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Analysis of Banking Risk, Good Corporate Governance, Capital and Earning Influences on the Indonesia's Commercial Bank Performances

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Abstract

This study aims to analyze the effect of commercial bank soundness in Indonesia based on Bank Indonesia regulation number 13/24/DPNP date 25 October 2011, which concern on the implementation guide for Bank Regulation in Indonesia number 13/1/PBI/ 2011 on assessment of bank healthy. In general, those assessments cover risks, good corporate governance (GCG), earning and capital. While, the performance of commercial bank is measured based on credit growth and profit growth. A total of 45 commercial banks listed on the Indonesia Stock Exchange are the population of the study which will be analyzed using the structural equation modeling program - partial least square (SEM-PLS). The results show that credit risk, GCG and earnings have no effect on bank's performance in Indonesia. Market risk, liquidity risk and capital negatively affect the performance of commercial banks in Indonesia. This research is expected to contribute to the policy making of central banks and also commercial bank organization in particular to improve their performance. This research also contributes to the theory by enriching the discussion on related themes.

Keywords: Performance, Bank, Risk, Good Governance, Capital, Earning

1. Introduction

1.1 Introduce the Problem

Performance illustrates the achievement of an organization. Specifically, in bank sector, good or not, healthy or not, can be seen from its financial statements which represent information about its financial performance. The financial report aims to provide information and current situation of the bank related to internal and external parties. Table 1.1 illustrates bank's performances in Indonesia from 2015 to 2019 as follows:

Table 1.1: Banks performance in Indonesia

	Bank's performance (in billion rupiahs)				
	2015	2016	2017	2018	2019
Total of Loans	4,092,104	4,413,414	4,781,931	5,358,012	5,683,757
Third party capital	4,413,056	4,836,758	5,289,377	5,630,448	5,998,648
Profit	133,198	136,311	165,398	185,439	196,474

Source: Indonesia banking statistics, 2019

The table shows that there was a significant decline in the growth of third-party funds and profits, as well as a significant decrease in the growth of provided credit in 2019. The performance of state-owned banks throughout 2019 experienced a downturn. On average, lending and third-party funds to the four state-owned banks grew only single digit. For examples, PT. Bank Mandiri which posted a net profit of Rp. 27.5 trillion in 2019 only recorded a growth of 9.9% yoy, which is far below the 2018 achievement of 21.2%. PT. Bank Rakyat Indonesia also experienced similar situation which has managed a net profit of Rp. 34.4 trillion in 2019 or about 6.2% percent of growth compared to 11.6% from the previous year. PT. Bank Negara Indonesia in contrast, witnessed a net profit of Rp. 15.4 trillion or 2.5% growth increased in 2019 but was not as high as the growth in 2018 about 10.3%.

Banks in Indonesia generally face challenges and demanded to maintain good performance. Commercial banks in Indonesia need to grow in a healthy manner therefore responsibilities and functions of banking as a financial intermediary in the national economy can run well (Hermawan, 2011). However, banking sector in Indonesia often experience problems related to management aspect and in some cases, several banks have shown a very poor performance, which eventually dropping public trust and causing losses that imposed burden on the government. According to the LPS (Lembaga Penjamin Simpanan) during the period of 2005 to 2019, LPS has handled as many as 98 failed banks with total customer claimed reaching of Rp1.4 trillion. Meanwhile, the only bank rescued by LPS was Bank Century with bailout reaching Rp. 8.1 trillion. In summary, Bank failures as the result of weak good corporate governance or the implementation of Good Corporate Governance (GCG).

The main income of a bank comes from loans, which shows that the more loans are given, the greater the bank's income. However, the high growth in loans will also increase potential risk of non-performing loans. Thus, this study aims to investigate the concept of RGEC from the Central Bank about bank's performance measurement. In this research RGEC are the independent variables while performance is the dependent variable. RGEC stands for Risks (credit risk, market risk and liquidity risk), Good corporate governance, Earning and Capital.

The banking industry is one of the sectors that influences a country's economic development. Therefore, banking sector must become a healthy industry in order to be able to maintain its performance. This is what underlies this research so that the results of this study can become a reference and preference for policy makers in banking organizations to be able to wisely determine the target for lending products. This research is also expected to provide consideration for Bank Indonesia, as the central bank and regulator, to make policies and decisions related to banking health and performance of commercial banks in Indonesia. In addition, this study is expected to contribute to the body of knowledge or a path for further research to discuss in more detail and depth the risks faced by banking industry in its operational activities.

1.2 Literature Review

The effect of banking soundness on commercial bank performance is a focus of interest in this study. Bank's healthy covers risks exposure, good corporate governance, earnings and capital. Meanwhile, commercial bank's performance contains of loan and profit growth. Research related to this theme is very diverse and provides a broad perspective for formulating hypotheses to be tested in this study. Some of them will be discussed briefly in this section.

