



DOES CORPORATE GOVERNANCE MODERATE THE IMPACT OF COVID-19 ON FINANCIAL PERFORMANCE? COMPARATIVE EVIDENCE FROM EAST AFRICAN STOCK MARKETS

Odrano Lucas Mwanana

Department of Economics, Institute of Accountancy, Arusha.

Email: odranomwanana@gmail.com

Cite this article:

Odrano, L. M. (2026), Does Corporate Governance Moderate the Impact of COVID-19 on Financial Performance? Comparative Evidence from East African Stock Markets. African Journal of Accounting and Financial Research 9(2), 92-107. DOI: 10.52589/AJAFR-ALZ2FJ0R

Manuscript History

Received: 29 Apr 2026

Accepted: 2 Jun 2026

Published: 19 Jun 2026

Copyright © 2026 The Author(s).

This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited.

ABSTRACT: *This paper examines the moderating effect of corporate governance on the impact of COVID-19 on the performance of financial firms listed in the Dar es Salaam Stock Exchange and Nairobi Securities Exchange. Specifically, the study examines how board size, board independence, and gender diversity moderate the effect of COVID-19 on the performance of financial firms listed in the Dar es Salaam Stock Exchange and Nairobi Securities Exchange. The study developed a composite indicator that aggregates corporate governance's key components, mainly gender diversity, board size, and board independence. The study adopted a descriptive research approach and the data collected was analyzed using inferential econometric regression (random effect model). The study found that a robust of corporate governance practices, including board size, gender diversity, and board independence, positively influences firm performance; however, the interaction between corporate governance and the COVID-19 variable was found to be negative but not statistically significant. This study contributes to the moderating role of corporate governance in enhancing firm performance during periods of economic uncertainty.*

KEYWORDS: Corporate Governance, COVID-19, Firm Performance, Agency Theory and Signalling Theory.



INTRODUCTION

Firms around the world have experienced rising instability and notably insignificant returns since the emergence of the COVID-19 pandemic (Moshfique et al., 2021). This may be due to the new levels of uncertainty brought on by lockdowns and other social distancing measures used to successfully stop the virus's spread and safeguard the public's health (Baig et al., 2020). A continuous release of COVID-19-related news may induce investors to become anxious, impacting their investing decisions. As a result, the decision to make forecasts of the firm's earnings performance has been difficult due to the emergence of the COVID-19 pandemic (Ashraf, 2020).

The COVID-19 pandemic posed a significant risk to public health because it spread rapidly, leading to a widespread illness that taxed the healthcare system and was challenging to contain. The Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2) outbreak was recognized as a global public health emergency by the World Health Organization on January 30, 2020 (Lai, Shih, et al., 2020). COVID-19, a deadly infectious virus that first surfaced at the end of 2019, has caused an economic crisis around the world. Globally, more than ten million COVID-19 cases have been confirmed, and a third of the global population has been subjected to some kind of lockdown (Van, 2020).

The emergence of the novel coronavirus (COVID-19) in 2020 has had a massive effect on the economy, population mobility, health care, and other fields across various industries. To halt the spread of the pandemic, governments-imposed lockdowns, which disrupted all aspects of the economy. The novel coronavirus COVID-19 forced countries to implement social estrangement policies as well as quarantine measures due to its highly infectious nature (Liu et al., 2020). Many governments implemented restrictions on imports to avoid viral transmission thus affecting export-oriented firms and causing countries' gross domestic product to fall. These conditions have had a significant effect on total demand, especially on consumption and exports. They forced some firms to shut down and others to ban their staff members from working due to a fall in return (Rababah, et al., 2020).

The construction of the COVID-19 barriers placed significant strain on global supply chains. At the macro level, the pandemic triggered the worst global recession since the 1930s Great Depression, which caused economic destruction (Kristijan et al., 2020). At the micro-level, the pandemic had an effect on asset management, cash flows, stock prices, and other areas, which led to poor business performance and even bankruptcies. Indeed, the COVID-19 pandemic has increased uncertainty regarding the performance of firms.

The COVID-19 pandemic has had a profound effect on African economies due to setbacks in terms of lost productivity and trade both within and among countries (Gondwe, 2020). The majority of African countries implemented containment measures ranging from border closures to total country lockdowns. COVID-19 measures have resulted in the disruption of most of the growth-enhancing sectors of the African economies. Specifically, COVID-19 had massive effects on East African countries by imposing movement restrictions (Obayelu, et al., 2021). These measures forced countries to employ economic policies to mitigate the effects of COVID-19. COVID-19 triggered a supply shock and a fall in the demand for goods and services.



In addition, the link between COVID-19 and firm performance would be significantly influenced by corporate governance. Corporate governance influences management choices on strategies relating to firm resilience and performance. This study examines the moderating effect of corporate governance mechanisms, namely board size, board independence, and gender diversity. Board size enhances expertise and reduces information asymmetry. Gender diversity brings diverse ideas, new knowledge, and experience. The independent directors increase governance power and voluntary disclosure. These governance mechanisms will enhance decision-making processes, including opinions and strategies for mitigating the effects of the pandemic, and may eventually result in a favorable influence on financial performance (Elmarzouky et al., 2021; Giroud & Mueller, 2019; Khaldoun et al., 2020).

