

# The Impact of COVID-19 on the Financial Performance of Insurance Companies in South Africa

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## ARTICLE INFO

## ABSTRACT

**Keywords:**

COVID-19, financial performance, insurance companies, South Africa.

**Kata Kunci:**

COVID-19, kinerja keuangan, perusahaan asuransi, Afrika Selatan.

The research aims to examine the influence of the Covid-19 pandemic on the financial performance of insurance companies in South Africa. The research sample comprises 37 insurance companies that are duly registered with the Financial Sector Conduct Authority (FSCA). The research used a descriptive analytical technique, focusing on quantitative and numerical data from annual financial reports published by insurance companies. The data was used to assess financial performance indicators over a time period of six consecutive years (2017–2022). The study indicated that Covid-19 had diverse impact on the financial performance of insurance companies. The study demonstrates a positive and statistically significant correlation between COVID-19 and ROA. This conclusion indicates that, despite the obstacles posed by the pandemic, several insurance companies adeptly managed their assets to maintain profitability. Conversely, the findings demonstrate a negative correlation between COVID-19 and ROE, underscoring the strain on equity returns.

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## SARI PATI

*Penelitian ini bertujuan untuk mengkaji pengaruh pandemi Covid-19 terhadap kinerja keuangan perusahaan asuransi di Afrika Selatan. Sampel penelitian terdiri dari 37 perusahaan asuransi yang terdaftar secara resmi pada Financial Sector Conduct Authority (FSCA). Penelitian ini menggunakan teknik analisis deskriptif dengan pendekatan kuantitatif, yang berfokus pada data numerik dari laporan keuangan tahunan yang dipublikasikan oleh perusahaan asuransi. Data tersebut digunakan untuk menilai indikator kinerja keuangan selama enam tahun berturut-turut (2017–2022). Hasil penelitian menunjukkan bahwa Covid-19 memberikan dampak yang beragam terhadap kinerja keuangan perusahaan asuransi. Studi ini menunjukkan adanya korelasi positif dan signifikan secara statistik antara Covid-19 dan ROA. Kesimpulan ini mengindikasikan bahwa, meskipun menghadapi berbagai tantangan akibat pandemi, beberapa perusahaan asuransi mampu mengelola asetnya dengan baik untuk menjaga profitabilitas. Sebaliknya, temuan juga menunjukkan adanya korelasi negatif antara Covid-19 dan ROE, yang menyoroti tekanan terhadap pengembalian ekuitas.*

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## INTRODUCTION

Insurance businesses play a crucial role in the economic development and progress of any nation by offering distinct financial services. The absence of insurance in the business sector is not viable since businesses that include significant risks may not have the ability to bear all types of risks in the constantly evolving and unpredictable global economy (Eling, Nuessle & Staubli, 2022). The ability of insurance firms to sustain coverage of risk in the economy depends on their capability to generate profit or value for their shareholders. Undoubtedly, an experienced and developed insurance business is very beneficial for economic progress as it offers substantial financial resources for the long-term development of infrastructure in any country (Rachmad *et al.*, 2024).

Naseeb, Diab and Metwally (2020) stated that insurers might be impacted in several ways by an impending worldwide economic downturn, which is becoming more probable. These factors include a decrease in the need for insurance products, an increase in the number of policyholders terminating their life insurance policies, and interruptions in regular business operations. This observation stays true throughout the COVID-19 pandemic. One impact of the COVID-19 pandemic in South Africa was the disturbance of economic activity brought about by the social distance enforced as a preventive measure to stop the virus from spreading (Chetty, 2021). The government's social distance and lockdown policies severely hampered the movement of products and other outputs, therefore slowing down economic development. The confidence of investors also dropped. Living in small, multi-generational households in an economically varied nation, most South Africans fall below the poverty line Visagie & Turok, 2020).

The COVID-19 pandemic started in December 2019 in Wuhan, Hubei Province, China (Mohan & Nambiar, 2020). Nonetheless, the COVID-19 pandemic in South Africa is therefore limited, particularly within the insurance industry. Compared to other sectors,

the insurance industry is undergoing growth, requiring a thorough assessment to promote economic progress. According to Guzmán-Ortiz *et al.*, (2020) approximately 22% of the workforce is employed in the insurance sector. The insurance sector is a vital component of the South African economy. Therefore, there is a heightened need for more research in this field. The study seeks to examine the impact of COVID-19 on the financial performance of insurance companies. In order for insurance companies to maintain sustainability within the competitive landscape of globalization, the generation of profit is an essential requirement. Without the presence of profit, insurers are unable to draw in external capital necessary to fulfil their objectives (Saleh & Derbali, 2020). The efficacy of an insurance company is contingent upon the intricacies of its policy design, and its performance can be assessed through profitability metrics. Furthermore, the insurer's performance is influenced by various determinants that extend beyond external factors (Tsvetkova *et al.*, 2021). The topic of financial performance has garnered considerable interest from academics.

