THE IMPACT OF COVID19 PANDEMIC ON THE PROFITABILITY OF THE INSURANCE INDUSTRY IN SRI LANKA

Thilakarathna U.H.L.[1] and Fernando. J.M.B.R[2]

Abstract

Introduction -The main purpose of conducting this research is to examine the effect of the COVID-19 pandemic on the profitability of the insurance industry in Sri Lanka. At present COVID-19 pandemic is very crucial to the profitability of any industry. As a consequence, it is expected that this impact transposes into the nature and methods of insurance risky ventures, and thus drastically changes the business models of the insurance industry both in the short and long run. Despite the abundance of predictions and potential implications, the literature lacks investigations that target the short-run economic impact of the COVID-19 pandemic on the insurance industry.

Design/Methodology/Approach - The analysis is based on 10 insurance companies listed on the Colombo Stock Exchange and also the study is based on secondary data over a period of the past four years from 2018 to 2021. Correlation, regression analysis, and descriptive statistics were applied in the analysis. Firm size, premium growth, solvency ratio, Confirmed COVID Cases, Reinsurance dependency, Inflation, and GDP Growth were used as firm-specific factors and ROA was used to measure the profitability of the firm.

Findings – The study shows that there is a significant impact exists the between COVID-19 pandemic and the insurance industry's profitability.

Conclusion: The study provides directions for the management of the insurance sector of Sri Lanka in relation to its profitability dimensions during a pandemic. The proactive actions were taken by the insurance companies during the Covid-19 appreciated and it is highlighted how sensitive the profitability indicators for the chosen strategies.

Keywords: *COVID-19, Insurance Industry, Profitability*

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[1]Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya *(*hiroshanilakmali97@gmail.com*)*

[2]Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya

1. Introduction

The COVID-19 outbreak began in Wuhan, China at the end of 2019 and spread rapidly in many developed countries including the USA, Span, Italy, the UK, and all over the world by May 2020. Although it does not appear to be slowing down across the globe nor is complete eradication of the virus in sight, governments are reacting in even more dramatic ways, closing borders, imposing lockdowns and travel restrictions, shutting schools and colleges, and banning mass gathering such as sporting events. COVID-19 is an increasingly severe pandemic that has a direct impact on the lives of individuals as well as corporate affairs. Due to the current pandemic, scholars have started to explore the effect of COVID 19 on several areas and on several industries. The impact of this corona pandemic affected not only one specific industry but the financial sectors of all industries. According to World Health Organization (WHO), the COVID pandemic has affected hotels, airlines, casinos and gaming, leisure facilities, oil and gas drilling, auto part and equipment, and many other large industries. Among them, the impact on the insurance industry is huge.

The insurance industry could be affected by the COVID-19 in two broad categories; premiums and claims. The impact on the profitability of the insurance industry can be clearly seen from the changes in those two broad categories. While it is clear that the claims might have skyrocketed due to increased unemployment (payment to unemployment insurance buyers), hospitalization (increased payments in case of health insurance policyholders), deaths (huge lump sum and annuity payments for life insurance), and business closures (payment against natural disasters), the impact on the premium is again expected to be twofold. First, there may be huge losses on premium

income due to reduced family, health, and life insurance sales resulting from a wide-scale lockdown with no direct interaction between salespersons and potential insurance policy buyers. Second, online insurance sales might boom due to the expanded health and life risks brought by the pandemic. People might want to hedge their huge payment risk due to potential illnesses caused by the epidemic or overall deteriorating health scenario. Correspondingly, raising unemployment insurance sales, and corporate insurance sales may increase the premium income of the insurance companies.

The elasticity of corporate insurance demand after a catastrophic occasion can explain if the insurance industry returns will be affected positively or negatively. One of the very few empirical papers on this critical topic uses the data on 1800 large U.S. corporations and concludes that the insurance industry exploits a boom in premium income after destructive incidents (Malik , 2011). Another study using 43 large catastrophic-insured events since 1970, finds a major increase in industry revenues and stock returns of insurance brokers, right after such incidents (Ragin, 2015). COVID-19 has had an austere negative impact on the Chinese insurance industry and caused a reduction in all kinds of inflows, including both commercial and individual premiums. The growth rate of gross premium brings down by 9.53% as compared with 2019.

