How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

Safeer Khan[1]   Sharif Ullah Jan[2]

Check for updates

[1] Undergraduate (BS), Department of Management Sciences, FATA University, Dara Adam Khel, Kohat, Khyber Pakhtunkhwa, Pakistan.
[2] Lecturer, Department of Management Sciences, FATA University, Dara Adam Khel, Kohat, Khyber Pakhtunkhwa, Pakistan.

Correspondence addressed to Sharif Ullah Jan. ✉ sharifullah.jan@fu.edu.pk

Abstract: This study explores further the impacts of the relationship between autumntime mean sea level pressure (MSLP) over the Indian Ocean and autumntime precipitation over Tasmania. We employ a combination of cross-correlation analysis, Singular Value Decomposition (SVD), and covariance measures to unravel this intricate connection. Our results reveal that MSLP over the Indian Ocean significantly influences Tasmania's autumn precipitation, particularly in the region extending from 125°E eastward and from 35°S southward. This MSLP-precipitation link is statistically significant, characterized by a Pearson's coefficient of correlation of 0.63 ($p < 0.05$). In addition, we calculate the Root Mean Square Covariance (RMSC) to gauge the strength of this association. The RMSC value, calculated at 0.33, surpasses the threshold of 0.1, emphasizing a robust and significant connection between autumntime MSLP and precipitation in Tasmania. Our results emphasize that the first leading mode of SVD accounts for 84% of the variability in both MSLP over the Indian Ocean and precipitation in Tasmania. These results contribute to a more profound understanding of the factors governing autumn precipitation in Tasmania and offer valuable insights for meteorological and climate science.

Key Words: Corporate Governance, Financial Performance, Pre-COVID-19, Post-COVID-19, Karachi Stock Exchange, Pooled Regression Analysis, Return on Assets, Return On Equity, Pandemic Impact

Introduction

The coronavirus has serious issues all over the world; COVID-19 has spread faster all over the world. COVID-19 affects the global economy and particularly the performance of listed companies on the stock exchange. This pandemic is affecting the world economy and the performance of corporations in different aspects due to governmental measures like lockdowns, social differentiation, and instructions to stay at home. It has been shown that COVID-19 has an effect on the stock market (Ashraf, 2020), labor market (Mayhew & Anand., 2020), business model (Yahaya et al., 2020), financial sectors (Baicu et al., 2020), small and medium-sized enterprises (Ratten., 2020), and other segments (Abate et al., 2020).

COVID-19 has affected the whole world, but the impact of some industries was more terrible than that of other industries. Due to COVID-19, global businesses have faced trillions of dollars of loss, for which the businesses have various business practices, operational flexibility, and technology tailored to engage against COVID-19 to reduce the impact of the COVID-19 pandemic.

Earlier phases of this pandemic have caused a decline in the global economy. COVID-19's impact on company performance, corporate governance, capital structure, dividends, and share repurchases is discussed in the same study, nevertheless. However, research is being done to examine COVID-19's effects on firm performance (FP). This study by Shen et al. (Shen et al., 2020) concluded that COVID-19 has a

detrimental effect on the firm performance of listed companies on the China Stock Exchange. When a company's investment scale or sales income is small, the negative effects of COVID-19 on business performance are more pronounced. These results provide the first empirical evidence linking the pandemic to corporate performance. For instance, during the COVID-19 pandemic, (Liu et al., 2020) looked at the adaptability of non-stock market performance.

It examines the connection between corporate governance and company performance in light of the most recent statistics on the epidemic, which is regrettable but unprecedented, and presents a fresh way to look at the relationship between business performance and governance.

To evaluate the relationship and the impact of COVID-19, this research will employ 69 companies listed on the Karachi Stock Exchange as a sample for the 2019—20 trading year. The COVID-19 epidemic has impacted every aspect of the firm, including performance, corporate administration structure, dividend level, liquidity, and purchases, but it is still unclear whether the difference between pre-and post-COVID-19 is statistically significant. Also, this paper investigated the board size and only the administration mechanism to have a significant positive impact on the firm's performance in tOVID-19. It has been suggested that the internal control mechanism has a board size. If the board size is large, the diction-making system is more effective because of the diver's experience with the board. This argument supports that board diversity significantly impacts the firm performance in the current pandemic. (Khatib et al., 2021).

Problem Statement

Every organization needs governance to fulfill its goals. Governance is vital in corporate operations. Corporate governance affects company performance because corporate governance guides corporations. Especially for huge enterprises because every firm has operated in different scenarios like market crashes. Corporate governance has helped organizations survive and drive their course. The company will fail without corporate governance. A company's CG can be affected by many variables. Recently, the COVID-19 pandemic has been shown to have an effect.

COVID-19 has affected health, the economy, and many aspects of existence. COVID-19 changed our lifestyle. Different corporations lost trillions. After COVID-19, the Pakistani government made decisions, including implementing the epidemic, staying home, social distinctions, working from home, etc. Businesses have lost a lot because of this. Some enterprises are nearing or have been dealt with.

Since COVID-19 has damaged the Firm's Operation, CG's impact on FR is more important. After adopting work-from-home and social distinction, the business had many challenges in its service and production sectors since the government's social differentiation instruction limited its freedom to operate. Corporate governance and firm performance are threatened by COVID-19. The business will go virtual, per the board. Due to the company's poor operations, most employees have taken a long time to adjust to this change. Board gender diversity hurts business performance before the pandemic. However, gender diversity on the board helps the FP during COVID-19.

Research Gaps

We have found a lot of Literature on the impact of CG on the FP, but they have limited Literature on the impact of corporate governance on FP during the COVID-19.for example, The impact of CG on the FP during COVID-19. (Khatib & Nour., 2021). Corporate governance and COVID-19. The effect of CG on FP during COVID-19 in

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

Vietnam (Le et al., 2022). However, in the Pakistani context, we have not found any literature on the impact of CG on the FP of the KSE-100 index during COVID-19, so we will start working on it.

Research Objectives

- To determine the impact of CG on the KSE-100 firms in the pre-COVID-19 scenario.
- To determine the impact of CG on the KSE-100 firms in the post-COVID-19 scenario.
- To compare the difference of CG impact on the KSE-100 firms in both pre-and post-COVID-19 scenarios.

