Pandemic, Financial Performance, and Firm Value in Indonesian National Banking

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Abstract. This research investigates how the Covid-19 pandemic affect Indonesia's national banking industry from 2018 until 2020. Our findings show that the country's national banks are still in good health despite having to deal with extraordinary events such as covid 19. The company's massive layoffs of employees and the significant number of job losses, notably in the tourism sector, have little bearing on the debtors' ability to meet their responsibilities to banking institutions. This is likely due to the consistency of the public with other professions such as civil servants or MSMEs in fulfilling their obligations to banks so that they can support and anticipate credit problems that may arise in national banks so that credit risks seen in the NPL ratio remain at a low value during the Covid-19 pandemic.

Keywords: firm value; financial performance; pandemic; indonesian national banking.

1. Introduction

The incident that had shocked the world occurred in December 2019 in Wuhan, China and was known as the Covid 19. This incident is very troubling because the spread occurs very quickly. Five individuals received medical care for Acute Respiratory Distress Syndrome (ARDS) from December 18 to December 29 in 2019 (Ren et al., 2020). These cases increased quickly between December 31, 2019, and January 3, 2020, as evidenced by the reporting of 44 cases (Susilo et al., 2020). Following its occurrence, Covid 19 was declared a public health emergency of global outrage on January 30, 2020, grabbing the attention of the entire world (Dong et al., 2020). As many as 192 countries/regions have reportedly contracted the virus due to its international spread. Data collected until March 25, 2020 showed 414,179 cases had been confirmed with 18,440 deaths (CFR 4.4%). There have been 31,186 confirmed cases of Covid 19 in Indonesia, and there have been 1,851 deaths as of June 2020. This number is expected to continue rising very quickly (Kemenkes, 2020). The Covid-19 pandemic affects the global financial system, one of which is in China. China, which is the second largest economy in the world, experienced an economic slowdown from 6.1% in 2019 and decreased to 3.8% in 2020 (Yamali & Putri, 2020). Due to the Covid 19's widespread distribution throughout the world, the downturn in the economy also affected Asia Pacific. Australia, Singapore, Hong Kong, South Korea, Japan, and Thailand are some of the nations that face the threat of economic collapse. Indonesia has also been impacted by Covid 19. The director of the World Bank predicts that by the beginning of 2020, Indonesia's GDP will have dropped below 5%.

The Indonesian government has made numerous attempts to combat this virus, one of which was the issuance of Government Regulation No. 21 of 2020 regarding the implementation of PSBB. Due to the PSBB's implementation, a number of activities in the business world, workplaces, government services, education, all religious sites, restaurants, shopping centers, and tourist destinations had to temporarily cease (Misno BP et al., 2020). The Indonesian economic growth has been severely impacted by the Covid-19 pandemic, including: 1) identified as many as ≥1.5 workers lost their jobs or around 90% of workers were laid off and 10% experienced layoffs, 2) In March 2020, Indonesia's Manufacturing PMI decreased by 45.3%, 3) In the First Quarter, Imports decreased by 3.7%, 4) In March 2020, inflation reached 2.96% year-on-year (yoy) sourced from gold prices and food commodities. 5) From January to March 2020, there was a decrease in revenue in the aviation sector which was a result of the cancellation of 12,703 flights at 15 airports with losses reaching Rp. 207 billion. 6) Tourism foreign exchange has decreased due to a decrease in occupancy (placement) in 6 thousand hotels in Indonesia by up to 50% (Hanoatubun, 2020). Data from the Ministry of Manpower in 2020 stated that layoffs had been carried out by 114,340 companies and companies that laid off their employees as many as 1,943,916 people with a percentage of 23% from the informal sector and the remaining 77% from the formal sector. If this pandemic continues and lasts a long time, the effects will be a decline in people's consumer spending and a sudden loss of money turnover. Due to the decline in people's purchasing power, there are additional effects that result, including limited production of goods, which will lead to a trade imbalance (Kurniawansyah HS, Salahuddin, Muslim, & Nurhidayati, 2020). With an observation period of 2018 to 2020, this study seeks to assess the Covid-19 Pandemic's impact on firm value on Indonesian national banking through financial performance. The RGEC (Risk Profile, Good Corporate Governance, Earnings, and Capital) method was used to examine national banking conditions. The CAMELS method (Capital, Assets, Management, Earnings, Liquidity, and Sensitivity to Market Risk) does not yet cover the elements of Good Corporate Governance and the application of risk management; therefore, the RGEC method is being used. Bank Indonesia has updated PBI Regulation No. 9/1/PBI/2007 concerning bank health assessment methods using the CAMELS method to PBI No. 13/1/PBI/2011 regarding bank health assessment with the RGEC risk approach because these two factors are crucial to take into account given the development of the banking sector is becoming more complex.

