development. In contrast, non-life insurance prevails at intermediate economic development stages. Insurance activity was found to be positively associated with financial development and with life insurance. They then can achieve more effective growing in early and intermediate stages of development of the Banking and stock

markets. In comparison, non-life insurance was found to be effective at both low and high levels of financial development. The study findings indicate that the insurance market performance is fundamental and one of the most eminent constituents for economic growth. It assists different functions for life and non-life insurance at different income levels and stages of financial development. Other suggestions include working on the development of the insurance market in particular for developing countries by replacing their regulatory frameworks, stimulating innovation, and unbundling insurance from the rest of the financial services industry. What's more, the findings uncovered an urgent need to understand the relevance of insurance investing for institutional clients and the entire macro-economy.

2.3.6 Firm Size

The study explored the relationship between the size of an insurance company and its willingness to take risks in the Malaysian market. Thus, the paper comes to explore the ability of big companies to take risks. It then explored the affects that may appear from taking risk; along with measuring the chance of failure. The study data was gathered from 2000 to 2010 to examine various related issues. However, an emphasize was given to capital, economic conditions, and underwriting risks. It's worth noting that the world has been going through global crises. For instance, in 2008 the mortgage loan crisis in the United States affected the financial institutions greatly which led to a major collapse. It also worth mentioning that taking risk may lead to a complete collapse. This finding drives the government to interfere and protect the economy and increasing the risk of collapse to the lowest level. However, the study findings showed that the effects risk related topics were studied in the field of banking sector in details, but there are no enough studies on the insurance sector. The manuscript also put under scrutiny the Malaysian insurance sector

where the focus was given to the company's ability to take risks and expand significantly. The paper also illustrates the extent to which laws, regulations, rules, and risk-based oversight contribute to the insurance sector stability and their impact on reducing these risks. Thus, the paper employed statistical PERSON CORRELATION method to analyze the data following GMM method over a period of time. It also explored both the independent factor and the dependent factor including the company size and the subscription risks. The results demonstrated that large companies consistently pursue large and high-risk subscriptions, which reflects a positive relationship. As a result, risk-based control and supervision systems and laws are important because they can stop growth that isn't based on the right constituents which causes big economic collapse in the future. As a matter of fact, the aforementioned findings do not deny the fact that large companies always have a greater ability to bear risks. (Ngwili et al., 2013.)

Adams & Buckle (2003), explored the factors that affect the corporate financial performance in underwriting and investment activities at the insurance market of Bermuda. Bermuda has been emerged as one of the most important offshore financial centers. Its insurance and reinsurance industries have been expanding steadily by the mid-1990s and represented with 10% of the worlds reinsurance business. The study stresses on the significant role by of some specific company characteristics like, size, leverage, liquidity, underwriting risk, company type, operational scope and how these company specific characteristics account for the variance in financial performance. The study uses a common-effects panel data model with 48 observations on 47 Bermudian insurance and reinsurance companies from 1993 to 1997. The performance of the firm is captured in a dependent variable which is the operational performance. It is calculated as the percentage difference between investment income and underwriting expenses, and in relation to the premiums earned. Independent variables include the natural logarithm of assets representing company size, loss ratio

indicating underwriting risk, operational leverages measured in terms of technical reserves as a surplus ratio, liquidity measured as the current assets-to-current liabilities ratio, and company type and scope binary indicator variables. The study findings indicate that the least performing of reinsurers are those that are highly liquid and minimally leveraged. In contrast, low levels of liquidity and high levels of leverage were associated with firm under-performance. Surprisingly, there was a positive correlation between financial performance and underwriting risk. This finding means that firms that were computed to be at financially weaker positions on the global arena, were able to make increased profits in the limited scope in Bermuda. However, neither company's total assets nor the fact that they were multinational made any substantial positive or negative impacts on their financial performance painting. This finding shows the importance of managerial entrepreneurialism as well as the willingness to undertake risks in the Bermuda Market. In conclusion, the financial leverage and liquidity management are key attributes to performance, which supports the notion that managers are motivated to perform better with proper capital and cash management strategies in place. The absence of noteworthy size and multinational scope elicit effects indicating that the Bermudian regulations are effective in stimulating market competition for any size of a firm. The study suggests that policymakers should be encouraged for an open market posture, and indeed an offshore jurisdiction’s obligation to provide investment services that require special jurisdictions.

Chen & Wong (2004), aims at examining the health of Asian economies’ insurance industries including general (property-liability) and life insurance. The 1997 Asian financial crisis coupled with the gradual liberalization of the insurance industry has made it difficult for regulators to maintain solvency. This critical stage elicits a question on how to deal with macroeconomic variables such as interest rates or inflation and their effects on insurers solvency. The paper also analyzes the impact of the designed regulation that maintain

insurers solvent in the Asian countries. Thus, the required data was gathered from financial reports and regulatory documents of 1966 to 1999 concerning general insurers in Singapore. The other regions data was gathered in the years 1994 to 1999. What's more, the study examined business specific and macroeconomics factors by using logistic regression models and HHM model to evaluate life insurers' stability. Then it employed a weighted logarithmic function to test changes in items on financial balance sheets. Moreover, the paper explored the study variables that consist of firm size, investment performance, operating margins, premium growth, liquidity, surplus growth, asset mix, product mix, and insurance leverage, macroeconomic, interest rate levels, inflation, competition, and the number of insurers in the market. The study findings illustrates that there is a positive relationship with firm size, investment performance and liquidity ratio. In contrast, they showed and a negative relationship with combined ratio and surplus growth. The Asian financial crisis was adverse to the financial health of insurers especially in Singapore. The findings also showed that a focus on maintaining liquidity with certain investments and developing the regulatory structure is a must; especially with the existence of unambiguous stances. The findings of life insurers consist of significant positive relationship with firm size and a negative relationship with combined alteration of asset mix, product mix, and insurance leverage. The importance of firm size, investment returns, and liquidity to general and life insurance solvency cannot be explained. However, life insurers still face difficult challenges pertaining to asset and product mix. The study recommends that regulators should focus on the following issues: controlling the liquidity ratios concerning investments to curb financial risk exposure and adjusting the investment. Then, adjust solvency regulations to match the changes of the market environments, and to be applicable for the general macroeconomic environment, but tailored to specific Asian countries' regulatory frameworks. The need to

strengthen insurance regulation and harness financial stability in developing Asian countries is clearly illustrated in this analysis.