Research Questions

- What is the impact of CG on the KSE-100 firms in the pre-COVID-19 scenario?
- What is the impact of CG on the KSE-100 firms in the post-COVID-19 scenario?
- What are the differences in CG impact in both pre-and post-COVID-19 scenarios?

Theoretical Framework
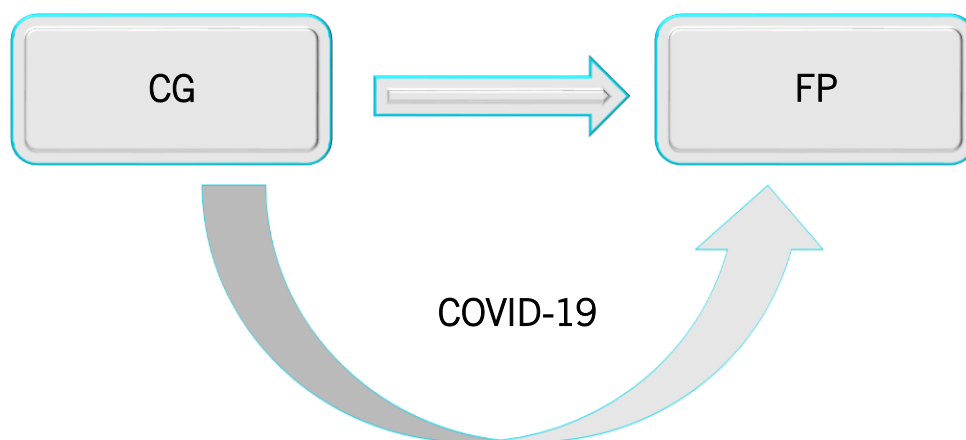
Research Hypotheses

H1: CG has a significant impact on the FP of the KSE-100 Index during COVID-19.

H2a: Ceteris paribus, board size has a significant positive impact on firm performance.

H2b: Ceteris paribus, board independence has a significant positive impact on firm performance.

H2c: Ceteris paribus, board gender diversity has a significant positive impact on FP.

H2d: Ceteris paribus, board meetings have a significant positive impact on firm performance.

H2e: Ceteris paribus, board financial qualification has a significant positive impact on FP.

H2f: Ceteris paribus, audit committee size has a significant positive impact on firm performance.

H2g: Ceteris paribus, audit committee meeting has a significant positive impact on FP.

H3: CG has a significant impact on the FP of the KSE-100 Index.

H4: The significant difference of CG impact on the KSE-100 firms in both pre-and post-COVID-19 scenarios.

Methodology
Data and Sample

The data will consist of both quantitative and qualitative nature. In this paper, we use panel data. We collected the data from the Pakistan Stock Exchange website and the SBP Publication to screen out all data, including all the firms that are listed on the Pakistan Stock Exchange. In the sample, we exclude all the financial firms

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

and all those firms whose data is not available in the State Bank of Pakistan (SBP) publication. Due to this, our sample consists of the 69 non-financial firms that are registered on PSX.

The annual reports are manually gathered for CG information such as board composition, impartiality, gender parity, meetings, size of the audit committee, and audit committee meetings. With the aid of SBP Publication, further financial information was gathered, covering all financial measures of business performance.

Nature of Research

This paper will conduct an event study. This paper is exploratory research to explore the effects of corporate governance on a company's performance both before and after COVID-19. COVID-19 has a significant effect on corporate governance and firm performance.

Technique

The subsequent A standard t-test was performed by various researchers (Khan et al., 2020) to investigate the effects of COVID-19 on the CG traits both before and after the pandemic (2019 and 2020). The table lists and describes every variable used in the study.

Table 1

	Variable name		Definition
Firm Performance	Return on assets	ROA	the proportion of total assets to profits before interest and taxes.
	Return on equity	ROE	the proportion of equity to profits before interest and taxes.
	Earnings before interest and tax	EBIT	An indicator of profitability is the ratio of assets to profits before interest and taxes.
	Leverage	LEV	How much is total debt compared to total assets?
	Liquidity	LIQ	The quick asset ratio and the cash to current liabilities ratio at the conclusion of each fiscal year have been used to gauge liquidity.
	Dividend per share	DPS	Cash dividends are distributed according to the number of outstanding shares.
Corporate Governance	Board size	BSIZ	a total number of board members.
	Board independence	BIND	the number of non-executive directors that are independent on the board.
	Board gender diversity	BGD	There are a number of female directors on the board.

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

	Variable name		Definition
	Board meeting	BM	The board met many times throughout the fiscal year.
	Board financial qualification	BFQ	how many directors have financial and economic backgrounds?
	Audit committee size	ACS	The audit committee includes a number of directors.
	Audit committee meeting	ACM	The audit committee met often during the fiscal year.
COVID-19	COVID-19	COV	2020
	Non-COVID-19	NCOV	2019

In order to look at the connection between governance and performance, we also used the Ordinary Least Square (OLS) method. We carry out Hausman and Breusch tests as well as Pagan Lagrangian multiplier testing to determine the best panel data analysis. In order to determine how Corporate governance affects business performance, we also created a regression model.

Results and Discussion
Descriptive and Correlation Analysis

The person correlation has been run using Gretel software to combine both the years (2019 and 2020) with running person correlation by all variables (dependent and independent), and the outcomes are displayed in the subsequent tables. Moreover, in the following paragraphs, the scholar reports and discusses these results along with each variable in detail as follows:

Table 2

Person correlation of firm performance

	ROA	ROE	EBIT	LEV	LEQ	DPS	BSIZ	BIND	BGD	BM	BFQ	ACS	ACM
ROA	1												
ROE	(0.163)	1											
EBIT	0.417**	(0.134)	1										
LEV	0.079	(0.717)**	0.067	1									
LEQ	0.513**	(0.022)	0.293**	0.019	1								
DPS	0.314**	0.035	0.120	0.023	0.114	1							
BSIZ	(0.069)	0.097	0.072	(0.061)	(0.031)	(0.030)	1						
BIND	0.051	0.089	(0.059)	(0.111)	0.199*	(0.025)	0.549**	1					
BGD	(0.094)	0.055	0.157	(0.034)	0.009	(0.046)	0.134	0.155	1				
BM	(0.080)	0.232**	(0.041)	(0.254)**	0.075	0.048	0.458**	0.397**	0.076	1			
BFQ	0.062	0.064	0.042	(0.109)	(0.057)	(0.094)	0.474**	0.242**	(0.160)	0.162	1		
ACS	0.085	0.134	0.159	(0.110)	0.253**	0.046	0.470**	0.311**	0.011	0.570**	0.169*	1	
ACM	(0.141)	0.226**	(0.095)	(0.118)	(0.081)	0.006	0.344**	0.232**	0.036	0.677**	0.200*	0.463**	1
Obs	138	138	138	138	138	138	138	138	138	138	138	138	138

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

The results of the Pearson Correlation analysis, a reliable statistical technique used to quantify the correlation between continuous variables, are shown in Table 02, which is supplied. This study, which uses a covariance-based methodology, sheds light on the degree and direction of the relationships between the different factors.