Hypotheses are temporary conjectures built from previous theories and studies and there are 13 hypotheses in this study, consisting of: H1a: Risk Profile (NPL) negatively affects Financial Performance (ROA), H1b: Risk Profile (LDR) positively affects Financial Performance (ROA), H2a: Risk Profile (NPL) negatively affects Firm Value (PBV), H2b: Risk Profile (LDR) negatively affects Firm Value (PBV), H3: Good Corporate Governance (Board size) has a positive effect on Financial Performance (ROA), H4: Good Corporate Governance (Board size) positively affects Firm Value (PBV), H5a: Earnings (BOPO) positively affects Financial Performance (ROA), H5b: Earnings (NIM) positively affects Financial Performance (ROA), H6a: Earnings (BOPO) positively affects Firm Value (PBV), H6b: Earnings (NIM) has a positive effect on Firm Value (PBV), H7: Capital (CAR) has a positive effect on Financial Performance (ROA), H8: Capital (CAR) has a positive effect on Firm Value (PBV), H9: Financial Performance (ROA) has a positive effect on Firm Value (PBV), H10a: Financial performance (ROA) mediates the effect of Risk Profile (NPL) on Firm Value (PBV), H10b: Financial performance (ROA) is mediates the effect of Risk Profile (LDR) on Firm Value (PBV), H11: Financial performance (ROA) mediates the influence of Good Corporate Governance (Board Size) on Firm Value (PBV), H12a: Financial

performance (ROA) can mediate the effect of Earnings (BOPO) on Firm Value (PBV), H12b: Financial performance (ROA) can mediate the effect of Earnings (NIM) on Firm Value (PBV), H13: Financial performance (ROA) can mediate the impact of Capital (CAR) on Firm Value (PBV).

2. Materials and Method
2.1 Data Set

The objective of this descriptive quantitative study is to assess how the Covid-19 Pandemic has affected firm value at Indonesia's National Private Commercial Banks and Persero Commercial Banks through financial performance. The annual financial statements of national banks in 2018, when the pandemic had not yet begun, 2019, when it first entered Indonesia, and 2020, when it was still observable, served as sources to collect secondary data for this study. Banks that have or have not been traded publicly on a national exchange are included in the data used. The basis for using secondary data is 1) data is easier to obtain than primary data, 2) the costs incurred in obtaining data are cheaper, 3) there are already studies that use this type of data, 4) more trustworthy of validity because the audited financial statements used have been audited by external accountants, 5) it is safer to obtain data considering the current pandemic conditions. The official websites of the banking companies that were sampled as well as www.idx.co.id, www.ojk.go.id, and www.yahoo.finance.com were used to collect the research data. The national banking sector of Indonesia, which consists of Persero Commercial Banks and National Private Commercial Banks, was the setting for this study. The banking sector was chosen for this study because the researcher wanted to know how the Covid-19 pandemic would affect the banking industry and the Indonesian economy. Because, as is well known, the banking industry plays a crucial role in a nation. Another factor contributing to this sector's appeal for study is the existence of a policy allowing banks to participate in managing the economic effects of the Covid-19 pandemic.

This study's sample comprised 68 national private commercial banks and 4 Persero Commercial Banks. Thus, the population for this study consisted of 72 financial institutions. Stratified random sampling and the Slovin formula, both probability sampling methods, are implemented in the sampling process. Samples are chosen at random using a lottery system to ensure that each member of the population has a comparable likelihood of becoming a research sample. Using the Slovin formula, based on the number of such populations and a 5% margin of error, a sample of size n is determined:

$$n = \frac{72}{1+72\,(0,05)^2} = \frac{72}{0,1825} = 39,45 = 39$$

According to the outcomes of these calculations, 39 banking companies served as the samples for this study. However, when searching for financial data, there were several companies that did not have complete financial statements so they were excluded from the sample. After the elimination of these samples, the final sample used in this study was 32 banking companies both from Persero Commercial Banks and from National Private Commercial Banks with a total of 32 companies x 3 years = 96 observations.

2.2 Methodology

This study used information on risk profile, good corporate governance, earnings, capital, financial performance, and firm value from the selected sample of company's financial statements. Research variables and variable measurements are shown in Table 1.

Multiple linear regression analysis, also known as Path Analysis, and parametric statistics are used in this study's analysis. The path equation below illustrates the direct relationship between the variables of risk profile (NPL and LDR), good corporate governance (board size), earnings (BOPO and NIM), and capital (CAR) on financial performance (ROA):

$$Y_1 = py_1x_{1a}X_{1a} + py_1x_{1b}X_{1b} + py_1x_2X_2 + py_1x_{3a}X_{3a} + py_1x_{3b}X_{3b} + py_1x_4X_4 + \varepsilon_1$$

The following path equation illustrates the indirect impact of the Effect of Risk Profile (NPL and LDR), Good Corporate Governance (Board Size), Earnings (BOPO and NIM), and Capital (CAR) on Firm Value (PBV), with Financial Performance (ROA) acting as an intervening variable:

$$Y_2 = py_2x_{1a}X_{1a} + py_2x_{1b}X_{1b} + py_2x_2X_2 + py_2x_{3a}X_{3a} + py_2x_{3b}X_{3b} + py_2x_4X_4 + py_2y_1Y_1 + \varepsilon_2$$

Description:
Y_1 = Financial Performance (ROA)
Y_2 = Firm Value (PBV)
X_{1a} = Risk Profile (NPL)
X_{1b} = Risk Profile (LDR)
X_2 = Good Corporate Governance (Board Size)
X_{3a} = Earnings (BOPO)
X_{3b} = Earnings (NIM)
X_4 = Capital (CAR)
py_1x_{1a} = Risk Profile (NPL) Path Coefficient to Financial Performance (ROA).
py_1x_{1b} = Risk Profile (LDR) Path Coefficient to Financial Performance (ROA).
py_1x_2 = Good Corporate Governance (Board Size) Path Coefficient to Financial Performance (ROA).
py_1x_{3a} = Earnings (BOPO) Path Coefficient to Financial Performance (ROA)
py_1x_{3b} = Earnings (NIM) Path Coefficient to Financial Performance (ROA)
py_1x_4 = Capital (CAR) Path Coefficient to Financial Performance (ROA)
py_2x_{1a} = Risk Profile (NPL) Path Coefficient to Firm Value (PBV)
py_2x_{1b} = Risk Profile (LDR) Path Coefficient to Firm Value (PBV)
py_2x_2 = Good Corporate Governance (Board Size) Path Coefficient to Firm Value (PBV)
py_2x_{3a} = Earnings (BOPO) Path Coefficient to Firm Value (PBV)
py_2x_{3b} = Earnings (NIM) Path Coefficient to Firm Value (PBV)
py_2x_4 = Capital (CAR) Path Coefficient to Firm Value (PBV)
py_1y_2 = Financial Performance (ROA) Path Coefficient to Firm Value (PBV)
ε_1 = Error path coefficient 1
ε_2 = Error path coefficient 2

