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The Influence of Corporate Governance for the Indonesian Banking Industry in a Pandemic Period

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This study aims to objectively investigate the impact of the Covid-19 pandemic on bank performance in Indonesia and the effect of corporate governance on banks. The sample consisted of 42 banks with 648 observations on the Indonesia Stock Exchange during the 2017-2020 period. The data were observed using a panel data set, and the estimation method used was Generalized least square (GLS). The results showed that the Covid-19 pandemic had a negative effect on bank performance. The governance variable proxied by the effectiveness of governance has a positive effect on performance. On the contrary, the governance variable proxied by the number of directors and board of commissioners has a negative effect on performance, unlike those proxied by diversity. The hierarchical regression analysis shows that the effectiveness of governance as a moderating variable can reduce the negative impact of the pandemic on performance. Therefore, it is possible to minimize the negative impact of Covid-19 on bank performance through effective governance. This is due to the ability to navigate through unexpected situations, identify opportunities, and create new strategies for adapting to the uncertainties caused by the pandemic. Effective governance shows that the bank has implemented good corporate governance to improve bank performance, efficiency, and service to stakeholders. This study provides empirical evidence that explores the overall governance effectiveness variable that can affect the relationship between the Covid-19 variable and bank performance.

Introduction

The pandemic has caused a drastic decline in the performance of several companies in different industries, such as airlines, infrastructure, energy, tourism, and banking (Pantano et al., 2020; Shen et al., 2020; Fu and Shen, 2020; Mishra, 2020; Baicu et al., 2020; Karim et al., 2021; Sun et al., 2021). It has acted as a catalyst to increase uncertainty associated with these companies' performances (Elmarzouky et al., 2021), causing non-performing credit, market, and liquidity risks to loom in the banking sector. Furthermore, this decline in credit or financing quality will likely increase due to the cessation of the social and industrial economy and business value chains (Siahaan, 2020) to reduce the bank's financial performance. An example is Bank Negara Indonesia Company (BBNI), where the pandemic caused a 41.6% (YoY) decrease in profit growth from IDR7.63 trillion in the first semester of 2019 to IDR4.45 trillion in 2020. The impact on a company's performance has been examined by previous research (Mirza et al., 2020; Shen et al., 2020, Karim et al., 2021). Shen et al. (2020) used a sample of companies in China and found that the pandemic negatively affected small-scale companies' investment or sales income.

The outbreak has caused a change in the government and foreign policies, such as the introduction of lockdown and social distancing (Balasa, 2020; Lateef and Akinsolure, 2021), affecting consumer behavior and sales. Khatib and Nour (2021) discovered that this policy affects the company's market demand and can bankrupt many industries because consumers stay home, halting the economy. In addition, Covid-19 is an extraordinary event with a negative impact on purchasing attitudes and consumption patterns designed by companies and consumer behavior in retail banking (Baicu et al., 2020; Ltifi and Hichri, 2021). This pandemic puts tremendous pressure on the company, hence the internal organs, including the board of directors and commissioners being the structure of

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corporate governance or a two-tier system, need to implement new development methods to counter this adverse effect (Shen et al., 2020; Foss, 2020; Kells, 2020; Liu et al., 2020; Sun et al., 2021). Another study by Elmarzouki et al. (2021) classified the pandemic as a systematic risk that requires the role of experts in making different risk mitigation efforts and their ability to disclose it to the public. Moreover, Golubeva (2021) also highlighted the importance of corporate governance infrastructure in dealing with the pandemic.

Khatib and Nour (2021) examined the effect of corporate governance and found that board diversity significantly improves the company's performance in this crisis. This is unlike the previous year when board diversity had an inverse relationship with the company's performance. Therefore, the board and audit committee meetings before and after Covid-19 significantly and negatively impacted the company's performance. Elmarzouky et al. (2021) analyzed how governance moderates the relationship between this pandemic and firm performance disclosures in the annual reports. The board independence and gender diversity moderated the relationship between the Covid-19-related information and the level of performance disclosure.