In this current study return on Assets (ROA) and return on Equity (ROE) behave as the dependent variables, whereas the independent variables encompass the impact of COVID-19 (COVID-19\_impact), Gross Domestic Product (GDP), loss ratio (LOS), interest (INTEREST), leverage (LEV), liquidity (LIQ), incurred claims (IC), firm size (SIZE), and age (AGE) in the context of selected publicly listed insurance firms in South Africa. As per Septina (2022), ROA and ROE are the most suitable indicator to evaluate the financial performance of insurance firms. ROA fairly reflects the efficiency with which these businesses control their assets to create profitability (Shamsuddin *et al.*, 2020). On the flip side, ROE evaluates the profitability created for shareholders, therefore reflecting the company's utilization of its equity basis to generate profits (Ibrahim, 2023). From a shareholder standpoint, ROE is a crucial indicator of financial success as investors have concerns about how the

pandemic would have affected their profits. With ROA emphasizing operational efficiency and ROE offering insights into shareholder value and general profitability, both ROA and ROE provide a balanced picture of how COVID-19 affected insurance businesses. According to Liu and Yang (2020), performance is determined by an organization's capacity to acquire and effectively use resources in various ways to establish a competitive edge. Financial performance focuses on factors directly connected to the financial report.

This study is motivated by the fact that the majority of research on the influence of COVID-19 on financial performance has been performed in developed nations, with little studies in developing nations like South Africa. The study conducted by Mamaro and Mabandla (2022) examines the effects of the COVID-19 pandemic on the financial performance of publicly listed retail companies in South Africa. The research by Mamaro and Mabandla (2022) is confined to retail firms. In other words, research about the effects of COVID-19 on the financial performance of insurance businesses inside developing economies remains in its nascent stages. The research examines the effect of COVID-19 on the financial performance of insurance businesses in South Africa. This study contributes to the literature on the financial performance of insurance businesses from the viewpoint of South Africa, a sub-Saharan African nation, which is an important but unexplored field of research.

### **Literature review**

The COVID-19 pandemic has significantly impacted worldwide economies, businesses, and society, radically transforming the financial performance setting. This literature review consolidates current studies about the pandemic's effects on financial performance, emphasising many industries and geographical settings. The study is structured thematically, focussing on the financial performance of insurance businesses. The COVID-19 pandemic caused unparalleled economic disruptions, resulting in substantial revenue decreases for

several enterprises. According to Przybytniowski *et al.*, (2022) the start of COVID-19 brought a storm for insurance firms, characterised by higher claims mostly in the health and life insurance industries. As they tried to balance rising claims with unchanged or dropping premiums, insurance firms saw a significant decline in ROA and ROE, the authors observed that the higher COVID-19 claims seriously reduced profit margins, therefore affecting total profitability.

Apart from higher claims, the pandemic greatly impacted the investment portfolios of insurance firms by causing market instability. Wójcik and Ioannou (2020) argues that for insurance companies, investment revenue is absolutely essential for their entire income. Variations in financial markets brought forth by the COVID-19 crisis negatively affected the asset values kept by these companies. For many insurers, the poor investment returns during the early months of the pandemic added to the declining ROA and ROE highlighted by Sasidharan, Ranjith and Prabhuram (2023). In a study Kaushik and Guleria (2020) indicate that the pandemic's immediate impact was a significant decline in economic activity, leading to extensive financial hardship for companies in several industries. The authors observed that sectors such as hospitality, travel, and retail were most adversely affected, with several enterprises reporting losses that threatened their financial sustainability.

In another study by Khresat and Sadiq (2022), their study seeks to examine the influence of the profits of Jordanian insurance companies on their financial performance indicators in the context of the Corona pandemic. This was done by comparing the financial performance indicators of insurance companies in the years 2019 (prior to the COVID-19 pandemic) and 2020 (during the COVID-19 pandemic). The study included a sample of 17 general insurance businesses that achieved profitability throughout the Corona pandemic. The research revealed that the profits of insurance firms had an adverse impact on the

financial performance, as evaluated by fast liquidity. However, the earnings of insurance companies had a beneficial influence on the financial performance when examined using other measures.