With regard to the life insurance industry, with the advent of epidemics such as COVID-19, huge compensation has to be paid. This can greatly reduce profitability and lead to losses. The key issue present in most countries is to allow rapid testing of individuals, particularly people in the vulnerable population such as the elderly or those with underlying health conditions, especially compromised immune systems. In many countries this testing is free

(provide by the government) of the cost are being waived by healthcare providers and/or health insurers free treatment, however, is not universal and these costs can be substantial. So presently the trend is an economic recession with decreasing profits but increasing claims.

The key issue currently in most countries is to enable rapid testing of individuals, particularly people in vulnerable populations such as the elderly or those with underlying health conditions, especially compromised immune systems. In most countries, this testing is free (provided by governments) or the costs are being waived by healthcare providers and/or health insurers. Free treatment, however, is not universal and these costs can be substantial. Additionally, this has forced insurance companies to take multiple steps to stay relevant in these challenging times. With that insurance companies have also taken initiatives to prevent the spread of the Coronavirus by extending benefits to their policyholders.

When considering the current insurance industry in SL, Sri Lanka Insurance Corporation Limited has covered all health and insurance policyholders with COVID 19 tests, loss of life claim benefits, daily hospitalization cash benefits, and surgical and hospitalization due to COVID 19, Allianz Life Insurance Lanka Limited has introduced hospitalization expenses benefit, and Hospital daily cash for better protection against COVID 19, AIA Insurance Lanka Limited has given free COVID 19 cover for all policyholders, Union Assurance introduced free COVID 19 life cover and hospital cash benefits for quarantine treatments and Softlogic Life Insurance PLC also extended their benefits to pay all medical and life claims that relate to COVID 19.

2. Literature review

2.1. Covid-19 Pandemic

Currently, we are passing through an unprecedented time in human history. Despite all the technological and economic progress, we made, and the abundance of resources we have, everyone felt helpless at least for some period of time, in front of nature during the COVID-19 outbreak (Square, 2020). The global number of confirmed cases and deaths has surpassed 30 million and 1 million (as of 24th September 2020), respectively (WHO, 2020). The pandemic of COVID-19 has been spreading across the world. The expected economic consequences might be as severe as a 2% decrease in the global GDP. It means that almost every sector of the economy is threatened, including the insurance sector.

The current spread of the virus at a fast rate compared to the previous pandemics has resulted in a total lockdown of nations, a ban on travel, public gatherings, and closure of offices. There has been global closure of business as well as the loss of jobs and lives. The general economic situation is a global recession. Even though the fast increase in infection cases is greater than the recovery of infected people, the pandemic has overwhelmed many governments and financially weaken some insurance companies (Babuna et al., 2020). In Somaliland, the COVID-19 outbreak has forced many businesses and stores to close, leading to an unprecedented disruption of commerce in most industry sectors. Retailers and brands face many short-term challenges, such as those related to health and safety, the supply chain, the workforce, cash flow, consumer demand, sales, and marketing (Donthu &

Gustafsson, 2020). COVID-19 is likely to cause bankruptcy for many well-known brands in many industries as consumers stay at home and economies shut down (Stuckler & McKee, 2020). This not only has consequences for the economy; all of society is affected, which has led to dramatic changes in how businesses act and consumers behave (Donthu & Gustafsson, 2020). Most major industries faced large drops in the number of business owners with the only exception being agriculture. Construction, restaurants, hotels, and transportation all faced large declines in the number of business owners due to COVID-19 (Fairlie, 2020).