Considering the corporate governance variable, Khatib and Nour (2021), as well as Elmarzouky et al. (2021), emphasized the variables related to governance organs such as commissioners, meeting activities, and audit committees. However, issues related to the board of directors and the effectiveness of the overall implementation of corporate governance have not been studied. Sutarti et al. (2021) studied banking in Indonesia and found that in a situation where the governance adheres to a two-tier system, the organ consists of supervisors, such as commissioners and managers controlled by directors. Meanwhile, the banking regulator in this country, known as the Financial Services Authority through Regulation Number 55/POJK.03/2016, has required entities to conduct a self-assessment on the implementation of bank governance to determine their overall implementation. This is conducted by compiling an analysis regarding the adequacy and effectiveness of implementing Good Governance principles.

The self-assessment on the implementation of Good Corporate Governance (GCG), stipulated by the Financial Services Authority Regulation Number 55/PJOK.03/2016 and Circular Number 13/SEOJK.03/2017 concerning the Implementation of Governance for Commercial Banks is a process conducted by internal parties to determine conclusions on the implementation of corporate governance. The self-assessment includes the implementation of (1) Board of Commissioners' duties and responsibilities, (2) Board of Director's duties and responsibilities, (3) Completeness and Committee's duties, (4) Handling Conflict of Interest, (5) Bank's Compliance Function, (6) Internal Audit Function, (7) External Audit Function, (8) Risk Management and Internal Control Function, (9) Provision of Funds to Parties related to Large Debtors, (10) Transparency of Bank's Financial and Non-Financial Conditions, Good Implementation Report Corporate Governance and Internal Reporting, as well as (11) Bank's Strategic Plan (OJK, 2017). Good corporate governance is said to be harmonious with structure, process, and outcome. The self-assessment results on these 11 criteria were used to determine the ranking of the Governance factors numbered from 1 to 5. Based on this ranking, those in the lower category reflect better governance implementation. The Financial Services Authority (2016) stated that the self-assessment results are to be submitted to the Financial Services Authority and published on the bank's website no later than 4 months after the end of the financial year. Previous research examined the effect of Covid-19 on performance directly. Only a few considered the moderating role of governance in performance in developing countries, such as Indonesia.

This present research empirically examines the role of total corporate governance value in moderating the impact of the pandemic on performance to bridge this gap. It adds the effectiveness variable obtained from the composite rating of the self-assessment result on the implementation of governance in banks, which was not conducted previously, besides using variables related to the composition of corporate governance bodies, which consist of board size and diversity, as conducted by Khatib and Nour (2021) as well as Elmarzouky et al., (2021). The self-assessment describes the overall implementation value of governance necessary for dealing with conditions of uncertainty (Aprisma and Sudaryati, 2020) and provides theoretical and conceptual contributions. First, it shows the role of bank corporate governance in mitigating the effect of Covid-19 on performance. Second, the results affect bank governance and regulators because good governance affects performance in stable and uncertain environmental conditions.

The remaining part is structured as follows, section 2 reviews the literature and develops the hypotheses, Section 3 discusses the method, section 4 explains the empirical results and additional testing, and section 5 is the conclusion.

Literature Review and Hypotheses Development

Covid-19 and Performance

COVID-19 (CoronaVirus Disease 2019) was first detected in Wuhan, China, at the end of December 2019 and spread very quickly to almost every country worldwide, including Indonesia. Several countries have implemented policies to enforce lockdowns and prevent the spread of this virus. Shen et al. (2020) described this lockdown as an external factor that can cause a recession. The Indonesian government has implemented a large-scale social restriction policy (PSBB) to suppress the spread of the virus. This regional quarantine policy, or PSBB, has threatened business and economic value chains, raising concerns that the unemployment and poverty rates are likely to increase. One of the industries affected is financial services, as they begin to feel the threat of non-performing credit, market, and liquidity risk. The decline in credit or financing quality will increase with the cessation of the economic and business value chains in society and industry (Siahaan, 2020).