In contrast, some studies indicate that some industries exhibited resilience or even development throughout the pandemic. The pandemic necessitated rapid modifications in company operations, leading to streamlined procedures and enhanced efficiency. Polinkevych *et al.* (2021) assert that several insurance firms adopted remote working arrangements, which ensured operational continuity and reduced overhead costs associated with maintaining physical office spaces. This shift has enabled organizations to use their resources more judiciously, so enhancing their financial performance. This is consistent with the findings of Volosovych *et al.* (2021), which indicated that the pandemic also advanced the insurance industry's use of artificial intelligence (AI) and automation. AI-driven solutions for underwriting and claims processing have increasingly gained significance for insurers, as shown by study conducted by Volosovych *et al.* (2021). In addition to efficiency and accuracy, these technologies have contributed to cost savings. Enhanced customer satisfaction due to more efficient claim processing has increased client loyalty and retention, hence bolstering financial success.

Yadav and Suryavanshi (2021) research show that as people tried to protect their families' financial prospects in the face of uncertainty, the demand for life insurance plans jumped during the pandemic. For insurers, this growing demand has resulted in more premium revenue, therefore improving their financial health. The outbreak has also caused customers to review their current insurance policies. Many people have tried to change their policies to better fit their present requirements, which has resulted in higher policy renewals and improvements. Grofcikova and Izakova (2021), the objective of this study was to identify and assess the influence of the COVID-19 pandemic, as well

as the associated actions and implications, on the financial performance of insurance firms based in Slovakia. The financial performance of insurance businesses was measured for the period from 2016 to 2020. The analysis revealed that the insurance businesses were not adversely affected by the pandemic and, concurrently, successfully adjusted to the circumstances. Therefore, COVID-19 had a beneficial effect on their financial performance.

Despite extensive study on the impact of COVID-19 on the insurance sector, contradictory results remain. Some studies suggest a fall in overall profitability, while others report an uptick in certain lines of insurance owing to heightened demand. This discrepancy in results emphasises the intricacy of the insurance sector during the pandemic and stresses the need for further investigation.

## **Theoretical review**

### ***Stakeholder theory***

Stakeholder theory, initially developed by R. Edward Freeman in the 1980s, asserts that companies should broaden the focus beyond profit maximisation for shareholders to include a wider range of stakeholders (Freeman, Dmytriiev & Phillips, 2021). Stakeholders include any person or organisation that may influence or is influenced by the organization's activities, including as workers, consumers, suppliers, communities, regulators, and the environment (Freeman, 1984). This broadened viewpoint compels companies to consider the ethical, social, and economic ramifications of their business activities. In the insurance sector, stakeholders significantly influence financial performance. Insurers depend on several stakeholders for their operations, including policyholders seeking coverage, regulators enforcing compliance, investors anticipating profits, and staff enhancing organisational performance. The interconnectedness of these stakeholders is more evident during emergencies, like as the COVID-19 pandemic, when their interests may either clash or align in distinctive ways.

The COVID-19 pandemic challenged insurers to reconcile conflicting stakeholder needs (Njegomir & Demko-Rihter, 2021). Insurers faced pressure to swiftly fulfill claims, especially those pertaining to business disruptions, while concurrently maintaining financial stability for shareholders. The crisis underscored the twin obligation of insurers to ensure profitability while also upholding their social duty to assist policyholders and society amid extraordinary hardships. Stakeholder theory is particularly relevant to this research as it clarifies how insurance firms prioritized and managed stakeholder relationships throughout financial and operational challenges. The theory offers a framework to analyze the influence of these objectives on essential financial performance indicators, including ROE and ROA.

#### ***Contingency theory***

The contingency theory is a behavioral theory that posits that there is no one optimal approach to leading a company, coordinating an organization, or making a decision. Contingency theory asserts that these acts are contingent upon both internal and external circumstances. This theory asserts that there is not a singular theory of contingency management (Myamba, and Nguni, 2023). It also posits that the effectiveness of companies relies on the alignment between their structure and the external environmental circumstances, emphasizing the interdependence of several factors. The appropriate management technique depends on the specific circumstances of the firm (Csaszar & Ostler, 2020). The organizational theorist's stance is that the most effective approach of organization is contingent upon the characteristics of the environment with which the organization is associated (Çelik, 2020). Basically, contingency theory is based on two fundamental assumptions: Firstly, there is no generally optimal method of organizing, and secondly, different ways of organizing have varying levels of effectiveness (Bandura, 2023). The research embraces the concept of contingency theory, since the COVID-19 pandemic was considered a major external

contingency that has the potential to greatly impact the financial performance of insurance firms. The theory will assist in explain the manner in which the insurance companies were compelled to modify their strategies, operations, and financial practices in order to address the unusual problems presented by the pandemic. These issues included changes in claims patterns, fluctuations in investment returns, and developing client requirements.