2.3.7 Claims Ratio

The global economy is based on the ideas and methods of risk science because insurance companies are exposed to different kinds of risks. There is no doubt that both the insured and the insurance firms desire to have their rights guaranteed; eg, the insured look for protection for their rights, and insurance firms look for a profit and stability. However, the Indonesian insurance sector suffers from a lack of awareness and knowledge about the foundation of insurance science, which involves taking on risks in exchange for achieving profit. Consequently, the study addressed the impact of the loss ratio, operating ratio, and retention ratio on the profitability of Indonesian companies listed on the stock market from 2011 to 2018. The loss ratio is considered as a key indicator that shows how insurance companies make money. If they don't do a good job of underwriting and pay their employees fairly, they won't be able to earn the desired profit, and will endanger the company's overall finances. The operating ratio factor is also very important, as it represents the inability of management to manage operating and technical expenses, which leads to increased costs and expenses for companies. Also, the retention ratio determines the company's ability to reduce risks and distribute risks which mainly affects profitability. The data extracted from the stock market was analyzed by using quantitative and descriptive methods, and scientific and statistical methods that led to the emergence of results. These findings indicate that the loss ratio has a negative relationship with profitability where the higher it is, the lower profit. More evidence showed that there are poor underwriting, weak management, and insufficient pricing. The operating ratio is also negatively affected by profitability, mainly because it is linked to it. In contrast, the it positively affected by profitability, but not in a fundamental

and significant way. In fact, the higher the retention ratio is, the higher the profit ratio will be. In the end, the researcher recommended that there's a necessity of offering mechanisms and methodologies that monitor the underwriting policy and pricing based on risks and the presence of wise and highly efficient management to deal with the operational and technical expenses. (Hasibuan et al., 2020.)

What's more, the study identified the relationship between the loss ratio and profitability in the Nigerian non-life insurance market. The market there has a loss ratio equals the claims ratio which is known to be a component of the insurance contract. This is because the insured think they may be at risk and buy insurance to protect themselves in case something goes wrong in the future. Therefore, the insurance sector operates on the principle of compensating for losses, a concept that is acceptable for various types of insurance. Insurance companies concentrate on the concept of customers compensation and manage it in an appropriate and ideal manner because insurance companies seek to leave a positive impression on their insured when an accident occurs. Firms also work hardly on managing their compensation efficiently and effectively. For instance, they want to compensate the insured at the lowest cost and with the best quality. Thus, insurance companies are exposed to face high expenses of controlling and accident-related costs which affect the company's profitability and liquidity. The company's long-term survival depends on how satisfied the insured are and how long they stay with the company, which is achieved by only having a good management. However, profit is a fundamental factor for the company survival in any sector. Thus, profit is considered as a mean for maintaining the company's financial solvency, to enhance its ability to offer the required obligations to shareholders, and help to face any future economic and financial risks. The study thus employed secondary data from 2002 to 2011. It then made linear equations to identify the relationship between the dependent and independent variables. The study findings showed that the loss ratio has an

opposite effect on profitability compared to compensation and the expense ratio. Thus, the study recommends that Nigerian insurance companies should focus on both the underwriting process and issuing insurance policies. This step is widely recommended and should be done by accepting risks that are within their capabilities and spending money on management to handle compensation and insurance costs. (Yusuf & Dansu, 2014).

Here, the author identified the level to which compensation management affects insurance company's bottom line by looking at a case study of non-life insurance companies in Rwanda. Insurance companies protect communities by accepting risks and dealing with accident outcomes suitably in case an accident occurred. When it comes to the compensation process in insurance companies, compensation management is crucial for making sure that the insured get the right amount of money at the lowest cost. In addition to offer the best quality service which make customers stay satisfied in the future. The research problem is elicited from the fact that insurance companies worldwide strive to minimize compensation payments and retain their customer base. This is because improper compensation management can negatively impact the financial solvency and company profits. However, the insurance sector in Rwanda faces numerous challenges, including unpaid compensation, pending court cases, and various other issues related to the insured. The study significance is represented in helping companies to pay attention and focus on risk science, offer proper management, and to reduce additional costs that may occur from compensations. It also stressed on the significance of paying attention to studying the market in the correct manner and accepting risks that may be appropriate for the company. For instance, the company can measure profitability by using return on assets and return on capital. Compensations are the total amount of money the company paid out. Thus, the study made interviews and designed questionnaires to gather quantitative and descriptive data from 93 employees, 10 agents, 13 brokers, and 205 insured claimants for compensation. The return on capital demonstrated

the close relationship between compensation management and profitability. The researcher recommended investing in compensation management, reducing additional costs, and studying the market appropriately to accept risks that align with the company's financial and economic capabilities, (Ntwali et al., 2020.)

Alomari & Azzam (2017), explained that insurance companies constitute an essential and important part of the economies worldwide. The study deals with exploring the relationship between the overall and partial factors (internal and external) that affect the profitability of Jordanian insurance companies listed on the stock market. The study applied the factors represented in liquidity, financial leverage, company size, market share, loss ratio (underwriting risk), underwriting growth rate, growth rate in gross domestic product and inflation rate. There is no doubt that the Jordanian insurance market is affected by the financial crises and an economic shock occurred. Then, a need arose to study the company's profitability, which was a reason to exit from the market and avoid bankruptcy. Even with the increase in the premiums and growth in the market and the increase in the number of residents, the profitability of companies decreased significantly. The mechanism of maintaining the profitability of companies is achieved by controlling the factors affecting them which helps to maintain the economic situation and the continuity of companies and their growth and development. The study main objective comes to examine and determine the impact of partial and comprehensive economic factors represented by the aforementioned factors. It then comes up with solutions and recommendations to develop the financial performance and continuity of the Jordanian insurance sector. The study methodology employed and developed a quantitative method to analyze the collected data from the targeted companies in the sample. The study sample consists of 24 companies listed on the stock market from 2008 to 2014. The source of this information was secondary data extracted by the researcher from the company's annual reports and through the Jordanian