The global health emergency of Covid-19 is forcing countries to adopt quarantine measures due to its highly contagious nature. However, these measures negatively impact aggregate demand, particularly consumption and exports. This affects customer behavior in banking service transactions to reduce lending. Baicu et al. (2020) explained that the government lockdown measures affect retail consumer behavior, while Shen et al. (2020) found a negative relationship between covid-19 and performance, leading to the formulation of the following hypotheses

H1: Ceteris paribus, Covid-19 Pandemic negatively impacts bank performance

The Moderating Role of Corporate Governance in mitigating the Negative Effects of Covid-19 pandemic on performance

Changes in the dynamic external environment cause contingency problems for the company, hence active management efforts are needed. Contingency theory states that organizational or company performance is a function of "fitness" or the fit between the organization's environment, strategy, structure, system, style, and culture. Meanwhile, structural contingency theory focuses more on the fit between organizational context and structure in explaining performance (Van de ven and Drazin, 1984). Lueg and Borisov (2014) stated that contingency theory had attracted much attention in environmental uncertainty. These external factors affect organizational performance, from planning and control management to decision-making.

Uncertainty has increased significantly due to Covid-19 (Altig et al., 2020; Kenisah et al.,2021; Marciszewska, 2021; Val sun et al., 2021; Rahman et al., 2021; Golubeva; 2021), which has negatively affected the world. Yin et al. (2020) explained that uncertainty and misinformation are reflected in people's behavior when meeting needs, specifically those related to financial and banking transactions and customer relations. Furthermore, organizations need to change and establish new strategies and adjust when facing environmental uncertainty caused by natural factors such as Covid-19 (Mishra,2020; Czetwertyński and Sukiennik, 2021). These changes or adjustments occur in institutions, as stated in the new institutional economics (NIE) theory (Wiliansom, 2000). In the case of Covid-19, there is a possibility that the adjustments are at the social level, such as changes in people's behavior. At the institutional level, the government enforces social distancing restrictions and other regulations to prevent or reduce the adverse effects of the pandemic. Meanwhile, companies need to adjust their tools, policies, and strategies at the governance level to decrease transaction costs. Elmarzouky et al. (2021) classified Covid-19 as systematic risk, and this means managers are required to have the ability to disclose and mitigate risks caused by the pandemic to build public trust.

Good Corporate Governance (GCG) is essential in mitigating the increasingly complex risks and challenges in the banking industry due to the ability to improve bank performance, protect stakeholder interests, and enhance compliance with applicable laws, regulations, and ethical values. Therefore, the commitment to implement good governance is actualized through the GCG system, divided into structure, processes, and governance results to achieve the company's business growth and sustainability (OJK, 2016). Previously, there was a positive relationship between governance and performance (Sianipar and Wiksuana, 2019).

Lew et al. (2018) and Puni and Anlesinya (2020) interpreted the agency theory concerning the board composition, which includes size and diversity, that most boards have collective expertise with diverse knowledge and experience and a broader relationship with the external environment. This can improve coordination in their duties and strategic decision-making processes. Previous literature found a positive relationship between board size and firm performance (Gaur et al., 2015; Pashar and Gupta, 2021; Puni and Anlensinya, 2020). For example, the resource dependence theory on the director's and commissioners' diversity (Pfeffer and Salancik., 1978) states that resources need to be provided by individuals in the company, while the upper echelon theory explains that strategic choices and performance levels are partially predicted from the background characteristics of the Top Management Team (TMT) (Hambrick and Mason, 1984). Bolo et al. (2011) indicated that the diversity on the board creates broader knowledge and ideas, creativity, and innovation that makes the organizations more competitive, resulting in better performance. Hillman and Dalziel (2003) also discovered that board gender diversity brings more significant resources to firms, reduces external dependencies, reduces uncertainty, and improves reputation, associated with increased business performance and value. Previous research has further described how TMT diversity impacts organizational strategy and performance (Wiersema and Bantel, 1992; Olson et al., 2006) and found a positive relationship between gender diversity and performance (Carter et al., 2003).