This study also employed the Sobel test. The Sobel test measures the magnitude of the indirect influence of the variable (X) on the variable (Y) through the variable (M). One of the conditions for applying this multiple linear regression is that the conventional assumption test be completed successfully. Traditional hypothesis tests include the statistical test, the coefficient of determination test, the multicholinearity test, the autocorrelation test, and the heterochedasticity test.

3 Result and Discussion
3.1 Descriptive Statistic

Descriptive statistics regarding the variables NPL, LDR, Board Size, BOPO, NIM, CAR, ROA, and PBV in the sampled companies are described in Table 2. In Persero Commercial Banks and National Private Commercial Banks, which make up the national banking companies, the average risk profile as measured by NPLs and LDRs is 3,49 and 86,24, with a maximum value of 10,16 and 162,29 and a minimum value of 0,21 and 41,43. Board size provides a measure of good corporate governance, with an average value of 11,94, a maximum value of 22, and a minimum value of 6. Average incomes as determined by BOPO and NIM were 87,27 and 4,10 respectively, with maximum and minimum values of 168,10 and 8,90. With a maximum value of 55,03 and a minimum value of 11,59, the average capital as determined by CAR has a value of 23,95. With such a maximum value of 88,94 and a minimum value of 0,00, the average financial performance as measured by ROA is 4,25. While this is going on, the average firm value as determined by PBV is 8,89, with a highest value of 73,40 and a lowest values of 0,33.

3.2 Classical Assumptions Tests
3.2.1 Normality Test

The effects of NPL, LDR, Board Size, BOPO, NIM, and CAR on ROA's normality test results were converted into the form of LN (Natural Logarithm) for the ROA and NPL variables, while lag transformations were applied to the other variables so that the analysis's results would display the Asymp value. Sig. (2-tailed) by 0,60 and greater than 5% or 0,05 to ensure that the residual data has a normal distribution.

The findings of the normality test of the influence of NPL, LDR, Board Size, BOPO, NIM, CAR, and ROA on PBV after being converted into the version of LN (Natural Logarithm) for PBV, ROA, and NPL variables, whereas other variables utilize LAG transformation, demonstrate a value of Asymp. Sig. (2-tailed) of 0,061 and higher than the significance value of 5% or 0,05, indicating that the residual data is evenly distributed.

The outcomes of the natural logarithm (LN) transformation of PBV and ROA variables into the form of the normality test of the effect of ROA on PBV. The analysis's findings demonstrate an Asymp. Sig. (2-tailed) value of 0,73 and a significance level greater than 5%, or 0,05, indicating that the residual data is evenly distributed.

3.2.2 Multicholinearity Test

The multicholinearity test results for the impact of NPL, LDR, Board Size, BOPO, NIM, and CAR on ROA revealed that each variable's VIF value was less than 10, leading to the conclusion that the effect of NPL, LDR, Board Size, BOPO, NIM, and CAR on ROA did not exhibit multicholinearity.

The multicholinearity test results for the influence of NPL, LDR, Board Size, BOPO, NIM, CAR, and ROA on PBV revealed that each variable's VIF value was less than 10, leading to the conclusion that the effect of NPL, LDR, Board Size, BOPO, NIM, CAR, and ROA on PBV did not exhibit multicholinearity.

The impacts of ROA on PBV was tested for multicholinearity, and the results revealed that each variable's VIF value was less than 10, thereby indicating that the influence of ROA on PBV had no multicholinearity.

3.2.3 Heteroskedasticity Test

When a heteroskedasticity test was performed on the impact of NPL, LDR, Board Size, BOPO, NIM, and CAR on ROA, the results showed that all of the variables had significance values higher than 0,05, indicating that no issues exist with heteroskedasticity.

It was concluded that no heteroskedasticity issues present with the influence of NPL, LDR, Board Size, BOPO, NIM, CAR, and ROA on PBV based on the heteroskedasticity test results, which showed that each variable's significance value was greater than 0.05.

The heteroskedasticity test of the effect of ROA on PBV discovered that the significance value of ROA was higher than 0.05, indicating that there was no heteroskedasticity concern with the influence of ROA on PBV.

3.2.4 Autocorrelation Test

The autocorrelation test of the consequences of NPL, LDR, Board Size, BOPO, NIM, and CAR on ROA using the two-step Durbin Watson D method revealed a durbin watson value of 1,882 with a value ofDU = 1,80 (1,80 < 1,882 < 4-du (2,2). Consequently, d statistics fall within the region of no autocorrelation or regression models containing no autocorrelation symptoms, so it is prudent to use them to make predictions.