1.2.1 Effect of Banking Risk on Commercial Bank Performance

Analysis of differences in health level of commercial banks before and after the implementation of Risk Profile, Good Corporate Governance, Earning, Capital (RGEC) method in Indonesia were conducted by Mayasari and

Aryani in 2018 with purposive sampling method of 10 banks in the period 2008-2016 through a different t-test (comparative analysis). The findings revealed that Risk Profile is proxied by Non-Performing Loans (NPL) and earnings proxied by Net Interest Margin (NIM). It has proved with no significant difference before and after the implementation of RGEK. Meanwhile, Good Corporate Governance and Capital, proxied by the Capital Adequacy Ratio (CAR) were proven to have significant differences between before and after the implementation of RGEK. This is in line with research by Ramosa *et al.* (2020) on commercial banks in Peru during the 2009 - 2018 period. Veithzal (2013) explains market risk is a risk that arises because of market movements from portfolios owned by banks, which can be detrimental to the bank (adverse moment). One factor that influence market risk is interest rate, which is measured by the difference between funding interest rate and loan interest rate. The difference between the total cost of funding and the total cost of borrowing is called NIM (Net Interest Margin). Market risk arises from market movements from normal conditions to abnormal conditions so that these conditions cause banks to experience losses (Fahmi, 2014). On the other hand, credit risk can be measured using a Non-Performing Loan (NPL), which is a comparison between total non-performing loans and total debts. The smaller the NPL, the more bank can manage their credit risk well so that it can have a good impact on financial performance assessments. Several researches also revealed that credit risk (NPL) has a negative effect on financial performance (Mushtaq *et al.* 2015; Ndoka & Islami, 2016; and Anshika, 2016). Noman *et al.* (2015) also assert similar results in the Bangladesh banking sector using NPL, LLR, and CAR variables as indicators of credit risk, ROA and NIM as indicators of profitability.

In addition, liquidity risk is a risk caused by bank's inability to meet its maturing obligations. It measures how much the bank's ability to pay its debts and payback to its depositors (Damayanti & Savitri, 2012). If the LDR value is high, then the credit channeled will be bigger therefore it will increase the profitability obtained by the bank through credit. This indicates that the LDR has a positive effect on ROA. This statement is in accordance with research conducted by Rengasamy (2014) and Dewi *et al.* (2015). Accordingly, three hypotheses are formulated as follows:

- H1: Credit risk has a negative influence on bank's performance
- H2: Market risk has a negative influence on bank's performance
- H3: Liquidity risk has a positive influence on bank's performance

1.2.2 Effect of Good Corporate Governance on Commercial Bank Performance

The OECD defines corporate governance as a set of relationships between company management, the board, shareholders, and other parties who have an interest in the company. According to the World Bank, good corporate governance is rules, standards and organizations in the economic sector which regulate the behavior of company owners, directors and managers as well as the details and description of their duties and authorities include their responsibilities to investors (shareholders and creditors). Ideally, good corporate governance ables to reduce risks that may be carried out by the board self-interest decisions and leads to increase investors' confidence to invest (Kusuma in Ristifani, 2009).

According to a research conducted by Nuswandari (2009) that *good corporate governance* positively affects the company's performance. The result supports by Pranata (2007) who assessed the *good corporate governance* secara with ROE and performance measured by NPM. Therefore, hypothesis four is formulated as follow:

- H4: Good Corporate Governance berpengaruh terhadap Kinerja Bank Umum.

1.2.3 The effect of Earning on Commercial bank performance

Earnings ratio is a comparison between profit after tax with profit before tax with total assets owned by the bank in a certain period. In order the ratio calculation result is closer to the actual conditions, the capital position is calculated on average during that period (Riyadi, 2006). Kalendesang (2017) states that ROA ratio has a significant effect on bank financial performance and obtains a healthy predicate. The amount of Return on Asset (ROA) shows better performance, because the rate of return is getting bigger. If the Return on Assets (ROA) increases, it means that the company's profitability increases, hence the benefits can be enjoyed by shareholders.

One of the earnings ratios in this study uses Operational Costs to Operational Income (BOPO). This ratio shows the level of efficiency of bank operational performance (Muhamad, 2014). The higher the level of the ratio, the

worse the performance of the bank's management, because the bank is less efficient in using existing resources in the company. This argument is supported by several research such Sudiyatno (2010), Schiniotakis (2012), and Suhardi and Altin (2013) that BOPO has a negative effect on profitability (ROA).

H5: Earnings effect on commercial banks performance

1.2.4 Effect of Capital on commercial bank performance

Capital is an important factor for a company in the context of business development and to accommodate risks that may occur (Umam, 2013). Capital is an assessment of the bank's capital adequacy to cover current risk exposures and anticipate future risk exposures. Mayunita's research (2017) shows that the CAR (capital adequacy ratio) has a positive effect on bank performance. Here the CAR variable shows its value has increased from year to year. Similarly, Chyntiaovami (2018) and Handayani, (2017) state that the CAR variable has a positive and significant effect on bank performance. CAR shows the ability of bank capital to guard against possible risk of loss to its business activities and has a significant effect on bank performance.

Moussa (2018) analyzes determinants of bank capital and stated that capital is very important to increase the strength and efficiency of the banking system. His research studies a sample of 18 banks in Tunisia during period of 2000-2013 and his finding shows that asset returns, net interest margins, liquidity, inflation rates, foreign ownership and private ownership significantly influence bank capital. This result is also supported by Taherinia and Baqer (2018); Yahaya et al. (2016); Hwang et al. (2013); Petria, et al. (2015) which states that CAR has a positive effect on profitability (ROA).