2.2. Insurance Industry

Wang, Zhang, Wang , and Fu (2020) study is concerned with the health insurance schemes of selected companies in India in order to analyze the position of the individual company are to be calculated and also analyze the company's claims, settlements, and premiums. The objective of Plott's study in 2020 was to examine the growth in the health insurance industry. Under this study four standalone health insurance companies were selected for the period of five years from 2013-2014 to 2017-2018. The major findings drawn from this study are: that the major activity of insurance companies is underwriting; private insurance companies should reduce the impact of underwriting risk (amount of losses). To reduce underwriting risk firstly, the private insurance companies should improve their underwriting performance through the techniques of risk and product selections with geographical approaches and different pricing strategies according to the geographical and specific historical ground to determine the price of the same risk class or others. Secondly, to reduce the number of losses the company should also increase claims handling practices with continuous improvement on claim leakage management on both

sides, which is from the company employee (the engendering, inspection, and clime management department) and from the customer side, to do this the company should develop immediate investigation mechanism on reported claims with crossed confirmation mechanism, for the employee, when conducting post-risk assessment the employee should report online picture and video to confirm the post-risk assessment therefore, he/she send the back office assessor or database from the clime site at a time, for the customer, the clime report or declaration day should reasonably limit to notice the loss.

The private insurance company should improve its underwriting share in favor of the economic growth of the county by identifying the potential and priority direction of the overall economic activity and growth of the country. And it should include new insurance services development based on the economic direction.

Private insurance companies should increase their company asset. An increase in total assets such as the establishment of more branches and the adoption of new technologies enables an insurer to underwrite more policies which may increase the underwriting profit and the total net profit. In addition, increasing assets like a branch and toying Crain also minimize the cost of clime.

Finally, the study sought to investigate the determinant of profitability in private insurers company in Ethiopia. However, the variables used in the statistical analysis did not include all factors that can affect the profitability of private insurers' company in Ethiopian it only includes few firm specific and macroeconomic quantitative variables. Thus, future research shall conduct on the issue like impact of government regulation policy and other directives and non- financial determinant of insurance profitability such as management quality, efficiency and

productivity and etc. (Lire & Tegegn , 2016).

2.3. Profitability of Insurance Industry

Kaya (2015) examined the effects of firm-specific factors on the profitability of nonlife insurance companies in Turkey. The analysis was done on a sample of 24 non-life insurance companies operating in the period 2006–2013 with profitability being measured with two different variables: technical profitability ratio and sales profitability ratio. Eight independent variables were tested in the study including size of the company, age of the company, loss ratio, insurance leverage ratio, current ratio, premium growth rate, motor insurance and premium retention ratio. The results show that the firm-specific factors affecting the profitability of Turkish non-life insurance companies are the size of the company, age of the company, loss ratio, current ratio, and premium growth rate. Specifically size and premium growth rate have positive effect on the performance, whereas all other variables significantly influencing performance have negative sign.

Batrinca and Burca (2014) analyzed the determinants of financial performance in the Romanian insurance market on a sample of 21 insurance companies during the period 2008-2012. Return on assets was employed in the model as the dependent variable while 13 explanatory variables (including firm-specific, industry-specific and macroeconomic variables) were tested using the multiple regression analysis. According to the findings, the determinants of the financial performance in the Romanian insurance market are leverage, size, gross written premium growth, underwriting risk, risk retention ratio and solvency margin.

Ying Lee (2014) investigated the effects of firm-specific and macroeconomic factors on the profitability of the property-liability insurance industry in Taiwan. Using the panel data of 15 insurers over 1999 through 2009, two dependent variables were employed in the model including operating ratio and return on assets to measure insurers' profitability. The results show that underwriting risk, reinsurance usage, input cost, return on investment (ROI) and the financial holding group have a significant influence on profitability in both operating ratio and ROA models.

There is also a great body of literature dealing with determinants of insurance companies' profitability in developed countries. For example, Doumpos, Gaganis and Pasiouras (2012) have analyzed performance of insurance companies from 91 countries in the period 2005-2009. Employing the preference ranking organization method for enrichment evaluations (PROMETHEE) II method, the authors employ seven financial performance variables such as equity to assets ratio, solvency ratio, technical reserves ratio, liquidity, ROA, etc., while determinants of performance include size, share.

2.4. Relationship between the COVID pandemic and the Insurance industry's profitability

Coronavirus disease 2019 (COVID-19) pandemic has placed unprecedented financial stress on most of the US health care system, including physician practices, emergency medical service systems, and hospitals. But there is one notable exception: health insurance companies. Sharp declines in elective care during the pandemic have reduced health care expenditures and contributed to earnings that are twice as large as those earned last year. For example, the United Health Group's net income during the second quarter grew from $3.4 billion in 2019 to $6.7

billion in 2020 and Anthem Inc's net income increased from $1.1 billion to $2.3 billion. Under the law, insurers must return a large portion of these excess revenues back to individuals, families, and employers. Insurers can keep only 15% or 20% of premiums for administration and profit; if they fail to spend the remainder on health services and efforts to improve quality, they must rebate the difference (Plott, 2020).