Firms experienced a decline in their daily business performance despite the governments' initiatives put forth to ensure a sound business environment during the pandemic. The unprecedented effect as a result of the pandemic on firm performance is a threat to firms, and the effect of COVID-19 has been incomparable among regions, despite increasing volatility in global firms' performance (Moshfique et al., 2021). The need for proper control and management of the emergence of the pandemic as a way to ensure the sustainable stability of the firms' performance is of great concern. There is a broad consensus among researchers that factors such as corporate governance can ensure the maintenance of firm resilience and performance (Elmarzouky et al., 2021).

Signalling Theory

The Signalling Theory developed by Michael Spence in 1973 posits that in a market with information asymmetry, one party, mainly the seller, can convey valuable information to another party, typically the buyer, through credible signals (Connelly et al., 2011). The theory helps companies to communicate their strategies, strengths, and prospects to the investors, stakeholders, and the market. Firms send signals to the market through their actions, thus influencing investor perceptions and stock prices. The theory underscores the critical role of strategic communication and credibility in navigating crises and sustaining firm performance. Firms may disclose information related to COVID-19 associated with the disclosure of performance earnings to send positive signals to the investors, stakeholders, and the market (Elmarzouky, et al., 2021). The announcements related to cost-cutting measures, securing new funding, and changes in dividend policies act as positive signals to the market. According to the theory, firms that communicate effectively about the strategies to mitigate the effect of COVID-19 reduce uncertainty and hence maintain better investor confidence and firm performance.

Agency Theory

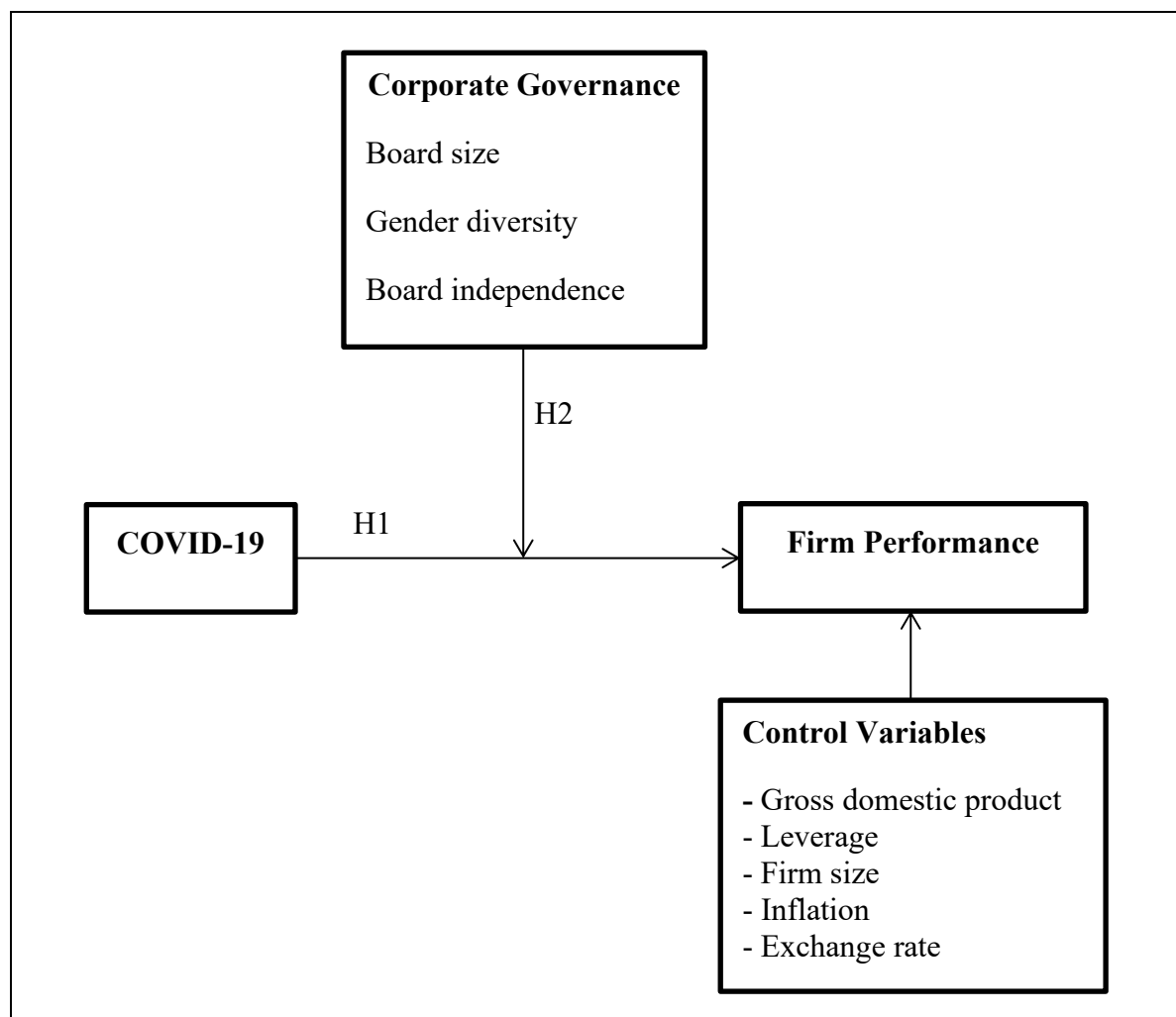
The Agency Theory proposed by Jensen and Meckling (1976) analyzes the relationship between principals and agents. The theory posits that corporations act as agents of their shareholders (Bendickson et al., 2016). The partnership develops as shareholders invest in corporate ownership and entrust the corporation's directors and managers with managing their resources (Federo & Carranza, 2020). It is evident that in corporations, there is a high divergence between the short-term and long-term interests of managers and shareholders (Dong, et al., 2021). The difference in interest between management and shareholders influences the actions and decisions of managers who may become detached from the shareholder's interest. The theory can arise within the firms in the form of a conflict of interest,

and the established board of directors could assist in overcoming the agency conflict that occurs between the shareholders and the management. The directors of the board are responsible for ensuring that the firm's objectives align with the interests of the shareholders. In the presence of economic turbulence such as COVID-19, the board governance is responsible for ensuring that the decisions and actions taken to stabilize the performance of firms meet the interests of its shareholders. (Federo & Carranza, 2020).