The Cocharane Orcutt 2 Steps method's autocorrelation test results for the impact of NPL, LDR, Board Size, BOPO, NIM, CAR, and ROA on PBV confirmed that the durbin-Watson value was 1,876 with a value of DU = 1,83 (1,83 < 1,876 < 4-du (2,17). D statistics are therefore in the region of no autocorrelation or regression model developed containing no autocorrelation symptoms, so it is valuable to use to assess.

The Durbin Watson D method's results of the autocorrelation test of the impact of ROA on PBV showed that the durbin watson value was 1,719 with a value of DU = 1,69 (1,69 < 1,719 < 4-du (2,31). D statistics are therefore located in the region of no autocorrelation or regression model developed containing no autocorrelation symptoms, so it is valuable to use to estimate.

3.3 Path Analysis

First Hypothesis Test (H_{1a} and H_{1b}): Analysis of the influence of Risk Profile (NPL and LDR) on Financial Performance (ROA).

The analysis's findings are presented in Table 3, which demonstrates that the calculated t-value for the Risk Profile as determined by NPL has a negative direction of -9,759 and is therefore considered significant because its significance is 0,000 less than alpha 0,05 (0,000<0,05) . This implies that Financial Performance as measured by ROA is impacted by Risk Profile as measured by NPL in order for $H1_a$ to be accepted.

The calculated t-value for the Risk Profile as determined by LDR, however, indicates a positive direction of 0,760 with a significance of 0,450 greater than alpha 0,05 (0,450>0,05),

which makes it deemed to be insignificant. $H1_b$ is denied because the risk profile as assessed by LDR has no impact on financial performance as determined by ROA.

Second Hypothesis Test (H_{2a} and H_{2b}): Analysis of the effect of Risk Profile (NPL and LDR) on Firm Value (PBV).

The analysis's findings are presented in Table 3, which demonstrates that the calculated t-value for the Risk Profile as determined by NPL has a positive direction of 0,505 and a signification that is greater than alpha 0,05 (0,615>0,05), thus making it inconsequential. This indicates that $H2_a$ is rejected because the Risk Profile as measured by NPL has no impact on the Firm Value as measured by PBV.

The calculated t-value for the Risk Profile as determined by LDR, on the other hand, indicates a positive direction of 0,617 with a significance of 0,539 greater than alpha 0,05 (0,539>0,05), and is therefore judged to be insubstantial. This means that $H2_b$ is rejected because the Risk Profile as measured by LDR has no impact on the Firm Value as measured by PBV.

Third Hypothesis Test (H_3): Analysis of the effect of Good Corporate Governance (Board Size) on Financial Performance (ROA).

The analysis's results are given in Table 3, which denotes that the calculated t value for Good Corporate Governance as measured by board size is 2,240 with a positive direction and significance of 0,028 less than alpha 0,05 (0,028<0,05), which qualifies it as considerable. In order for H_3 to be accepted, it follows that effective corporate governance as measured by board size influences financial performance as assessed by ROA.

Fourth Hypothesis Test (H_4): Analysis of the effect of Good Corporate Governance (Board Size) on Firm value (PBV).

According to Table 3, the calculated t value for Good Corporate Governance as analyzed by Board Size has a positive direction of 2,290 and a significance of 0,025 less than alpha 0,05 (0,025<0,05), denoting that it is considerable. This indicates that Good Corporate Governance, as assessed by Board Size, has an effect on Firm Value, as calculated by PBV, and therefore H_4 is accepted.

Fifth Hypothesis Test (H_{5a} and H_{5b}): Analysis of the effect of Earnings as calculated by BOPO and NIM on Financial Performance (ROA).

The analysis's findings are shown in Table 3, where it is determined that the calculated t value for earnings as measured by BOPO is insignificant because it has a positive direction of 0,122 and a significance value of 0,903 greater than alpha 0,05. As a result, $H5_a$ is rejected because earnings as assessed by BOPO does not affect financial performance as evaluated by ROA.

The calculated t value for earnings as determined by NIM, however, indicates a positive trend and is therefore deemed unimportant because its significance level is greater than alpha 0,05 (0,498>0,05). This means that $H5_b$ is rejected because Earnings as measured by NIM have no influence Financial Performance as measured by ROA.

Sixth Hypothesis Test (H_{6a} and H_{6b}): Analysis of the effect of Earnings measured by BOPO and NIM on Firm value (PBV).

The analysis's findings are outlined in Table 3, where it is determined that the calculated t value for earnings as measured by BOPO is insignificant because it has a positive direction of 0,123 and a significance value of 0,902 greater than alpha 0,05. This means that H6a is rejected because earnings as determined by BOPO have no impact on firm value as determined by PBV.

The calculated t value for earnings as determined by NIM, however, is insignificant because it has a negative direction of -1,047 and a significance value of 0,298 that is greater

than alpha 0,05 (0,298>0,05). This means that H6$_b$ is rejected because Earnings as measured by NIM have no impact on Firm Value as measured by PBV.

Seventh Hypothesis Test (H$_7$): Analysis of the effect of Capital (CAR) on Financial Performance (ROA).

The analytical findings are presented in Table 3 and indicate that while the calculated t value for Capital as measured by CAR has a positive direction of 1.048, it has no statistical significance because its significance value, 0.298, is higher than the alpha value, 0.05 (0,298>0,05). The idea that the level of capital as analyzed by CAR has any bearing on the level of financial performance as determined by ROA is refuted by this.

Eighth Hypothesis Test (H$_8$): Analysis of the effect of Capital (CAR) on Firm Value (PBV).

