

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/324167850>

International Journal of Economics and Financial Issues Corporate Governance, Capital Reserve, Non-Performing Loan, and Bank Risk Taking

Article · March 2018

CITATIONS

0

READS

180

1 author:



[Diyan Lestari](#)

Institut Teknologi dan Bisnis Kalbis, Indonesia, Jakarta

2 PUBLICATIONS **0** CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Banking Performance in Indonesia [View project](#)



Corporate Governance, Capital Reserve, Non-Performing Loan, and Bank Risk Taking

Diyan Lestari*

Institut Teknologi dan Bisnis Kalbis, Jakarta, Indonesia. *Email: diyan.lestari@kalbis.ac.id

ABSTRACT

This study aim to analyze the effect of corporate governance, bank capital reserve, and non performing loan on bank risk taking which listed in Indonesia Stock Exchange from 2009 to 2016. The corporate governance represent management decision making and bank management policy related to risk and other banking issue. While capital reserve and non-performing loan indicate bank financial performance. Capital reserve is important indicator for bank compare to its risky activities, and non-performing loan will give bank information about bank effectivity in lending behavior. The result of this study show that ownership concentration, the big four audit committee, and non-performing loan has negative effect on bank risk taking behavior. While capital reserve is not statistically significant on bank risk taking.

Keywords: Corporate Governance, Capital Reserve, Non-Performing Loan, Bank Risk Taking

JEL Classifications: G3, G32

1. INTRODUCTION

Bank, as financial intermediary play a big role in local and global economy. The asymmetric information which occur in banking industry may trigger the financial crises. Banking and currency crises are classified as typical financial crises which occur in many emerging countries (Kasri, 2011). Banking sector, is considerably as a strong and risky business at the same time, so banks should manage their performance and enhance their reputation to built consumer's trust. The failures of banking and other financial institutions which occur in 1998 and 2007 is considered as the poor corporate governance practices that failed to manage bank risk (Abou-El-Sood, 2017). Since the Asian crises, major efforts of banking reform focus on recapitalization, decreasing the degree of non-performing loans, strenghtening the banking regulation and corporate governance practice (Nam, 2006).

The good corporate governance practice will impact the overall business process that reflected on every business decision. Banks might suffer from all the economic fluctuation without significantly enhance corporate governance (Nam, 2006), and the ownership structure become one of important issues to increase both efficiency and effectiveness of management decision (Al-Najjar, 2015).

Before Asian financial crisis in 1997, most of Asian countries experience high economic growth that can be shown by the rose of real per capita income about 4–6% per annum, especially when Asian countries fuelled by significant inflows of capital from Europe and Japan. Financial crisis was started by currency financial crisis in Thailand which quickly spread to other countries in the region. Banks and corporations across the region encountered financial difficulties and their currencies and asset prices dropped by as much as 30% to 40%. In Indonesia, there are several step to reform the financial sector since it play important role in economic development: (1) Financial reforms – closing nonviable institutions (sixteen small banks) and merging state banks, (2) Structural policy – liberalizing foreign trade and investment, dismantling domestic monopolies and expanding privatization programme, (3) fiscal policy – maintaining government budget surplus of 1% of gross domestic product (GDP) during 1997/98 and 1998/99, (4) monetary policy – maintaining tight money policy to stabilize the rupiah (The University of Hong Kong, 2000).

Mehran and Mollineaux (2012) analyzed the corporate governance practice in financial sector because the financial crisis is not random events, but set in motion by decisions of individuals and institutions operating within a given framework of laws, regulations, and tax

codes. Corporate governance can be a powerful tool to identify the problem spot where incentives are mismatched in a way that could lead to undesired firm behavior or even system-wide instability. While Croitoru and Saltaji (2017) stated that corporate governance is a comprehensive and important term which represent issue in protecting shareholders and depositors besides monitoring the performance of the board of directors. The corporate governance framework and practices relating to corporate risk management, in the private sector and in state-owned enterprises, risk taking management is a fundamental driving force in business, and corporate governance should ensure that risks are understood, managed, and communicated (OECD, 2014).

Banks, as the core of countries economy, channelling funds from surplus to deficit sectors or we can define, bank played as intermediary role. When banks act as intermediary, they act as buffers and lending activity that will be associated with risky activities, and the lending proporsion should be covered with enough capital reserve requirement. During the financial crisis in Euro area, banks are under the stress, especially banks with the lack of capital. Banks' capital buffer can be important determinat to measure the banks readiness in facing the uncertainty event (Maurin and Toivanen, 2012). The Basel Committee (BIS) rules the limit capital requirement in order to protect banking sector in taking risk (Oliver, Wyman and Company, 2001).

Banks which play important role in an economy should be prudent in taking decision of their lending behavior. Many financial indicators can be a guidance and controlling tools to reduce bank risk (European Central Bank, 2017). Banking industry is relatively the most regulated sector, studies show that banks liabilities are considered as raw material of investable funds, and banks assets are classified as outputs which represent the degree of banks policy to generate their revenue (Berger and Humphrey, 1992). Non-performing loan, indicates bank credit quality that will effect not only banking sector but also economic condition (Baudino and Yun, 2017). KPMG (2017) suggest that Non-Performing Loan decrease bank profitability and effect the bank position in economy, which represented in the effectiveness of monetary policy. Some banks do not manage their non performing loan (NPL) effectively and do not prepare alternative strategies to reduce NPL. Based on Lu, Thangavelu, and Hu (2005), banks in China have a lending bias in favor of state-owned enterprises (SOEs). Banks should provide prudent measurement in decision making, and avoid the risky lending, including the risky SOEs.