CONCEPTUAL FRAMEWORK

The conceptual framework shows the effect of COVID-19 on firm performance, including corporate governance as a moderating factor, potentially affecting the strength or direction of the relationship between COVID-19 and firm performance. In addition to the primary variables, the framework includes several control variables, Gross Domestic Product (GDP), leverage, firm size, inflation, and exchange rate, recognized as influential factors in firm performance.

Conceptual Framework





LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Firm Performance

Gwala and Mashau (2022) conducted a comprehensive review of the literature on the positive impact of corporate governance on organizational performance in Africa, analyzing 32 journal articles and 12 dissertations from 2003 to 2022. They found a strong correlation between corporate governance and firm performance, with agency theory being the most commonly used theory. The study underscores the need for more comprehensive coverage of corporate governance.

Namanya et al. (2021) studied the impact of corporate governance on firm performance using 42 listed companies from the East African Community. The study found no significant impact of board gender diversity and risk management on firm performance, while the relationship between board size and independence remained inconclusive. The study also found that corporate governance mechanisms became more influential after the establishment of the East African Community Common Market.

COVID-19 and Firm Performance

Ngo & Duong (2023) analyzed the effects of COVID-19 on the performance of firms across various industries and identified the channels through which the pandemic had a significant influence. The study used data from 402 listed firms between 2017 and 2021, employing fixed-effect and difference-in-difference models. The findings revealed that COVID-19 notably impacted firms in industries more susceptible to the virus and government response measures. In addition to the traditional channels of sales and expenses, the study uncovered new impact pathways, such as competition and short-term receivables.

Atayah, et al. (2021) examined the interrelationship between COVID-19 and the financial performance of logistics firms from the G-20 countries from 2010 to 2020. The study revealed that companies that quickly adapted to e-commerce surged in demand benefited from the increased demand. However, logistical challenges in Germany, Korea, and the UK led to severe disruptions, resulting in a decline in financial performance. Shipping delays and reduced supply chain efficiency were common issues, illustrating the pandemic's impact on logistics firms in two different outcomes across the G-20.

Al-Kharusi & Murthy (2020) assessed the financial stability and sustainability of 30 large banks that operate in the Gulf Cooperation Council banking market. The study employed a simulation approach for five-year income statements and the forecast balance of each bank. The findings suggest that COVID-19 has resulted in disruption of banks operating in the Gulf Cooperation Council countries. The 300 simulation trials of each bank indicated the possibility of negative profitability, loss of credit, and low capital ratios during the COVID-19 pandemic.

Ding et al. (2021) examined the association between the reactions of stock returns to COVID-19, employing data for more than 6,700 companies across 61 economies. The study found that firms experienced significant drops in stock prices and profitability due to the pandemic, driven by supply chain disruptions, reduced consumer demand, and operational challenges. This finding underscores the widespread negative effects of the pandemic on firm performance, regardless of specific firm characteristics.



Tanjung (2023) examined the interrelationship between the cost of capital, firm performance, and the COVID-19 pandemic. The study used data from publicly listed firms in Indonesia from 2012 to 2021 and found that, even after considering the effects of the pandemic, ESG firms were significantly impacted. The findings highlight that while ESG firms have gained attention during the pandemic due to their focus on sustainability, their performance still lagged, suggesting that the adoption of sustainable finance is in its early stages. The results further imply that these firms need a stronger framework, regulatory support, and more time to fully develop and integrate sustainable practices into their financial strategies for long-term growth and resilience.

The emergence of the COVID-19 pandemic posed disruptions to majorities of economies worldwide, which had a direct influence on the performance of firms. This is evident due to the negative returns as a result of the pandemic. It is therefore hypothesized that:

H_1 : COVID-19 has a significant negative effect on firm performance.

Moderating Effect of Corporate Governance

Khatib & Nour (2021) examined the impact of COVID-19 on corporate governance mechanisms and firm performance in 188 Malaysian non-financial firms. The findings showed a significant impact on key business factors like performance, organizational structure, and leverage levels. However, the difference between pre- and post-COVID-19 factors was insignificant. The study also found that board size did not affect firm performance, but board diversity was crucial during the crisis.

Elmarzouky, et al. (2021) studied the impact of COVID-19 on performance disclosure with the moderating effect of corporate governance. A sample of 225 firm observations was employed from non-financial firms listed on the United Kingdom Financial Times Stock Exchange. The research further demonstrated that board independence and gender diversity played a crucial role in strengthening this relationship, suggesting that firms with more independent and diverse boards were better at disclosing performance during the pandemic. However, the study found that board size did not significantly affect performance disclosure, indicating that the composition and diversity of the board may be more important factors in navigating disclosure practices during times of crisis.