It's vital to remember that Pearson correlation only captures linear correlations between variables, even though it offers several advantages. Pearson correlation may not adequately capture non-linear connections. Furthermore, just because two variables are associated does not indicate that altering a single variable always results in alterations in the other. As a result, it's critical to use other statistical techniques and domain expertise when concluding Pearson correlation data and to interpret them in the proper context.

Table 02 presents all research variables, including dependent and independent variables, along with the relationships between them. In particular, both significant and insignificant correlations—both positive and negative—are highlighted. Asterisks (*) are used to indicate the levels of significance, where one (*) indicates 10% importance, two (**) indicates 5% relevance, and three (***) indicates 1% relevance.

Significant positive connections among the variables are shown across the board: ROA has a positive correlation with EBIT, LEQ, and DPS at a threshold of significance of 5%. When 5% of importance is used, ROE also shows a positive connection with BM and ACM at a threshold of significance of 5%, EBIT and LEQ have a positive link, whereas LEQ shows significant relationships with BIND at a 10% degree of importance and with ACS at a 5% degree of importance. Additionally, at a 5% level of significance, There are substantial and favorable relationships between BSIZ and BIND, BM, BFQ, ACS, and ACM. At a 5% level of significance, BM has a similar relationship with ACS and ACM. Additionally, at a 5% level of significance, ACS and ACM show a positive and substantial connection with one another.

On the other side, certain factors have substantial negative associations. For instance, at a 5% significance level, ROE and LEV are negatively connected, and at the same level, LEV and BM are negatively correlated.

The significant study shows that independent variables are not multiple-collinear variables. This is corroborated by the rule that multi-collinearity is not a problem if the coefficient values one independent variable and two others are less than 70% (Khan, Tanveer & Malik, 2017). This lack of multi-collinearity is further supported by the VIF results, which are presented in Table 03 of the article.

In conclusion, Table 02 provides a thorough overview of the correlations and linkages among the variables, illuminating the dynamics between the study's constituent parts and offering a solid basis for further research.

Table 3

Registration(coefficients) of firm performance

	ROA	ROE	EBIT	LEV	LEQ	DPS	BSIZ	BIND	BGD	BM	BFQ	ACS	ACM
VIF	--	2.251	1.28	2.283	1.368	1.053	2.333	1.7	1.173	2.606	1.469	1.894	2.128
Min	(61.80)	(455.30)	1.33	(195.51)	0.06	-	1.62	-	-	3.70	-	1.10	1.18
Max	24.60	784.79	19.00	30.97	7.02	105.00	13.00	6.00	3.00	22.00	9.00	10.00	10.00
Mean	0.50	19.99	16.83	1.27	1.31	3.38	8.27	2.41	0.81	6.67	3.45	3.84	4.53
Std. Dev	12.56	111.66	1.87	18.91	1.09	11.65	1.70	1.31	0.74	3.68	1.81	1.11	1.20
Obs	138	138	138	138	138	138	138	138	138	138	138	138	138

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

A thorough description of the numerous statistical measures for each variable supplied in the table was used in the study above. These measurements provide information on the traits, distributions, and connections between the variables. Let's look at each row in the table, their justifications, and their logical ramifications:

The VIF values, also known as the variance inflation factor, are indicators of multi-collinearity and show how well one independent variable can be predicted from other independent variables. "ROA" is unique within the dataset since it lacks a VIF value (denoted by "--"). The VIF for "ROE" is 2.248, which denotes considerable collinearity. Similar to this, other variables have VIF values as well, indicating that there is some degree of association between them.

The minimum values for each variable are the lowest values ever observed. Surprisingly, the minimum values for "ROA" and "ROE" are negative. Other variables have positive minimum values. However, "LEV" and "BGD" also show negative values.

The maximum values are each variable's highest-ever observed values. A notable maximum number for "ROE" is 784.79, while maximum values for "EBIT" and "LEV" are also quite high.

The arithmetic averages of each variable throughout the dataset are represented by the mean (average) values. For instance, the mean value for "ROA" is 0.50, whereas the average value for "ROE" is 19.99.

Standard deviation: For each variable, the standard deviation quantifies how far it is spaced out. The data points are averages. A greater standard deviation indicates more variability. The standard deviation for "ROE" in this instance is noticeably greater at 111.66, indicating a broader distribution of data points.

The "Obs" row displays the total number of observations that are available for each variable, which is 138 for all variables.

This table is a useful resource for comprehending the distribution of the data, trends, and potential correlations between the variables. The VIF values show multi-collinearity, which implies that certain variables may have similar predictive potential. Interpreting the outcomes of statistical studies and ensuring the accuracy and dependability of research findings need careful calculation of these metrics.