2. LITERATURE REVIEW

2.1. Banking Sector in Indonesia

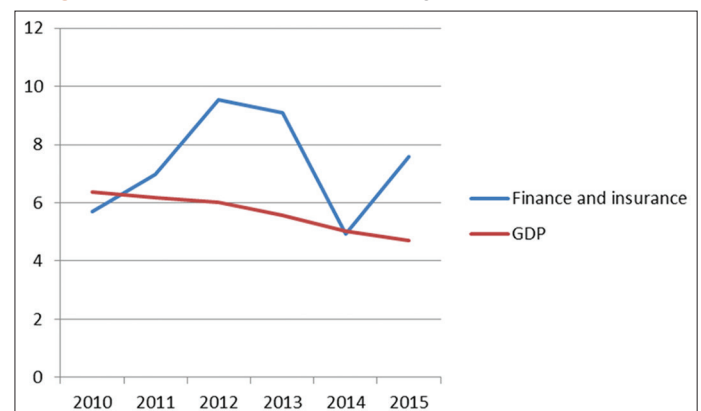
Banking sector development in Indonesia is characterized by the deregulation banking policy in 1988 which showed an increase in the number of banks and branches, and since financial crisis in 1997, banking sector need to be restructured thourgh the IBA (Indonesian Banking Architecture) framework development (Medyawati and Yunanto, 2014). Banking sector perform slow growth of loan portfolio and increasing NPL in 2012, the global economic condition and coal price falling effect the Indonesian banking sector, but according to Ernst and Young (2017) report,

in 2016, 6 out of 10 Indonesian large banks by assets successfully managed to increase their total assets in 2016 compared with 2015. The large banks as follow: Mandiri, BRI, BCA, BNI, CIMB Niaga, BTN, Panin, Danamon, Maybank, and Permata. However, the total assets of Danamon, Permata, Maybank, and CIMB Niaga decreased by 20%, 10%, 2%, and 1% respectively due to loan repayment, NPL, and slow loan growth because of economic downturn in 2015 and 2016.

Finance and insurance sector contribute about 4.2% to Indonesian GDP in 2016, which increase from 3.86% in 2015 and 2014 (Putra, 2017). Figure 1 exhibit the performance of finance and insurance sector compare to GDP growth, the finance and insurance sector fluctuates and experience the highest decline in 2014 but continue to rise despite GDP growth relatively decrease from 2010 to 2015. Banking system that well perform is an essential part of nation's economic. Bank, as an intermediary and act as allocators of capital. The bank's failure, may impact the public trust, and reduce the portion of nation's consumption and investment. The ability of bank system to withstand in periods of economic crisis indicates the health of a country's banking system itself. In 1997, when the financial crisis hit Asian countries including Indonesia, it lead to higher country's debt and decrease Indonesia GDP. The crisis also causes most of Indonesian banks receive poor marks and expose the core weakness of banking system and need to be restructured (Bennett, 1999). The success or failure of bank restructuring in Indonesia is bound up with IBRA which was designed to supervise and restructured (Enoch et al., 2001).

The global financial crisis that occur in 2007 began to penetrate into Indonesian economy in mid of September 2008 which shown by depreciation of rupiah, increase of government bond yield, and stock price. Compare to global economic condition, in 2007 Indonesia has relatively stable economy since Asian crisis in 1997. The credit expansion increased from 26.4% in 2007 to 29.5% and 33.6% in the first and second quarter of 2008 and reached its peak in the third of 2008 which is the highest growth since 1997. The capital adequacy ratio (CAR) was solid and NPL dropped from 4% in 2007 to 3.3% in 2008 (Djaja, 2009). Bank Indonesia forecasted the banking sector will experience growth about 11% or 12% and liquidity position (represent by loan to deposit ratio) decrease to 90.7% in 2016 compare to 92.11% in 2015 which represent by loan to deposit ratio (Ernst and Young, 2017).

Figure 1: Finance and insurance sector growth from 2010 to 2015



Source: Badan Pusat Statistik

2.2. Corporate Governance in Banking Sector

Corporate governance plays important role in a company development and receive many attention in academic literature. Alexander (2004) stated that financial regulation is very crucial in influencing the corporate governance principles, and the corporate governance regulation in the financial sector has been regarded as a specialist area that involve banking standard and rules to achieve the objective of financial regulation, for example the financial system performance, and consumer and investor protection. Theoretically, corporate governance will be relatively related to agency theory that views the relationship between agent and principal (Himaj, 2014). Jensen and Meckling (1976) document, if the relationship between the principal and the managers (agent) is a pure agency relationship, it should be common to discover the issues associated with the separation of ownership and control in the modern corporation are associated with the general agency problem. They define an agency relationship as a contract under which one or more persons (principal) engage another person (the agent) to perform service on their behalf which involves delegating some decision making authority to the agent, and if principal and agent are utility maximizers, there's a tendency that the agent will not always act in the best interest of the principal. The agency conflict can be minimized by appropriate incentives, cost monitoring to control agent's activities, and the good corporate governance practice.