Various approaches have been implemented to investigate the impact of COVID-19 on the insurance industry. For instance, Mansour et al. (2020) used the patient perspective to propose improvements in the coverage of the health insurance class. Babuna , Yang , Gyilbag, Awudi , Ngmenbelle, & Bian (2020) conducted interviews with representatives from the insurance industry in Ghana and found out that there is a trend of decreasing profits but increasing claims. Richter and Wilson (2020) developed a scenario analysis in which they evaluate and summarize the lessons learned from the pandemic crisis by baselining actual developments against a reasonable, pre-COVID-19 scenario.

Several studies have been conducted on the subject matter of COVID-19 and insurance industry's profitability. All the above studies provide us a solid base and give us an idea regarding relationship between insurance industry and COVID-19 pandemic. With regards to the literature used in this research it has been discussed about concepts of COVID-19 pandemic, Insurance industry, Profitability of Insurance industry and Relationship between COVID pandemic and Insurance industry's profitability.

3. Research Methodology

3.1. Population and the sample

The population of this study is all Sri Lankan insurance companies. The main objective of this research is to monitor the impact of COVID-19 epidemic on the Sri Lankan insurance industry, only the local insurance companies are used as a population. As the sample for this study the insurance companies with the total annual revenue of over 1000 million is considered as the sample covering the general insurance and life insurance companies. The total sample size is 15 (9 general insurance companies and 6 life insurance companies).

3.2. Empirical model

This study mainly focuses on the profitability variables of insurance companies in Sri Lanka. This study used secondary data extracted from the published financial statements of the selected insurance companies for the period of five years, from 2018 to 2020. For obtaining information, study used the income statements and balance sheets of the selected insurance companies. In some cases, some data and information have been extracted from the websites of the sample firms. The data analyzed descriptively using tables, frequencies, percentages, correlation, reliability and regression analysis.

In line with the past literature a regression analysis was employed using the balance panel data method to examine the effect of COVID pandemic for insurance industry's profitability in Sri Lanka. Researcher developed

regression model using ROA as dependent variables and taking Premium Growth, Solvency Ratio, Firm Size, COVID 19 pandemic, Confirmed COVID ratio and Reinsurance Dependency.

The panel data is used in analyzing the impact of insurance industry's profitability, the basic frame work for the panel data is defined as per the following regression model.

$$Y = \alpha + \beta x + \mu$$

Where the dependent variable is denoted by (profitability) Y Intercept term used and denoted by α, on the explanatory variables, β is a k*1 vector of parameters to be estimated and vector of observations is xnt 1*k, t=1 T: n=1,…..N. The functional form of the above model is as follows.

Profitability= ∱(macroeconomic variables, insurance-specific variables, Covid_dummy)

$$ROA_{it} = \alpha + \beta 1\ Premium\ Growth_{hit} + \beta 2\ Solvancy_{it} + \beta 3\ Firm\ size_{it} + \beta 4\ Confirmed\_Covid\ cases_{t} + \beta 5\ Reinsurance\_dependency_{it} + \beta 6\ COVID\ dummy + Inflation_{t} + GDP_{t} + \mu_{it}$$ - Equation 01

Where the Alfa (α) indicates the intercept coefficient in the regression equation and the beta (β) indicates the slope coefficients of equation and the error term is indicated by the (μ).

4. Data presentation and analysis

4.1. Descriptive statistics

Descriptive statistics helps to understand the behavior of the variables. To provide a better understanding of the behavior of the variables, researcher utilized the descriptive analysis tools such as minimum, maximum, mean, standard deviation, skewness and kurtosis. Descriptive statistics can be divided into measures of central tendency and measures of variability, or spread. Measures of central tendency comprise the mean, median and mode, whereas measures of variability comprise the standard deviation or variance, the minimum and maximum variables of the entire independent, dependent variables to identify the behavior of entire variables of the study.