The complexity of risks in banking business activities increases the need for good governance practices because Covid-19 has posed the threat of non-performing credit, market, and liquidity risks to the banking system. This caused the internal organs of companies, specifically the directors and commissioners, to initiate several policies and strategies to survive the pandemic. Therefore, governance tools are essential in mitigating the increasingly complex risks of online banking transactions and ensuring the management of problems arising. Erkens et al. (2012) stated that corporate governance significantly impacts company performance during crises, while Orazalin and Mahmood (2018) showed that the impact was positive through better CG practices which led to better bank operation after a period of a financial crisis. Practices, such as changes in the CG code, board structure, disclosure requirements, and members' competence, significantly impact CG and improve the bank's operational performance. Khatib and Nour (2021) stated that board diversity significantly improves company performance during the covid-19 pandemic. Asprima and Sudaryati (2020) also showed that corporate governance reduced the negative effect of environmental uncertainty on performance, while Baum et al. (2012) found that the relationship significantly impacts corporate liquidity. Elmarzouki et al. (2021) stated that governance variables, including independent commissioners and gender diversity, moderated the relationship between Covid-19 disclosure and performance and provided stakeholders with a better understanding of the company's current and future performance. This was achieved by showing how managers handled the crisis to reduce the risks. Therefore, the hypothesis formulated is:

H2: Ceteris paribus, Corporate governance mitigates the negative impact of Covid-19 pandemic on bank performance

Research Methodology

Research Data and Sample

All commercial banks trading on the Indonesia Stock Exchange (IDX) between 2017 and 2020 make up the population. Sampling yielded an uneven data panel of 42 financial institutions and 648 observations. Secondary data were collected from annual reports, bank websites, governance reports or news releases, and quarterly financial reports. Meanwhile, those obtained manually include corporate governance data, such as Director and Commissioner (Board) size, gender diversity, and self-assessment rating on implementing good corporate governance in banks.

Research Model

The research model used to test the hypotheses is presented in models 1, 2, and 3 in line with Sutarti et al. (2021)

The research model to test hypothesis H1:

$$PERFit = \beta 0 + \beta 1COVIDit + \beta 2\ SIZEit + \beta 3GOVit + \varepsilon it \quad (1)$$

The research model to test hypothesis H2

$$PERFit = \beta 0 + \beta 1COVIDit + \beta 2EFEK\_CGit + \beta 3SIZE\_DIRit + \beta 4DIV\_GEN.DIRit + \beta 5SIZE\_COMit + \beta 6DIV\_GEN.COMit + \beta 7SIZEit + \beta 8GOVit + \varepsilon it \quad (2)$$

$$PERFit = \beta 0 + \beta 1COVIDit + \beta 2EFEK\_CGit + \beta 3SIZE\_DIRit + \beta 4DIV\_GEN.DIRit + \beta 5SIZE\_COMit + \beta 6DIV\_GEN.COMit + \beta 7COVID*EFEK\_CGit + \beta 8COVID*SIZE\_DIRit + \beta 9COVID*DIV\_GEN.DIRit + \beta 10COVID*SIZE\_COMit + \beta 11COVID*1DIV\_GEN.COMit + \beta 12SIZEit + \beta 13GOVit + \varepsilon \quad (3)$$

Where:
PERF is the current banking performance as measured by return on assets (ROA) in the bank i, in year t, COVID represents a dummy variable 1 when the bank operates during the pandemic period and 0 when it does not, operates. EFEK_CG represents governance effectiveness measured by the composite value at the bank i in year t, SIZE_DIR is the number of directors in the bank, EFEK_DIR is the effectiveness of directors (TMT), DIV_GEN.DIR represents gender diversity of directors in the Index, SIZE_COM is the number of commissioners, DIV_GEN.COM represents gender diversity, SIZE is the size of bank i in year t in log_aset, GOV is a dummy variable 1 when the government owns the bank, and 0 when it is owned by other individuals.

Operationalization of Defined Variables

Dependent Variable: Bank Performance (PERF)
The bank or financial performance measure is expressed in terms of profitability and calculated using the ratio approach, known as return on assets (ROA) (Orazalin and Mahmood., 2018; Prashar and Gupta, 2020; Shen et al., 2020; Sutarti et al., 2021; Khatib and Nour, 2021). This is obtained from pre-tax profit divided by total assets, including net profit margin on total assets and net profit/ending balance on total assets.