According to Table 3, the analysis indicates that the calculated t value in Capital as measured by CAR exhibits a positive direction of 1,409 with a significance value of 0,163 greater than alpha 0,05 (0,163>0,05), thus being announced insignificant. This disproves H8, which states that there is a correlation between the Capital Measured by CAR and the Firm Value Measured by PBV.

Ninth Hypothesis Test (H$_9$): Analysis of the effect of Financial Performance (ROA) on Firm Value (PBV).

The analysis's findings are presented in Table 3, which demonstrates that the calculated t value for financial performance as measured by ROA has a positive direction of 4,875 and is considered significant because its significance value is 0,000 less than alpha 0,05 (0,000<0,05). This indicates that H9 is received because Financial Performance as analyzed by ROA affects Firm Value as measured by PBV.

Tenth through Thirteenth Hypothesis Tests (H10$_a$, H10$_b$, H11, H12$_a$, H12$_b$, and H13): Analysis of the Effect of Risk Profile as measured by NPL and LDR, Good Corporate Governance as measured by Board Size, Earnings as counted by BOPO and NIM, and Capital as calculated by CAR on Firm Value (PBV) with Financial Performance (ROA) as the Intervening Variable.

The Sobel test is used to determine whether or not the risk profile, as determined by NPL and LDR, good corporate governance, as defined by Board Size, Earnings, as determined by BOPO and NIM, and capital, as determined by CAR, have a significant impact on firm value (PBV), with financial performance (ROA) serving as an intervening variable:

Calculate the default error of the indirect effect coefficient

$$S_{ab}= \sqrt{b^2 sa^2 + a^2 sb^2 + sa^2 sb^2}$$

t value statistical influence mediation (intervening)

$$t = \frac{ab}{S_{ab}}$$

According to the results of Sobel's test, the t-count value was -4,34 less than the t-Table value with a signification level of 0,05 for Sobel's test. It is therefore possible to draw the conclusion that the coefficient of mediation (intervening) is negligible, indicating that financial performance variables calculated by ROA are unable to mediate the relationship between risk profile measured by NPL and firm value assessed by PBV. Accordingly, the Tenth Hypothesis (H10$_a$) is proven to be false.

According to the results of Sobel's test, the difference between the t-count value and the t-table value, which was 1,98 and 0,05, was 0,805. Therefore, it can be inferred that the coefficient of mediation (intervening) is negligible, indicating that the relationship between risk profile as measured by LDR and firm value as measured by PBV cannot be mediated by

variable of financial performance as evaluated by ROA. Accordingly, the Tenth Hypothesis ($H10_b$) is disproved.

With a signification level of 0,05, Sobel's test results produced a t-count value of 2,015 that was higher than the t-Table value of 1,98. It is therefore possible to make the inference that the coefficient of mediation (intervening) is significant, indicating that financial performance variables assessed by ROA are able to mediate the relationship between good corporate governance as measured by board size and firm value as counted by PBV. This indicates that the H11 hypothesis has been confirmed.

With a signification level of 0,05, Sobel's test results showed a t-count value that was 0.140 less than the t-Table value of 1,98. It is therefore possible to draw the conclusion that the coefficient of mediation (intervening) is negligible, indicating that financial performance variables measured by ROA are unable to mediate the relationship between earnings evaluated by BOPO and firm value analyzed by PBV. Accordingly, the Twelfth Hypothesis ($H12_a$) is rejected.

With a signification level of 0,05, Sobel's test results showed a t-count value that was 0,662 less than the t-Table value of 1,98. Thus, it can be inferred that the coefficient of mediation (intervening) is minimal, indicating that the relationship between financial performance variable evaluated by ROA and firm value counted by PBV cannot be mediated by earnings measured by NIM. The Twelfth Hypothesis ($H12_b$) is therefore disproved.

With a signification level of 0,05, Sobel's test results showed a t-count value that was 0.960 less than the t-Table value of 1,98. Therefore, it can be deduced that the coefficient of mediation (intervening) is negligible, indicating that the relationship between capital analyzed by CAR and firm value measured by PBV cannot be mediated by the financial performance variable assessed by ROA. The thirteenth hypothesis (H13) is therefore disproved.

3.4 Discussion

In accordance with Figure 1 and the findings of the Sobel test, financial performance as measured by ROA is unable to mediate the relationship between risk profile as measured by NPL and firm value as measured by PBV. NPL has a negative direct effect on ROA of -0,72 and a negative indirect effect on PBV of -0,33 via ROA. These calculations' outcomes reveal that indirect influences have a greater impact than direct influences. National banks should therefore monitor financial performance (ROA), as rising ROA demonstrates the company's capacity to utilize all of its assets to produce profit after tax. This ratio is crucial for management because it allows them to assess how well and effectively they are managing all of the company's assets. When ROA goes up, it indicates that a company is getting better at making the most of its assets, which in turn allows it to bring in more money in the form of profits. A growth in profitability will convey to investors the positive message that the company has a solid firm value, can produce, and will profit investors. This attracts investors to put their money to use. Companies must reduce credit issues as indicated by NPL in order to realize a high ROA. The Otoritas Jasa Keuangan (OJK) has set a safe limit for the NPL ratio at a maximum of 5%, while the average NPL in national banks for the 2018–2020 period of 3.49% is still within this safe range. The low NPL ratio suggests that credit problems at national banks are not too severe. This low credit issue demonstrates that, despite the Covid-19 pandemic, debtors and other parties are successful in meeting their financial obligations to banks. The company's mass layoffs of employees and the numerous job losses, particularly in the tourism industry sector, have little bearing on the debtors' ability to meet their financial obligations to banks. This is probably due to the public's consistency with other professions,

like civil servants or MSMEs, in upholding their obligations to banks, enabling them to support and foresee credit issues that may arise in national banks and maintain low credit risks during the Covid-19 pandemic.