Anas, et al. (2023) examined the role of corporate governance mechanisms influencing firm performance during COVID-19. A sample of 151 non-financial firms for the pre-COVID-19 (2019-2020) and during COVID-19 (2020-2021) periods was employed. The study found that board size and audit committee frequency positively influenced return on assets, while board independence negatively affected performance. Board diversity, however, positively impacted firm performance. The study highlighted the importance of effective governance in enhancing firm performance.

Azizah & Wulaningrum (2022) examined the impact of COVID-19 on corporate governance and firm performance. The study employed a quantitative approach with a sample of 50 manufacturing firms listed in the Indonesian market for the year 2019 to 2021. The results revealed a significant negative effect on both corporate governance and firm performance, highlighting the challenges faced by these firms during the pandemic. Interestingly, the research also found that the board of directors and audit committee did not have a significant



influence on firm performance during this period, suggesting that traditional governance structures may not have been as effective in mitigating the pandemic's effects.

Boshnak, et al. (2023) examined how corporate governance practices influenced firm performance during the COVID-19 pandemic by analyzing 258 annual reports from Saudi Arabian firms. The study found that larger board sizes and more frequent meetings had a negative impact on firm performance during this period. On the other hand, gender diversity within the board had a significant positive effect, suggesting that diverse perspectives may have contributed to better decision-making and resilience in times of crisis.

Khan, et al. (2024) studied the effect of corporate governance on the performance of private commercial banks in Bangladesh post-COVID-19 for the financial years 2022 and 2023. The research revealed that board composition, size, and expertise had a positive impact on firm performance, while a chief executive officer's duality was found to have a negative effect on firm performance. The study measured firm performance using key indicators such as return on assets, return on equity, and earnings per share, highlighting the importance of effective governance in driving post-pandemic recovery and growth.

After the literature review in this section, the study proposed the following hypothesis:

H_2 : Corporate governance has a positive moderation on the effect of COVID-19 on firm performance.

METHODOLOGY

The study employed a descriptive research design because the data collected was quantifiable and the variables were uncontrollable. This study focuses on the East African region, specifically Tanzania and Kenya, and it includes listed firms at the Nairobi Securities Exchange because of data availability, cross-listing effects, and also having a common market history. Therefore, the target population of the study includes all financial firms that are listed on the Dar es Salaam Stock Exchange and Nairobi Securities Exchange. The sampled data relied on the publicly available annual reports from the year 2015 to 2022. The number of financial firms involved in the study was 14 after excluding firms with missing information to ensure a robust analysis of the data collected. The source of data for this study was secondary data, which was obtained from the annual reports of firms listed in the Dar es Salaam Stock Exchange, Nairobi Securities Exchange, and World Bank Data (World Development Indicators).

The dependent variable, firm performance, will be proxied by return on asset (ROA) (Khakan et al., 2021). For the independent variable COVID-19, a dummy variable was developed where all observations during the years 2020 to 2022 were given the value "1" and the prior COVID-19 period (the year 2015 to 2019) was assigned "0" (Atayah et al., 2021). This study opts to create a composite indicator that combines the overall quality of corporate governance. This composite indicator aggregates the key components of corporate governance, including gender diversity, board size, and board independence (Adams & Ferreira, 2009; Carter et al., 2003).

$$\text{Composite Score} = \frac{Z_{\text{gender diversity}} + Z_{\text{board size}} + Z_{\text{board independence}}}{3}$$



The measures of the control variables employed in the study include leverage as the proportion of shareholders' debt utilized to fund a firm's assets. Firm size is computed by taking the natural logarithm of Total Assets. The gross domestic product (GDP) was determined using the GDP growth. The inflation rate was used because it has a direct influence on firm performance since it is quantified by the consumer price index, and the real interest rate was employed in this study.

Data Analysis

Data was analyzed using STATA software version 17. The analysis focused on the two specific objectives of this study. However, initially, a test for choosing between static or dynamic models was carried out. The Durbin-Wu-Hausman test was used to choose between the random effect model and the fixed effect model for regression. The regression results demonstrated an association between the dependent variable and independent variables to answer the study objectives.

Model Estimation

$$ROA_{it} = \beta_0 + \beta_1 COVID19_t + \beta_2 CORPORATE_GOVERNANCE_{it} + \beta_3 FIRM_SIZE_{it} + \beta_4 LEVERAGE_{it} + \beta_5 INFLATION_t + \beta_6 EXCHNGR_t + \beta_7 GDP_t + \mu_{it}$$

Where;

ROA_{it} - is the return on assets as in net income to net assets of firm i in year t ,

$COVID-19_t$ - is the dummy variable for COVID-19 of in year t ,

$CORPORATE_GOVERNANCE_{it}$ - consists of the composite score of gender diversity, board size, and board independence of firm i in year t ,

$FIRM_SIZE_{it}$ - is the firm size as a natural logarithm for total assets of firm i in year t ,

$LEVERAGE_{it}$ - is the leverage as in total debt to total equity of firm i in year t ,

$INFLATION_t$ - is the inflation rate (Consumer price index) in year t .

$EXCHNGR_t$ - is the real interest rate (%) in year t .

GDP_t - is the growth domestic product growth (GDP growth) in year t .

μ_{it} - is the error term for the model.