Table 4.1.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Premium	150	-0.430	0.640	0.044	0.185		
growth						2.555	0.7084
Solvency ratio	150	-0.185	0.860	0.035	0.123	1.786	0.4700

Confirmed COVID cases	150	0	0.02407	0.003	0.006457	0.436	0.0247
Firm Size	150	21.5436	24.9422	23.22	0.983896	1.701	3.7585
Reinsurance dependency	150	0	23.1506	2.32	6.911732	0.336	26.4028
Covid_Dummy	150	0	1	0.467	0.50056	0.932	1.9121
Inflation	150	0.03	0.06	0.044	0.00817	1.726	0.0312
GDP	150	-0.16	0.12	0.016	0.05668	3.112	0.2165
Return on Assets	150	-0.22505	2.35497	0.697	0.611893	1.507	2.3374

Source: Author Compiled

According to the Descriptive Analysis Minimum value of the premium, growth is -0.430. It has a 0.640 Maximum value and 0.044 Mean value. According to Table 4.1.1, the independent variable of the solvency ratio has a maximum value of 0.860 and its mean value is 0.035. The solvency ratio has a minimum value of -0.185. The confirmed COVID cases has a maximum value of 0.024 and its mean value is 0.003. The solvency ratio has a

minimum value of 0. The firm Size has a maximum value of 24.942 and its mean value is 23.22. The firm size has a minimum value of 21.543. Reinsurance dependency has a maximum value of 23.15 and it has a mean value of 2.320. The Standard Deviation is 6.911. The ratio of ROA has a mean value of 0.697 and it has a maximum value of 2.354. ROA has a minimum value of -0.225 and it has a 0.611 of standard deviation value. The Correlation analysis shows what kind of relationship between each of these dependent and independent variables. The below table summarizes the results of the correlation analysis of the current study.

Table 4.1.2: Correlation analysis

Correlations

Variables		Premium growth	Solvency ratio	Confirmed COVID cases	Firm Size	Reinsurance dependency	Inflaction	GDP	Return on Assets
Premium growth	Pearson Correlation	1.00							
	Sig. (2-tailed)								
	N	150							
Solvency ratio	Pearson Correlation	-0.02	1.00						
	Sig. (2-tailed)	0.78							
	N	150	150						
Confirmed COVID cases	Pearson Correlation	0.13	-0.10	1.00					
	Sig. (2-tailed)	0.12	0.21						
	N	150	150	150					
Firm Size	Pearson Correlation	0.05	0.12	0.08	1.00				
	Sig. (2-tailed)	0.53	0.15	0.31					
	N	150	150	150	150				
Reinsurance dependency	Pearson Correlation	0.02	0.01	0.00	-0.08	1.00			
	Sig. (2-tailed)	0.76	0.88	0.99	0.34				
	N	150	150	150	150	150			
Inflaction	Pearson Correlation	0.05	-0.12	.492**	0.07	0.00	1.00		
	Sig. (2-tailed)	0.55	0.14	0.00	0.42	0.99			
	N	150	150	150	150	150	150		
GDP	Pearson Correlation	0.02	0.05	.219**	-0.01	0.00	0.11	1.00	
	Sig. (2-tailed)	0.78	0.51	0.01	0.93	1.00	0.16		
	N	150	150	150	150	150	150	150	
Return on Assets	Pearson Correlation	0.09	0.12	0.06	.291**	.817**	0.01	-0.02	1.00
	Sig. (2-tailed)	0.27	0.13	0.49	0.00	0.00	0.89	0.85	
	N	150	150	150	150	150	150	150	150

Source: Author Compiled

According to the results of hypothesis test as shown in the Table 2, the correlation between premium growth and ROA positive value is 0.091. It indicates that there is a completely positive correlation between two variables. The correlation between Solvency ratio and ROA is 0.124. It indicates that there is a completely positive correlation

between two variables. The correlation between Confirmed COVID cases, a proxy for the Covid impact, and ROA is 0.057. It indicates that there is a completely positive correlation between two variables. The correlation between Firm Size and ROA is .291. It indicates that there is a positive correlation between the two variables. The correlation between Reinsurance dependency and ROA is .817. It indicates that there is a positive correlation between two variables. The correlation between Inflation and ROA is 0.01. It indicates that there is a completely positive correlation between two variables. The correlation between GDP and ROA is 0.01.