The financial performance as measured by ROA cannot mediate the relationship between the risk profile as measured by LDR and the firm value as assessed by PBV, as shown in Figure 1 and the results of the Sobel test. LDR had a direct impact of 0,0570 on ROA and an indirect impact of 0,0264 on PBV through ROA. These calculations' findings indicate that the direct influence outweighs the indirect influence. LDR is a ratio that assesses a bank's capacity to meet its short-term obligations, so national banks should be aware of the risk profile as indicated by that ratio (liquidity). The bank's health level based on the LDR ratio permitted by Bank Indonesia is at a minimum limit of 78% and a maximum of 92% but can be relaxed to a maximum of 94% under particular circumstances. Meanwhile, the LDR tolerance limit is between 85% and 110%, as per central bank regulations. In national banks from 2018 to 2020, the average LDR value was 86.24%. This value remains within Bank Indonesia's safe range for the bank's health level. This indicates that during the 2018–2020 period, the national banking sector was able to fulfill its short-term obligations, and the national bank is also regarded as having good liquidity. Since a high loan-to-deposit ratio will increase interest income from loans disbursed to customers, national banking companies are expected to keep their high LDR ratio. High company revenue may be a sign to investors that it will affect the company's value.

Figure 1 and the findings of the Sobel test highlight that the link between good corporate governance as judged by board size and firm value as defined by PBV may be mediated by financial performance as calculated by ROA. Board Size had a direct impact on ROA of 0.2020 while indirectly affecting PBV by way of ROA had a 0.0935 impact. These calculations' findings indicate that the direct influence outweighs the indirect influence. National banks should therefore be aware of the Board Size since it represents the total number of members of a company's board of directors and commissioners. The analysis' findings indicate that the board's size has a favorable impact on the company's value. This implies that the company's value will rise along with the board's size. The effectiveness of board oversight to enhance performance and firm value can be increased with a larger board of directors. The Board of Commissioners has the authority to monitor how well the Board of Directors and Management carry out their responsibilities. Improvements in the board of commissioners', board of directors', and management's performance in carrying out business operations will raise the firm value. The size of the board of commissioners will make it simpler to oversee the board of directors, and the board of directors' suggestions and input will be more plentiful, which will improve the firm's value.

Figure 1 and the outcomes of the Sobel test indicate that financial performance as measured by ROA cannot mediate the relationship between Earnings as measured by BOPO and firm value as tested by PBV. Earnings as determined by BOPO had a direct impact on ROA of 0,0110, while BOPO's indirect impact on PBV via ROA was 0,0051. These calculations' findings indicate that the direct influence outweighs the indirect influence. Because BOPO is a ratio used to assess the comparison of operating costs or intermediation costs to operating income generated by banks, national banks should be aware of it. The primary source of income for the bank is operating income, which includes other operating income as well as income from the placement of funds in the form of credit. The positive impact of BOPO on ROA exemplifies that a company's profit will decrease if its costs exceed its revenue. According to Bank Indonesia guidelines, banks are considered efficient if their BOPO ratio is less than 90%. A BOPO of less than 93.52 percent is required for banks to be

considered healthy by Bank Indonesia. The bank indicates that it is unhealthy and inefficient because its value is higher than the provisions of Bank Indonesia. The BOPO ratio established by Bank Indonesia was 87.27% smaller than the average BOPO value of banking companies in this study. According to their BOPO ratios, the banking companies sampled for this study are, on the whole, in good health. The low BOPO value indicates that the bank's income is increasing, which will encourage investors to put money into this banking sector and consequently boost the worth of financial firms.

The financial performance measured by ROA cannot mediate the relationship between earnings measured by NIM and firm value measured by PBV, as demonstrated by Figure 1 and the results of the Sobel test. Earnings as measured by NIM have a direct impact on ROA of 0,0540, while NIM has an indirect impact on PBV through ROA of 0,0250. These calculations' findings indicate that the direct influence outweighs the indirect influence. The ability of bank management to manage its productive assets to generate net interest is measured by NIM, so national banks should be aware of it. According to the study's findings, NIM had a favorable impact on ROA and PBV. This indicates that the amount of NIM will affect the bank's profit and loss, which will ultimately affect the bank's performance, and that an increase in the NIM ratio will also increase the ROA ratio. During the Covid-19 pandemic between 2018 and 2020, the national banking companies' average NIM was 4.1%. This value falls short of the healthy threshold set by Bank Indonesia, which is 6% and above. The state of the nation's banking system as a whole was unaffected by this low NIM. This is most likely to occur because national banks have started to rely less heavily on interest income in the wake of the Covid-19 pandemic.