T-test Analysis

The paired sample has been run using Gretel software to compare both years (2019 and 2020) to run a Paired sample t-test to analyze the alteration among 2019 and 2020 of all variables (dependent and independent), and the outcomes are displayed in the subsequent tables. Moreover, in the following paragraphs, the scholar reports and discusses these results along with each variable in detail as follows:

Table 4

Paired Sample T-Test Of Firm Performance Table 04	Before COVID-19 (2019)		After COVID-19 (2020)		Mean Deference	T-Test
	Mean	Std. Deviation	Mean	Std. Deviation		
ROA	1.19	14.15	(0.35)	10.89	1.54	1.757
ROE	38.59	137.96	0.07	74.66	38.53	2.735
EBIT	17.01	1.32	16.87	1.34	0.35	2.036
LEV	(0.22)	24.59	2.51	10.86	(2.73)	(1.467)
LEQ	1.29	1.10	1.33	1.10	(0.05)	(0.889)
DPS	3.98	13.96	2.65	8.98	1.33	1.577

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

Paired Sample T-Test Of Firm Performance Table 04	Before COVID-19 (2019)		After COVID-19 (2020)		Mean Deference	T-Test
	Mean	Std. Deviation	Mean	Std. Deviation		
BSIZ	8.23	1.54	8.41	1.70	(0.17)	(1.988)
BIND	2.32	1.29	2.52	1.34	(0.20)	(2.574)
BGD	0.75	0.76	0.87	0.75	(0.12)	(2.637)
BM	6.45	3.57	6.94	3.83	(0.49)	(1.978)
BFQ	3.39	1.70	3.54	1.94	(0.14)	(1.165)
ACS	3.83	1.01	3.88	1.18	(0.06)	(0.893)
ACM	4.48	0.85	4.62	1.44	(0.14)	(1.165)

The presented table displays the paired sample t-test findings, which determine the difference in mean values for a variety of variables, including ROA, ROE, EBIT, LEV, LEQ, DPS, BSIZ, BIND, BGD, BM, BFQ, ACS, and ACM, between the pre-and post-COVID-19 periods. The goal of the analysis is to identify any substantial alterations brought on by the epidemic.

Nine variables (LEV, LEQ, BSIZ, BIND, BGD, BM, BFQ, ACS, ACM) had negative coefficients and matching t-test values, according to the results. However, when compared to the tabulated t-values, these results are not statistically significant. However, four variables—ROA, ROE, EBIT, and DPS—show positive t-values. Only four of them have been statistically significant when compared to the tabulated t-values.

To further explain, extremely significant findings include the mean ROE values, which are included in the list of significant findings. With a matching T-value of 2.753, these mean values show a significant difference of 38.53 units between the two periods (2019 and 2020). 0.8% is chosen as the significance level for the change in ROE. The mean values for EBIT have similarly demonstrated significant significance, with a T-value of 2.036 showing a mean difference of 0.35 units between the two periods. This change in EBIT is deemed to have a significance level of 4.6%. Furthermore, it has been determined that the mean values for BIND are very significant, with a mean difference between the two periods of -0.2 units and a T-value of -2.574. According to reports, the significance threshold for the change in BIND is 1.2%. The mean results for BGD, which showed a mean difference of -0.12 units for the two periods and a corresponding T-Value of -2.637, were also judged to be highly significant. The change in BGD is given a significance level of 1%.

In conclusion, the findings of the paired sample t-test provide important information on how the COVID-19 epidemic has affected several factors. Even while some changes are seen, only a few variables show statistically significant changes throughout the course of the studied period. These results add to a more thorough comprehension of the effects of the pandemic on the parameters under investigation.

Our research efforts have produced findings that differ from some of the fundamental literature in important ways. In line with earlier studies by Madushanka & Jathurika (2018) and Ehiedu (2014), our study confirms the general relationship between liquidity and earnings quality (LEQ) and a positive return on assets (ROA), but it deviates from the predicted significant correlation between LEQ and returns on equity (ROE). Our research demonstrates a non-significant association between Asset Commonality (ACM) and ROE, in contrast to the conclusions of Oroud (2019) and Gurusamy (2017). Additionally, by emphasizing differences in the impact of certain variables, such as Dividends Per Share (DPS) and Asset Commonality (ACM), across the pre- and post-COVID-19 eras, our approach gives new views. The intricate interaction between corporate governance traits and financial indicators is highlighted in these nuanced findings, which contribute to the ongoing scholarly discussion on the subject.

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

In the light of Table 04 supports hypothesis *H4: The significant difference in CG impact on the KSE-100 firms in both pre- and post-COVID-19 scenarios*.

Regression Results and Discussion

The pooled regression has been run using Gretel software to combine both the years (2019 and 2020) to run panel OLS by the dependent variable along with all independent variables, and the results are shown in the following tables. The tables present the coefficients along with their significance (within brackets) against each coefficient of the independent variables. Moreover, in the following paragraphs, the scholar reports and discusses these results along with each variable in detail as follows:

Table 5

Panel OLS regressions of firm performance

	ROA	ROE
Const	−44.9245 *** (-3.637)	70.0904 (0.7137)
EBIT	2.73427 *** (3.838)	−9.39318 * (−1.674)
LEV	0.0286521 (0.6154)	−4.26656 *** (−11.55)
LIQ	4.55017*** (5.113)	5.04718 (0.7126)
DPS	0.261270 *** (3.563)	0.601719 (1.035)
BS	−0.988378 (−1.250)	6.39628 (1.020)
BIND	0.835189 (1.001)	−4.63062 (−0.7011)
BGD	−1.64136 (−1.355)	6.15795 (0.6414)
BM	−0.156261 (−0.4277)	−3.74968 (−1.299)
BFQ	0.976941 * (1.747)	−2.94924 (−0.6650)
ACS	−0.122080 (−0.1156)	1.63379 (0.1957)
ACM	−0.471682 (−0.4643)	19.0358 ** (2.358)
R-Squared	0.440481	0.555810
Obs.	138	138

Table 4 shows pooled regression analysis results for the dependent variable's ROA and ROE. The table shows that all study variables—EBIT, Leverage, Liquidity, Earnings Quality, Dividend Payout Ratio, Business Industry, and Business Frequency—positively affect ROA. ROA is negatively correlated with company size

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

(BS), Board gender diversity (BGD), business momentum (BM), asset composition structure (ACS), and asset commonality.

Only four of the six ROA-boosting factors were statistically significant. Importantly, all three elements boost ROA. EBIT is highly significant, as evidenced by three asterisks and 1% significance. LEQ and DPS also show great statistical significance at the 1% level, indicated by three asterisks. BFQ is also linked to a smaller asterisk, indicating a 10% effect.

The ROE effects of LEQ, DPS, Business Size (BS), Board gender diversity (BGD), ACS, and ACM are positive. However, ROE is negatively correlated with EBIT, LEV, BIND, BM, and BFQ. Six factors improve ROE. However, only three variables have statistically significant effects. ACM's positive significance (two asterisks and 5% significance) stands out in this subgroup. However, ROE is negatively impacted by EBIT and LEV. An asterisk representing 10% significance indicates EBIT's low importance. At 1% significance, LEV loses its high degree of significance, but three asterisks indicate its considerable influence.