RESULTS

Descriptive Statistics

The descriptive statistics provide a detailed snapshot of the variables under investigation in the study by examining the effects of COVID-19 on firm performance. The Return on Assets (ROA) indicates that, on average, firms have low positive returns, but there is a considerable



variation among firms, with some experiencing significant losses while others achieving notable gains. The Covid Dummy variable reveals that a substantial portion of the data is from the pandemic-affected period. The Corporate Governance composite indicator, with its standardized mean of zero and wide range, indicates a considerable diversity in corporate governance practices among the firms. This variation implies that while some firms have robust governance structures, others may lack such mechanisms, potentially influencing their ability to effectively navigate the challenges posed by the pandemic.

Other variables such as firm size, leverage, inflation, GDP growth, and exchange rate also show considerable variability. The wide range in firm size indicates a diverse set of firms, from small to very large enterprises, reflecting different scales of operation and resource availability. High variability in leverage points to differing levels of debt utilization among firms that affect their financial stability and risk exposure. The moderate variability in inflation and GDP growth reflects the economic conditions during the study period, which are crucial for understanding the broader economic environment in which these firms operate. Finally, the substantial fluctuations in the exchange rate suggest varying degrees of currency risk and its potential effect on firms engaged in international trade or with foreign currency exposures.

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	112	.0286	.088	-.3778	.473
Covid Dummy	112	.375	.486	0	1
Corporate Governance	112	0	.644	-1.698	1.613
Firm Size	112	17.229	3.014	10.971	25.185
Leverage	112	.7155	.959	.0002	10.221
Inflation	112	5.411	1.397	3.290	8.006
GDP Growth	112	4.813	1.903	-.2727	7.590
Exchange rate	112	1017.175	1060.076	98.178	2325.58

Correlation Test

The correlation matrix provides insights into the relationships between the key variables in the study examining the effect of COVID-19 on firm performance.

Table 2: Matrix of Correlation

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Covid Dummy	1.000						
(2) Corporate Governance	0.023	1.000					
(3) Firm Size	-0.148	-0.167	1.000				
(4) Leverage	-0.041	0.022	0.019	1.000			
(5) Inflation	-0.078	0.039	-0.004	-0.085	1.000		
(6) GDP Growth	-0.386	-0.058	0.050	0.064	0.029	1.000	
(7) Exchange Rate	0.025	-0.095	0.045	-0.029	-0.711	0.178	1.000

The Covid Dummy shows weak correlations with corporate governance, firm size, leverage, inflation, GDP growth, and exchange rate. This suggests that the onset of the COVID-19



pandemic is relatively independent of firm-specific characteristics such as governance practices and size. However, the pandemic period is associated with lower GDP growth, reflecting the widespread economic slowdown caused by the pandemic. The weak correlations with other variables imply that the impact of COVID-19 on firm performance operates through channels not strongly tied to these specific firm attributes.

The relationship among corporate governance, firm size, and leverage is weak. This may indicate that larger firms, due to their scale and complexity, might adopt governance practices that differ from smaller firms. The weak positive relationship between corporate governance and leverage suggests that firms with better governance practices do not significantly differ in their debt levels compared to those with weaker governance. These observations highlight that corporate governance practices are relatively independent of firm size and leverage within the sample.

The correlations among the macroeconomic variables, such as inflation, GDP growth, and exchange rate, provide additional economic context. There is a strong relationship between inflation and the exchange rate, suggesting that higher inflation is often associated with currency depreciation. This reflects a typical economic behavior where inflation erodes purchasing power, leading to a weaker currency. The relationships between inflation and GDP growth, and between GDP growth and the exchange rate, are relatively weak, indicating that these economic factors do not exhibit strong interdependencies in this sample.

Multicollinearity Test

The VIF value in the multicollinearity test of every independent variable was approximately equal to 2, which implies that there is no multicollinearity between these independent variables; hence, all variables can be included in the regression model.

Table 3: Variance Inflation Factor (VIF)

Variables	VIF	1/VIF
Exchange Rate	2.292	.436
Inflation	2.206	.453
Corporate Governance	1.494	.669
Corporate_x_Covid	1.469	.681
GDP Growth	1.299	.77
Covid Dummy	1.213	.824
Firm Size	1.063	.94
Leverage	1.04	.962
Mean VIF	1.51	.

Durbin-Wu-Hausman Test

The p-value from the Durbin-Wu-Hausman test was 0.8993, in which we fail to reject the null hypothesis at a 5 percent level of significance. Hence, the Random Effects model was opted for since the Hausman test approved REM.

**Table 4: Durbin-Wu-Hausman Test**

	Coef.
Chi-square test value	2.21
P-value	0.8993

Estimation Results for the Three Models

The random effects regression was performed to determine the effect of COVID-19 on firm performance. In the analysis, the moderating factor (i.e., Corporate_x_Covid) was included to examine the moderating effect of corporate governance on the relationship between COVID-19 and firm performance. However, before performing the estimations, we aggregated the corporate governance variable as shown below.