Department of Statistics. What's more, the study identified the dependent factor which is profitability, and it is measured by calculating the return on assets. The study then identified the independent factors represented by liquidity, financial leverage, company size, market share, loss ratio (underwriting risk), inflation, and growth in the gross domestic product. The data was analyzed through Ordinary Least Square (OLS), Regression, Panel Data, Multicollinearity, and Autocolleration. The study findings showed a negative and influential relationship between profitability and liquidity. They also showed a negative and influential relationship with financial leverage where increasing debt negatively affects profitability. The company size and market share have a positive and influential relationship because increasing the company size and market share increase its ability to compete and achieve positive results. In contrast, the loss ratio (underwriting risks) has a negative and influential relationship with profitability; e.g. the higher this ratio and compensation is, the lower the profit is. What's more, the overall factors have a positive and influential relationship with the growth of the gross domestic product. It also positively affects the citizen's ability and increased demand for insurance. Finally, The inflation rate has an ineffective relationship with profitability because there is no sensitivity to fluctuations in basic prices. The researcher recommended the necessity of implementing risk management strategies to reduce the risks related to underwriting, supporting the merger of companies and expanding the size of companies to increase competition and profitability, and improving and increasing capital structures in order to reduce dependence on debt.

The study aims at investigating the financial health of life insurance companies in Ghana by testing the factors affecting them like macroeconomic and microeconomic factors (internal and external). As a matter of fact, these topics were not addressed in previous studies in the same context and were not studied adequately especially in life insurance. The study explores several main issues in order to identify the internal and external factors (macro and

micro) that affect the financial stability of life insurance companies in Ghana. It also illustrates the factors that affect directly the financial solvency of companies and seeks to control them. The outcomes of the study achieved its main objectives to develop a proactive system, and to determine the status of companies in terms of the strength of their financial health and financial solvency and classify them accordingly. The study sample includes a community that consists of 16 life insurance companies between the years 2007 and 2013. The secondary data was obtained through the financial statements of the companies. However, the study variables are the dependent factor which is financial health. It was measured by financial solvency, where other independent factors represented in the size of the company, income from investment, liquidity ratio, growth in premiums, loss ratio, combined loss ratio, technical profit, inflation and also regulatory reforms by sector supervisors. The study findings showed a strong positive relationship between the financial health and regulatory reforms. In contrast, a negative relationship appeared between inflation, loss ratio, and combined loss ratio. There was an effect on other elements represented by company size, technical profit, investment income and liquidity ratio on the financial performance of companies. In conclusion, the study findings recommend that the financial health of Ghanaian life insurance companies is affected by a set of internal and external variables (macro and micro). Thus, the study findings recommended that competent authorities should make efforts to create initiatives that offer best possible comfort in an atmosphere for professional growth, and to maintain a proper management for risks, reducing their effects and improving profits continuously with full compliance with suitable regulatory instructions and laws. The study also urged the regulatory authorities to work on a risk-based system that constitutes a proactive and cautionary step to reduce cases of financial bankruptcy and failure to the lowest level; and then to achieve financial solvency. (Asare, 2015).

Table 1: Literature Review

Name of Study	Methodology	Objective	Findings	Recommendations
Abdel Jawad & Ayyash, (2019)	Panel data regression analysis on financial statements of seven insurance companies (2010-2017), examining the effect of independent variables of leverage, Investment, Liquidity, Claims ratio on the solvency.	To investigate the factors that affect the solvency of insurance company in Palestine.	The results showed that there is positive impact of claims on solvency; while there is negative effect of leverage on the solvency. Finally there is no significant effect of investment and liquidity on it.	The researcher recommends to invest on the liquidity, increase the investments, increase the equity of the firms to minimize the leverage ratio, to make a further investigate of other factors such as firm size, premium growth, retention.
Fares & Nour, (2023)	Panel data regression analysis of seven firms (2012-2019), examining the effect of independent variables of profitability, liquidity, financial leverage, investment, and claims, with firm	To investigate the factors that influenced the solvency of insurance companies	The results showed that there is no significant relationship between the profitability and liquidity with the solvency while there is a positive impact of claims ratio,	The researcher recommends to invest on the liquidity, increase the capital and to carefully underwriting to minimize the risks

	size as a control variable on the solvency.	that listed in PEX.	investments and leverage on it.	and to examine another factors.
Abduh & Isma (2017)	Panel data regression analysis of six Takaful firms (2008-2012), examined the effect of independent variables of profit rate, Islamic index, company size, risk retention, contribution growth, investments income, Takaful leverage, company size, liquidity and expenses on the solvency.	To study firm-specific and economic factors that affect the solvency of family Takaful companies in Malaysia.	The factors that affect the solvency positively are contribution growth, investment income, Takaful leverage, liquidity and Islamic equity index while the other factors like size, risk retention, expense, profit rate are negatively affect the solvency,	The researcher recommends to enhance the investments and to issue a restricted policy to reduce the costs, to increase the capital and to decrease the retention rates.
Guendouz & Ouassaf, (2018)	Panel data regression analysis of sixth Takaful firms (2010-2016), examined the effect of independent variables of age, size, loss ratio, retention rate, risk level and written premium growth on the profitability.	To examine the main internal factors affecting the profitability of insurance Takaful companies in the Saudi	There is a significant influence of age, size, premium growth, loss ratio on the profitability.	The researcher recommends to set a list of procedures to improve the financial performance mainly by the regulators.

		Takaful market.		
Kaya (2015)	Panel data regression analysis of 24 non-life insurance firms (2006-2013), examind the effect of independent variables of company size, company age, loss ratio, current ratio, retention rate, risk level and written premium growth on the profitability.	To examine the firm-specific factors that affect the profitability of non-life Turkish insurance firms.	The factors that affect the profitability positively are size, premium growth and the factors that affect it negatively are age, loss ratio, current ratio.	The researcher recommends to pay attention for the growth policies in the future and to investigate the merger and expansions options.
Mazviona et al. (2017)	Panel data regression analysis of 20 insurance firms (2010-2014), examined the effect of independent variables of company size, claims ratio, expense ratio, leverage and liquidity on the performance of insurance firms.	To investigate the factors that influence the performance of insurance companies in Zimbabwe.	The expense ratio, claims and size affect the performance negatively while the leverage and liquidity affect it positively.	The researcher recommends to enhance the management strategies that minimize the administrative and operational expense.