#### **METHODS**

This study used a quantitative research methodology. The study aim was accomplished by conducting systematic observations using secondary data obtained from external sources, including the McGregor BFA, company websites, and the SARB website. The target group consisted of all insurance businesses that were officially registered with the FSCA. The sample size for this study consisted of 37 South African insurance firms, which were evaluated throughout the period from 2017 to 2022. To guarantee the validity and reliability of the data, the researcher used many sources as mentioned above. Despite obtaining all the necessary data from the McGregor BFA, a cross-reference was conducted utilising information obtained from the websites of the respective companies.

#### ***Model Specification and Estimation Method***

The research constructed an econometric model to evaluate the interconnectedness between the covid-19 pandemic and the financial performance of insurance companies. The research used a panel data estimation approach. This data allows for the observation of particular entities' behaviors across time. A notable benefit of panel data is its ability to account for individual variability and facilitate the identification and measurement of effects that may not be visible using other data methods (Bliese *et al.*, 2020). Furthermore, it has the advantage of reducing collinearity and enabling a greater number of degrees of freedom, all while operating with increased efficiency. A panel data format effectively mitigates the influence of unobservable factors in both cross-sectional and time dimensions, which

included fixed effect and random effect regression models. The econometric model was established based on the studies conducted by Al Farooque, Buachoom and Sun (2020), Ichsan *et al.*, (2021), and Feng *et al.*, (2022).

$$ROA_{it} = \beta_0 + \beta_1 COVID\_IMPAC_{it} + \beta_2 GDP_{it} + \beta_3 LOS_{it} + \beta_4 Interest_{it} + \beta_5 LEV_{it} + \beta_6 LIQ_{it} + \beta_7 IC_{it} + \beta_8 Size_{it} + \beta_9 Age_{it} + \epsilon_{it}$$

$$ROE_{it} = \beta_0 + \beta_1 COVID\_IMPAC_{it} + \beta_2 GDP_{it} + \beta_3 LOS_{it} + \beta_4 Interest_{it} + \beta_5 LEV_{it} + \beta_6 LIQ_{it} + \beta_7 IC_{it} + \beta_8 Size_{it} + \beta_9 Age_{it} + \epsilon_{it}$$

When  $_{it}$  represents insurance company  $i$  at time  $t$ , ROA is its return on assets  $i$  at time  $t$ , calculated by dividing net income by total assets. ROE is return on equity  $i$  at time  $t$ , it was calculated by dividing the company's net income by its average shareholders' equity. COVID\_IMPACT is the covid-19 impact on companies  $i$  at time  $t$ , calculated using a dummy variable with pre- and post-covid periods of 0 and 1, respectively. GDP of the company is the gross domestic product  $i$  at time  $t$ , calculated by the sum of their consumption, investment, government spending, and net exports. The LOS is the loss ratio  $i$  at time  $t$ , that was calculated by summing the claim paid and loss adjusted expenditure and dividing by the businesses' premium. The businesses' interest rate  $i$  at time  $t$ , was determined using the SARB repurchase rate. LEV at time  $t$ , companies' leverage

was measured by dividing total debt by total assets. LIQ is liquidity  $i$  at time  $t$ , calculated by current assets/current liabilities. IC represents businesses' incurred claims  $i$  at time  $t$ , computed by combining paid claims with reserved claims at the end and subtracting the reserved claim at the beginning. The natural logarithm of insurance business assets measures firm size  $i$  at time  $t$ . Age of businesses  $i$  at time  $t$  refers to the number of years an insurer has existed. Finally,  $\beta$  represents variable coefficients,  $\epsilon_{it}$  it represents stochastic error at time  $t$ ,  $i$  represents company count, and  $t$  represents time period.

**RESULTS AND DISCUSSION**

**Descriptive results**

Table 4.1 displays the results of the descriptive statistics for the primary variables used in the model of this research. The statistical measures of mean, standard deviation, minimum, and maximum value were provided.