Independent Variable: Covid-19 Pandemic (COVID)
A dummy variable was used to denote Covid-19 with a value of 1 when the company operates during the pandemic and 0 when it does not (Shen et al., 2020).

Moderating Variable: Corporate Governance
The moderating variable is corporate governance, measured using methods adopted from other studies. It was proxied using board size, which consists of the number of directors (SIZE_DIR) and commissioners (SIZE_COM) adopted because Indonesia adheres to a two-tier governance system. This is in line with previous studies that the number of directors or commissioners on the firm's board is used to measure board size (Puni and Anlensinya, 2020; Gupta and Pashar, 2020; Elmarzouky et al., 2021; Sutarti et al., 2021). Gender diversity shows the mix of men and women who occupy the positions of directors or commissioners in the company, and it is measured using the Blau Index (Schwab et al., 2015; Sutarti et al., 2021).

Governance effectiveness (EFEK_CG) is the GCG assessment rating of bank governance in the annual and bank governance report, where a score of 4, 3, 2, 1, and 0 is given when the self-assessment results have a rating of 1, 2, 3, 4, and 5.

Control Variable
The control variables are bank size and ownership. This bank size, denoted as SIZE, was obtained from the log of total natural assets (Sutarti et al., 2021). Furthermore, it is linked to bank performance due to the financial institutions' capability to reduce costs based on economies of scale. GOV represents ownership with a dummy variable of 1 when a bank is owned by the government and 0 when owned by other individuals (Shuying et al., 2017). Li and Simerly (1998) explained that this bank's ownership structure affects managerial supervision due to performance improvement efforts, while Zhou et al. (2016) described that state ownership plays a minor role in promoting innovation and company performance from the conventional efficiency-based economic perspective.

Analysis Method

Data were analyzed using panel data regression, the Chow, and the Hausman test to select the best model from pooled least squares, fixed, and random effects. The estimation method used is Generalized least square (GLS), through STATA software version 13. Moreover, the classical assumption testing for multicollinearity is the Variance Inflation Factor (VIF) test, where the mean VIF above 10 indicates multicollinearity. Subsequently, the VIF test for each model showed that several variables had multicollinearity, treated by centering.

Results and Discussion

This research was conducted on 42 selected banks registered with the Bank Indonesia yang Listing di Bursa Efek Indonesia from 2017–2020, totaling 648 observations. These consist of 4 state-owned, 2 regional developments (BPD), 34 privates, and 2 Sharia commercial banks. Furthermore, data were extracted from the financial, annual, bank governance reports and websites.

Table I shows the descriptive and multivariate analysis, consisting of the mean, standard deviation, and correlation for the selected variables to explain the impact of the pandemic on performance with corporate governance as moderating variable. The variables used include Covid-19, corporate governance as proxied by the number of directors, diversity of directors, number of commissioners, diversity of the board of commissioners, corporate governance effectiveness, and bank performance.

Table 1: Means, Standard Deviations, and Correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. ROA	0.361	1.244	1								
2. COVID	0.324	0.468	-0.09 ***	1							
3. EFEK_CG	2.895	0.424	0.32 ***	-0.02	1						
4. SIZE_DIR	6.25	2.692	0.33 ***	0.02	0.42 ***	1					
5. DIV_GEN.DIR	0.228	0.189	0.06	0.01	0.15 ***	0.26 ***	1				
6. SIZE COM	4.733	2.091	0.27 ***	0.01	0.35 ***	0.80 ***	0.30 ***	1			
7. DIV_GEN.COM	0.236	0.358	-0.08	0.01	-0.03	-0.01	0.21 ***	-0.02	1		
8. SIZE	13.55	0.787	0.43 ***	0.05	0.42 ***	0.87 ***	0.23 ***	0.80 ***	-0.08 *	1	
9. GOV	0.123	0.329	0.18	-0.01	0.13 ***	0.43 ***	0.04	0.49 ***	-0.14 ***	0.55 ***	1