The study found a complex link between the variables and the financial measures of ROA and ROE, with some variables having statistically significant effects.

The significant increase in Earnings Before Interest and Taxes (EBIT) that was observed as a result of the observed positive increase in Return on Assets (ROA) is consistent with recent scholarly works by Tousek, Hinke, Malinska, and Prokop (2021) and Suroso (2021). The coefficients that result from examining the relationships between ROA and Return on Equity (ROE), two different dependent variables, and EBIT present fascinating possibilities for comprehension. The positive correlation coefficient of 2.734 assigned to ROA indicates that a unitary rise in EBIT is accompanied by a 2.734-unit increase in ROA. This demonstrates that an increase in EBIT correlates with an increase in the company's operational results, strengthening its ability to make profits in line with its total assets.

According to Tousek, Hinke, Malinska, and Prokop (2021) and Suroso., (2021), the extant research is in line (compatible) with the negative rise in ROE caused by a considerable decline in EBIT. On the other side, the negative correlation of -9.393 between EBIT and ROE indicates that a rise in EBIT causes a decrease in ROE of 9.393 units. The organization of the firm's capital and debt financing may be to blame for this irrational conclusion. As a result of having more debt to pay off, the company's interest expenses may increase even as EBIT does. This might impact ROE and lower the net income available to shareholders. This scenario illustrates the intricate relationships between a business's profitability, capital structure, and financing options, which can have a range of effects on different performance metrics. The coefficients emphasize the significance of understanding the relationships between variables like EBIT and financial ratios ROA and ROE in the context of the broader financial climate.

As shown in publications by Lenka (2017) and Rehman (2013), the observed inverse variance in Return on Equity (ROE) linked to a significant reduction in Financial Leverage (LEV) resonates nicely with the prevalent academic discourse. A significant insight is shown by the coefficient result of -4.266 for LEV, which stands for Financial Leverage: a unitary decrease in Financial Leverage causes a decrease in Return on Equity (ROE) of 4.266 units. An explanation of the link can logically support this empirical conclusion. The coefficient that is being provided emphasizes the deep relationship between rising financial leverage and a sharp decrease in ROE. This result might be ascribed to the concomitant increase in interest rates as well as the dangers that could result from more monetary risk. Financial leverage may boost returns in the right situations,

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

but it can also multiply losses, as shown by the negative connection between LEV and ROE's coefficient, which highlights the importance of understanding.

According to sources like Madushanka and Jathurika (2018), Ehiedu (2014), and Tousek, Hinke, Malinska, and Prokop (2021), the observed positive increase in Return on Assets (ROA), which is attributed to a significant improvement in Liquidity and Earnings Quality (LEQ), is consistent with the body of existing scholarly literature. According to the liquidity coefficient of 4.550, a single unitary increase in liquidity results in a corresponding rise in Return on Assets (ROA) of 4.550 units. With the consideration of several contributing circumstances, this link may be rationally explained. Increased financial flexibility, skillful risk management, availability of affordable financing, strategic prospects, successful operational performance, and the development of a positive investor impression are some of these characteristics.

It is crucial to recognize that maintaining a careful balance of liquidity helps achieve optimal asset utilization while protecting against an excessive buildup of idle resources that would not provide useful returns.

According to publications like Trang (2012) and Alzurqan & Al_Sufy (2011), the observed positive increase in Return on Assets (ROA), which is linked to a notable increase in Dividends Per Share (DPS), is consistent with the corpus of existing scholarly work. A unitary rise in dividends per share results in a commensurate increase in Return on Assets (ROA) of 0.261 units, according to the coefficient of 0.261 given to DPS, a representation of dividends per share.

It is possible to outline a logical explanation for this relationship. A strong association between rising dividends per share and an ascent in Return on Assets (ROA) is established by the supplied coefficient. This beneficial link may be ascribed to skillful resource management, improved financial results, better investor mood, smart capital allocation, luring long-term investors, and a favorable impression of the capital markets.

However, striking a wise balance between dividend payments and the company's development plans is of utmost importance. Prudent investing techniques are necessary for the preservation of long-term financial stability and the sustainability of dividends.

The large increase in Board Financial Qualification (BFQ), which is responsible for the observed improvement in Return on Assets (ROA), is consistent with the body of current academic research, as demonstrated by publications like Arumona, Erin, Onmonya, and Omotayo (2019) and Darmadi (2013). The coefficient given to Board Financial Qualification, particularly 0.977, denotes that a corresponding incremental increase of 0.977 units in Return on Assets (ROA) equates to a progression of one unit in Board Financial Qualification.

It is possible to explain this link with a logical justification. The coefficient indicates a strong correlation between increasing Board Financial Qualification levels and an increasing Return on Assets (ROA) trend. This beneficial link results from enhanced financial decision-making skills, strategic planning initiatives, skilled risk management practices, boosted stakeholder trust, and strengthened governance frameworks. These factors work together to provide businesses the advantage of a board that understands finances and can encourage wise financial choices that eventually lead to improved financial performance.

According to works like Oroud (2019) and Gurusamy (2017), the observed positive increase in Return on Equity (ROE), attributed to a significant increase in Audit Committee Meetings (ACM), aligns cohesively with the prevailing body of scholarly literature. The coefficient, which has been given to Audit Committee

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

Meetings and is now 19.036, emphasizes the fact that a unitary increase in the frequency of these meetings corresponds to a significant 19.036-unit rise in Return on Equity (ROE).

This association can be explained with a sound justification. The statistic indicates a strong correlation between increased audit committee attendance and rising Return on Equity (ROE). This association results from improved financial monitoring, prompt risk detection systems, strong governance frameworks, the facilitation of high-quality financial reporting, increased investor trust, and a reduced perception of financial risk. It is important to emphasize that while meeting frequency might influence positive results, the amount and quality of the conversations and decisions made during these meetings are crucial in attaining these positive benefits on ROE.

In light of Table 05 Given above, the result supported the Hypothesis

H3: CG has a significant impact on the FP of the KSE-100 Index.

H2g: Ceteris paribus, audit committee meeting has a significant positive impact on FP.