2.4 Research Gap

- The Study focuses in particular on Palestinian ICs that listed at PEX. Quite the opposite, the other studies focus on their own countries.
- The Study investigates the New Solvency Regulations that issued by the PCMA; despite the fact that the insurance industry in Palestine has a unique characteristics from an economic, political and regulatory point view.
- The global studies investigate the solvency in the context of a global standards. The solvency is calculated by international accepted financial ratios. In contrast, this study uses the calculation of the PCMA that customized for the Palestinian industry and matches the accepted global standards. It thus will fill the current gap by studying the effect of the independent variables on solvency accompanied with the impact of the regulatory improvements.
- This Study use Real-Time financial data before and after the regulatory changes which will give a detailed impact of this changes. In contrast, the other studies use historical data without a comparison.
- The study investigates six hypotheses as follows: profitability, liquidity, leverage, premium growth, company size, claims ratio.

2.5. The Study Contributions

- The study provides practical recommendations for the regulators and the insurance companies to be implemented in order to eliminate the detected gaps.
- The study introduces useful contribution to enhance the Palestinian insurance market conditions that suffer from various obstacles.

- The study provides a comprehensive integrating model that consists of six hypotheses.
- The study enriches the academic studies by presenting the effects of localized regulations. It also provides a fundamental base for the global industries that may have a regulatory change.

Chapter Three
Research Methodology

3.1 Overview

The third chapter tells the reader about the thesis technique, which covers the data-collecting method. The thesis includes: sample, model, variable measurements and statistical analysis.

3.2. Data collection method

The thesis data is classified as secondary data that obtained from the financial statements (the income statement and the balance sheet statement) of the insurance firms in Palestine. This data is published on the Palestine Exchange website for the 10 periods (2020-2022). The secondary source of data for this study includes (Q4 2022, Q3 2022, Q2 2022, Q1 2022, Q4 2021, Q3 2021, Q2 2021, Q1 2021, Q4 2020, Q3 2020).

3.3 Population and Sample

At the end of 2022, the number of ICs listed at PEX was 8. Thus, the thesis selected these eight firms as a sample, including: TRUST, NIC, MIC, AIG, GUI, PICO, TIC and TPIC.

Table 2: Companies Name

Abbreviation	**Full Name**
TRUST	Trust International Insurance Company
NIC	National Insurance Company
MIC	Al-Mashreq Insurance Company
AIG	Al-Ahleia Insurance Group
GUI	Global United Insurance Company

PICO	Palestine Insurance Company
TIC	Al-Takaful Palestinian Insurance Company
TPIC	Tamkeen Palestinian Insurance Company

3.4 Research Model

The Researcher used the multiple linear regression models, represented as:

SLV= C + b1 Pro + b2 Liq + b3 PG +b4Csize + b5CL +b6Lev+ E.

This model is considered as the most common form of regression analysis

Table 3: Model Variables

SLV	**SOLVENCY RATIO**
PRO	Profitability ratio
LIQ	Liquidity ratio
PG	Premium growth
CSIZE	Company Size
CL	Claims ratio
LEV	Leverage
E	Error
C	Constant
B1 B2 B3 B4 B5 B6	Parameters that have been estimated

Source: Prepared by The Author.

3.5 Variables Measurement

Solvency Ratio: *(Dependent Variable)*

PCMA (Palestine Capital Market Authority) Percentage Calculation, through an Regulations No. 6 (2020) that issued by PCMA. There are 6 appendices' that fill out by the regulator customized professional team to calculate it relying on the financial statements of the companies.

The solvency margin form consists of the following appendices, which are considered as an integral part of these instructions and are read with them (PCMA – Official Website, 2025):

1. Appendix No. (1): Solvency margin.
2. Appendix No. (2): Available capital.
3. Appendix No. (3): Capital required against asset risks.
4. Appendix No. (4): Capital required against the underwriting obligations.
5. Appendix No. (5): Capital required against the reinsurers.
6. Appendix No. (6): Capital required against the life insurance.

The equation is calculated as: Solvency (%) = The Available capital / The Required capital.

Profitability: *(Independent Variable)*

ROA= net income before tax / Avg. total assets

Liquidity ratio: *(Independent Variable)*

Current ratio = current assets / current liabilities

Premium growth: *(Independent Variable)*

Premium growth = change in growth written premium

Claims ratio: (Independent Variable)

Claims ratio = claims incurred expense / (net premium + commission received).

Leverage: (Independent Variable)

Debt to Equity Ratio = Total Debt/Equity

Chapter Four

Data Analysis and Findings

4.1. Overview

This section consists of the statistical analysis, their results. It also discusses the descriptive statistical and correlation analysis, diagnostic tests and multiple liner regression.

1. Descriptive Statistics:

This section discusses the descriptive statics results for the dependent variable: the solvency of insurance companies that work in Palestine. The independent variables are: Profitability, liquidity, leverage, premium growth, company size, and claims ratio (loss ratio).

Before applying the new solvency regulations:

Table 4: Descriptive statistics before applying the new solvency regulations

Variable	Mean	S.D.	Min	Max	Obs
SLV	1.587159	. 3062052	1.04	2.29	40
PRO	. 0088848	. 0189583	-.0459724	.0574032	40
LIQ	.9678492	.141462	.8229341	1.558209	40
LEV	.1026022	.1126808	0	.4000039	40
PG	.1409104	.1959655	-.2171377	.5898378	40
CSIZE	18.17543	.3609202	17.3433	18.74898	40
CL	.653552	.0648784	.5351937	.8401984	40

Source: The Author.

The descriptive statistics computed and calculated based on the 40 observations recorded on the period Q3/2020 to Q4/2022. The table above illustrates that Profitability of the Palestinian insurance companies range from minimum -.0459724 to maximum of .0574032 with a mean of .0088848. The liquidity range is presented from .8229341 to 1.558209. It also presents the Leverage ranges from 0 to .4000039. The Premium growth ranges from -.2171377 to .5898378. The Size ranges from 17.3433 to 18.74898. The claims ratio ranges from .5351937 to .8401984.