The mean return on assets ROA of 3.13% suggests a moderate level of profitability. However, the standard deviation of 3.25% and the range from -3.44% to 22.15% show substantial variations in profitability. This implies that some firms incurred losses while others achieved high levels of profitability. ROE with the mean of 3.13%, this suggests a generally good financial performance as the insurance firms in the sample produced a return on their equity investments on average

**Table 1: Descriptive results**

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA (%)	222	3.13	3.25	-3.44	22.15
ROE (%)	222	13.03	10.26	-9.63	58.57
COVID_IMPACT	222	0.33	0.47	0.00	1.00
GDP (%)	222	0.65	3.45	2.34	4.91
LSR (%)	222	34.10	16.57	4.36	78.82
Interest (%)	222	7.63	2.29	3.50	10.25
LEV (%)	222	0.29	0.21	0.03	0.86
LIQ (%)	222	1.13	0.64	0.13	3.14
IC (millions of rands)	222	379.29	1312.48	1574.00	9251.66
Size (millions of rands)	222	2320.70	5256.42	10.537	34807.00
Age (years)	222	47.64	43.48	8.00	177.00

of 13.03%. Nevertheless, the 10.26% standard deviation shows significant variation across the companies, suggesting that while some of them had good profits, others performed badly. The COVID\_IMPACT variable indicates that around 33% of companies had a substantial effect from the pandemic. This is supported by a large standard deviation of 0.47, suggesting that the amount of impact varied greatly across these companies. The GDP growth rate during this time had a low average of 0.65%. This suggests that the economic instability potentially impacted the performance of companies. The average Loss Ratio (LSR) of 34.10% shows that, on average, firms experienced losses equivalent to almost one-third of their premiums. However, the broad range of 4.36% to 78.82% reveals significant variations in loss experiences, which might be attributed to diverse claims made during the pandemic. The mean interest rate is 7.63%, the average leverage ratio is 0.29, and the average liquidity ratio is 1.13. These numbers indicate that borrowing rates are reasonable, debt levels are low, and there are enough liquid assets. However, it is important to note that these metrics vary significantly across various companies. The incurred claims and firm size exhibited significant variation, with average values of 379.29 million rands and 2,320.70 million rands, respectively. Moreover, the substantial standard deviations suggest that companies have different abilities to handle financial difficulties. The mean age of firms was 47.64 years, exhibiting a wide spectrum ranging

from 8 to 177 years. This diversity encompasses both well-established and recently founded enterprises, potentially affecting their capacity to cope with or be susceptible to the effects of the pandemic.

**Multicollinearity Test**

Table 2 displays the Pearson correlation coefficients of the independent variables, investigating their association with each other. The investigation found that all variables had a correlation value below 0.7, which suggests that there is no multicollinearity present. The Variance Inflation Factor (VIF) is a commonly used metric for evaluating the existence of multicollinearity (Gokmen, Dagalp and Kilickaplan, 2022). A VIF score over 10 indicates a significant degree of multicollinearity. After examining the data shown in Table 2, it is clear that all the variables have VIF values that are lower than the set threshold of 10, indicating the absence of multicollinearity among the independent variables.

**Regression Results and discussion**

As noted in Chapter 3, one of the metrics used by the researcher to assess financial performance was ROA. The table below illustrates the effects of COVID-19 on ROA. The researcher conducted the Hausman Test to determine the most suitable model. The researcher has determined that the P values obtained by the Hausman Test, which are more than 0.05, are statistically insignificant. Thus, the researcher used the Random Effect Model to examine the factors that influence financial success.

**Table 2: Correlation Matrix and Variance Inflation Factor**

	COVID	GDP	LossRatio	INTR	Leverage	Liquidity	ICR	Size	Age	VIF
COVID	1.00									2.83
GDP	-0.28***	1.00								6.67
LR	0.39***	0.03	1.00							3.19
Interest	-0.69***	0.68***	-0.21***	1.00						2.03
LEV	-0.19***	0.09	-0.02	0.19***	1.00					4.92
LIQ	-0.23***	0.03	-0.24***	0.23***	-0.11	1.00				3.49
IC	0.03	0.01	-0.11	-0.03	-0.04	0.06	1.00			5.24
Size	0.04	0.01	-0.09	-0.04	-0.15**	-0.00	0.73***	1.00		4.92
Age	0.02	0.01	0.09	-0.02	-0.17**	0.33***	-0.00	0.04	1.00	6.13