H6: Capital effects on the performance of commercial banks

1.3 Research Framework

Based on observation in the literature review section, this study proposes six independent variables which measure one bank's performance as the dependent variable, the figure is as follows:

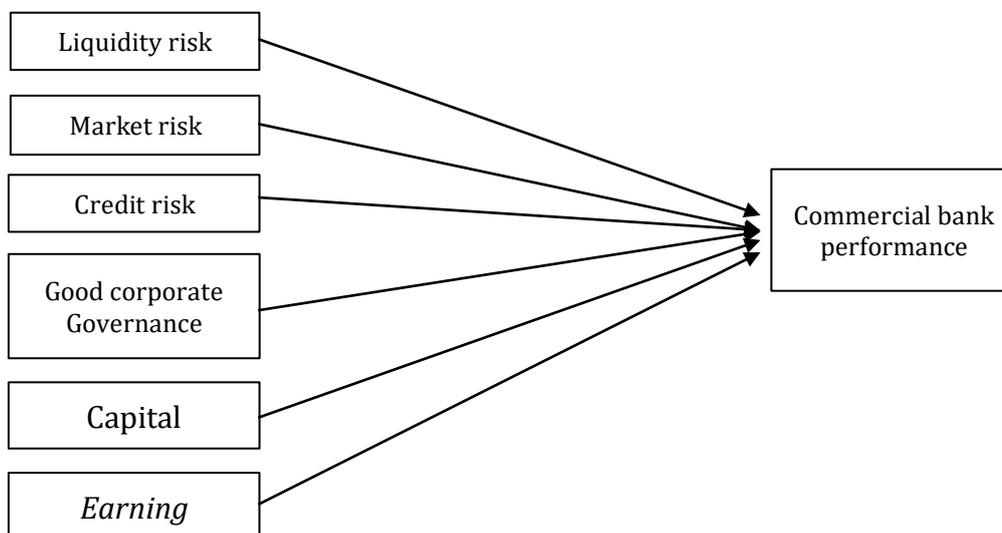


Figure 1.1: Research model

2. Method

2.1 Research Design

The method of this research is exploratory with objective to gain something different than other research and also to test the causal relationship between dependent and independent variables. This research assesses the effect of bank soundness such as risks, good corporate governance, earning dan capital toward performance of commercial bank in Indonesia.

Besides, this article also analysis descriptively the data of bank soundness through bank risk exposures (credit risk, market risk and liquidity risk), good corporate governance, earning dan capital altogether with commercial bank performance through credit as well as profit growths. Therefore, this paper in nature is positivist to test the formulated hypotheses.

The analysis technique used to process the data is the structural equation modeling (SEM) analysis technique using the Partial Least Square (PLS), in order to see the relationship between indicators and latent constructs by calculating the total variance which consist of general, specific and error with a sample of 45 commercial banks that have been go-public and listed on the Indonesia Stock Exchange (IDX). The period of this research is 2015 to 2019.

Several variables were studied in order to achieve research objectives in this study, namely credit risk, market risk, liquidity risk, good corporate governance, capital and earnings, on the performance of commercial banks. The governance process assessment aims to assess the effectiveness of GCG principles implementation process, which is supported by the availability of a bank governance structure and infrastructure. For this reason, a supporting variable is used, namely the frequent training that has been provided and carried out by the governance structure. The indicator of the number of training (training) in this study is the number of training conducted by the governance structure which is recorded in the GCG implementation report.

3. Analysis results

The first step in analysis phase in this study is demographic analysis. Then followed by assessing the validation and reliability of the model. Outer model with reflexive indicators is evaluated through convergent and discriminatory on the indicators forming latent constructs, as well as through composite reliability and Cronbach alpha for the indicator block. The next phase is to evaluate the structural equation model (inner model) which explains the effect of the independent latent model on the dependent latent variable.

3.1 Demographic analysis

In the description of the research data, the minimum, maximum, mean, and standard deviation of each indicator on the research variables are presented. The results of descriptive statistics for data can be seen in the following table:

Table 3.1: Descriptive statistic for each indicator

n = 225	Minimum	Maximum	Mean	Std. Deviation
NPL	.700	15.750	3.80319	2.331626
NPLN	.200	9.920	2.21483	1.573582
PDN	.063	6.820	1.94508	1.707968
PDNV	.043	5.580	1.09112	1.194948
LDR	50.610	111.750	85.98032	12.227406
LCR	-.596	9.081	1.41361	1.797532
CAR	9.927	35.720	20.83464	5.995452
Train	2.000	4.000	3.00000	.707107
Profit	.058	1.472	.15687	.226002
Credit	.047	1.180	.12888	.180793
ROA	-.552	.359	.05491	.099481
Bopo	-.030	.171	.02117	.025176

Source: Result of data analysis

The mean value shown in the table for each construct variables is obtained from time series data for 45 commercial banks in Indonesia (listed on BEI) from 2015-2019. The average NPL (Non-Performing Loan) value as an indicator of the credit risk variable was 3.8. This value increased from 3.3 in 2015. The average NPLN (Non-Performing Loan Netto) was quite low (2.2) because NPLN in 2015 was only 1.8. It increased in the following

years, then fell back to 1.9 in 2019. A high NPL ratio indicates the large number of debtors who do not pay credit installments continuously, either the principal or the interest.

Other indicator, the average of PDN and PDNV are 1.94 and 1.09 respectively. NOP and PDNV are indicators of market risk variables. Among the banks studied, the average NOP and PDNV were less than 20%. This is because banks are required to manage and maintain NOP not exceeding 20% of capital every 30 minutes since the bank's treasury system is opened to closed.

The table also shows the average of LDR (Loan to Deposit Ratio) and LCR (Liquidity Coverage Ratio) which are indicators of liquidity risk variable. The average value of LDR tends to be stagnant, around 86.764% from 2015 to 2019 appointing to 85,990%. This shows that the LDR value is too high. If the LDR value is too high, means that banks do not have sufficient liquidity to cover their obligations to customers (TPF).