***, **, * Significance at the 1%, 5%, 10%, levels

Source: Processed secondary data

Based on Table II, model 1, hypothesis H1 was tested to determine the effect of Covid-19 on performance (ROA). The coefficient of Covid-19 and performance (ROA) is -0.318, with a p-value of 0.000 (< 0.01), indicating that H1 is accepted. The significant negative effect of Covid-19 on ROA shows that when the pandemic prevailed for an extended period, it limited the bank's financial performance (ROA). This is in line with Shen et al. (2020), that discovered the negative effect on company performance. The commercial banks sampled experienced delays in payment of principal and interest as well as in their credit restructuring stimulus. However, this low credit or financing quality will likely worsen due to the cessation of community and industrial economy and business value chains.

Table 2: Results of Regression Models 1, 2, and 3 (Hypothesis 1 and 2)

		Var. Dep: PERF= ROA		
Description	Predict	Model 1	Model 2	Model 3
Independent Variable		Coef. (Prob t-stat)		
COVID	-	-0.318 (0.000***)	-0.327 (0.000***)	-1.09 (0.015**)
EFEK_CG	+		0.274 (0.022**)	0.182 (0.111)
SIZE_DIR	+		-0.658 (0.074*)	-0.059 (0.108)
DIV_GEN.DIR	+		0.396 (0.156)	0.381 (0.176)
SIZE _COM	+		-0.071 (0.078*)	-0.917 (0.054*)
DIV_GEN.COM	+		0.143 (0.187)	0.237 (0.100)
Interaction				
COVID*EFEK_CG	+			0.361 (0.005**)
COVID*SIZE _DIR	+			-0.027 (0.269)
COVID*DIV_GEN.DIR	+			-0.416 (0.467)
COVID*SIZE_COM	+			0.035

				(0.272)
COVID*DIV_GEN.COM	+			(0.160)
Control Variable's				-0.225
SIZE	+/-	0.709	0.958	(0.160)
		(0.000***)	(0.000***)	(0.000***)
GOV	+/-	-0.227	-0.134	-0.143
		(0.540)	(0.701)	(0.676)
Cons		-9,129	1,105	0.679
		(0.000)	(0.000)	(0.004)
N		648	648	648
R2		21.05%	23.92%	24.80%
R2 Change		21.05%	2.87%	0.88%
Chi2		38.99***	55.05***	61.72***

***, **, * Significance at the 1%, 5%, 10%, levels

Source: Processed secondary data

The pandemic causes most people to stay at home without making transactions, decreasing the performance of small banks that use the conventional transaction model. However, the larger banks with digital banking services and high technology adoption are the least affected. This situation can cause an increase in fee-based income, as shown by the additional test in Table III, where the small banks in groups 1 and 2 have a significant decrease than 3 and 4. The decline was more significant due to the lack of ready infrastructure to provide digital services.

Hypothesis H2 was tested to determine the corporate governance in mitigating the negative impact of the pandemic performance. The results of model 2 regression in Table II show that the governance variable, namely the effectiveness denoted as EFEK_CG, has a positive and significant coefficient. Therefore, the bank's performance improves when the corporate governance is more effective. This result validates Javaid's (2015) and Sianipar and Wiksuana's (2019) research that governance effectiveness positively affects performance. This positive effect on performance occurs because the company has implemented the eleven good corporate governance criteria of the Financial Service Authority (OJK, 2017). The implementation of corporate GCG can create a system to direct, control, and supervise all resources efficiently and effectively to maintain a balance of different interests benefitting the company.

Cadbury Committee (1992) viewed corporate governance as a set of rules that define the relationship between shareholders, managers, creditors, government, employees, and other interested parties, concerning their rights and responsibilities. Corporate governance also requires the availability of structures, tools to achieve objectives, and performance monitoring (OECD, 2004). This supports the new institutional economics theory, namely that the institution is said to be efficient when the transaction costs are low. Customers are more likely to use a bank or conduct business, including online banking, when the bank has a solid governance mechanism. This will impact increasing customers using e-banking, ultimately improving the bank's performance as management's responsibility, especially during a pandemic where customers tend to make online transactions.