And **H2a-H2f** has been rejected under the light of Table 05

Robustness Test

The pooled regression has been run using Gretl software for both the years (2019 and 2020) by the dependent variable along with all independent variables, and the results for both years are combined in the following tables. The tables present the coefficients along with their significance (within brackets) against each coefficient of the independent variables. Moreover, in the following paragraphs, the scholar reports and discusses these results along with each variable in detail as follows:

Table 6

Panel OLS regressions of firm performance: year Sub-Samples

	ROA		*ROE*	
	2019	*2020*	*2019*	*2020*
Const	−37.6273	−36.0606 **	132.747	−61.0484
	(-1.592)	(-2.426)	(0.7142)	(−0.6125)
EBIT	3.32924 ***	1.53300 *	−21.1037 **	1.65406
	(2.718)	(1.701)	(−2.191)	(0.2736)
LEV	0.0467616	0.0255910	−4.20666 ***	−4.51769 ***
	(0.7447)	(0.2458)	(−8.520)	(−6.470)
LEQ	3.63250 **	5.08571 ***	8.94859	5.85199
	(2.415)	(4.761)	(0.7567)	(0.8169)
DPS	0.232959 **	0.372890 ***	0.328689	0.942941
	(2.288)	(3.192)	(0.4106)	(1.204)
BSIZ	−1.91569	−0.125076	15.0969	−1.15967
	(-1.369)	(-0.1382)	(1.372)	(−0.1911)
BIND	0.0223002	0.975975	3.14001	−4.95919
	(0.01553)	(0.9754)	(0.2780)	(−0.7391)
BGD	−2.36115	−0.239131	2.69121	13.3008
	(-1.123)	(-0.1638)	(0.1628)	(1.359)

	ROA		ROE	
	2019	*2020*	*2019*	*2020*
BM	0.153963	−0.532644	−5.86543	−0.709892
	(0.2524)	(-1.143)	(−1.223)	(−0.2272)
BFQ	1.30160	0.655973	−1.42491	−3.19150
	(1.170)	(1.070)	(−0.1629)	(−0.7765)
ACS	1.14651	−0.461078	−11.5643	9.81394
	(0.5992)	(-0.3915)	(−0.7686)	(1.243)
ACM	−3.50609	0.858676	45.6179 **	4.98010
	(-1.469)	(0.7220)	(2.430)	(0.6244)
F-statistic	4.625381	5.402687	9.891959	5.872166
R-Squared	0.471631	0.510434	0.656236	0.531226
Obs.	69	69	69	69

For both the 2019 and 2020 study years, Table 4.1 shows the pooled regression analysis results for the dependent variables, ROA and ROE, in separate columns. Across these years, the analysis illustrates how many research factors affected ROA differently. ROA was positively affected by EBIT, Leverage, Liquidity, Earnings Quality, Dividend Payout Ratio, Business Industry, Business Momentum, Business Frequency, and Asset Composition Structure in 2019. In the same year, Business Size (BSIZ), Board gender diversity (BGD), and Asset Commonality (ACM) hurt ROA.

EBIT, LEV, LEQ, DPS, BIND, and ACS correlated positively with ROA in 2020, while Business Size (BSIA), Board gender diversity (BGD), BM, BFQ, and ACS correlated negatively. Eight of the eight parameters positively affect ROA, although only three have statistical significance. The positive importance of EBIT, LEQ, and DPS is high.

These parameters changed in prominence across the two research years. EBIT is significant in 2019, with three stars and a 1% effect. In 2020, EBIT's impact drops to 10%, symbolized by a single star. In 2020, LEQ rose to a high of three stars (significant at 1%) from its medium of two stars in 2019. DPS, like DPS, is medium important in 2019 with two stars (significant at 5%) and high significance in 2020 with three stars (significant at 1%).

For 2019 and 2020, the table analysis shows significant trends in study factor effects on ROE. Liquidity and Earnings Quality (LEQ), Dividend Payout Ratio (DPS), Business Size (BSIZ), Business Industry (BIND), Board gender diversity (BGD), and Asset Commonality effect ROE positively in 2019. However, EBIT, LEV, BM, BFQ, and Asset Composition Structure negatively affected ROE in the same year.

Similarly, in 2020, Leverage (LEV), Business Size (BSIZ), Business Industry Attribute (BSIA), Board gender diversity (BGD), Business Momentum (BM), and Business Frequency (BFQ) had a negative influence on ROE. In contrast, EBIT, LEQ, DPS, ACS, and ACM showed a positive correlation with ROE. Only three of the six factors that had a favorable influence on ROE in 2019 were statistically significant in their impacts on the dependent variable. Two of these factors showed negative significance with ROE in 2019, while one variable showed positive significance. Meanwhile, in 2020, only one of these factors developed a meaningful relationship with the dependent variable, and it did so in a negative way despite five variables showing a favorable influence on ROE.

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

In particular, LEV carried high importance with two stars in 2019, indicating a 1% level of negative significance, while EBIT bore medium significance with two stars in 2019, meaning a 5% degree of negative relevance. ACM also showed strong relevance, earning three stars and a 1% positive effect rating. In contrast, LEV retained its high relevance with two stars for the year 2020, but EBIT lost its significance concerning ROE. In contrast, ACM's correlation with ROE for that year did not show significance.

The analysis essentially highlights the various effects and significances of these research variables on ROE for the taken years.

Only the independent variable's significant coefficients from the table are presented. A one-unit increase in Earnings Before Interest and Taxes (EBIT) correlates to a 3.329-unit rise in Return on Assets (ROA) for the year 2019 and a 1.533-unit rise in the same dependent variable for the following year, 2020, according to the coefficient. The second dependent variable, return on Equity (ROE), is also discovered to have a negative coefficient value for the year 2019 for the identical independent variable, EBIT. This shows that a unit increase in EBIT causes a unit fall in ROE of 21.1 units.

The considerable increase in EBIT that led to a positive increase in ROA in 2019 and 2020 is consistent with previous academic studies like Tousek, Hinke, Malinska, and Prokop (2021) and Suroso (2021). This result makes conceptual sense since, given their similar base as profitability metrics, a rise in EBIT equates to an increase in ROA. The research, including works by Suroso (2021) and Yegon et al. (2014), also supports the negative association between EBIT and ROE. This adverse effect represents a situation in which an increase in EBIT, although positively affecting profitability, may be countered by a corresponding rise in the number of shareholders. In such circumstances, the growth in the number of shareholders may result in a drop in ROE, highlighting the complex relationships between profitability and equity ownership.