Based on the average LCR value, commercial banks in Indonesia are above 1, which means that it is above 100%. According to the regulation, banks are required to meet a minimum quota of 100% LCR in a sustainable manner. The average value of training (abbreviated as Train) is 3.0 which this indicator is used to measure good corporate governance (GCG). In addition, the average value of CAR is 20.8%, this also shows that the CAR of commercial banks in Indonesia is more than the safe limit of 8%, which indicates the ability to provide funds to overcome possible risk of loss. The CAR of commercial banks in Indonesia tends to be stagnant, shown with the values of 21.24 in 2015, 21.49 in 2016, and 21.07 in 2019 respectively.

In regard to operational expenditure, BOPO is the interest expense paid to customers while operating income is the interest earned from customers. The smaller the BOPO value means the more efficient the bank is in operating. The table shows the average value of BOPO is 0.02 or 2%, which means that every 2 rupiah of expenses, it generates income of Rp. 100. The average growth of bank profits is 0.157 and the average credit growth is 0.129.

3.2 Analysis of Structural Equation Modelling (SEM)

The instrument can be said to be valid if the instrument can measure what it should be measured (Cooper and Schindler, 2014). In this study, the validity test used the method of convergent validity and discriminant validity with the help of SmartPLS 3.0. Based on the research method described in chapter 3, before analyzing the data, the first step is to test the quality of the instrument, namely the validity test and the reliability test. The result of convergent validity shows that almost all loading factor values are more than 0.70 and between 0.60 - 0.70 is acceptable. With the variable indicators above, it is declared valid and considered sufficient to meet the convergent validity requirements. In addition, all constructs or latent variables have good discriminant validity, where the indicators in the construct indicator block are better than the indicators in other blocks.

To evaluate the discriminant validity, it can also be seen by the average variance extracted (AVE) method for each construct or latent variable. The AVE value of each construct is above 0.5, except for the liquidity risk which has AVE $0.463 < 0.5$. Therefore, there is no convergent validity issue in the model being tested hence the construct in this research model can be said to have good discriminant validity. Based on the composite reliability value, all constructs are very good which is above 0.7, except for liquidity risk which has a composite reliability value of $0.632 < 0.7$ but the composite reliability value between 0.6 - 0.7 is still acceptable according to Ghozali, (2015: 77). Thus, it can be concluded that the construct indicators are reliable. In other words, all manifest variables of latent variables are proven to have accuracy, consistency and accuracy of instruments in measuring constructs well.

3.2.1 Structural Model (Inner Model)

This subsection explains the results of the path coefficient test, goodness of fit test and hypothesis testing. Path coefficient evaluation is used to show how strong is the effect or influence of the independent variable on the dependent variable. While, coefficient determination (R-Square) is used to measure how much the endogenous variable is influenced by other variables. Chin, (1998) states that the R² result of 0.67 and above for endogenous latent variables in the structural model indicates that the effect of exogenous variables on endogenous variables is

strong. If the result is 0.33 - 0.67, it is in the medium category, and if the result is 0.19 - 0.33, it is in the weak category (Chin, 1998 quoted in Ghozali and Latan, 2015: 81).

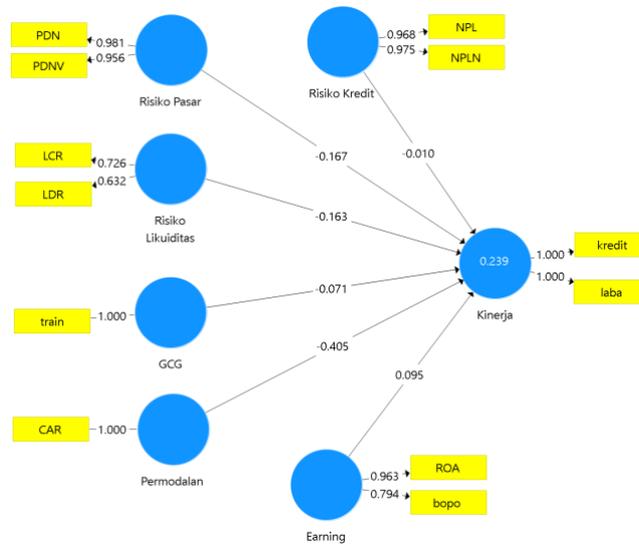


Figure 3.1. Output of Structural Model (Standardized Output) – PLS Algorithm
 Source: Result of data analysis

Based on the inner model scheme that has been shown in Figure 3.1, it can be explained that the regression coefficient value for credit risk variable is -0.010, market risk variable is -0.167, liquidity risk variable is -0.163, GCG variable is -0.071, capital variable is -0.405 and earnings variable is 0.095. These values show that there are five variables in this model that have a negative coefficient as follows: the variable credit risk, market risk, liquidity risk, GCG and capital. These results imply that the greater the coefficient value on these variables, the lower the performance of commercial banks and vice versa. In contrast, the earning variable has a positive coefficient which means that the higher the earnings, the higher the performance of commercial banks. Moreover, R-Square value for the performance variable of commercial banks is 0.239. This value explains that the percentage of commercial bank performance can be explained by credit risk, market risk, liquidity risk, GCG, capital and earnings as much as 23.9% and the remaining 76.1% is caused by other unstudied factors. The R-square value of 0.239 is in the range 0.19 - 0.33 indicates that the model is in the weak category.