Becht et al. (2011) document that international corporate governance debate has mostly focus on: (1) weak shareholders and dominant executives in the United States, (2) insufficiently engaged shareholders in the United Kingdom, and (3) powerful but conflicted blockholders in most other countries. Moreover, many institutions can be effected by poor corporate governance practice, including banking sector. For some reasons, bank has unique characteristics and specific governance issues that differ from other sector. Bank has opaque assets that cause it's more difficult to be monitored by principal, bank has the ability to take on risk very quickly and it's not immediately visible to directors or investors, and many regulation which has been created by government in order to stimulate the economic growth has important implication for the bank risk-taking incentives, and may also weaken the potential role of market for corporate control. Another finding from, Mehran et al. (2011) document that banks have many stakeholders than nonfinancial firms, and business of banks is opaque and complex and it can shift quickly.

2.3. Bank Risk Management

Many studies document that bank plays a distinct role in an economy because it is subject to extensive regulation, including capital requirement which is an important element for banking industry. Based on Ernst and Young (2010), capital, risk, and strategy are deeply connected in banking. Bank's risk appetite basically influences bank strategical choices. Capital management, is the way that risk management finds expression in bank strategy at the highest level, management will explore the best strategy in allocating their capital to achieve the optimal return. The proportion of its credit portfolio structure present the initial indicators of its risk appetite. A large share of loan in a certain asset class may increase bank risk, moreover the presence

of complex financing transaction such as specialized lending may also indicate a larger risk appetite (Oesterreichische Nationalbank, 2006). The international standard developed the bank minimum capital reserve to ensure banks can absorb a reasonable of losses before becoming insolvent, and it's expected to depository protection, bank stability, and efficiency of the financial system (Bank Reserve of New Zealand, 2007). According to Bank Reserve of New Zealand (2007), there are many aspects of the Basle Capital Accord, these are: Tier one capital to total risk weighted credit exposures to be not <4%, total capital (tier one plus tier two less certain deduction) to total risk weighted credit exposures to be not <8%, tier two may not exceed 100% of tier one capital, lower tier two capital may not exceed 50% of tier one capital, and lower two capital is amortised on a straight line basis over the last 5 years of its life.

During the economy downturn, banks usually hold lower capital reserve than in normal economy. In order to tackle the situation, banks tend to lend less since the risk will be higher. Banks also maintain higher retained earning to fulfill the capital regulation by reducing their dividends and floating shares is another option in gaining new capital, but the most common option is banks lend less (Noreen et al., 2016). Another bank performance indicator is NPL, represent the contractual payment that will not be made. Bank clasified the NPL when payments of interest and/or principal are past due by 90 days or more, or interest payment equal to 90 days or more have been capitalized, refinanced, or delayed by agreement, or payments are <90 days overdue (Bloem and Freeman, 2005). The unprudent bank action in mortgage lending caused financial crisis in 2007, low interest rate, booming housing markets and credit securitization has led to credit loss and impact the global economy (Cucinelli, 2015). The effective risk management may help the banking sector to prevent bank losses and able to identify the suitable proportion of capital allocation in the economy.

3. HYPOTHESIS

3.1. Corporate Governance and Bank Risk Taking

The corporate governance literature suggest that managing risk is very important to firm's stability. Banking sector is considered as a strong and risky business at the same time. In general, banking risks fall into three categories: Financial, operational, and invernmental risks. Financial risk's divided into two types of risk: Traditional banking risks and treasury risk, while operational risks are related to a bank's overall business processes (Greuning and Bratanovic, 2009). Aebi et al. (2012) document that there is influence of bank specific corporate governance on bank performance during the financial crisis, if bank has good performance, it's expected that can manage their risk well. Weak and ineffective corporate governance mechanism in banks are pointed out as the main factors which contribute to the financial crisis, deep changes is expected to reinforce the financial sector stability, the new regulation and guidance is established to create bank stability in order to face the possibility of financial crisis and other risk (Marcinkowska, 2012). While according to (John et al. 2016) state that bank corporate governance differs form manufacturing firms and influence bank risk taking since bank

management closely related to shareholders and responsible in taking policy decision. Bank corporate governance can be evaluated from three perspectives: (1) Maximizing bank equity value, (2) maximizing total enterprise value, and (3) maximizing social objectives.

