The Impact of Risk Governance and Ownership Structure on Bank Risk-Taking Behavior in ASEAN-5 Banks for the period 2012 – 2021

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Abstract. This study analyzes how risk governance and ownership structure influence bank risk taking behavior in ASEAN-5 countries. The research sample consists of 34 banks from 2012 to 2021, using the panel data regression method. The results of the study show that risk governance has a negative and significant impact on credit and liquidity risk. Meanwhile, it has a positive and insignificant impact on operational risk and a negative and significant impact on insolvency risk. Furthermore, ownership structure has a negative and insignificant impact on credit and operational risk but a positive and insignificant impact on liquidity and insolvency risk. Additionally, bank size seems to have a significant effect on credit, liquidity, operational, and insolvency risk. Thus, regulators and banks can optimize risk governance, particularly at risk committee meetings, by increasing the frequency of meetings on a periodic basis.

Keywords: Risk Governance, Ownership Structure, Risk Taking

1 Introduction

The rapid economic development of the Association of Southeast Asian Nations (ASEAN) countries is an advantage that opens up many opportunities to improve the economy in ASEAN countries. Based on data from the World Bank, from year to year the GDP growth trend in ASEAN countries is seen on average above 5% [56]. Seeing the GDP growth of ASEAN countries which can be said to be good, this is like a "green light" signal for the banking industry in carrying out its operations, such as the breadth of lending to consumers, positive banking credit, and so on. The good economic conditions in ASEAN countries from year to year have resulted in positive cooperation between banks in ASEAN countries, namely ASEAN countries trying to integrate the banking industry by producing a framework called the ASEAN Banking Framework (ABIF).

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Despite the increasingly positive development of the banking industry in ASEAN, especially among the ASEAN-5 countries, over the years, it's important not to forget that the banking industry has also faced various crises that disrupted its stability. For example, the Asian Financial Crisis in 1997 had significant repercussions, causing a drastic economic downturn, and leading to countries like Indonesia and Thailand seeking assistance from the IMF to overcome the crisis. Many banks also underwent restructuring due to this event. Additionally, there was the crisis in 2007–2008, known as the Global Financial Crisis, which also had a significant impact on the banks in ASEAN countries. The 2007–2008 Global Financial Crisis demonstrated how weak risk aggregation and riskreporting data governance, inadequate data, and technology, can hinder quick decision-making for financial risk management across banks. Battaglia & Gallo also stated that weaknesses in risk governance structure and excessive risk taking by banks were identified as key determinants of financial crises [19]. Therefore, the Global Financial Crisis served as a turning point for policymakers and regulators to emphasize the enhancement of risk governance and effective risk management within banks [4].

Based on Soltanizadeh et al., Identifying potential risks early is an important element for business success because it allows mitigating potential dangers [54]. In order to limit these risks, risk management is required. Risk management is currently seen as a form of prevention activity compared to a process to overcome crises that occur [5]. To drive well-informed risk management decisions together with create responsive risks [24], advance operational, and strategic decisions [33] can be influenced by enterprise risk management.

There are international standards that serve as a reference for countries to implement risk management, especially in the banking sector. These standards are like the COSO Framework, whichregulates 17 fundamentals including the risk assessment process to consider significant changes in business operations and adapt to internal, external, or risks that could potentially arise in the future. Apart from that, another standard that is also commonly applied by the banking sector in ASEAN is the BASEL Framework issued by the Basel Committee on Banking Supervision (BCBS).

Based on the research by Nor et al., the development of business risk management towards business performance not only relies on business strategies, but the role of the board of directors canalso have an influence [50]. In the banking industry, there is typically a dedicated department to address various banking risks and ensure effective risk management, known as Risk Governance [2]. One crucial role within Risk Governance is the presence of a Chief Risk Officer (CRO) [6].

Apart from the importance of the roles of the CRO and the Risk Committee in managing risks within a company, there are other factors that can impact a company's decision-making. Based on research by Nguyen, it was found that ownership structure in a bank affects the behavior of risk decision-making [49]. Additionally, research by Dong et al. also identified a relationship between ownership structure and the risk taking behavior of banks [29]. Research by Zheng et al. also supports the view that ownership structure indeed has an influence on risk taking behavior [58].

Amidst various studies suggesting that the roles of the board of directors and ownership structure have an impact on risk taking behavior within companies, there is research that contradicts these assumptions. Abid et al. found that Risk Governance has a negative and

insignificant influence on risk taking behavior [2]. Considering the diversity of opinions and the increasingly varied, volatile, and risky global banking landscape, with threats such as cyberattacks, it's important to investigate whether there is an influence from internal company factors, in this case referring to the role of the Risk Committee in terms of the number of members and meeting frequency, as well as the company's ownership structure, on decision-making risktaking behavior within the banking sector. Given these considerations, the primary inquiry of this study revolves to the following research question: to what degree do risk governance and governance structure impact risk taking behavior within the ASEAN-5 Banking sector.