3.2.2 Hypotheses tes

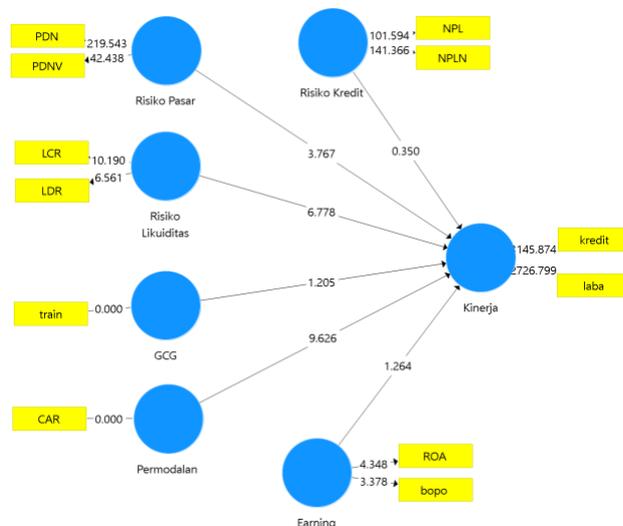


Figure 3.2 Structural model results (Standardized Output) – Bootstrapping
 Source: Result of data analysis

The SmartPLS 3.0 program only provides a bootstrap resampling method. The significance value used was 1.96 (on significance level = 5%) (Ghozali and Latan, 2015: 80). Thus, constructs with t count >1.96 declare to have a significant effect. The following is a summary of the results of hypothesis testing.

Table 4.13: Hypotheses Testing

Hypotheses	Variable	Path Coefficient	T – Statistic	p-values	Remark	Decision
H1	Credit Risk → Performance	-0.010	0.350	0.727	No effect	Rejected
H2	Market Risk → Performance	-0.167	3.767	0.000	Effect significantly	Accepted
H3	Liquidity risk → Performance	-0.163	6.778	0.000	Effect significantly	Accepted
H4	GCG → Performance	-0.071	1.205	0.229	No effect	Rejected
H5	Capital → Performance	-0.405	9.626	0.000	Effect significantly	Accepted
H6	Earning → Performance	0.095	1.264	0.207	No effect	Rejected

Source: Result of data analysis

Based on the results of hypothesis testing, it can be explained as follows:

Hypothesis 1 states that credit risk affects the performance of commercial banks. From the results of existing data processing, it is known that the t-value of the credit risk statistic is 0.350 smaller than 1.96 and the p-value is 0.727 > 0.05, so that H0 is accepted and H1 is rejected. This means that the credit risk variable has no effect on the performance of commercial banks so that hypothesis 1 is rejected

Hypothesis 2 states that market risk affects the performance of commercial banks. By looking at the results of existing data processing, the t-value of the market risk statistic is 3,767 > 1.96 and the p-value is 0,000 < 0.05 so that H0 is rejected and H2 is accepted. This means that the market risk variable has a significant effect on the performance of commercial banks so that H2 be accepted.

Hypothesis 3 states that liquidity risk affects the performance of commercial banks. The result of data processing shows that the t-value of the liquidity risk statistic is 6.778 > 1.96 and p-value of 0.000 < 0.05, so that H0 is rejected and H3 is accepted. This means that hypothesis 3 is accepted where liquidity risk has a significant effect on the performance of commercial banks.

Hypothesis 4 describes the effect of GCG on the performance of commercial banks. In the table of processed data, the t-value of the GCG statistic is 1.205 < 1.96 and the p-value is 0.229 > 0.05, so that H0 is accepted and H4 is rejected. This means that the GCG variable has no effect on the performance of commercial banks and hypothesis 4 is rejected.

Hypothesis 5 describes the effect of capital on the performance of commercial banks. With the results from data processing, the t-value of the capital statistic was 9.626 > 1.96 and the p-value was 0.000 < 0.05. This means that H0 is rejected and H5 is accepted, which indicates that the capital variable has a significant effect on the performance of commercial banks.

Hypothesis 6 describes the effect of earnings on the performance of commercial banks. The t statistical earning value from the processed data is 1.264 < 1.96 and the p-value is 0.207 > 0.05. This means that the earning variable has no effect on the performance of commercial banks so that H0 is accepted and H6 is rejected.

4. Discussion

4.1 Effect of Banking Risks on Commercial Bank Performance

Among the risks exposures on banking sector consist of credit risk, market risk and liquidity risk. The study results show only market risk and liquidity risk have a significant negative effect on the performance of commercial banks

in Indonesia. The rest does not actually affect the performance of commercial banks in Indonesia. In details, the size of NPLs did not actually affect the performance because credit risk or NPLs could be anticipated with various techniques, methods and alternatives which increasingly develop on banking industry, for instance: rescheduling, reconditioning, restructuring and others method (Didik and Bambang, 2013; Putri Qaniah, 2015; and Pauline, 2015).

Liquidity risk is caused by the inability to fulfill its due obligations. Loan to Deposit ratio (LDR) is used to measure how good the bank to pay its debts and repay to its depositors. LDR indicates the effectiveness of third-party funds (customer funds) channeled to generate returns and profits. The lower the liquidity risk, the better the performance of the bank. In other words, lower liquidity risk (the ability to manage their liquid assets to meet short-term liabilities), it will have an effect on improving the performance. These results are supported by Sari et al. (2012), Damayanti & Savitri, (2012), Fahmi (2014), Attar (2014), Dewi et al. (2015), Mushtaq et al. (2015), Ndoka & Islami (2016), Anshika (2016), Rengasamy (2014).

4.2. Effect of Good Corporate Governance on Commercial Bank Performance

The results showed that good corporate governance (GCG) as represented by training indicators which had no effect on the performance of commercial banks in Indonesia. Training is an indicator that explains how much training has been carried out by committee with the aim of helping banking performance, especially in the governance process.