**Table 3: The impact of COVID-19 on ROA**

ROA	Random Effect Model			Fixed Effect Model		
	Coef.	t-stats	p-value	Coef.	t-stats	p-value
COVID	2.642	14.31	0.000	1.04	2.62	0.009
GDP	-0.289	-4.92	0.000	-0.12	-1.70	0.091
LossRatio	-0.027	-2.97	0.003	-0.04	-2.91	0.004
INTR	0.85	8.37	0.000	0.39	2.86	0.004
Leverage	-0.12	-5.45	0.000	-0.03	-0.71	0.478
Liquidity	0.79	3.12	0.002	0.21	0.68	0.497
Incurred claims	0.64	2.96	0.003	-2.49	-2.52	0.012
Size	-0.25	-1.05	0.292	1.24	0.80	0.424
Age	-0.00	-0.39	0.698	-0.133	-1.09	0.275
Constant	-5.72	-4.02	0.000	7.03	1.43	10.153
R <sup>2</sup>	0.781			0.728		
Adjusted R <sup>2</sup>	0.787			0.741		
F-Stats	137.93			118.75		
Prob. of F-Stats	0.000			0.000		
Prob. of Hausman Test	0.103			0.103		

The regression results obtained from the random effects model offer valuable insights into the influence of COVID-19 on the financial performance of insurance companies. Table 3 shows a positive and significant relationship between COVID-19 and ROA with a coefficient of 2.642 and p-value = 0.000, showing that the pandemic significantly boosted the ROA of insurance firms. The findings of Ichsan *et al.* (2021) corroborate these results, since they also observed a positive correlation between COVID-19 and financial performance. This implies that asset returns at insurance businesses may have increased even with the pandemic's economic setbacks. Higher premiums, or efficient cost control are some of the possible causes. It would also imply that these businesses were able to maximize their operations, control risk, and make strategic investments that improved their asset returns even if the pandemic presented difficulties like higher claims in certain industries like health and life insurance. Furthermore, the outcome could show changes in consumer behaviour during the outbreak in response to growing demand for certain kinds of insurance products, including health, life, and business interruption insurance, thereby raising premiums and enhancing profitability.

When looking at GDP, the coefficient of -0.289 and p-value of 0.000 provide evidence of a significant negative association between GDP and ROA. This indicates that a decline in GDP, which is illustrative of the overall economic decline caused by COVID-19, has an adverse impact on the ROA of insurance companies. The result is understandable since when an economy contracts, it usually leads to a decrease in company activity and a reduction in income from investments, which has a negative effect on financial performance. These findings are inconsistent with the conclusions of Doan (2020), who demonstrated a positive correlation between GDP and FP.

In addition, the Loss Ratio exhibits a statistically significant negative correlation with the ROA with a coefficient of -0.027 (p-value = 0.003). This result suggests that greater loss ratios, particularly due to claims linked to COVID-19, have a detrimental effect on the ROA. This emphasizes the pressure on financial performance when insurance payouts rise, as a result of increased healthcare and business disruption claims. These results align with the findings of Puspitasari *et al.*, (2021) and Hawaldar *et al.*, (2022). The authors showed that the pandemic

caused significant disruptions to regular corporate activities, resulting in escalating operating expenses and reduced productivity. The implementation of remote work, health and safety protocols, and the adjustment to new work methods resulted in elevated costs without an equal increase in income. Furthermore, these findings are inconsistent with previous research done by Panigrahi and Vachhani (2021) and Olowokudejo and Ajijola (2022), which demonstrated that LSR had a positive impact on insurers' performance.

The analysis reveals a significant positive connection between the interest rate and the ROA, with a coefficient of 0.85 and a p-value of 0.000. The result indicates that an increase in interest rates is associated with an improvement in ROA. This suggests that insurance companies will benefit from higher interest rates in normal circumstances, as they frequently invest in interest-bearing assets, such as bonds and other fixed-income securities. The return on these investments increases when interest rates rise, which in turn enhances overall profitability, as evidenced by a higher ROA.

LEV also has a negative and statistically significant effect on ROA. The coefficient is 0.12, with a p-value of 0.000. This result suggests that increased leverage, resulting in larger amounts of debt and interest payments, has a negative impact on ROA. This may be because of the heightened financial responsibilities during the pandemic, which put pressure on profitability and asset returns. This is consistent with the results of previous research conducted by Rahman, Saima, and Jahan (2020) and Zelalem (2020).

The table further demonstrates a positive and statistically significant correlation between LIQ and ROA. This is supported by the coefficient of 0.79 and a p-value of 0.002, indicating that more liquidity leads to improved ROA. Insurance businesses with greater liquidity may have effectively navigated the uncertainties of the pandemic, ensuring financial stability and attaining superior asset returns.