According to the coefficient of leverage (LEV), a one-unit increase in LEV causes a loss in return on equity (ROE) of 4.207 units for the year 2019 and 4.518 units for the same dependent variable for the year 2020.

According to publications like Lenka (2017) and Rehman (2013), the adverse effect on ROE due to a large decrease in LEV for both 2019 and 2020 is consistent with the body of scholarly material already in existence. Given that there is a correlation between declining leverage (LEV) and declining ROE, this result has a logical basis. This agreement can be explained by the fact that they both have similar bases as measures of profitability.

The inherent link between LEV and ROE further strengthens the argument supporting this relationship. Operating Leverage's decline results in a comparable drop in ROE since it assesses how sensitive a company's net income is to changes in sales. The direct link between the two indicators emphasizes their interdependence by causing concurrent changes in one variable when the other is altered.

The coefficient for Liquidity and Earnings Quality (LEQ) shows that for the years 2019 and 2020, respectively, a one-unit increase in LEQ results in a 3.63-unit rise in Return on Assets (ROA) and a noteworthy increase of 5.085 units in the same dependent variable.

As evidenced by works like Madushanka & Jathurika (2018), Ehiedu (2014), and Tousek, Hinke, Malinska, and Prokop (2021), the observed improvement in ROA attributable to a significant increase in LEQ for both 2019 and 2020 is consistent with established scholarly literature. This congruence has a reasonable basis in the idea that greater share liquidity equates to lower investment exit risk for investors in a stock market

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

environment. According to Portobello, Famá, and Sacramento (2016), this is because people believe that such shares have reduced market risk and expected returns, making them more alluring as investment possibilities.

A one-unit increase in the Dividend Payout Ratio (DPS) correlates to a 0.233-unit increase in the dependent variable for the year 2019 and a more significant increase of 0.373 units in the same dependent variable for the year 2020, according to the coefficient.

As shown by publications like Trang (2012) and Alzurqan & Al_Sufy (2011), the reported positive increase in Return on Assets (ROA) resulting from a considerable increase in DPS for both 2019 and 2020 is consistent with available academic sources. The discrepancy in the results may also be caused by several external factors, such as changes in market conditions, consumer behavior, technological advancements, regulatory requirements, or other factors, which may have had a different impact on the relationship between DPS and the dependent variable over two years. Further examination of these aspects is essential to fully comprehend the underlying causes of the variation in the influence of DPS on the dependent variable between 2019 and 2020.

The coefficient for Asset Commonality (ACM) indicates that for the year 2019, a one-unit increase in ACM caused a significant rise of 45.618 units in Return on Equity (ROE).

According to works like Oroud (2019) and Gurusamy (2017), they saw a favorable improvement in Return on Equity (ROE) because of notable growth in ACM for the year 2019. Furthermore, given that the regularity of audit committee meetings may be used as a proxy for efficient corporate governance and financial supervision, this relationship makes conceptual sense. Meetings are often held more frequently in organizations that demonstrate a commitment to strong internal controls, open financial reporting, and proactive risk management. This procedure can improve financial performance by increasing investor trust, reducing risks, and preventing financial irregularities.

As a result of this connection, organizations that prioritize regular audit committee meetings are more likely to sustain moral corporate conduct, boosting profitability and raising Return on Equity (ROE).

In light of Table 06, they do not support hypothesis *H1: CG has a significant impact on the FP of the KSE-100 Index during CVOID-19.*

Conclusion

The purpose of the study is to comprehend how corporate governance (CG) affects the performance of companies that are listed on the KSE-100 Index. The study adopts Return on Assets (ROA) and Return on Equity (ROE) as dependent variables and focuses on the pre- and post-COVID-19 scenarios. The influence of CG on firms' performance and the changes between pre- and post-COVID-19 conditions are the subjects of the study topics. The study postulates that there is a difference between the CG impact before and after COVID-19 and that CG has a big impact on firm performance. Using Gretl software, the pooled regression analysis generated multiple significant results. Earnings Before Interest and Taxes (EBIT), Liquidity and Earnings Quality (LEQ), Dividend Payout Ratio (DPS), and a few governance-related factors all had a favorable influence on ROA and ROE in both 2019 and 2020. Not all factors, nevertheless, had statistically significant effects. Some factors' influence differed between the two years, and their significance levels varied as well. The study stresses the complicated interplay between factors and how they affect financial indicators. The results reveal that while some factors continually influence financial measures like ROA and ROE, their

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

importance and directional influence can fluctuate over time. Both ROA and ROE were significantly impacted by variables including EBIT, LEQ, and DPS. However, the significance levels changed between the two years. Leverage (LEV) and business growth dynamics (BGD) were two other variables that consistently had a negative influence on these financial metrics. Understanding the variance in these relationships gives information on the complicated nature of the influence of corporate governance. To evaluate the connections between variables, the study performed statistical tests and pooled regression analysis. The variance inflation factor (VIF) identified links between multiple independent variables and collinearity. A thorough assessment of the links between the variables was provided by the Pearson correlation analysis. The impact of the pandemic was underlined by the paired sample t-test, which indicated significant differences in averages between the pre- and post-COVID-19 periods for numerous variables. According to the research, corporate governance practices, including EBIT, LEQ, and DPS, can have a good impact on a firm's success. Businesses should change their governance methods in light of these variables' shifting effects across time. The results also underscore the benefits of prudent financial decision-making, prudent liquidity management, and prudent dividend policies in delivering superior financial outcomes. The underlying processes producing the varying influence of elements during time could be the subject of further research. It would be helpful to study the exact causes of the differences in significance levels throughout the years and look at the outside elements that affect these changes. Research can also concentrate on the performance of various corporate governance practices in times of economic volatility, such as the COVID-19 pandemic. In conclusion, the study illustrates the complicated interaction between corporate governance standards and financial indicators, emphasizing both factors that are constant and those that are changing. Knowing these dynamics can help firms make intelligent judgments and adapt their governance plans to achieve financial success.