The analysis results show that the quantity of conducted training does not affect the performance of banks in Indonesia. Good quality training actually helps more in the governance process than the quantity of training provided. It is probably the conducted training was not based on business activities related to profit growth and credit growth. Moreover, good corporate governance also requires the existence of the right structure and tools (especially in achieving profit growth and credit growth) to achieve goals and oversight the performance of commercial banks in Indonesia. The results of this theme are in line with Pracoyo and Putriyanti (2016), Yani and Azwansyah (2017), Ferdian (2018), Gabriela and Ivonne (2019) and Panji and Joko (2019).

4.3. The Influence of Capital on Commercial Bank Performance

The results showed that capital had a negative effect on the performance of commercial banks in Indonesia. Even more, capital is the strongest influence on performance compared to other variables. The results of this study also show that the increased capital adequacy ratio (CAR) causes credit growth and profit growth for commercial banks in Indonesia to decline. Capital is the most basic factor for a bank in the context of business development and accommodating risks that may occur. If the value of the CAR is large, the more capital need to carry out for its operational activities. Similarly, with Oino's (2017) studies on the Impact of Regulatory Capital on European Banks Financial Performance, which shows that banks play an important role in the economy by channeling resources from savers to borrowers and striving to allocate productive investment opportunities. However, the last decade has highlighted the dangers of allowing the financial sector to become too large. Thus, negative developments such as rent seeking and the development of complex innovative financial instruments may outweigh the financial benefits.

However, to avoid greater risks, the minimum CAR ratio must be adjusted to the size and nature of banking activities as some banks are involved in riskier projects than others (Adelia, 2011 and Anisah, 2013).

4.4. Effect of Earning on Commercial Bank Performance

The results of this study indicate that earnings have no effect on the performance of commercial banks in Indonesia. The level of ROA and BOPO do not affect profit growth and credit growth. The ROA ratio is a comparison of profit before tax with total assets owned by the bank in a certain period or a comparison of profit after tax with capital. In order for the ratio calculation results closer to the actual conditions, the capital position is calculated averagely during that period. Return on Asset (ROA) shows the health level of a bank because of a large rate of

return. BOPO is a ratio that shows the actual state of bank operations. The higher the level of the BOPO ratio, the worse the health of the bank because the bank's concern is less efficient in using existing resources. The BOPO ratio did not affect credit growth and profit growth for commercial banks in Indonesia, even though commercial banks are efficient in bank operations as well as in the use of assets.

5. Conclusion and Suggestion

5.1 Conclusion

1. The lower the market risk for commercial banks in Indonesia (the ability to manage capital for their foreign exchange activities), the better the performance of commercial banks will be.
2. Liquidity risk has a negative effect on the performance (credit and profit growth) of commercial banks in Indonesia. The lower the liquidity risk in commercial banks in Indonesia (the ability to manage their liquid assets to meet short-term liabilities), the higher the performance (credit and profit growth) of commercial banks.
3. Good Corporate Governance (GCG) as represented by training indicator at commercial banks did not affect the performance (credit and profit growth) of Indonesian commercial banks. A good quality of training carried out by the governance structure is more helpful rather than the quantity of training provided.
4. Capital in commercial banks has a negative effect on the performance (credit and profit growth). The higher the capital adequacy ratio (CAR), the lower the credit growth and profit growth of commercial banks in Indonesia. It is possible for commercial bank credit and profit growth to be shifted to a capital adequacy ratio in order to achieve compliance with the stipulated CAR regulations.
5. Earning at commercial banks does not affect performance in Indonesia. This shows that the level of ROA and BOPO do not affect profit growth and credit growth of commercial banks in Indonesia. ROA shows the health of commercial banks only, because of a good rate of return. Likewise, BOPO does not affect credit growth and profit growth for commercial banks in Indonesia, even though commercial banks are quite efficient in bank operations and asset utilization.

5.2. Suggestion

1. For banking industry
 - a. The ability of commercial banks in Indonesia to manage market risk and liquidity risk can be maintained and even improved therefore performance of commercial banks in Indonesia will increase. The ability to manage market risk and liquidity risk should be appreciated by BI as the central bank and financial services authority (OJK).
 - b. To achieve the implementation of training in the governance process at commercial banks in Indonesia, it should also improve the quality of training compared to its number.
 - c. The increasing capital adequacy ratio (CAR) for commercial banks in Indonesia should be accompanied by the increasing of profit growth. Commercial bank nowadays have been strengthened their capital structure by increasing the amount of reserved profit to increase their paid-in capital.
 - d. Because commercial banks have an intermediary function in the economy, the increasing the capital adequacy ratio for commercial banks in Indonesia should be accompanied by the increasing credit growth. However, growth in credit distribution must remain under control because credit with poor collectability has a greater risk, so that assets are weighted according to risk (the components in the capital adequacy ratio will also increase).
 - e. The soundness level of commercial banks in Indonesia, which is marked by a good returns and efficiency in operations. It should be used to increase credit growth and profit growth for commercial banks.

2. Future research

This study provides another perspective for future research using other variables, both financial and non-financial, such as: company size, compliance, maximum credit lending limit (BMPK), fulfillment of minimum statutory reserves (GWM). Inflation rate, BI rate and other variables are also among the

suggestion variables to be accounted so that it can better describe what things can affect Indonesian banking. Samples in further research should also differentiate types bank such as foreign exchange bank, non-foreign exchange bank, conventional and non-conventional (sharia) banks.