Model Results**Table 5: Return on Asset Model Estimation Results**

Variables	(OLS)	(FE)	(RE)
Covid Dummy	-.00517 (.01348)	-.00061* (.01233)	-.0084** (.0041)
Corporate Governance	.02878** (.01276)	-.00645 (.00868)	.00232** (.00097)
Corporate_x_Covid	-.03045 (.02649)	-.00774 (.02428)	-.009 (.0216)
Firm Size	.00695** (.00344)	-.00021 (.00635)	.00258 (.0057)
Leverage	-.01238 (.01218)	.00187* (.00103)	.00078 (.00179)
Inflation	.01162* (.00682)	.00957* (.0046)	.01378* (.00714)
GDP Growth	.00383 (.00373)	.00203*** (.00022)	.00274*** (.00043)
Exchange Rate	.00001 (.00001)	-.00022 (.00017)	0 (.00002)
Constant	-.16805* (.09948)	.18895 (.17291)	-.1017 (.11104)

Source: Author *** $p < .01$, ** $p < .05$, * $p < .1$

Random Effects Model Regression Results Interpretation

The negative and statistically significant coefficient for the Covid Dummy variable indicates that the COVID-19 pandemic has had a detrimental impact on Return on Assets (ROA) across firms. This result is consistent with recent literature highlighting the broad economic disruptions caused by the pandemic. For instance, Ding, et al. (2021) found that firms experienced significant drops in stock prices and profitability due to the pandemic, driven by supply chain disruptions, reduced consumer demand, and operational challenges. This finding underscores the widespread negative effects of the pandemic on firm performance, regardless of specific firm characteristics.



The positive and statistically significant coefficient for Corporate Governance suggests that better governance practices are associated with higher ROA across firms. This result is supported by recent studies, such as a study by Nguyen et al. (2015), which indicates that strong corporate governance mechanisms improve firm performance by enhancing managerial oversight, reducing agency costs, and fostering strategic decision-making. The positive effect of corporate governance highlights its critical role in improving firm resilience and financial performance, particularly during times of economic uncertainty.

The interaction term between Corporate Governance and Covid Dummy is negative but not statistically significant. This suggests that while the pandemic might challenge the effectiveness of corporate governance, the impact is not strong enough to be conclusive. Recent literature by Amore et al. (2021) suggests that the effectiveness of governance mechanisms may vary during crises, with some firms being able to leverage their governance strengths better than others. The lack of significance in this interaction term implies that further investigation is needed to understand how different aspects of governance interact with crisis conditions.

The coefficient for firm size is positive but not statistically significant, indicating that larger firm size tends to be associated with higher ROA, though not conclusively. The coefficient for leverage is positive but not statistically significant, suggesting that higher leverage might be associated with better performance, although this relationship is not strong enough to be definitive. The positive and statistically significant coefficient for inflation indicates that inflation is generally beneficial for firm performance. The positive and statistically significant coefficient for GDP growth underscores the positive effect of economic growth on firm performance. The coefficient for exchange rate is zero and not statistically significant, indicating no substantial impact of exchange rate changes on ROA across firms.

Ordinary Least Squares Model Regression Results Interpretation

The Ordinary Least Squares (OLS) regression results provide insights into the overall relationships between the independent variables and Return on Assets (ROA) without accounting for individual firm characteristics. The negative but not statistically significant coefficient for the Covid dummy suggests that the pandemic is associated with a decrease in ROA, although this effect is not strong enough to be conclusive. This contrasts with the Random Effects (RE) model, where the pandemic's effect is significant, indicating that the OLS model would not fully capture the heterogeneity aspect across firms.

Corporate Governance shows a positive and statistically significant relationship with ROA, indicating that firms with better governance practices generally perform better financially. This aligns with the RE model results, and it supports the idea that robust governance mechanisms enhance firm performance by improving oversight and decision-making. Firm size is positively related to ROA, suggesting that larger firms benefit from economies of scale and more efficient resource utilization. However, unlike the RE model, Leverage shows a negative but not significant effect, indicating that debt levels do not significantly affect performance in this model. Inflation positively affects ROA, suggesting that firms may benefit from moderate inflation through increased pricing power, while the GDP growth shows a positive but not significant effect. Exchange Rate changes appear to have no significant effect on ROA, similar to the RE model findings.



Fixed Effects Model Regression Results Interpretation

The Fixed Effects (FE) regression results emphasize within-firm variations over time, controlling for time-invariant characteristics. The Covid dummy has a slight but significant negative effect on ROA, consistent with the RE model, indicating that the pandemic negatively affects firm performance across periods within the same firm. This result reinforces the pervasive adverse effect of COVID-19, as firms struggle with operational disruptions and economic downturns.

Corporate Governance is negatively related to ROA but not statistically significant, differing from the OLS and RE models. This suggests that improvements or declines in governance practices within firms over time do not significantly affect performance, highlighting the potential importance of stable, long-term governance structures over short-term changes. Firm Size and Leverage show no significant effect on ROA within firms, contrasting with the OLS model where Firm Size was significant. This implies that firm-specific characteristics related to size and leverage may not vary enough within firms over time to influence firm performance. Inflation has a positive and significant effect on ROA, consistent across all models, suggesting that moderate inflation benefits firms. The GDP growth also positively affects ROA significantly, indicating that economic growth supports better firm performance. The Exchange Rate, however, shows no significant relationship, similar to the other models.

Comparison and Implications

Comparing the three models reveals key insights into the determinants of firm performance during the COVID-19 pandemic. The RE model, which accounts for both within-firm and between-firm variations, provides a comprehensive view, highlighting the significant negative effect of the pandemic on ROA and the positive influence of corporate governance. The OLS model supports the importance of corporate governance and firm size but fails to capture the pandemic's significant effect, suggesting the need to account for firm-specific heterogeneity. The FE model emphasizes the adverse effect of COVID-19 and the benefits of inflation and GDP growth but shows that within-firm changes in governance and size do not significantly influence performance.