H1: The corporate governance effect the bank risk taking

3.2. NPL and Bank Risk Taking

The NPL information provides detailed analysis of bank's transactions and bank revenue projection. Cucinelli (2015) observe 488 listed and unlisted banks from 2007 to 2013 document that there is negative effect of NPL and the loan loss provision ratio (credit risk) on bank lending behavior which represent the bank risk taking. A case study of CBZ Bank Limited using questionnaires and interview to collect data, the result show, NPL will effect the bank performance, indicates the revenue decreasing, and influence the ability of banks to play a big role in the economy. The major factors that cause higher NPL are natural disaster, government policy, and borrower integrity (Joseph et al., 2012). China's rural commercial banks, is one of the China's unique economic system and economic transformation which is a combination of the rural credit cooperatives and stock system reform. Currently, Chinese government's emphasises on the rural issues, including rural commercial banks. Based on study about rural commercial banks in China from 2010 to 2014, the research shows that non-performing loan rate is higher than China's commercial bank and indicates the rural commercial banks should have a correct understanding of credit risk and control (Zhu and Chen, 2016). While Almekhlafi et al. (2016) study bank performance in Yemen from 1998 to 2013 using panel data, based on their study, NPLs has negative effect on performance which indicates banks have to control and review their credit policy.

H2: NPL has negative effect on bank risk taking.

3.3. Bank Capital and Risk Taking

According to the Basel Accord, it's important for banks to balance their reserve capital. This regulation, is designed to provide banks protection from any issues that can damage bank performance and impact the economy. Lin et al. (2015) study 4828 syndicated loan of publicity banks from 1987 to 2010, the result show that bank's capital ratio has positive effect on banks credit risk taking which implies, the lower capital ratio will charge higher lending spread for borrowers with fewer cash flows. While Kochubey and Kowalczyk (2014) state that during financial crisis, lower risk indicates higher capital, however higher capital implies more risk taking. A study about China's rural commercial bank implies that rural commercial banks have taken strict measures to supervise capital by maintaining a high CAR to avoid shocks of external exposure which indicates the higher capital adequacy, bank can tackle the higher risk issues (Zhu and Chen, 2016). Operating efficiency for banks is essential for the challanging economy, Odunga et al. (2013) state that CAR indicates positive effect and statistically significant on bank's operating efficiency, that definitely will impact bank risk taking and how banks will improve their performance.

H2: Capital Reserve has positive effect on bank risk taking.

3.4. Data, Variables and Methodology

This study use pooling regression to tackle the issues that raised in this paper. The data consist of banking companies which listed in Indonesia Stock Exchange from 2008 to 2016. Pusposive sampling is used as sampling technique, as follows: (1) Banking firms listed in IDX from 2008 until 2016, (2) Banking firms must have complete financial report. There are 27 banking companies which fulfill the research requirement. The banking characteristic data gathered from Indonesia Stock Exchange, Indonesia Capital Market Directory, and yahoo finance.

3.5. Variables

3.5.1. Dependent variables

We consider the dependent variable (risk) is a proxy for the degree of bank risk taking capture in each of the risk-weighted assets portfolio (Abou-El-Sood, 2017).

3.5.2. Independent variables

This study consider corporate governance practice as independent variable, in order to account for corporate governance, we use the ownership concentration, board structure variables (board size and outside directorship), audit committee, and state/foreign ownership.

Ownership consentration is defined as the percentage of common stocks held by shareholders who own at least 5% of the total number of a firm's common stocks (Nguyen et al., 2015). Natural log of the board of directors number is proxy to measure the board size, while outside directorship is measured by the ratio of outside directors to the total number of directors on the board (Abou-El-Sood, 2017).

Audit committee is measured by dummy variable which take value 1 if the audit company enggange of Big Four auditors (Shamsabadi et al., 2016). Dummy variable is used to measure the state/foreign ownership which take value 1 if bank is owned by government or major shareholder is government, while considered as foreign and take value 1 if the major shareholders are foreign investor or foreign company (Önder, 2003). Another independent variable is banking financial performance which is represented by NPL, and CAR. NPL denotes loans to assets, while CAR represent the regulatory of capital adequacy (Abou-El-Sood, 2017). size as control variable is defined as log of total asset (Abou-El-Sood, 2017).

The following model is used to test the hypothesis:

$$\text{RISK} = \alpha + \beta_1 \text{OWN} + \beta_2 \text{BS} + \beta_3 \text{OUTDIR} + \beta_4 \text{BIG} + \beta_5 \text{STATE} + \beta_6 \text{FOR EIGN} + \beta_7 \text{NPL} + \beta_8 \text{CAR} + \beta_9 \text{SIZE} + \varepsilon$$

RISK=Bank risk taking

OWN=Ownership concentration

BS=Board Size

OUTDIR=Outside Directship

BIG=Audit committee

STATE=State ownership

FOREIGN=Foreign ownership

NPL=Non performing loan

CAR=Capital adequacy ratio

SIZE=Bank size

4. EMPIRICAL RESULTS

4.1. Descriptive Statistics

Descriptive statistics is presented in Table 1, over the 2008–2016 period, the ownership concentration in banking sector reach the average of 56.92%. Board size accounted for 82.97% on average, while outside directorship which represent the percentage of committee outside director shows reach the average of 63.78%, relatively high proportion. Audit committee accounted for 63.79% on average. The state ownership shows only reached the average of 13.17% from the total banking sector, while foreign ownership exhibit relatively higher at 36.21% on average. NPL, according to the regulation must not be higher than 5%, the data shows it accounted for 1.73% on average, while CAR which represent the regulatory of capital adequacy reach the average of 17.03%. Size, as control variable accounted for 7.49% on average.