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References

- American Psychological Association. (1972). *Ethical standards of psychologists*. Washington, DC: American Psychological Association.
- Anderson, C. A., Gentile, D. A., & Buckley, K. E. (2007). *Violent video game effects on children and adolescents: Theory, research and public policy*.
- Beck, C. A. J., & Sales, B. D. (2001). *Family mediation: Facts, myths, and future prospects* (pp. 100-102). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/10401-000>
- Bernstein, T. M. (1965). *The careful writer: A modern guide to English usage* (2nd ed.). New York, NY: Atheneum.
- Bjork, R. A. (1989). Retrieval inhibition as an adaptive mechanism in human memory. In H. L. Roediger III, & F. I. M. Craik (Eds.), *Varieties of memory & consciousness* (pp. 309-330). Hillsdale, NJ: Erlbaum.
- Abba, G. O., Zachariah, P., & Inyang, E. E. (2013). Capital Adequacy Ratio and Banking Risks in the Nigeria Money Deposit Banks. *Research Journal of Finance and Accounting*, 4(17), pp: 17–25. Retrieved from <http://www.iiste.org/Journals/index.php/RJFA/article/view/8972>
- Alajmi, M. & Alqasem, K. (2018). Determinants of Capital Adequacy Ratio in Kuwaiti Banks, *Journal of Governance and Regulation*, 4(4), pp: 315-322
- Aspal, P. K. and Nazneem, A. (2014). An Empirical Analysis of Capital Adequacy in the Indian Private Sector Banks, *American Journal of Research Communication*, 2 (11), pp: 28-42
- Athukorala, Prema-chandra and Peter G. Warr. (2002). Vulnerability to a Currency Crisis: Lessons from the Asian Experience. *The World Economy* 25 (1), pp. 33–57.
- Aykut Ekinci, (2016). The Effect of Credit and Market Risk on Bank Performance: Evidence from Turkey. *International Journal of Economics and Financial Issues, Econ Journals*, vol. 6(2), pp: 427-434.
- Barth JR, Caprio G, Levine R. (2010). Bank Regulation and Supervision: What Works Best? *Journal of Financial Intermediation* 13:205–248
- Batani, Leila, Vakilifard, Hamidreza, dan Asghari, Farshid. (2014). The Influential Factors on Capital Adequacy Ratio in Iranian Banks. *International Journal of Economics and Finance*, 6(11), pp. 108-116
- Bertrand, M. and A. Schoar (2003). Managing with Style: The Effect of Managers on Firm Policies. *Quarterly Journal of Economics* 118.4, pp. 1169–1208
- Boot, A. and Thakor A.V. (2010). The Accelerating Integration of Banks and Markets and its Implications for Regulation, in A. Berger, P. Molyneux and J. Wilson (eds.), *The Oxford Handbook of Banking*, pp. 58-90.
- Borio, C., Zhu, H. (2008). Capital Regulation, Risk-Taking and Monetary Policy: A Missing Link in the Transmission Mechanism? Bank for International Settlements *Working Paper* 268
- Buchory, Herry Achmad, (2006). The Influence of Financial Intermediary Function Implementation, Risk Management Application and Bank Capital Structure on Banking Financial Performance, *Disertasi Fakultas Ekonomi, Universitas Padjadjaran Bandung*
- Dornbusch, R. (2009). Expectations and Exchange Rate Dynamics. *Journal of Political Economy* 84, pp: 1161–1176
- Eichengreen, Barry, and Yung Chul Park (2005). Why Has There Been Less Financial Integration in Asia than in Europe? in Y.C. Park, T. Ito, and Y. Wang, eds., *A New Financial Market Structure for East Asia*. Cheltenham, Edward Elgar, pp. 84-103
- Farlane (2009). Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence. *World Bank Economic Review* 13, pp: 379-408.
- Fiordelisi, F., and Marques-Ibanez, D. (2013). Is Bank Default Risk Systematic? *Journal of Banking and Finance* M37, pp: 2000-2010
- Fiordelisi F, Marques-Ibanez D, Molyneux P. (2011a). Efficiency and Risk in European Banking. *Journal of Banking and Finance* 35 (5), pp: 1315-1326
- Francis, W. and Osborne, M. (2010). On the Behavior and Determinants of Risk-Based Capital Ratios: Revisiting the Evidence from UK Banking Institutions. *International Review of Finance*, 10, 485-518