Study Limitation and Direction for Future Studies

The study's limitation is on the data availability in the annual reports and timely publication of the annual reports. This has resulted in a lower number of firms included in the data analysis due to the omission of firms with incomplete information within the time frame. The board composition of some firms did not include diversity, which is necessary for adhering to the corporate governance practices. For future research, the study suggests considering the role of specific governance attributes, such as the effectiveness of board committees or the impact of managerial compensation structures, in mitigating the effects of crises like COVID-19. Additionally, longitudinal studies examining the long-run impact of corporate governance on firm resilience beyond the immediate effects of the pandemic would provide valuable insights. Another potential area of research could involve a comparative analysis across different industries or regions to assess whether the effect of COVID-19 and the effectiveness of governance practices vary based on industry characteristics or economic environments.



REFERENCES

- Aabo, T., Pantzalis, C., & Park, J. C. (2016). Exchange Rate Exposure Revisited. *Journal of Corporate Finance*, 101-116.
- Adams, R. B., & Ferreira, D. (2009). Women in the Boardroom and their Impact on Governance and Performance. *Journal of Financial Economics*, 291-309.
- Alharahsheh, H. H., & Pius, A. (2020). A Review of Key Paradigms: Positivism VS Interpretivism. *Global Academic Journal of Humanities and Social Sciences*, 2 (3), 39-43.
- Al-Kharusi, S., & Murthy, S. R. (2020). Financial Stability of GCC Banks in the COVID-19 Crisis: A Simulation Approach. *The Journal of Asian Finance, Economics and Business*, 7 (12), 337-344.
- Allini, A., Rossi, F. M., & Hussainey, K. (2018). The Board's Role in Risk Disclosure: An Exploratory Study of Italian Listed State Owned Enterprises. *Public Money and Management*, 36 (2), 113-120.
- Amore, M. D., Pelucco, V., & Quarato, F. (2021). Family Ownership During the COVID-19 Pandemic. *Journal of Banking & Finance*.
- Anas, M., Gulzar, I., Tabash, M. I., Ahmad, G., Yazdani, W., & Alam, F. (2023). Investigating the Nexus between Corporate Governance and Firm Performance in India: Evidence from COVID-19. *Journal of Risk and Financial Management* 16.
- Ashraf, B. N. (2020). Stock Markets' Reaction to COVID-19: Moderating Role of National Culture. *Finance Research Letters*, 41, 1-9.
- Atayah, O. F., Dhiaf, M. M., Najaf, K., & Frederico, G. F. (2021). Impact of COVID-19 on Financial Performance of Logistics Firms: Evidence from G-20 Countries. *Journal of Global Operations and Strategic Sourcing*, 15 (2), 172-196.
- Azizah, A., & Wulaningrum, R. (2022). Corporate Governance and Firm Performance During COVID-19. *International Journal of Multidisciplinary Research and Publications*, 84-86.
- Baig, A. S., Butt, H. A., Omair, H., & Rizvi, S. A. (2020). Deaths, Panic, Lockdowns and US Equity Markets: The Case of COVID-19 Pandemic. *Finance Research Letters*, 38 (C), 1-9.
- Bank, W. (2024). *World Bank*. Retrieved January 5, 2024, from Media Centre: <https://www.worldbank.org>
- Bendickson, J., Muldoon, J., Liguori, E. W., & Davis, P. E. (2016). Agency Theory: Background and Epistemology. *Journal of Management History*, 22 (4), 437-449.
- Boshnak, H. A., Alsharif, M., & Alharthi, M. (2023). Corporate Governance Mechanisms and Firm Performance in Saudi Arabia Before and During the COVID-19 Outbreak. *Content Business and Management*, Vol 10.
- Carter, D. A., Simkins, B. J., & Simpson, G. W. (2003). Corporate Governance, Board Diversity, and Firm Value. *The Financial Review*, 33-53.
- Ciftci, I., Tatoglu, E., Wood, G., Demirbag, M., & Zaim, S. (2019). Corporate Governance and Firm Performance in Emerging Markets: Evidence from Turkey. *International Business Review*, 90-103.
- Connelly, B. L., Certo, T. S., Ireland, D. R., & Reutzel, C. R. (2011). Signaling Theory: A Review and Assessment. *Journal of Management*, 39-67.
- Ding, W., Levine, R., Lin, C., & Xie, W. (2021). Corporate Immunity to the COVID-19 Pandemic. *Journal of Financial Economics*, Vol 141, 802-830.