In contrast to the results of the effectiveness of governance which positively influences performance. Governance variables proxied by the size of the board of directors (SIZE_DIR) and the size of the board of commissioners (SIZE_COM) have negative and significant coefficients, thereby showing that the bank's performance reduces as the number of directors or commissioners in the corporate governance structure increases. This result is in accordance with the previous research, which showed a negative effect of board size on performance (Chen, 2008; Rostami et al., 2016). The negative effect is possible because the larger sizes of directors and commissioners have the potential to cause difficulty in coordination and communication, requiring more effort to reach consensus (Chen, 2008). Therefore, this condition affects the delay in making strategic decisions and overcoming problems, reducing the company's performance.

The governance variable represented by the gender diversity of directors (DIV_GEN.DIR) and the gender diversity of commissioners (DIV_GEN.COM) has a positive but non-significant coefficient, showing that gender diversity of the board of directors and commissioners does not affect performance. These results support the research by Carter et al. (2010) and Wachudi et al. (2012) that there is no effect of gender diversity on performance.

Model 3 regression in Table II shows the interaction between COVID-19 and EFEK_CG, SIZE_DIR, DIV_GEN.DIR, SIZE_COM, and DIV_GEN.COM. The regression for the interaction of the variables COVID and EFEK_CG were significant. Helm and Mark (2012) described the significant effect of the moderator variable on the dependent as a quasi-moderation. Meanwhile, directors' interaction between size (SIZE_DIR) and diversity (DIV_GEN.DIR) showed a negative but non-significant coefficient. Furthermore, the commissioners' size (SIZE_COM) and diversity (DIV_GEN.COM) showed positive and insignificant coefficients. Only the governance variable denoted by effectiveness (EFEK_GOV) has been proven to mitigate the negative impact of Covid-19 on performance. These results also support the research conducted by Aprisma and Sudaryati (2020) that governance can reduce the negative effect of environmental uncertainty on performance.

Table 3: (Additional Testing)

Comparison of Regression Results The effect of Covid-19 on performance with sub-samples in the Large and Small Bank Groups

PERFit = β+ β1 COVID it+ β2EFEK_CGit + β3SIZEit + β4GOVit + εit.

		Dependent Variable: ROA			
		Bank group:_Large Size		Bank group:_Small Size	
	Prediction	Coefficient	P-Value	Coefficient	P-Value
Independent Variables					
COVID	+	-0.127	0.094*	-0.442	0.000***
SIZE	(+/-)	0.762	0.000***	0.734	0.002***
Cons		-10.04	0.000	-9.395	0.003
N	253			395	
R2	19%			12%	
Chi2	20.41***			18.11***	
***, **, * ** Significant at the 1%, 5% and 10% levels					

Source: Processed secondary data

Figure 1 shows the relationship between Covid-19 and bank performance with corporate governance effectiveness. The regression in model 1 shows the relationship between Covid-19 and bank performance, similar to that of a bank practicing governance effectively and less effectively, affecting the bank performance. The two lines show a negative relationship between Covid-19 and bank performance, but the decline in performance was sharper for less effective management.

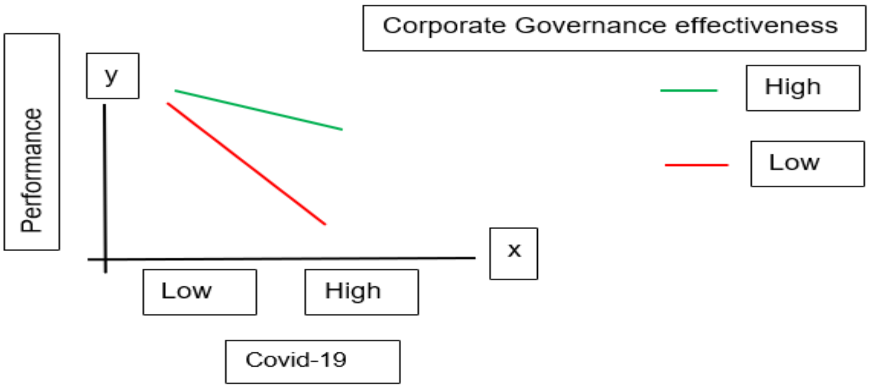

Figure 1: Graph of the relationship between Covid-19 and Performance with the effectiveness of corporate governance as a moderating variable