- Fu, F., (2009). Idiosyncratic Risk and the Cross-Section of Expected Stock Returns. *Journal of Financial Economics* 91, 2437.
- Furman, J. and Stiglitz, J. (2000). Economic Crises: Evidence and Insights from East Asia. *Brookings Papers on Economic Activity*, 29(2), pp. 1–136
- Gadzo, Samuel Gameli Holy Kwabla Kpportorgbi & John Gartchie Gatsi. (2019). Credit risk and operational risk on financial performance of universal banks in Ghana: A partial least squared structural equation model (PLS SEM) approach, *Cogent Economics & Finance*, 7:1, 1589406
- Ghenimi, A., & Omri, M. A. B. (2016). Liquidity Risk Management: A Comparative Study Between Islamic and Conventional Banks. *Arabian Journal of Business and Management Review*, 3(6), pp: 25-30.
- Ghozali, I., dan Latan, H. 2015. Partial Least Squares: Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 3.0 untuk Penelitian Empiris. Semarang: BP-UNDIP.
- Giordana, Gaston A., and Ingmar Schumacher. (2017). Bank Liquidity Risk and Monetary Policy. Empirical Evidence on the Impact of Basel III Liquidity Standards. *International Review of Applied Economics* 27, pp: 633–55
- Glick, Reuven and Hutchison (2009). Contagion and Trade. Why Are Currency Crises Regional? *Journal of International Money and Finance*, 18, pp: 603-618. Earlier versions issued as CEPR Discussion Paper 1947 and NBER Working Paper 6806
- Goldstein, Itay. (2005). Empirical Literature on Financial Crises: Fundamentals vs. Panic. In the Evidence and Impact of Financial Globalization. Chapter 36, 523–534. *Academic Press*
- Griffin, J. M., & Lemmon, M. L. (2002). Book-to-Market Equity, Distress Risk, and Stock Returns. *The Journal of Finance*, 57(5), pp: 2317-2336
- Huang MY, Fu TT (2013). An Examination of the Cost efficiency of banks in Taiwan and China using the metafrontier cost function. *J Prod Anal* 40, pp:387–406
- Kaminsky, Graciela, Saul Lizondo, and Carmen Reinhart (2008). Leading Indicators of Currency Crises. International Monetary Fund Staff Papers, 45, March, 1-48
- Kaminsky, Graciela L. and Carmen M. Reinhart, (2009). The Twin Crises: The Causes of Banking and Balance of Payments Problems. *American Economic Review*, 89(3), pp: 473–500
- Khan, Z., Ferguson, D., and Pérez, A. (2015). Customer Responses to CSR in The Pakistani Banking Industry. *International Journal of Bank Marketing*, Vol. 33(4): 471-493
- Koju, Laxmi, Ram Koju, Shouyang Wang. (2018). Macroeconomic and Bank-Specific Determinants of Non-Performing Loans: Evidence from Nepalese Banking System, *Journal of Central Banking Theory and Practice*, 3, pp. 111-138
- Krugman, Paul (2000). A Model of Balance of Payments Crises. *Journal of Money, Credit and Banking*, 11, pp: 311–25
- Kumar, Manmohan, Uma Moorthy, and William Perraudin (2008). Determinants of Emerging Market Currency Crises and Contagion Effects. paper presented at *CEPR/World Bank Conference*. Financial Crises: Contagion and Market Volatility, London, May 8-9
- Lepetit, L., Nys, E., Rous, P., Tarazi, A., 2008. Bank Income Structure and Risk: An Empirical Analysis of European banks. *Journal of Banking and Finance*, 32(8), pp: 1452–1467
- Leeungan, M., & Turban, E. (2015). A Trust Model for Consumer Internet Shopping. *International Journal of Electronic Commerce*, 6, pp: 75-91.
- Lepetita, Laetitia & Strobel. (2015). Bank Insolvency Risk and Time-Varying Z-Score Measures *Journal of International Financial Markets, Institutions & Money*, 25, pp. 73-87
- Mahrán, Hatim Ameer, (2012). Financial Intermediation and Economic Growth in Saudi Arabia: An Empirical Analysis, 1968- 2010. *Journal Modern Economy*, 3(5), pp. 626-640
- Minsky, H.P., (2000), *Stabilizing an Unstable Economy*, New Haven, CT: Yale University Press
- Mishkin, Frederic S. (1997). *The Economics of Money, Banking, and Financial Markets*. Pearson International Edition, 8th edition
- Mishkin & Eakins, (2006). *Financial Market & Institutions*, Chicago: Richard D. Irwin
- Moreno, Luis (2005). The Europeanization of Welfare: Paradigm shifts and social policy reforms, in Taylor-Gooby, Peter (ed.), *Ideas and Welfare State Reform in Western Europe*, pp. 145-175. New York: Palgrave Macmillan
- Moreno, Ramon (2009). *Was There a Boom in Money and Credit Prior to East Asia's Recent Currency Crisis?* Federal Reserve Bank of San Francisco Economic Review No. 1
- Noman, Abu Hanifa Md., Mustafa Manir Chowdhury, Najmeen Jahan Chowdhury, Mohammad Jonaed Kabir, and Sajeda Pervin. (2015). The Effect of Bank Specific and Macroeconomic Determinants of Banking Profitability: A Study on Bangladesh. *International Journal of Business and Management* 10: pp: 287–97.
- Nouaili, M., Abaoub, Ezzeddine & Ochi, A. (2015). The Determinants of Banking Performance in Front of Financial Changes: Case of Trade Banks in Tunisia. *International Journal of Economics and Financial Issues*, 5(2).

- Poudel, R.P.S. (2012). The impact of credit risk management on financial performance of commercial banks in Nepal. *International Journal of Arts and Commerce*, 1(5), pp: 9-15
- Rose, Peter, S., (2002). *Commercial Bank Management*. Chicago: Richard D. Irwin, Inc
- Roy, A. D. (1952). Safety First and the Holding of Assets. *Econometrica*, 20(3), pp: 431-449
- Rivai, V., & Ismal, R. (2007). *Islamic Risk Management for Islamic Bank*. Jakarta: Gramedia Pustaka Utama.
- Riyanto, (1998) *Dasar-dasar Pembelanjaan Perusahaan*, Yayasan Badan Penerbit Gadjah Mada, Edisi 4, Yogyakarta
- Saba, I., Ashraf, H. M. W., Kouser, R. (2017) Impact of Basel III framework on financial distress: A case study of Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 3(1), pp: 1-22
- Salas, V., Saurina, J., (2003). Deregulation, Market Power and Risk Behavior in Spanish Banks. *European Economic Review*, 47, 1061–1075.
- Taherinia, Masoud & Baqeri, Alirahm (2018). The Effect of Capital Adequacy Ratio on the Ratio of the Bank Reserves Accepted in the Tehran Stock Exchange. *International Journal of Economics and Financial Issues, Econjournals*, 8(1), pp. 161-167.
- Yahaya, S., Hamid, I. A., Fauzi, A., Idris, B., & Haji-Othman, Y. (2016). Adoption of Islamic banking products and services in Nigeria: An application of Diffusion of Innovation theory. *Science and Technology*, 2, 264-273