2 Prior Evidence and Hypotheses Development

2.1 Risk Governance

Abid et.al. defines risk governance as corporate governance which ensures that the implementation of risk management runs effectively [2]. Other research also defines risk governance as risk management that helps reduce risk and improves the performance and stability of the banking itself [48], [14], [44]. Risk Governance consists of a Risk Committee and also a Chief Risk Officer,to oversee all risks that occur in the company [6].

Since the financial crisis, public policy makers and many researchers have attempted to improve the risk management system itself [43], and risk governance has become an important partof identifying risks that might occur in the future [30], [46], [55]. The implementation of risk governance in ASEAN countries has also seen changes after the financial crisis in 2008, as can be seen from how banks in Vietnam, Malaysia and Singapore decided to have a risk committee that is more responsible for the oversight role in risk taking and risk management. This is in line with research from Brown et al [20] and also Lundqvist [43] which suggests that it is necessary to have aseparate risk committee and assign a Chief Risk Officer to oversee and be responsible for the company's ERM system. Andres and Vallelado, also suggest that the risk committee should be separated considering that banks are exposed to higher risk exposure and have a higher level of business complexity [13].

Currently, there are several prior literatures that have attempted to delve into risk governance comprehensively. Based on the research by Malik et al., it is revealed that the effectiveness of Enterprise Risk Management (ERM) is positively associated with firm performance, with a strong risk committee further enhancing this relationship [45]. Battaglia and Gallo's study also found that the size of the risk committee is positively correlated with firm performance, albeit negatively correlated with market valuation [19]. Likewise, a similar study by Mongiardino and Plath identified the influence of the risk committee in maintaining stability and performance within the banking sector [47]. Beyond investigations into the impact of the risk committee on banking, there are studiesthat concentrate on the roles of both the risk committee and the Chief Risk Officer in the context ofbanking, known to be more intricate and stringent compared to non-financial corporations, which have also been conducted by various researchers.

Ames et al. also discovered that the presence of the risk committee contributes to an effective governance framework for overseeing risk activities within a company, thereby potentially augmenting performance, and resilience [10]. Research on the risk committee is also enriched

by the contributions of Hines and Peters, who established that the risk committee is an integral component of governance responsible for the maintenance of risky activities [34]. Similarly, the study conducted by Ellul and Yerramilli found that banks with stronger risk management during financial crises tend to be less impacted compared to banks with moderate risk management [30]. Moreover, they also discerned that robust risk management is associated with lower non-performing loans. Research by Hunjra et al. [35] and Zheng and Das [58] also discovered significant influences of risk governance on bank risk taking behavior and firm performance.

Based on previous studies, it can be concluded that the presence of a risk committee influences how companies take risks. However, apart from just looking at the presence of a risk committee in a bank, research from Abid et al., also found that the frequency of board member meetings can be an indication of the active involvement of board members in strategic decision making [2]. Research from Hussain et al. also argues that meetings are the time when board members obtain specific information about the company, so in line with this research, the risk committee meeting frequency can provide an opportunity for risk committee members to discuss, supervise, and develop strategies to mitigate in risk taking [36]. This thinking is also supported by the results of research from Battaglia and Gallo who found that there is a relationship between risk committee meetings and the effectiveness of risk management in companies [19]. However, on the one hand there is an opinion that strong risk management will not always make the risk lower. Research from Aljughaiman and Salama [9], argues that the banking industry has a high level of complexity, and corporate governance does not have the same effect on all types of risk. The strategy adopted by risk governance is more dependent on the appetite and risk profile of the bank itself.

2.2 Ownership Structure

Laeven and Levine state that poor governance is one of the factors contributing to financial crises, and they also state that governance, including the complex ownership structure and lack of transparency, was the main factor in the emergence of a crisis [40]. Barry et al. [17] and John et al. [38] who found that ownership of a company affects performance and risk taking behavior in the organization. Research from Laeven and Leiven, states that banks that are owned by strong ownerstend to take much higher risks [40]. Brown and Dinc found that banks whose largest ownership is the local government have a smaller tendency to default than privately owned banks [20]. This is also in line with research by Fungáčová & Solanko which found that state-owned banks have lower risks [32]. Apart from banks with domination of government ownership, there is also research from Laeven, which compares between banks with domination of foreign ownership, dominance of government ownership, dominance of company ownership, and dominance of family ownership [39]. Laeven found that banks that are dominated by foreign ownership tend to take higher risks compared to other ownership dominations. This is also in line with the findings of Lassoued et al. who found that banks with a predominance of foreign ownership tend to take higher risks [42].