After applying the new solvency regulations:

Table 5: Descriptive statistics after applying the new solvency regulations

Variable	Mean	S.D.	Min	Max	Obs
SLV	1.407658	. 3478063	.66	2.06	40
PRO	.0166554	.02262	-.081872	.062858	40
LIQ	.9361631	.0579759	.8527867	1.048245	40
LEV	.0983185	.1059104	0	.4771414	40
PG	.1361508	.1804966	-.2544754	.5840875	40
CSIZE	18.29498	.304512	17.73188	18.75236	40
CL	.6639473	.0663676	.4562161	.826322	40

Source: The Author.

The descriptive statistics computed and calculated based on the 40 observations recorded on the period Q3/2020 to Q4/2022. The table above illustrates that profitability for Palestinian insurance companies ranges from minimum -.081872 to maximum .062858 with a mean of .0166554. It also presents the liquidity that ranges from .8527867 to 1.048245. It

then presents the leverage that ranges from 0 to .4771414. The Premium growth ranges from -.2544754 to .5840875. The size ranges from 17.73188 to 18.75236. Finally, the claims ratio ranges from .4562161 to .826322.

4.2 Descriptive Statistical Analysis

Correlation coefficient presents the linear relation between each two variables. Table (4) illustrates that there is a significant relationship between solvency and size, and liquidity. In contrast, there is a negative relationship between solvency and leverage, premium growth. The table also shows that there is an insignificant relationship between solvency with profitability and claims ratio.

Before applying the new solvency regulations:

Table 6 : Descriptive statistical analysis before applying the new solvency regulations

Variable	**SLV**	**PRO**	**LIQ**	**LEV**	**PG**	**CSIZE**	**CL**
CL	-0.0932	-0.3348	0.1223	-0.1005	0.1086	-0.0690	1.0000
CSIZE	0.4427	0.1244	-0.1622	-0.0734	-0.0755	1.0000	
PG	-0.3144	0.1324	-0.2382	-0.1787	1.0000		
LEV	-0.2594	-0.4383	-0.2617	1.0000			
LIQ	0.3856	0.1728	1.0000				
PRO	0.2216	1.0000					
SLV	1.0000						

Source: The Author.

Table (6) shows that r=0.2216 for solvency and profitability. This finding illustrates that there is an insignificant correlation between the variables. It also shows that r=0.3856 for solvency and liquidity which means there is moderate positive correlation between the variables, where the more liquidity means more solvent. It also identified that r=-0.2594 for solvency and leverage which means there is a week negative relationship between the variables; the companies that have high leverage might be less solvent. Moreover, r=-0.3144 for solvency and growth shows that there is a moderate negative correlation between the variables, which indicate that companies that have a high growth may have low solvency. Finally, the table shows that r=0.4427 for solvency and size which means that there is moderate positive correlation, and the big companies might be more solvent. However, r=-0.0932 for solvency and claims ratio means that there is a negative weak relation between the claims ratio and tend to be more solvent.

<u>After applying the new solvency regulations:</u>

Correlation coefficient presents the linear relationship between each two variables. Table (5) illustrates that there is a significant positive relationship between solvency and profitability, and size. It also shows a negative relationship between solvency and leverage, premium growth. In contrast, it shows an insignificant relationship between solvency with liquidity and claims ratio.

Table 7: Descriptive statistical analysis after applying the new solvency regulations

Variable	**SLV**	**PRO**	**LIQ**	**LEV**	**PG**	**CSiZE**	**CL**
CL	0.2282	-0.0330	-0.1425	-0.0026	0.0848	0.0975	1.0000

CSiZE	0.4055	0.0530	-0.3995	-0.1247	-0.1947	1.0000
PG	-0.2994	0.0602	0.0115	0.0829	1.0000	
LEV	-0.6144	-0.1741	-0.4170	1.0000		
LIQ	0.1113	0.1679	1.0000			
PRO	0.4705	1.0000				
SLV	1.0000					

Source: The Author.

Table (7) shows that r=0.4705 for solvency and profitability. This finding means that there is a significant positive relationship between the variables, but this effect appeared after applying the new regulations. It also illustrates that r=0.1113 for solvency and liquidity which means that there is a weak positive correlation between variables. The more liquidity means more solvent. The table also illustrates that r=-0.6144 for solvency and leverage which means that there is a strong negative relationship between the variables. This finding also means that the companies that have high leverage might be less solvent. Moreover, r=-0.2994 for solvency and growth means that there is a weak negative correlation between the variables; and indicates that companies that have a high growth are exposed to low solvency. Then, it shows that r=0.4055 for solvency and size means that there is a moderate positive correlation where big companies might be more solvent. Finally, the table illustrates that r=0.2282 for solvency and claims ratio which means that there is a positive weak relationship between the variables. It also means that the higher claims ratio did not significantly affect the solvency ratio.

4.3 Inferential Statistical Analysis

Before applying the new solvency regulations:

Table 8: Inferential statistical analysis before applying the new solvency regulations

Solvency	Coefficient	Std. Error	t-ratio	p-value	[95% Conf. Interval]	
PRO	.393835	2.576673	0.15	0.879	-4.848446	5.636116
LIQ	.8113714	. 3127577	2.59	0.014	. 1750611	1.447682
LEV	-.4447542	.4109669	-1.08	0.287	-1.280873	.3913642
PG	-.331818	.2178125	-1.52	0.137	-.7749608	.1113248
CSIZE	.3954242	.1117481	3.54	0.001	.168071	.6227774
CL	-.4348753	.6797658	-0.64	0.527	-1.817869	.9481185
CONS	-6.012026	2.160491	-2.78	0.009	-10.40758	-1.616474

Source: The Author.

This section of the study explores the coefficient that measures the strength of the relationship between the variables. The standard deviation stands for the error of the coefficient; t-ratio represents the statistical significance; p-value shows the significance of the coefficient (less than 0.05).