4.2. Correlation Matrix

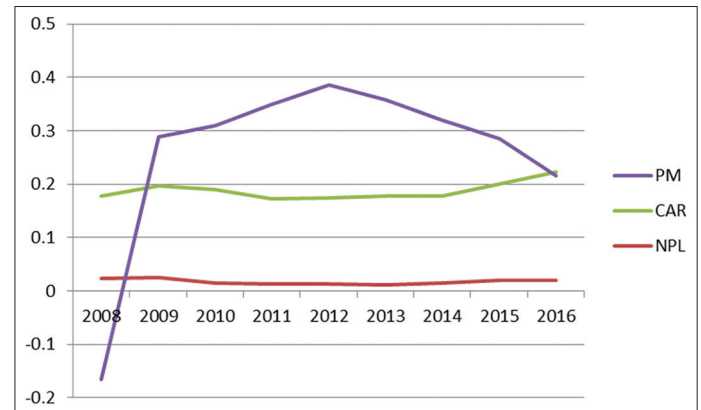
Table 2 represent the correlation matrix of all variables. Most of the independent variables exhibit relatively weak correlation, while some variables show strong correlation but multicollinearity issue is less of a concern because the correlation value is still below 0.8.

4.3. Regression Results: Corporate Governance, Financial Performance and Risk Taking

The global financial turmoil effected banking systems around the world in 2007–2009, including Indonesia. Nevertheless, Indonesian Banks remained having stable performance. We can

see the data description in Figure 2 that shows the Indonesia bank performance during 2008–2016, NPL is still below 5%, capital adequacy is above 10%, and net profit margin relatively stable, but since there is a bank (Bank Century) which has relatively high negative profit margin, it effects the overall banks profit margin on average. During the global financial crisis, the data reported that Asian growth fallen from 5.1% to 1.3% in 2009, according to IMF Survey Online May 6, 2009, and Indonesian economic growth is still above 6% with relative well performance on financial industry.

Figure 2: Banks financial performance



Where PM represent Bank Profit Margin, NPL is measured by nonperforming loans to assets, CAR is measured by capital adequacy ratio. The graphic exhibit banks average performance during 2008 to 2016

Table 1: Descriptive statistics

Variables	Mean	Median	Max	Min	Std. Dev	Observation
Bank risk taking	0.695555	0.699215	1.916210	0.118863	0.158693	243
Corporate governance						
Ownership concentration	0.569218	0.580000	1.000000	0.110000	0.209765	243
Board size	0.829687	0.845000	1.146000	0.477000	0.172706	243
Outside directorship	0.632613	0.632000	0.860000	0.300000	0.107370	243
Audit committee	0.637860	1.000000	1.000000	0.000000	0.481611	243
State ownership	0.131687	0.000000	1.000000	0.000000	0.338848	243
Foreign ownership	0.362140	0.000000	1.000000	0.000000	0.481611	243
Financial performance						
NPL	0.017259	0.012300	0.205100	0.000100	0.020856	243
CAR	0.170277	0.162700	0.457500	-0.222900	0.058446	243
Control variable						
Size	7.494206	7.400007	9.016493	6.133501	0.763381	243

This table describes the descriptive statistic. This study considers 27 banks in Indonesia from 2008 to 2016. NPL: Non performing loan, CAR: Capital adequacy ratio

Table 2: Correlation matrix

Variable	OWN	BS	OUTSIDE	BIG	STATE	FOREIGN	NPL	CAR	SIZE
OWN	1								
BS	0.0040	1							
OUTSIDE	0.0170	0.1002	1						
BIG	0.0255	0.2026	0.0004	1					
STATE	0.0186	0.1132	0.0072	0.0861	1				
FOREIGN	0.0820	0.0393	0.0107	0.0075	0.0861	1			
NPL	0.0148	0.1125	0.0013	0.0542	0.0260	0.0047	1		
CAR	0.0007	0.0004	0.0005	0.0029	0.0003	0.0052	0.1048	1	
SIZE	0.0000	0.4910	0.0276	0.2362	0.2104	0.0004	0.1050	0.0099	1

Where RISK is the dependent variable that proxies for bank risk taking, measured by risk-weighted assets to total assets, OWN is the percentage of common stocks held by shareholders who own at least 5% of the total number of a firm's common stocks, BS is measured by the natural logarithm of the number of directors on the board, OUTSIDE is the ratio of outside directors to the total number of directors on the board, BIG is dummy variable which take value 1 if the audit company engage of Big Four auditors, FOREIGN is dummy variable which take value 1 if the major shareholders are foreign investor or foreign company, STATE is dummy variable which take value 1 if bank is owned by government or major shareholder is government, NPL is measured by nonperforming loans to assets, CAR is measured by capital adequacy ratio, while SIZE is natural log of total assets

The Indonesian banking sector had a challenging period in 2015 and 2016, it's due to the downturn of macroeconomic condition which resulted in an overall increase in NPL rates. Despite these challenges, the banking sector grew in 2016, and Jokowi (the Indonesian president) initiated 13 stimulus packages between 2015 and 2017 to stimulate economic growth and stabilize the banking sector (Ernst and Young, 2017).