4.2. Empirical results

In panel regression, the effect of COVID-19 epidemic on firm performance were measured. In this study, researchers obtained secondary data from annual reports. Panel data was analyzed by using the fixed-effect model and random effect model. Here, the researchers run the Hausman test for identifying the effect. According to Hausman test results, the random effect model of ROA was rejected (p=0.000) therefore, the fixed effect model was accepted. This study has a fixed effect situation. The below table represents the results of fixed-effect GLS regression.

Table 4.2.1: Results of the Panel fixed effect model

Variable	ROA	
	Coefficient	P value

Premium growth	-7.798	0.000
Solvency ratio	1.329	0.186
Confirmed COVID cases	2.103	**0.007**
Firm Size	0.253	0.801
Reinsurance dependency	8.954	**0.000**
Covid Dummy	22.674	**0.000**
Inflation	1.520	0.131
GDP	-0.682	0.496
Chi-square	0.807	
Prob. Value	0.000	
Cross sectional fixed (dummy variable)	Yes	
R-squared	5.6310	
F-test	73.9120	
Prob> F	0.000	

Source: Author Compiled

According to the fixed effect model coefficient of Premium, growth is -7.798 and the significant value of 0.000 is lower than 0.05. So, the variable of Premium growth has a negative and significant impact on ROA. The Solvency

ratio is 1.329 shows a positive and insignificant (0.186) impact on ROA. According to the fixed effect model coefficient of Confirmed COVID cases is 2.103 and the significant value of 0.007 is lower than 0.05. So, the variable of Confirmed COVID cases has a positive and significant impact on ROA. Firm Size is 0.253 shows a positive and insignificant (0.801) impact on ROA. Reinsurance dependency is 8.954 shows a positive and significant (0.000) impact on ROA. GDP is -0.682 shows a negative and insignificant (0.131) impact on ROA. Inflation is 1.520 shows a positive and insignificant (0.496) impact on ROA. The overall R-squared of this model is 5.6310 and it represents a total variance of ROA from the independent variable of Firm-specific factors. Further, these results are significant at the 5% level. In this study, the hypotheses relating to covid-19 and reinsurance dependency are accepted.

5. Conclusions and Recommendations

The outbreak of the COVID 19 pandemic has adversely affected global social and economic activities. This empirical study examines the impact of COVID-19 on the insurance market in Sri Lanka using the panel data and the fixed effect model. The findings reveal that COVID 19 has had a significant negative impact on Sri Lanka insurance marketing l channels and the suppression of household insurance demand.

Mainly six hypotheses were formulated and they were tested based on regression analysis. Firm Size, Reinsurance Dependency, and Confirmed COVID Cases were supported by the results of these analyses and confirmed with previous research findings, moreover, the impact of the COVID 19 pandemic on the insurance industry's profitability is significant. Further, the results proved that independent variables (Premium growth, Solvency ratio, Confirmed COVID cases, Firm Size, Reinsurance dependency) make a positive impact on the insurance

industry's profitability. After identifying the main issues of this, we discussed the main objective of this research as to identify and assess the impact of COVID 19 pandemic on the insurance industry's profitability and to identify what implications should be taken for stakeholders to survive with Covid-19 pandemic. To achieve the main objective used panel regression. The study revealed that insurance specific variables influence the insurance profitability. Study found that model that are developed in order to examine the impact of variables on insurance performance were statistically sound.

This study proposes to conduct a cross-border study involving other countries in order to determine the impact of COVID 19 pandemic for insurance industry's profitability. In this study used as determinants the impact of COVID 19 pandemic for insurance industry's profitability ROA. Then future researcher can take more than these variables. This study considers only 3 year's information of annual reports of selected insurance companies from 2019-2021. And also sample size is 10. Future researcher can get many years than 3years. And can take more than 10 samples of companies. Another limitation of this study is only used secondary data of the companies. This study is used audited quarterly reports to the collect the data. But this study didn't use other documents which are prepared by the insurance companies. For the research purpose used secondary data method. Future researcher can collect data using primary source.

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