In accordance with Figure 1 and the findings of the Sobel test, financial performance as measured by ROA is unable to mediate the relationship between capital as measured by CAR and firm value as measured by PBV. CAR had an indirect impact on PBV through ROA of 0,0403 while having a direct impact on ROA of 0,0870. These calculations' findings indicate that the direct influence outweighs the indirect influence. As a result, national banks should be aware of the capital adequacy ratio (CAR), which demonstrates banks' capacity to contribute funds used to offset potential loss risks. This ratio is crucial because, by keeping the CAR within a safe range (at least 8%), customers are protected and the financial system as a whole is kept stable. The higher the value of CAR, the better the banks' ability to manage potential loss risks is. Between 2018 and 2020, the national banking CAR's condition averaged 23.95%. This value is well above the Bank Indonesia-established safe limit. This demonstrates that national banks had enough capital during the observation period to finance operational activities effectively and economically, allowing banks to boost their own profits as well as the profits of the company because there were no financial difficulties.

The simultaneous influence of the risk profile as measured by NPL and LDR, good corporate governance as measured by board size, earnings as measured by BOPO and NIM, capital as measured by CAR, and financial performance as measured by ROA is on the 71% of firm value as measured by PBV. Other factors not included in the research model have an impact on the remaining 29%.

4. Conclusion

According to the findings and analysis in the preceding chapter, the following conclusions can be drawn:

1) Financial Performance as assessed by ROA is impacted by Risk Profile as measured by NPL, resulting in the acceptance of $H1_a$, 2) $H1_b$ is rejected because risk profile as measured by LDR has no impact on financial performance as measured by ROA; 3) $H1_b$ is rejected because risk profile as counted by LDR has no impact on financial performance as measured by ROA; 4) $H2_b$ is rejected because the Risk Profile as determined by LDR has no impact on the Firm Value as determined by PBV, 5) Financial Performance as analyzed by ROA is affected by Good Corporate Governance as calculated by Board Size, allowing H3 to be accepted, 6) In order for H4 to be accepted, good corporate governance as measured by board size affects the firm value as measured by PBV, 7) $H5_a$ is rejected because earnings as determined by BOPO have no impact on financial performance as determined by ROA, 8) $H5_b$ is rejected because earnings as determined by NIM have no impact on financial performance as measured by ROA, 9) $H6_a$ is rejected because earnings as determined by BOPO have no impact on firm value as determined by PBV, 10) $H6_b$ is rejected because NIM earnings measurements have no impact on PBV firm value measurements. 11) H7 is rejected because capital as evaluated by CAR has no impact on financial performance as measured by ROA. 12) H8 is rejected because capital as measured by CAR has no impact on firm value as evaluated by PBV. 13) The Firm Value as measured by PBV is impacted by Financial Performance as measured by ROA, resulting in the acceptance of H9. 14) Financial performance metrics such as ROA are unable to mediate the link between firm value and risk profile as determined by NPL. It can be inferred that the Tenth Hypothesis ($H10_a$) is denied, as demonstrated by the fact that Financial Performance Variable measured by ROA cannot mediate the relationship between Risk Profile measured by LDR and Firm Value measured by PBV. This asserts that the Tenth Hypothesis ($H10_b$) is not supported, and that (16) financial performance variables assessed by ROA can mediate the relationship between good corporate governance as calculated by board size and firm value as measured by PBV. As a result, the Eleventh Hypothesis (H11) is confirmed, which states that Financial performance variables analyzed by ROA are unable to mediate the relationship between earnings measured by BOPO and firm value calculated by PBV. This confirms that the Twelfth Hypothesis ($H12_a$) is not correct, and that 18) the financial performance variable ROA cannot mediate the relationship between earnings as assessed by NIM and firm value as determined by PBV. This notes that the Twelfth Hypothesis ($H12_b$) is not true, and that the relationship between Capital, as assessed by CAR, and Firm Value, as evaluated by PBV, cannot be mediated by the financial performance variable, as determined by ROA. The thirteenth hypothesis (H13) is therefore disproved.

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Table 1. Research Variables and Variable Measurements

Type of Variable	Name of Variable	Measuring Instruments	Formula
Dependent Variable	Firm Value	Price to Book Value (PBV)	Book Value per Share = $\dfrac{Book\ Value\ equity}{Number\ of\ Shares\ Outstanding}$ $PBV = \dfrac{Market\ Price\ per\ Share}{Book\ Value\ per\ Share}$
Independent Variables	Risk Profile	Non Performing Loan (NPL) and Loan to Deposit Ratio (LDR).	NPL = $\dfrac{Total\ of\ Non\ Performing\ Loans}{Total\ Credit}$ x 100% LDR= $\dfrac{Total\ Credit}{Third\ Party\ Funds}$ x 100%
	Good Corporate Governance	Board Size	Board Size = Total of non Independent Board of Commissioners + Total of Independent Board of Commissioners + Total of Board of Directors
	Earning	Operating Costs to Operating Income (BOPO) and Net Interest Margin (NIM)	BOPO = $\dfrac{Total\ of\ Operating\ Expenses}{Total\ of\ Operating\ Income}$ x 100% NIM = $\dfrac{Total\ of\ Net\ Interest\ Income}{Average\ Productive\ Assets}$ x 100%
	Capital	Capital Adequacy Ratio (CAR)	CAR = $\dfrac{Bank\ Capital}{Risk\ Weighted\ Assets}$ x 100%
Intervening Variable	Financial Performance	Return on Assets (ROA)	ROA = $\dfrac{Profit\ Before\ Tax}{Total\ Assets}$ x 100%

Table 2. Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
Risk Profile_NPL	96	,21	10,16	3,4858	1,84607
Risk Profile_LDR	96	41,43	162,29	86,2413	18,15398
GCG_Board Size	96	6,00	22,00	11,9375	4,89213
Earning_BOPO	96	26,50	168,10	87,2660	19,77052
Earning_NIM	96	,05	8,90	4,1003	1,94638
Capital_CAR	96	11,59	55,03	23,9533	8,93103
Financial Performance_ ROA	96	,00	88,94	4,2493	15,37426
Firm Value_ PBV	96	,33	73,40	8,8840	12,75436
Valid N (listwise)	96				