The coefficient & p-value for the profitability reached 0.3938 and 0.879. In contrast, t-value has no significant relationship between profitability and solvency. Liquidity and the results shows that coefficient & p-value were 0.8114 and 0.014. This finding means that t-value is more than 2 and there is a positive and statistically significant effect on solvency. What's more, the leverage coefficient & p-value were -0.4448 and 0.287. T-value is less than 2 which means that there is a negative weak relationship. The coefficient & p-value for the Growth were -0.3318 and 0.137. T-ratio is below 2, and this means there is a negative weak and insignificant relationship between the growth and solvency. The coefficient & p-value

of the size were 0.3954 and 0.001. The t-ratio 3.54, which means that there is a positive strong and statistically significant relationship between the size and solvency. Coefficient & p-value for the claims ratio were -0.4349 and 0.527. The t-ratio is very small and below 2, which means that there is no statistically relationship between the claims ratio and solvency. Finally, the coefficient & p-value for the Constant were -6.012 and 0.009. The t-ratio is above 2, which means that the intercept is statistically significant and has a relationship between the variables.

Table 9: Analysis of variance table before applying the new solvency regulations

Source	**SS**	**df**	**Ms**
Model	1.73364476	**6**	.288940794
Residual	1.92305819	**33**	.058274491
Total	3.65670295	**39**	.093761614

Source: The Author.

Table 10: Model summary table before applying the new solvency regulations

Number of obs	**40**
F (6,33)	4.96
Prob > F	0.0010
R-squared	0.4741
Adj R-squared	0.3785
Root MSE	.2414

Source: The Author.

Table(10) illustrates that the number of observations was 40 before applying the new regulations. F-statistic examines the overall variables by determining the statistical

significance where it equals 4.96. p=0.0010 which means that the model is statistically significance as at least one of the independent variables could explain the dependent variable. R-Squared equals 0.4741 which means that the model percentage is explained by the independent variables in a moderate relationship. Adjusted R-Squared equals 0.3785 which means that the model percentage is explained by independent variables. However, not all the variables are useful in interpreting the dependent variable.

After applying the new solvency regulations:

Table 11: Inferential statistical analysis after applying the new solvency regulations

Solvency	**Coefficient**	**Std. Error**	**t-ratio**	**p-value**	**[95% Conf. Interval]**	
PRO	6.135368	1.45779	4.21	0.000	3.169472	9.101264
LIQ	-.2380345	.7144527	-0.33	0.741	-1.6916	1.21553
LEV	-1.677392	.3564584	-4.71	0.000	-2.402612	-.9521715
PG	-.4916741	.1829188	-2.69	0.011	-.8638252	-.1195229
CSIZE	.2653901	.1253918	2.12	0.042	.0102785	.5205017
CL	1.222959	.4907889	2.49	0.018	.2244419	2.221477
CONS	-3.907116	2.72404	-1.43	0.161	-9.449216	1.634985

Source: The Author.

This part of the study explains the coefficient that shows the strength of the relationship between the variables. The standard deviation stands for the error of the coefficient. T-ratio represents the statistical significance. p-value shows the significance of the coefficient (less than 0.05).

The coefficient & p-value for the profitability were 6.135368 and 0.000. T-value is more

than 2 means that there is a significant positive relationship between profitability and solvency. The liquidity and the results shows that coefficient & p-value were -0.2380345 and 0.741. t-value is very small and less than 2 which means that there is no statistically significant relationship with solvency. The leverage' coefficient & p-value were -1.677392 and 0.000. Moreover, the findings showed that t-value is below 2 which means that there is a strong negative relationship with solvency. The coefficient & p-value for the Growth were -0.4916741 and 0.011. The findings also illustrates that t-ratio is below 2, which means that there is a negative and significant relationship between the growth and solvency. The coefficient & p-value for the size is 0.2653901 and 0.042. t-ratio is 2.12, which means that there is a positive strong and statistically significant relationship between the size and solvency. The coefficient & p-value for the Claims ratio were 1.222959 and 0.018. t-ratio is above 2, which means that there is a positive statistically relationship between the claims ratio and solvency. Finally, the coefficient & p-value for the Constant were –3.907116 and 0.161. t-ratio is below 2, which means that the intercept of the model is not significant.

Table 11: Analysis of variance table after applying the new solvency regulations

Source	**SS**	**df**	**Ms**
Model	3.40164587	6	.566940978
Residual	1.31615432	33	.039883464
Total	.039883464	39	.120969236

Source: The Author.

Table 12: Model summary table after applying the new solvency regulations

Number of obs	**40**
F (6,33)	14.21
Prob > F	0.0000
R-squared	0.7210
Adj R-squared	0.6703
Root MSE	.19971

Source: The Author.

Table (13) illustrates that the number of observations is 40 before applying the new regulations. It also illustrates that F-statistic examines all of the variables by determining the statistical significance that equals 14.21. Moreover, p=0.0000 means that the model is statistically significance; where one of the independent variables could explain the dependent variable. R-Squared equals 0.7210; and this means that the model is explained by the independent variables with a strong relationship. The Adjusted R-Squared equals 0.6703 which means that the model is explained by this percentage. Thus, the variables are found to be useful in interpreting the dependent variable.

4.4 Testing the Hypothesis and the Results Analysis

4.4.1 Testing the first hypothesis

The H01 claims that there is no significant positive relationship between the profitability and the solvency of insurance companies working in Palestine. The correlation analysis indicates that there is a positive relationship between solvency and profitability at 0.2216. However, regression analysis illustrates that there is no statistically significant relationship between them with a coefficient 0.3938 and p-value 0.879. So, we conclude that this

hypothesis is correct and there is a no significant relationship between the profitability and the solvency of insurance companies that operate in Palestine.

The H02 claims that there is no significant positive relationship between profitability and the solvency of insurance companies that work in Palestine. The correlation analysis indicates that there is a positive relationship between solvency and profitability at 0.4705. Regression analysis shows that there is a strong statistically relationship between them with a coefficient at 6.1354. However, p-value rates 0.0000 which shows that this hypothesis is rejected and there is a significant relationship between the profitability and the solvency of insurance companies operating in Palestine.