The results coincide with the findings of a study conducted by Tegegn, Sera, and Merra (2020), which also demonstrated a positive correlation between LIQ and ROA. However, this finding contradicts the findings of Wolde, Kolech, and Dadi (2020), who revealed a negative relationship between LIQ and ROA.

The result further shows a positive and statistically significant relationship between IC and ROA, with a coefficient of 0.64 and a p-value of 0.000. The findings are corroborated by the research conducted by Ntwali, Kituyi, and Kengere (2020), which similarly provided the similar results where IC had positive correlation with ROA. This finding, although somewhat counterintuitive, suggests that effective management and resolution of claims have a positive impact on ROA during the pandemic, possibly indicating strong claims management practices.

In the random effect model, both the variables Size and Age have coefficients of -0.25 and -0.00, respectively. However, their p-values of 0.292 and 0.698 indicate that they are not statistically significant. These findings indicate that the financial performance of insurance businesses, as evaluated by ROA, was not significantly influenced by their size and age during the pandemic. This suggests that, regardless of size big or small the management of an insurance company's assets to provide profits during the pandemic had no bearing on its size. Larger companies did not necessarily show better or worse than smaller companies in terms of return on assets, suggesting that other elements most certainly had a more important impact on financial performance throughout this era. Likewise, the age of insurance firms, whether they were newly created or had been operating for a considerable period, did not have a substantial impact on their capacity to make profits on their assets during the pandemic.

#### **The impact of COVID-19 on Return on Equity.**

Table 4 below shows results on the association

between the pandemic and ROE as another indicator of the financial performance used in this study. Table shows for the random and fixed effects models the coefficients, t-statistics, and p-values. The interpretation of the obtained results from the random effect model was based on a review of the p-value (0.074) generated by the Hausman test.

The examination of COVID-19's impact on the financial performance of South African insurance firms, as measured by ROE, uncovers numerous significant findings. The negative and statistically significant coefficient for the COVID-19 impact variable (-0.15, p-value 0.008) indicates that the pandemic adversely affected the profitability of insurance firms. This is probably attributable to heightened claims, interruptions in company operations, and economic instability, which have affected the sector. The result is consistent with the findings of Nguyen (2022), who also uncovered a significant and adverse correlation between ROE and COVID-19.

The reduction in economic activity is shown by the inverse correlation between GDP and ROE

(-0.59, p-value 0.001), indicating that an economic downturn decreased premiums, heightened cancellations, and adversely impacted investment income for insurers. These results highlight how macroeconomic issues intensified by the pandemic significantly affected the industry's financial health. In this regard, a dropping GDP during COVID-19 reflects an undesirable contingency an external economic crisis compromising company performance. The negative relationship between GDP and ROE in the research demonstrates how insurance businesses, functioning within this limited economic context, were unable to sustain previous amounts of profitability. According to contingency theory, companies have to change their plans depending on external demands if they are to stay performing. The businesses included in this research may not have had enough adaptability or preventive actions to lessen the negative effects of the recession.

The loss ratio (-0.07, p-value 0.035) revealed a negative and statistically significant correlation with ROE, signifying those increased losses in comparison to premiums during the pandemic

**Table 4: The impact of COVID-19 on ROE**

ROA	Random Effect Model			Fixed Effect Model		
	Coef.	t-stats	p-value	Coef.	t-stats	p-value
COVID	2.642	14.31	0.000	1.04	2.62	0.009
GDP	-0.289	-4.92	0.000	-0.12	-1.70	0.091
LossRatio	-0.027	-2.97	0.003	-0.04	-2.91	0.004
INTR	0.85	8.37	0.000	0.39	2.86	0.004
Leverage	-0.12	-5.45	0.000	-0.03	-0.71	0.478
Liquidity	0.79	3.12	0.002	0.21	0.68	0.497
Incurred claims	0.64	2.96	0.003	-2.49	-2.52	0.012
Size	-0.25	-1.05	0.292	1.24	0.80	0.424
Age	-0.00	-0.39	0.698	-0.133	-1.09	0.275
Constant	-5.72	-4.02	0.000	7.03	1.43	10.153
R <sup>2</sup>	0.781			0.728		
Adjusted R <sup>2</sup>	0.787			0.741		
F-Stats	137.93			118.75		
Prob. of F-Stats	0.000			0.000		
Prob. of Hausman Test	0.103			0.103		

lowered profitability. This may be linked to an increase in health and life insurance claims during the pandemic. Conversely, interest rates exhibited a positive and statistically significant correlation with ROE (1.28, p-value 0.000), indicating that insurers gained from investment returns in a high-interest rate context, which mitigated some adverse effects from claims. This is crucial since insurance businesses often depend on investment income to augment their operating revenue, particularly during difficult times. This interpretation contradicts the findings of Nguyen and Nguyen (2020), who identified a positive connection between loss ratio and ROE.