Table 3 displays the regression result of corporate governance on bank risk taking, common effect, fixed effect, and random effect in each of the three main columns. Since the chow test and hausman test shows the result is below 5%, fixed effect is the appropriate model to analyze the effect of corporate governance, financial performance on bank risk taking.

From the regression result, since chow test and hausman test show below 5%, the appropriate model to analyze the bank risk is fixed effect model. The coefficients of ownership concentration has negative effect on bank risk taking, statistically significant in 10%. This result consistent with Abou-El-Sood (2017) that ownership concentration negatively effect the bank risk taking which indicates, the higher ownership concentration, bank risk taking will be lower. Higher ownership concentration reflects the higher percentage of ownership and control in a company. Since the shareholders basically expect the optimal investment return, they will tend to ask the lower risk for any investment spending. Another variable which shows statistically significant is audit commite, explain a company that engage the Big Four auditors tend to reduce their proportion in risky assets. Indicates that regulatory intervention is generally associated with risk taking reduction in bank decision, the higher intervention is followed by the lower bank risk taking (Berger et al., 2011). The better quality of auditor is expected to help the banking supervision, and enhance the prudential supervision become more effective (Bank for International Settlements, 2013).

The study about banking sector in Spain shows that financial reporting and involvement of high class auditors may help banks to minimize credit risk, and it is crucial for bank performance and sustainability, some banks do not able to continue their business because of minimum control systems (Akwa-Seky and Gené, 2016). Reserve Bank of Zimbabwe (2015) state that audits quality will trigger market confidence and enhance banking supervision. Since the government control the minimum capital requirement and banks usually operate above the minimum CAR, but they do not apply the higher proportion in meeting the government requirement. Banks will maintain their strategy after fullfill their capital ratio, because they already anticipate the ratio requirement, and it will be easier to maintain their asset allocation. The effect of capital ratio on bank risk taking is not significant, banks are constrained by CAR and should adjust their capital ratio when they take the higher risk, but some Swiss banks decrease their capital ratio in responding the capital requirement (Bertrand, 2000).

NPL, represent the degree of overdue payment in credit activities and crucial indicators in evaluating bank performance. This study show, NPL has neagative effect on bank risk taking. Since the banks basic activity is lending and act as intermediary, the proporsion of credit which is one of bank risk component will still continue to raise, but NPL will become a help tools for banks to control their risky asset allocation, if the NPL show higher value, banks should evaluate their asset allocation policy. Zhang et al. (2016) study about non-performing loan, moral hazard, and regulation of the Chinese commercial banking system, and the result show the higher in NPL ratio will raise riskier lending and potentially decrease the loan quality and financial system instability, so there should be an indicator to monitor and design strategic policy to reduce NPL. Non-performing loan show negative effect on bank behavior, especially on lending activities which suggest bank should be prudent in taking decision (Cucinelli, 2015). Board size and outside directorship do not effect the bank behavior risk taking. Rachdi and Ameer, 2011 find that the outside directoship

Table 3: Corporate governance, financial performance and bank risk taking

Dependent variable: RISK						
Variables	CE		FE		RE	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
C	0.462461	2.807***	-1.043104	-3.479	0.099701	0.512
OWN	0.030367	0.600***	-0.169159	-1.713***	-0.055593	-0.834
BS	0.074341	0.561	0.103419	0.6298	0.009519	0.068
OUTSIDE	0.141026	1.408	0.125157	0.666	0.167617	1.255
BIG	-0.04196	-1.816	-0.092092	-2.718*	-0.051801	-1.925***
FOREIGN	0.098865	4.095*	0.055398	1.491	0.103549	3.608*
STATE	-0.014782	-0.422	0.115367	1.284	-0.002739	-0.055
NPL	-1.412315	-2.678*	-2.359795	-4.051*	-1.944759	-3.713*
CAR	-0.251933	-1.401	-0.230938	-1.315	-0.226244	-1.365
SIZE	0.010187	0.3397*	0.225781	4.829*	0.068643	2.077**
Chow test				0.0000		
Hausman test						0.0001
Adjust		0.345822		0.414581		0.305148
Observation	243		243		243	

***, **, * Significant at the 10, 5 and 1% level, respectively. Where RISK is the dependent variable that proxies for bank risk taking, measured by risk-weighted assets to total assets, OWN is the percentage of common stocks held by shareholders who own at least 5% of the total number of a firm's common stocks, BS is measured by the natural logarithm of the number of directors on the board, OUTSIDE is the ratio of outside directors to the total number of directors on the board, BIG is dummy variable which take value 1 if the audit company engage of Big Four auditors, FOREIGN is dummy variable which take value 1 if the major shareholders are foreign investor or foreign company, STATE is dummy variable which take value 1 if bank is owned by government or major shareholder is government, NPL is measured by nonperforming loans to assets, CAR is measured by capital adequacy ratio, while SIZE is natural log of total assets

has no significant effect on bank risk taking. The proportion of non executive committee will help the company to control board decision, but since director responsible to make decision, including firm strategy and risk taking, it will not effect the bank decision to lower its risk taking. The smaller board size indicates the higher insolvency risk but statistically insignificant, while the present of independent directors also has no significant effect on bank risk (Rachdi et al., 2013). The board size played a big role in company performance, but the most important is the ability of the board to make meaningful decision for firm sustainability. Government banks are expected to become more risk averse comparing to foreign banks. This study find that the ownership structure (foreign-owned banks and government-owned banks) do not impact bank risk taking, since every banks has its own policy to decide the degree of bank risk taking.