4.4.2 Testing the second hypothesis

H01 indicates that there is no statistically positive relationship between liquidity and the solvency of insurance companies that operate in Palestine. The correlation indicates that there is a significance positive relation at 0.3856. In contrast, regression analysis illustrates that there is a strong statistically relationship between them with a coefficient at 0.8114. p-value rates 0.014 which indicates that this hypothesis is rejected and there is positive significant relationship between the liquidity and the solvency of insurance companies that operate in Palestine.

Moreover, H02 indicates that there is a statistically positive relationship between liquidity and the solvency of insurance companies that operate in Palestine. The correlation indicates that there is no significance relation at 0.1113. Regression analysis also indicates a positive but not significance relationship between them with a coefficient at -0.2380. p-value rates 0.741 which indicates that this hypothesis can’t be rejected and there is a positive but not

significant relationship between the profitability and the solvency of insurance companies in Palestine.

4.4.3 Testing the third hypothesis

H01 indicates that there is a no statistically positive relationship between leverage and the solvency of insurance companies in Palestine. The correlation indicates a negative relation at rate of -02594. In contrast, the regression analysis shows a negative relationship, but it doesn't indicate statistically relation between them with a coefficient that rates -0.4448. Moreover, p-value rates 0.287 which indicates that this hypothesis can't be rejected and there is a negative but not significant relation between the leverage and the solvency of insurance companies that operate in Palestine.

What's more, H02 indicates that there is no statistically positive relationship between leverage and the solvency of insurance companies that operate in Palestine. The correlation indicates that there is a negative relationship at -0.6144. In contrast, regression analysis shows a negative statistically relationship between them with a coefficient that rates -1.6774. p-value rates 0.0000, which illustrates that this hypothesis is accepted and there is a negative significant relationship between the leverage and the solvency of insurance companies that operate in Palestine.

4.4.4 Testing the fourth hypothesis

H01 indicates that there is no statistically positive relationship between premium growth and the solvency of insurance companies that operate in Palestine. The correlation indicates that there is a negative relationship at -0.3144. The regression analysis shows a negative relationship, but it doesn't show statistically relationship between them with a coefficient

that rates -0.3318 and p-value 0.137. In conclusion, this hypothesis can't be rejected and there is a negative but not significant relationship between the premium growth and the solvency of insurance companies that operate in Palestine.

Moreover, H02 indicates that there is a statistically positive relationship between premium growth and the solvency of insurance companies that operate in Palestine. The correlation indicates that there is a negative relation rates -0.2994. Regression analysis illustrates that there is a negative relationship but not statistically between them with a coefficient that rates -0.4917. Moreover, p-value rates 0.011 which concludes that this hypothesis is rejected, and there is a negative significant relation between the premium growth and the solvency of insurance companies that operate in Palestine.

4.4.5 Testing the fifth hypothesis

H01 indicates that there is no statistically positive relationship between company size and the solvency of insurance companies that operate in Palestine. The correlation analysis indicates that there is a positive relation at rate 0.4427. Moreover, regression analysis showed that there is a positive statistically relationship between them with a coefficient at 0.3954. In addition, p-value rates 0.001, which concludes that this hypothesis is rejected, and there is a positive significant relationship between the company size and the solvency of insurance companies that operate in Palestine.

H02 indicates that there is a statistically positive relationship between company size and the solvency of insurance companies that operate in Palestine. The correlation analysis indicates that there is a positive relation at rate 0.4055. Regression analysis indicates that there is a positive statistically relationship between them with a coefficient at 0.2654. p-value rates 0.042 which concludes that this hypothesis is rejected, and there is a positive significant

relationship between the company size and the solvency of insurance companies that operate in Palestine.

4.4.6 Testing the sixth hypothesis

H01 indicates that there is no statistically positive relationship between claims ratio and the solvency of insurance companies that operate in Palestine. The correlation analysis indicates that there is a negative relationship at rate of -0.0932. Regression analysis showed that there is a negative statistically relationship between them with a coefficient at rate of -0.4349. Moreover, p-value rates 0.527, which concludes that this hypothesis can't be rejected, and there is a negative but not significant relationship between the claims ratio and the solvency of insurance companies that operate in Palestine.

H02 indicates that there is no statistically positive relationship between claims ratio and the solvency of insurance companies that operate in Palestine. The correlation analysis indicates that there is a positive relation at rate of 0.2282. Regression analysis showed that there is a positive statistically relationship between them with a coefficient at rate of 1.2230. Moreover, p-value rates 0.018, which concludes that this hypothesis is rejected, and there is a positive significant relationship between the claims ratio and the solvency of insurance companies that operate in Palestine.

Chapter Five

Conclusions and Recommendations

5.1 Overview

This thesis, titled, 'Factors Affecting the Solvency of Palestinian Insurance Companies Listed at Palestine Exchange: A Comparative Study before and after the Implementation of New Solvency Regulations', investigates the factors affecting the solvency of the Palestinian insurance companies using the financial information. The financial information employed Excel and Stata, multiple linear regression analysis, and descriptive statistics as a mean to achieve the desired objectives. A discussion of the findings is covered in this chapter.

5.2 Conclusions

This thesis examined the determinants that affect the solvency of insurance companies in Palestine. The required data is gathered from eight listed insurance companies at Palestine Exchange and covered the period from the Q3 of 2020 to the Q4 of 2022. Multiple linear regression is used to identify the factors that affect solvency. What's more, correlation is also used to illustrate the relationship between solvency and its determinants. The study findings show that before the new rules were implemented, the solvency was positive, but it does not have significant relationship with profitability. It also has a positive significance relationship with liquidity and company size. Moreover, claims ratio, liquidity, and premium growth illustrate a negative but not significant relationship with solvency. However, After the new rules were implemented, the study findings show that solvency has a positive and significant relationship with profitability, company size, and claims ratio.

Then, leverage and premium growth show a negative and significant relationship with solvency. Finally, liquidity has a positive but not significant relationship with solvency.