2.3 Bank Risk

Based on the BASEL Framework issued by the Basel Committee on Banking Supervision (BCBS) and also regulation from Bank Indonesia No. 11 of 2009, there are several types of risks that should be considered in the banking industry, namely: (i) Credit risk is a risk that

illustrates the possibility of default on loans that have been channeled to borrowers in accordance with the contracts that have been determined [52]. Credit risk can be described through the ratio of loan lossprovision to total gross loans [1]; (ii) Liquidity risk is a risk that occurs when there is a shortage of bank liquidity, or in other words the demand for cash withdrawals exceeds the supply of bank cash. liquidity risk will increase if the bank has difficulty borrowing funds at a reasonable cost or faces difficulties when selling assets to meet its current liquidity needs [28]; (iii) Operational Risk, Operational risk or operational risk is defined as the risk of loss resulting from the failure or inability of internal banking, human resources, systems, or external events [18]; (iv) Insolvency Risk, a bankis said to be bankrupt (insolvent) if the value of its assets is below the value of its liabilities [52]; (v) Market Risk, Market risk or market risk occurs because there is a risk of loss arising from market price movements [18]. Based on Bank Indonesia Regulation No. 11 of 2009, market risk is defined as the risk that occurs due to changes in market conditions including changes in the price of the option; (vi) Legal risk or legal risks arising from lawsuits or weak judicial aspects. According to Yanuarrdin [57], legal risks can arise due to weak or non-existent supporting laws and regulations; (vii) Strategic Risk is the risk that occurs as a result of making and/or implementing strategic choices inappropriately, and failing to anticipate changes in the company's environment; (viii) Compliance Risk is a risk that may occur as a result of non-compliance by the relevant bank in implementing laws and regulations and other regulations applicable in the scope of the industry; (ix) Reputation Risk is a risk that arises as a result of a decrease in the trust of stakeholders in the relevant banking system, which creates a negative perception of the bank.

2.4 Hypotheses Development

Based on the journal Abid et al [2] entitled "Risk governance and bank risk taking behavior: Evidence from Asian banks" found that risk governance has a negative and significant effect on bank risk taking behavior. Research on risk governance was also conducted by Malik et al. [45] which states that the risk committee influences the company's decision-making process, the larger the committee, the better the decisions that will be made. In addition, research from Battaglia and Gallo also found that risk committee meetings have a positive effect on the effectiveness of risk management, so that they have a negative effect on bank risk taking behavior [19]. Then the researchhypothesis used in this study is as follows.

H1a: Risk Governance has a negative effect on Credit Risk

H1b: Risk Governance has a negative effect on Liquidity Risk

H1c: Risk Governance has a negative effect on Operational Risk

H1d: Risk Governance has a negative effect on Insolvency Risk

Research from Nguyen shows that ownership structure has an effect on limiting risk taking within a bank [49]. Research on ownership structure was also conducted by Lang and So [41] who found that banks dominated by state ownership tended to make less risky decisions, while research from Chou and Lin [23] found that foreign-owned banks were rated as less risky and more resilient when faced with a risk. Research from Elbannan also shows that there is a negative relationship from foreign ownership to bank risk taking behavior in banks in Egypt. Thus, the second hypothesis for this study is explained as follows [31].

H2a: Ownership Structure has a negative effect on Credit Risk

H2b: Ownership Structure has a negative effect on Liquidity Risk

H2c: Ownership Structure has a negative effect on Operational Risk

H2d: Ownership Structure has a negative effect on Insolvency Risk

3 Research Methodology

This study uses panel data on 34 banks in ASEAN-5 countries which took annual reports from the websites of each company and Refinitiv Datastream for the 2012-2021 period. The data will then be processed using the STATA application with the panel data regression method with pooled least squares. The author also uses data available from the World Bank. To assist the completion of the research problem formulation that has been determined, the author also uses reference books and other journals to broaden views in problem solving.