The liquidity coefficient (2.15, p-value 0.021) is positive and statistically significant, suggesting that companies with high liquidity levels were more capable of sustaining the financial pressures of the pandemic. Liquidity is essential during crises as it enables companies to fulfill urgent obligations and operating expenses, therefore preserving consumer trust and ensuring operational continuity. This aligns with the findings of Kariuki *et al.* (2021) and Olowokudejo and Ajijola (2022), which identified a favorable correlation between liquidity and ROE. Conversely, Al Maani *et al.* (2021) and Tsvetkova *et al.* (2021) identified a negative link between liquidity and ROE in insurance firms.

Table 4 demonstrate a positive correlation between LEV and ROE, the relationship lacked statistical significance, as indicated by a coefficient of 0.04 and a p-value of 0.648. this result might imply that the financial performance of insurance firms throughout the pandemic was not much influenced by leverage. The worldwide uncertainty brought on by COVID-19 might have eclipsed the possible advantages of leverage if businesses paid more attention to operational risk management and liquidity than to debt or borrowing. The lack of significance might also suggest that companies had very consistent capital structures, thereby avoiding too strong dependence on debt throughout the crisis and therefore reducing the projected influence of

leverage on profitability. This align with the results that was found by Zelalem (2020).

Notably, while incurred claims exhibited a positive correlation (1.89) and a statistically insignificant (p-value 0.056) relationship between ROE and Incurred. This suggests that many insurance businesses may have efficiently countered these losses by strategic activities like raising premiums or using improved risk management techniques, even in spite of the observed increase in claims. The total financial impact of the claims was therefore reduced, which resulted in avoiding a major negative impact on performance. As suggested by contingency theory, the findings show that companies' capacity to modify their risk management and pricing policies to manage growing claims helped them to maintain financial stability even in the face of higher claims.

With a coefficient of -0.46 and a p-value of 0.674 the findings reveal a negative and insignificant link between firm size and ROE. This shows that the capacity of an insurance firm to provide returns during the pandemic was not much influenced by its size. Although the negative coefficient implies that bigger businesses could have partially dropped their ROE, the high p-value indicates that this influence is not statistically significant. This finding contrasts the results of Mansour *et al.* (2023), who identified a positive link between firm size and ROE.

The results in table 4 shows the negative and insignificant link between firm age and ROE. The p-value of 0.289 and the coefficient of -0.02 show that an insurance company's age was not a significant factor in influencing its financial performance during the pandemic. This implies that newer businesses and older, more established businesses were equally vulnerable to the difficulties posed by COVID-19, including market volatility, greater claims, and economic disruptions. The findings coincide with those of Al Nawaiseh (2020), which indicated a negative association between firm age and ROE. However, research conducted by Le *et al.*

(2020) revealed contradictory findings, indicating a positive association between age and ROE.

R-squared ( $R^2$ ) score of 0.718 indicates that 71.8% of the variance in ROE is accounted for by the model, indicating a robust match. The chosen variables are crucial determinants of financial performance during the pandemic. The model's robust explanatory capacity highlights the critical influence of macroeconomic and firm-specific financial variables on the profitability of South African insurance firms during crises.

#### MANAGERIAL IMPLICATION & CONCLUSION

The research used stakeholder and contingency theory to examine the effects of COVID-19 on the financial performance of insurance companies in South Africa. Evidence indicated that COVID-19 had a positive and significant influence on ROA, while ROE demonstrated a negative however significant correlation with COVID-19. The findings indicate that COVID-19's effect on the financial performance

of insurance firms was varied. The notable and significant correlation between COVID-19 and ROA suggests that, regardless of the difficulties presented by the pandemic, insurance firms successfully managed their assets, potentially capitalising on heightened demand for particular products or strategic modifications during the crisis. The inverse and substantial correlation between COVID-19 and ROE underscores the pressure on profitability derived from shareholders' equity. This may arise from elevated claims, market fluctuations, or increased operating expenses during the pandemic, which negatively impacted profits in comparison to equity. The favourable effect on ROA underlines the significance of effective asset management and the prospective advantages of expanding product offerings to address new needs during disruptions. In contrast, the adverse effect on ROE highlights the need to enhance profitability via expense reduction, optimal equity utilisation, and efficient claims management. ■

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