5.3 Recommendations

There is no doubt that the findings of this thesis obtain a set of significant and an up-to-date recommendations that certainly will help to improve the insurance sector in Palestine. Thus, the study findings recommend the insurance companies in Palestine to persist on enhancing and developing the company's profitability due to its vital role in achieving the required economic success. The findings also stressed on the positive impact of offering an appropriate financial solvency to ensure the fulfillment of the company's obligations that is represented by insurance compensation and related operating expenses. The thesis also recommends following strategic policies that focus on reducing the operating expenses of little importance, and improving the quality of revenues by focusing on underwriting based on a study of risks and appropriate profitability. What's more, the thesis explores a set of significant points related to liquidity. In details, the researcher urges the decisions makers in Palestine and the working companies there to work on improving the quality of liquidity management. However, despite the presence of a positive relationship with financial solvency, there isn't a significant statistical impact. Thus, the importance of continuous interest in ensuring the company's ability to maintain its short-term financial liquidity appears, which directly affects the financial solvency of the companies. The researcher also stressed on monitoring financial leverage due to its direct impact on the margin of financial solvency. The thesis then illustrates a gap represented in the failure to follow appropriate hedging policies on debts and monetary policies. These policies are vital and contribute to offer appropriate borrowing system for the company's financial capabilities, which will inevitably lead to negative results on the company's ability to pay its insurance obligations in an appropriate and timely manner. Moreover, the researchers illustrate that growth rate

of premiums and the existence of a negative relationship with financial solvency require diligent attention to improve the quality of the subscription. Thus, it should be appropriately based on the risks related to the subscription, as a large, unsound subscription only contributes to increasing the risks incurred by the company and negatively impact the main financial indicators of the company, especially financial solvency. The thesis then explored a set of factors in relation to the company size and its relationship with financial solvency. It recommends that insurance companies should work on offering an appropriate opportunities for mergers or acquisitions, and expanding the target markets. It then shed a light on the eminent role and the positive impact of the financial solvency on the company's success. Finally, the researcher suggests working on reducing and regulating the claims ratio on an ongoing basis. Despite the positive relationship with financial solvency, companies are asked to maintain this ratio because of its general impact on the performance of the insurance company.

5.4 Recommendations for Future Research

Future literatures may expand into other studies through:

- Analyzing other financial and non-financial elements such as investment income and other factors related to market conditions.
- Working on studying other global and regional markets, which provides a broad database for the future studies and analysis to reach more accurate results.
- Doing more research to study the economic market fluctuations, changes and updates in instructions and laws on the financial solvency of companies.
- Studying the role of governance and risk science practices in influencing financial solvency.

- Do more efforts on enhancing awareness and knowledge among the public about the importance of insurance, and its important role in enhancing the financial and economic stability.
- Enhancing work with insurance supervisors.

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الملخص

في عصر العولمة الحالي، يعمل التأمين كمكون أساسي وحيوي اقتصاديا واجتماعيا من خلال توفير الأمن والحماية ضد المخاطر مع المساهمة في تعزيز النمو.يدرس هذا البحث قضية الملاءة المالية لشركات التأمين المدرجة في بورصة فلسطين بحيث يسعى الى فهم تأثير الربحية والسيولة والرافعة المالية ونمو الأقساط وحجم الشركة ونسبة المطالبات عليها. بالإضافة الى ذلك، تسعى الى فحص تأثير هذه المحددات قبل وبعد تطبيق التعليمات و التغيرات القانونية التي أقرتها هيئة سوق رأس المال الفلسطينية بشأن الية احتساب هامش الملاءة المالية ، وتشمل هذه التغيرات اللوائح و التعليمات التي تحدد نسب هامش الملاءة و التصنيفات المتعلقة به والية احتسابه بناء على رقابة مستندة على المخاطر والعديد من المحددات القانونية و المهنية ، تعتمد هذه الدراسة على بيانات ثانوية مستمدة من ثماني شركات تأمين فلسطينية خلال الفترة من الربع الثالث للعام 2020 الى الربع الرابع للعام 2022 ،

حيث استخدم الباحث الطرق الإحصائية المتعارف عليها لفحص العلاقة بين المتغيرات المختلفة قبل وبعد تطبيق التغيرات التنظيمية ، وتشير النتائج الى وجود تغيرات كبيرة في محددات الملاءة المالية خلال الفترة ، حيث انه قبل تطبيق التعليمات الجديدة كان للربحية و السيولة تأثيرات معتدلة على الملاءة المالية في حيت تأثرت سلبا بنسب الرفع المالي و المطالبات المرتفعة و علاوة على ذلك كان لنمو الأقساط وحجم الشركة تأثيرات معاكسة حيث لم تكن هناك ممارسات موحدة لإدارة المخاطر، والى جانب كل هذا، أعطت المتطلبات هامش الملاءة المالية المحدثة أقساط التأمين والربحية والسيولة تأثيرا ايجابيا أكثر وضوحا ، كما أدى تحسين الامتثال التنظيمي الى خفض الاثار السلبية لهذه المقاييس مما يشير الى أن نسبة الرفع المالي و المطالبات كانت أكثر صرامة في الإدارة وعلاوة على ذلك، تؤكد الدراسة على حقيقة أنه يجب مراقبة المخاطر و السيطرة عليها من أجل تحقيق التنمية والاستدامة في قطاع التأمين. إن دعم صياغة السياسة المحلية لقطاع التأمين في فلسطين يجعل من الممكن تحقيق التوازن السليم بين الاستقرار المالي والاقتصادي والسوقي من جهة وأمن المستثمرين وحمايتهم وثقتهم من جهة أخرى. وبناءً على النتائج، يقترح الباحث على شركات التأمين أن تقوم بالتركيز على تعظيم الأرباح من خلال إدارة السيولة بكفاءة وفعالية عالية، التحكم بالرفع المالي، تطبيق الاكتتاب المبني على المخاطر للحفاظ على الملاءة المالية، كما يمكن للشركات أن تقوم بعليمات الاندماج والتوسع في أسواق جديدة بشرط التحكم بنسب الخسارة، وعليه يقترح الباحث أن يتم الأخذ بعين الاعتبار عوامل أخرى للدراسة تتمثل في دراسة الأسواق التأمينية الخارجية والعوامل الاقتصادية الأخرى للحفاظ على الاستقرار المالي.

الكلمات المفتاحية: هيئة سوق رأس المال الفلسطينية، شركات التأمين، الملاءة المالية، الاستقرار المالي، التغيرات التنظيمية.