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

References

Abate, M., Christidis, P., & Purwanto, A. J. (2020). Government support to airlines in the aftermath of the COVID-19 pandemic. *Journal of Air Transport Management*, 89(89), 101931. https://doi.org/10.1016/j.jairtraman.2020.101931

Alzurqan, S. T., & Al_Sufy, F. J. (2011). The effect of corporate governance on the performance of Jordanian industrial companies: An empirical study on Amman Stock Exchange. *International Journal of Humanities and Social Science*, *1*, 55-69.

Arumona, J., Erin, O., Onmonya, L., & Omotayo, V. (2019). Board Financial Education and Firm Performance: Evidence from the Healthcare Sector in Nigeria. *Academy of Strategic Management Journal*, *18*(4), 1–18.

Ashraf, B. N. (2020). Economic impact of government interventions during the COVID-19 pandemic: International evidence from financial markets. *Journal of Behavioral and Experimental Finance*, *27*, 100371. https://doi.org/10.1016/j.jbef.2020.100371

Baicu, C. G., Gârdan, I. P., Gârdan, D. A., & Epuran, G. (2020). The impact of COVID-19 on consumer behavior in retail banking. Evidence from Romania. *Management* & *Marketing. Challenges for the Knowledge Society*, *15*(s1), 534–556. https://doi.org/10.2478/mmcks-2020-0031

Darmadi, S. (2013). Board members' education and firm performance: evidence from a developing economy. *International Journal of Commerce and Management*, *23*(2), 113–135. https://doi.org/10.1108/10569211311324911

Ehiedu, V. C. (2014). The impact of liquidity on the profitability of some selected companies: The financial statement analysis (FSA) approach. *Research Journal of Finance and Accounting*, *5*(5), 81-90.

Gurusamy, P. (2017). Board characteristics, audit committee and ownership structure influence on firm performance of manufacturing firms in India. *International Journal of Business and Economics Research*, *6*(4), 73-87. https://doi.org/10.11648/j.ijber.20170604.16

KHAN, K., ZHAO, H., ZHANG, H., YANG, H., SHAH, M. H., & JAHANGER, A. (2020). The Impact of COVID-19 Pandemic on Stock Markets: An Empirical Analysis of World Major Stock Indices. *The Journal of Asian Finance, Economics and Business*, *7*(7), 463–474. https://doi.org/10.13106/jafeb.2020.vol7.no7.463

Khan, A., Tanveer, S., & Malik, U. (2017). An empirical analysis of corporate governance and firm value: Evidence from KSE-100 index. *Accounting*, *3*(2), 119-130. https://doi.org/10.5267/j.ac.2016.7.003

Khatib, S. F., & Nour, A. N. 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*, *8*(2), 0943-0952.

Le, T. T., & Nguyen, V. K. (2022). Effects of quick response to COVID-19 with change in corporate governance principles on SMEs' business continuity: Evidence in Vietnam. *Corporate Governance: The International Journal of Business in Society*, *22*(5), 1112-1132. https://doi.org/10.1108/cg-09-2021-0334

Liu, H., Yi, X., & Yin, L. (2021). The impact of operating flexibility on firms' performance during the COVID-19 outbreak: Evidence from China. *Finance Research Letters*, *38*, 101808. https://doi.org/10.1016/j.frl.2020.101808

Madushanka, K. H., & Jathurika, M. (2018). The impact of liquidity ratios on profitability. *International Research Journal of Advanced Engineering and Science*, *3*(4), 157-161.

Safeer Khan & Sharif Ullah Jan, 2022 | https://doi.org/10.63062/trt/2k22a.13003

How Corporate Governance Affected the Firms' Performance of KSE-100 Firms: Evidence from the COVID-19 Pandemic Around the Globe

Mayhew, K., & Anand, P. (2020). COVID-19 and the UK labor market. *Oxford Review of Economic Policy*, *36*, S215–S224. https://doi.org/10.1093/oxrep/graa017

Oroud, Y. (2019). The effect of audit committee characteristics on the profitability: Panel data evidence. *International Journal of Economics and Finance*, *11*(4), 104. https://doi.org/10.5539/ijef.v11n4p104

Ratten, V. (2020). Coronavirus (COVID-19) and entrepreneurship: Changing life and work landscape. *Journal of Small Business and Entrepreneurship*, *32*(5), 503–516. https://doi.org/10.1080/08276331.2020.1790167

Rehman, S. S. F. U. (2013). Relationship between financial leverage and financial performance: Empirical evidence of listed sugar companies of Pakistan. *Global Journal of management and Business Research finance*, *13*(8), 33-40.

Shen, H., Fu, M., Pan, H., Yu, Z., & Chen, Y. (2020). The impact of the COVID-19 pandemic on firm performance. *Emerging Markets Finance and Trade*, *56*(10), 2213–2230. https://doi.org/10.1080/1540496x.2020.1785863

Stryckova, L. (2017). The relationship between company returns and leverage depending on the business sector: Empirical evidence from the Czech Republic. *Journal of Competitiveness*, *9*(3), 98-110. https://doi.org/10.7441/joc.2017.03.07

Suroso, S. (2021). Between ROA, ROE, NPM, and EBIT Variables, Which Can Change the Stock Price. *Jurnal Ekonomi*, *10*(01), 28-35.

Tousek, Z., Hinke, J., Malinska, B., & Prokop, M. (2021). The performance determinants of trading companies: A stakeholder perspective. *Journal of Competitiveness*, *13*(2), 152-170. https://doi.org/10.7441/joc.2021.02.09

Trang, N. T. X. (2012). Determinants of dividend policy: The case of Vietnam. *International Journal of Business, Economics and Law*, *1*(1), 48-57.

Yahaya, I. S., Senin, A. B. A., Yusuf, M. M., Khatib, S. F. A., & Sabo, A. U. (2020). COVID-19 pandemic and global business challenge are how to survey with business models: A systematic literature review. *Journal of Public Value and Administrative Insight*, *3*(3), 82–91. https://doi.org/10.31580/jpvai.v3i3.1493

Yegon, C., Cheruiyot, J., Sang, J., & Cheruiyot, P. K. (2014). The effects of capital structure on firm's profitability: Evidence from Kenya's banking sector. *Research Journal of Finance and Accounting*, *5*(9).