- Dong, J. Q., Karhade, P. P., Rai, A., & Xin, S. (2021). How Firms Make Information Technology Investment Decisions: Toward a Behavioural Agency Theory. *Journal of Management and Information Systems*, 29-58.
- Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on Business and Research. *Journal of Business Research*, 284-289.
- Elmarzouky, M., Albitar, K., & Hussainey, K. (2021). COVID-19 and Performance Disclosure: Does Governance Matter? *International Journal of Accounting & Information Management*, 29 (5), 776-792.
- Fazio, C., Guzman, J., Murray, F., & Stern, S. (2020). A New View of the Skew: A Quantitative Assessment of the Quality of American Entrepreneurship. *American Economic Review*, 1065-1099.
- Federo, R., & Carranza, A. S. (2020). A Typology of Board Design for Highly Effective Monitoring in Intergovernmental Organizations under the United Nations System. *Regulation and Governance*, 344-361.
- Giroud, X., & Mueller, H. M. (2019). Corporate Governance, Product Market Competition, and Equity Prices. *The Journal of Finance*, 563-600.
- Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate Governance and Equity Prices. *The Quarterly Journal of Economics*, 107-156.
- Gondwe, G. (2020). Assessing the Impact of COVID-19 on Africa's Economic Development. *UNCTAD* (p. 21). Africa: Least Developed Countries and Special Programmes.
- Gwala, S., & Mashau, P. (2022). Corporate Governance and Organisational Performance in Africa: A Systematic Literature Review. *African Journal of Business Management*, 210-223.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 305-360.
- Khakan, N., Subramaniam, R. K., & Atayah, O. F. (2021). Understanding FinTech Peer-to-Peer Lending (P2P) Implications for Sustainability During the COVID-19 Pandemic. *Journal of Sustainable Finance and Investment*, 87-102.
- Khaldoon, A., Khaled, H., Nas, K., & Gerged Ali, M. (2020). ESG Disclosure and Firm Performance Before and After IR: The Moderating Role of Governance Mechanisms. *International Journal of Accounting and Information Management*, Vol. 28, 1-21.
- Khan, S. R., Akhtar, S., Afrin, S., & Khan, G. S. (2024). The Post COVID Effect of Corporate Governance on Firm Performance. A Study on Private Commercial Bank in Bangladesh. *Australian Finance and Banking Review*, Vol 8, 1-10.
- Khatib, S. F., & Nour, A. I. (2021). The Impact of Corporate Governance on Firm Performance During the COVID-19 Pandemic: Evidence from Malaysia. *Journal of Asian Finance, Economics and Business*, Vol 8(2), 0943-0952.
- Kolsi, M. C., & Attayah, O. F. (2018). Are Socially Responsible Firms Less Engaged in Earnings Management? Evidence from ADX Listed Companies. *International Journal of Business Innovation and Research*, 536-560.
- Kristijan, K., Ronny, W., Vijay, K. C., ORCID, N. V., & Mihajlo, J. (2020). Corona-Triggered Global Macroeconomic Crisis of the Early 2020s. *International Journal of Environmental Research and Public Health*.
- Lai, C. C., Shih, T. P., Ko, W. C., Tang, H. J., & Hsueh, P. R. (2020). Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Coronavirus Disease-2019 (COVID-19): The Epidemic and the Challenges. *International Journal of Antimicrobial Agents*.



- Liu, Y., Lee, J., & Lee, C. (2020). The Challenges and Opportunities of a Global Health Crisis: The Management and Business Implications of COVID-19 from an Asian Perspective. *Asian Business & Management*.
- Mohajan, H. (2017). Two Criteria for Good Measurements in Research: Validity and Reliability. *Annals of Spiru Haret University Economics Series*.
- Moshfique, U., Anup, C., Keith, A., & Kaushik, C. (2021). The Effect of the COVID-19 Pandemic on Global Stock Market Volatility: Can Economic Strength Help to Manage the Uncertainty? *Journal of Business Research*, Vol. 128, 31-44.
- Namanya, D., Leng, F. M., & Mugarura, J. T. (2021). Corporate Governance and Firm Performance in Developing Countries: Evidence from East Africa. *Advanced International Journal of Banking, Accounting and Finance*, Vol 3, 127-147.
- Ngo, H. T., & Duong, H. N. (2023). COVID-19 Pandemic and Firm Performance: Evidence on Industry Differentials and Impacting Channels. *International Journal of Social Economics*.
- Nguyen, T., Locke, S., & Reddy, K. (2015). Ownership Concentration and Corporate Performance from a Dynamic Perspective: Does National Governance Quality Matter? . *International Review of Financial Analysis*, 148-161.
- Obayelu, A. E., Edewor, S. E., & Ogbe, A. O. (2021). Trade Effects, Policy Responses and Opportunities of Covid-19 Outbreak in Africa. *Journal of Chinese Economic and Foreign Trade Studies*, 44-59.
- Ozili, P. (2022). COVID-19 in Africa: Socio-Economic Impact, Policy Response and Opportunities. *International Journal of Sociology and Social Policy*, 177-200.
- Parth, K. (2020). The Economic Cost of COVID-19: A Potential Pandemic Impact on Indian Economy. *International Journal of Advanced Science and Technology*, 2182-2192.
- Peng, C. W., & Yang, M. L. (2017). The Effect of Corporate Social Performance on Financial Performance: The Moderating Effect of Ownership Concentration. *Journal of Business Ethics*, 171-182.
- Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. Harper & Row.
- Rababah, A., Haddad, L. A., Sial, M. S., Chunmei, Z., & Cherian, J. (2020). Analyzing the Effects of the COVID-19 Pandemic on the Financial Performance of Chinese Listed Companies. *Journal of Public Affairs*.
- Tanjung, M. (2023). Cost of Capital and Firm Performance of ESG Companies. What Can We Infer from COVID-19 Pandemic. *Sustainability Accounting, Management and Policy Journal*, 1242-1267.
- Van, H. E. (2020). Lockdown is the World's Biggest Psychological Experiment and We Will Pay the Price. *In World Economic Forum*, Vol. 9.
- Zeid, A. A., & Loi, H. (2016). Inflation and Growth: An Estimate of the Threshold Level of Inflation in the U.S. *Journal of Economics and Finance*.