5. CONCLUSION

The bank risk taking indicate the banks aggressiveness in allocating their asset. This study concern about how bank governance initiate the bank policy and decision making in facing the fiercing competition, including the higher proportion of risk asset, the bank financial performance which is measured by CAR and Non-performing Loan, expected as indicator in determaning risk taking decision. Prior researchs indicate that corporate governance and bank financial performance are able to explain bank risk taking behavior.

This study find that some indicator of corporate governance do not effect the bank risk taking. Ownership concentration and auditor committee play important role on bank risk taking. This finding suggest that the higher proportion in ownership may protect banks from agency conflict and indicates higher control compare to lower ownership concentration. The big four auditors represent the audit quality of banks which expected to have better quality, independency and tranparancy than other auditors. The auditor will help to enhance and achieve the company's goal, apply, evaluate, and control the sistematical and disciplin the risk management process. The finding shows that the big four auditors has negative effect on bank risk taking. While non-performing loan represent bank control, and indicates Indonesian bank behavior preference in taking risk.

REFERENCES

- Abou-El-Sood, H. (2017), Corporate governance structure and capital adequacy: Implications to bank risk taking. *International Journal of Managerial Finance*, 13(2), 165-185.
- Aebi, V., Sabato, G., Schmid, M. (2012), Risk management, corporate governance, and bank performance in the financial crisis. *Journal of Banking and Finance*, 36(12), 3213-3226.
- Akwaa-Seky, E.K., Gené, J.M. (2016), Effect of internal controls on credit risk among listed Spanish banks. *Intangible Capital*, 12(1), 357-389.
- Alexander, K. (2004), Corporate Governance and banking regulation. Working Paper, 17, 1-51.
- Almekhlafi, E., Khalil, A., Mohamed, K., Xiangpei, H. (2016). A study of credit risk and commercial banks' performance in Yemen: Panel evidence. *Journal of Management Policies and Practices*, 4(1), 57-69.
- Al-Najjar, D. (2015), The effect of institutional ownership on firm performance: Evidence from Jordanian listed firms. *International Journal of Economics and Finance*, 7(12), 97-105.
- Bank for International Settlements. (2013), Basel Committeeon Banking Supervision. Bank for International Settlements.
- Bank Reserve of New Zealand. (2007), Capital Adequacy Ratios for Banks - Simplified Explanation and Example of Calculation. New Zealand: Bank Reserve of New Zealand.
- Baudino, P., Yun, H. (2017), Resolution of Non-Performing Loan- Policy Options. Bank for International Settlement.
- Becht, M., Bolton, P., Roell, A. (2011), Why bank governance is different. *Oxford Review of Economic Policy*, 27(3), 437-463.
- Bennett, M.S. (1999), Banking deregulation in Indonesia: An updated perspective in light of the Asian financial crisis. *Journal of International Economic Law*, 20(1), 1-60.
- Berger, A., Bouwman, C., Kick, T., Schaeck, K. (2011), Bank Risk Taking and Liquidity Creation. Cent ER Discussion Paper Vol. 2011-088.
- Berger, A.N., Humphrey, D.B. (1992), Measurement and efficiency issues in commercial banking. *National Bureau of Economic Research Studies in Income and Wealth*, 56, 245-300.
- Bertrand, R. (2000), Capital Requirements and Bank Behaviour: Empirical Evidence for Switzerland. Swiss National Bank.
- Bloem, A.M., Freeman, R. (2005), The Treatment of Nonperforming Loans. *International Monetary Fund WP/01/209*.
- Croitoru, I., Saltaji, I.M. (2017), Corporate Governance: Banking Sector and Economic Development. Conference Proceedings of Globalization - Economic, Social and Moral Implications.
- Cucinelli, D. (2015), The impact of non-performing loans on bank lending behavior: Evidence from the Italian banking sector. *Eurasian Journal of Business and Economics*, 8(16), 59-71.
- Djaja, K. (2009), Impact of the Global Financial and Economic Crisis on Indonesia. ILO Report.
- Enoch, C., Balwin, B., Frecaut, O., Kovanen, A. (2001), Indonesia: Anatomy of a Banking Crisis Two Year of Living Dangerously, 1997-1999. IMF Working Paper.
- Ernst and Young. (2010), Capital Management in Banking. Boston, MA: Ernst & Young.
- Ernst and Young. (2017), The Indonesian Banking Industry: Unfolding the Opportunity. Malaysia: EYGM Limited.
- European Central Bank. (2017), Guidance to Banks on Non-Performing Loan. European Central Bank.
- Greuning, H.V., Bratanovic, S.B. (2009), Analyzing Banking Risk. USA: The World Bank.
- Himaj, S. (2014), Corporate governance in banks and its impact on risk and performance: Review of literature on the selected governance mechanisms. *Journal of Central Banking Theory and Practice*, 3(3), 53-85.
- Jensen, M.C., Meckling, W.H. (1976), Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- John, K., Masi, S.D., Paci, A. (2016), Corporate governance in banks. *Corporate Governance an International Review*, 24(3), 303-321.
- Joseph, M.T., Edson, G., Faitira, M., Mutibvu, C., Kamoyo, M. (2012), Non performing loans in commercial banks: A case of CBZ bank limited In Zimbabwe. *Interdisciplinary Journal of Contemporary Research in Business*, 2(7), 467-488.
- Kasri, R.A. (2011), Explaining the Twin crises in Indonesia. Working Paper in Economics and Business, 1(2), 1-17.
- Kochubey, T., Kowalczyk, D. (2014), The Relationship between Capital, Liquidity and Risk in Commercial Banks. The Ninth Young Economist Seminar. Dubrovnik: Croatian National Bank.
- KPMG. (2017). Non-Performing Loans in Europe. KPMG. ECB Office Report Discusses the Solutions.