This is in line with the institutional theory that effective governance reduces high transactions during the pandemic and also validates the importance of corporate governance infrastructure in dealing with the pandemic, as Golubeva (2021) reported. This agrees with Kells (2020) that the Covid-19 crisis has raised awareness concerning the importance of strong corporate governance, solid financial guarantees, and flexible corporate management. It provides additional literature that governance effectiveness reduces the adverse effects of Covid-19. Thanks to effective governance, the risks or problems faced by companies are better managed by banks. Effective governance adequately navigates the unexpected, identifies opportunities, and develops new strategies for the company's survival to adapt to the pandemic situation.

This implies that banks with good governance effectiveness allow the supervisory role of the board of commissioners to run well. The bank's governance rules state that the board of commissioners is responsible for directing, monitoring, and evaluating strategic policies through supervision. This is the reason the directors developed new strategies or innovations to facilitate customer transactions by improving online services and other lending policies. Nguyen et al. (2021) discovered that bank customers use digital-based transactions, making digital banks the primary medium for transactions. Therefore, banks with complete digital banking facilities and infrastructure can survive more in the pandemic and post-pandemic era.

For this reason, banks are upgrading their online operating systems and increasing customer services, with some employees working remotely. This increases the potential for operational and cyber security risks. However, effective bank governance, including adequate internal control, gives customers the confidence to transact online. Sutarti et al. (2019) showed that effective internal bank control mitigates risks and gives customers the confidence to use e-banking transactions, increasing e-banking users and improving bank performance. This present research supports the regulations that require commercial banks to implement good governance as regulated in POJK No.55/POJK.03/2016 concerning the implementation of Good Corporate Governance for commercial banks as well as the one from Bank Indonesia Regulation Number 11/33/PBI/2009 concerning good corporate governance for Sharia commercial business.

Conclusions

This research determines the relationship between Covid-19 and company performance and examines the moderating role of corporate governance in mitigating the negative impact of the pandemic on bank performance. The panel data analysis showed that Covid-19 has a negative impact on performance. There is a positive relationship between governance effectiveness and performance but a negative effect of the number of directors and commissioners on performance. The regression model further showed the moderating role of corporate governance effectiveness on the performance of commercial banks. Therefore, it is possible to minimize the negative impact of Covid-19 on bank performance through effective governance. This is due to the ability to navigate through unexpected situations, identify opportunities, and create new strategies to adapt to uncertainties, ensuring the company's survival. This supports the new institutional economics theory, where the institution is said to be efficient when the transaction costs are low. The Financial Services Authority (OJK) as a regulator must implement good governance to improve bank performance, protect stakeholders' interests, and improve compliance with laws and regulations.

This present research is expected to contribute as an addition to the literature on the science of corporate governance and also serve as an input for empirical research on the effect of Covid-19 on banking performance and governance effectiveness in mitigating the pandemic's effect. These results provide a deeper understanding of the impact on corporate performance and how effective governance reduces the negative effect. Moreover, the findings serve as input for regulators in making policies to ensure good governance in banks and for investors to support regulators. This requires the implementation of OJK Circular Letter No. 32/SEOJK.04/2015 concerning governance guidelines for public companies and POJK No. 55/POJK.03/2016 regarding the governance of commercial banks and OJK Circular Letter No. 13/SEOJK.03/2017. Further tests should be conducted on the declining performance of small banks during the Covid-19 period.

This present research has the following limitations, first, it uses a sample of banks registered with Bank Indonesia and listed on the Indonesia Stock Exchange. However, a cross-border bank sample needs to be used in the future. Second, it utilizes moderating governance variables proxied by the effectiveness of governance, the number of directors and commissioners, and gender diversity. Therefore, further studies need to consider other governance mechanisms, such as ownership.

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