Table 3. Path Analysis Result

First Regression

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763[a]	.583	.552	.99925

a. Predictors: (Constant), LAG_CAR, LAG_NIM, LN_NPL, LAG_LDR, LAG_BOARDSIZE, LAG_BOPO

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.
1　Regression	112.940	6	18.823	18.852	.000[b]
Residual	80.878	81	.998		
Total	193.818	87			

a. Dependent Variable: LN_ROA

b. Predictors: (Constant), LAG_CAR, LAG_NIM, LN_NPL, LAG_LDR, LAG_BOARDSIZE, LAG_BOPO

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1　(Constant)	.224	1.234		.182	.856
LN_NPL	-1.893	.194	-.724	-9.759	.000
LAG_LDR	.005	.006	.057	.760	.450
LAG_BOARDSIZE	.061	.027	.202	2.240	.028
LAG_BOPO	.001	.007	.011	.122	.903
LAG_NIM	.043	.063	.054	.681	.498
LAG_CAR	.014	.014	.087	1.048	.298

a. Dependent Variable: LN_ROA

Second Regression

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.543[a]	.295	.233	1.11874

a. Predictors: (Constant), LN_ROA, LAG_CAR, LAG_NIM, LAG_LDR, LAG_BOPO, LAG_BOARDSIZE, LN_NPL

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.
1　Regression	41.809	7	5.973	4.772	.000[b]
Residual	100.126	80	1.252		
Total	141.936	87			

a. Dependent Variable: LN_PBV

b. Predictors: (Constant), LN_ROA, LAG_CAR, LAG_NIM, LAG_LDR, LAG_BOPO, LAG_BOARDSIZE, LN_NPL

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.144	1.382		-.104	.917
	LN_NPL	.162	.320	.072	.505	.615
	LAG_LDR	.004	.007	.061	.617	.539
	LAG_BOARDSIZE	.072	.031	.279	2.290	.025
	LAG_BOPO	.001	.007	.015	.123	.902
	LAG_NIM	-.074	.071	-.110	-1.047	.298
	LAG_CAR	.022	.015	.154	1.409	.163
	LN_ROA	.401	.124	.468	3.222	.002

a. Dependent Variable: LN_PBV

Third Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.463[a]	.215	.206	1.13364

a. Predictors: (Constant), LN_ROA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.542	1	30.542	23.765	.000[b]
	Residual	111.807	87	1.285		
	Total	142.348	88			

a. Dependent Variable: LN_PBV
b. Predictors: (Constant), LN_ROA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.542	.120		12.836	.000
	LN_ROA	.395	.081	.463	4.875	.000

a. Dependent Variable: LN_PBV

Table 4. Path Analysis Summary

No	Path Equation		Information
1.	$Y_1 = py_1x_{1a}X_{1a} + py_1x_{1b}X_{1b} + py_1x_2X_2 + py_1x_{3a}X_{3a} + py_1x_{3b}X_{3b} + py_1x_4X_4 + \varepsilon_1$	$Y_1 = -0,724X_{1a} + 0,057X_{1b} + 0,202X_2 + 0,011X_{3a} + 0,054X_{3b} + 0,087X_4 + \varepsilon_1$	The effect of Risk Profile (NPL and LDR), Good Corporate Governance (Board Size), Earnings (BOPO and NIM), and Capital (CAR) on Financial Performance (ROA).
2.	$Y_2 = py_2x_{1a}X_{1a} + py_2x_{1b}X_{1b} + py_2x_2X_2 + py_2x_{3a}X_{3a} + py_2x_{3b}X_{3b} + py_2x_4X_4 + py_2y_1Y_1 + \varepsilon_2$	$Y_2 = 0,072X_{1a} + 0,061X_{1b} + 0,279X_2 + 0,015X_{3a} - 0,110X_{3b} + 0,015X_4 + 0,463Y_1 + \varepsilon_2$	The effect of Risk Profile (NPL and LDR), Good Corporate Governance (Board Size), Earnings (BOPO and NIM), and Capital (CAR) on Firm Value (PBV) with Financial Performance (ROA) as an intervening variable.
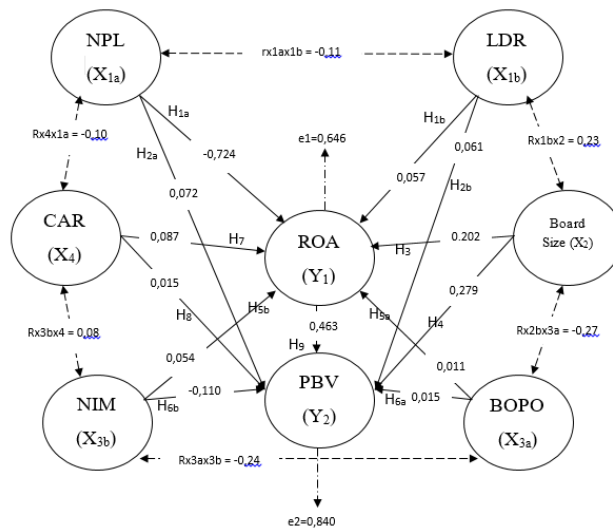
Figure 1. The concept of research after the data processing proces