- Lin, S.L., Chen, W.P., Lu, J. (2015), Relationship between banks' capital and credit risk-taking through syndicated loan. *Modern Economy*, 6, 1297-1308.
- Lu, D., Thangavelu, S.M., Hu, Q. (2005). Biased lending and non performing loans in China's banking sector. *The Journal of Development Studies*, 41(6), 1071-1091.
- Marcinkowska, M. (2012), Corporate governance in banks: Problems and remedies. *Financial Assets and Investing*, 3(2), 47-67.
- Maurin, L., Toivanen, M. (2012), Risk, Capital Buffer and Bank Lending. Working Paper Series, No. 1499. European Central Bank. p1-26.
- Medyawati, H., Yunanto, M. (2014), The Role of Indonesia Banking Architecture and Banking Technology to Economic Growth in Indonesia. *International Conference on Economics, Social Sciences and Languages (ICESL'14)*. p25-29.
- Mehran, H., Mollineaux, L. (2012), *Corporate Governance of Financial Institutions*. USA: Staff Report No. 539, Federal Reserve Bank of New York.
- Mehran, H., Morrison, A., Shapiro, J. (2011), *Corporate Governance and Banks: What Have we Learned from the Financial Crisis?* Federal Reserve Bank of New York, Staff Report No. 502.
- Nam, S.W. (2006), *Corporate Governance of Banks: Review of Issues*. Tokyo: Asian Development Bank Institute.
- Nguyen, T., Locke, S., Reddy, K. (2015), Ownership concentration and corporate performance from a dynamic perspective: Does national governance quality matter? *International Review of Financial Analysis*, 41, 148-161.
- Noreen, U., Alamdar, F., Tariq, T. (2016), Capital buffers and bank risk: Empirical study of adjustment of Pakistani banks. *International Journal of Economics and Financial Issue*, 6(4), 1798-1806.
- Odunga, R.M., Nyangweso, P.M., Carter, D.A., Mwarumba, M. (2013), Credit risk capital adequacy and operating efficiency of commercial banks in Kenya. *International Journal of Business and Management*, 2(9), 6-12.
- OECD. (2014), *Risk Management and Corporate Governance*, Corporate Governance. OECD Publishing.
- Oesterreichische Nationalbank. (2006), *Bank-Wide Risk Management: Internal Capital Adequacy Assessment Process*. Vienna: Oesterreichische National bank.
- Oliver, Wyman & Company. (2001), *Study on the Risk Profile and Capital Adequacy of Financial Conglomerates*. London: Oliver, Wyman & Company.
- Önder, Z. (2003), Ownership concentration and firm performance: Evidence from Turkish firms. *METU Studies in Development*, 30(2), 181-203.
- Putra, I.R. (2017), Diambil Kembali Dari. Available from: <https://www.merdeka.com/uang/tumbuh-tertinggi-kontribusi-sektor-keuangan-pada-ekonomi-terus-naik.html>.
- Rachdi, H., Ameer, I.G. (2011), Board characteristics, performance and risk taking behaviour in Tunisian banks. *International Journal of Business and Management*, 6(6), 88-97.
- Rachdi, H., Trabelsi, M.A., Trad, N. (2013), Banking governance and risk: The case of tunisian conventional banks. *Review of Economic Perspective*, 13(4), 195-206.
- Reserve Bank of Zimbabwe. (2015), *External Audit Framework for Banking and Non-Bank Financial Institutions*. Reserve Bank of Zimbabwe.
- Shamsabadi, H.A., Min, B.S., Chung, R. (2016), Corporate governance and dividend strategy: Lessons from Australia. *International Journal of Managerial Finance*, 12(5), 583-610.
- The University of Hong Kong. (2000), *Asian Financial Crisis: Causes and Development*. Hong Kong: The University of Hong Kong.
- Zhang, D., Cai, J., Kutan, A.M., Dickinson, D.G. (2016). Non-performing loans, moral Hazard and regulation of the Chinese. *Journal of Banking and Finance*, 63, 48-60.
- Zhu, C., Chen, L. (2016), An empirical study on the capital buffer of rural commercial banks in China. *Journal of Finance and Economics*, 4(3), 97-102.