Based on the reference journal Abid et al [2] entitled "Risk governance and bank risk taking behavior: Evidence from Asian banks" and Nguyen [49] entitled "Ownership structure and bank risk taking in ASEAN countries: A quantile regression approach" as well as modifications made by the author, the following are the research model applied in this study:

$$\begin{aligned} \text{Risk}_{ijt} = {} & a_0 + a_1\text{RCSIZE}_{ijt} + a_2\text{RCMEETING}_{ijt} + a_3\text{BoardSize}_{ijt} + a_4\text{BoardIND}_{ijt} \\ & + a_5\text{BankSize}_{ijt} + a_6\text{BankAge}_{ijt} + a_7\text{DER}_{ijt} + a_8\text{GDP}_{jt} + e \end{aligned} \quad (1)$$

$$\begin{aligned} \text{Risk}_{ijt} = {} & a_0 + a_1\text{StatOWN}_{ijt} + a_2\text{ForOWN}_{ijt} + a_3\text{BoardSize}_{ijt} + a_4\text{BoardIND}_{ijt} \\ & + a_5\text{BankSize}_{ijt} + a_6\text{BankAge}_{ijt} + a_7\text{DER}_{ijt} + a_8\text{GDP}_{jt} + e \end{aligned} \quad (2)$$

4 Analysis and Discussion

4.1 Descriptive Statistic

Table 1. Descriptive Statistic

Variabel	Obs	Mean	Min	Max
Dependent Variable				
CR	322	0,0081	-0,0029	0,0576
LR	316	0,6262	-0,0027	9,0685
Zscore	326	5,4185	1,9101	8,7299
OR	329	0,0010	0,0000	0,0111
Independent Variable				
RC_SIZE	314	6,5955	3	22
RC_MEET	312	9,9103	1	35
STAT_OWN	57	0,4648	0,0317	0,6135
FOR_OWN	77	0,3149	0,1124	0,7448

Control Variable				
Board_Size	338	11,249	5	19
Board_IND	325	0,4797	0,1536	0,8421
BANK_SIZE	340	24,4926	22,4626	26,9549
BANK_AGE	340	64,6206	7	170
DEP	317	0,7318	0,0315	0,9828
GDP	340	26,8043	26,2913	27,8016

Based on the descriptive statistics table, the research observations show that the data used is unbalanced data from 34 banks in ASEAN countries in the 2012 – 2021 period, this is due to the uneven distribution of data provided by each company to the related variables. As observed in the descriptive statistical results of the dependent variable, credit risk has a minimum value of -0.0029 and a maximum value of 0.0576 and an average of 0.0081. A high ratio indicates that the credit risk that occurs in the company is also getting higher [2], it means has the potential to reduce the performance of the company. Based on research sample the highest credit risk was achieved by Security Bank Corp in the Philippines in 2020. It is corresponds to the significant increase in loan loss provisions due to the pandemic [53]. Meanwhile the lowest credit risk was achieved by AMMBHoldings Bhd in Malaysia in 2019, a significant decrease in loan loss provision occurred due to a decrease in non-performing loans (NPL) due to the acquisition of NPL AMMB Holding Bhd by the company Aiqon Capital Group Sdn [11]. Additionally, liquidity risk is seen in the range of -0.0027and 9.0685 with an average of 0.6262. Elevated liquidity risk is associated with a high ratio of loansto deposits [3], [27]. The highest liquidity risk value was achieved by Affin Bank Bhd in Malaysia in 2013. The reason was due to a decrease in total deposits and an increase in loans [7]. On the other hand, the lowest liquidity risk occurred in AMMB Holding Bhd in 2019, along with an increase in total deposits of 11.6%, so that the liquidity of the AMMB Holding company could be considered at an adequate level [11]. The next dependent variable, namely the Zscore, or related to insolvency risk is in the range 1.9101 to 8.7299 and the average is 5.4185. The highest Zscore was achieved byDBS Group Holdings Ltd in 2015, the high value of the Zscore indicates that insolvency risk or bankruptcy risk in the company is low. Meanwhile, the lowest Zscore was achieved by AMMB Holdings Bhd in 2021. Furthermore, operational risk is in the range of 0.0000 to 0.0111 with an average value of 0.0010. The lowest value occurred at DBS Group Holdings in 2014, while the highest value occurred at PT Bank Central Asia Tbk in 2014.

Descriptive statistical tables also describe independent variables such as risk committee size which has the lowest score of 3 people and the highest score of 22 people, while Risk committee meetings range from 1 to 35 meetings. This shows that each company has its own policy in determining the number of risk committees and the number of meeting frequencies according to theneeds of each company. Furthermore, regarding state ownership variables it appears to be in the range of 0.0317 to 0.6135 with an average of 0.4648 and foreign ownership which is in the range of0.1124 to 0.7448 with an average value of 0.3149.

The board size variable appears to be in the range of 5 to 19 people, with an average of 11,249 or 11 people. Furthermore, the composition of independent boards within a board is in the range of0.1536 (15.36%) to 0.8421 (84.21%). For the risk governance variable, it can be seen that each company has a different composition, depending on the size of the board and the needs of each bank.The next variable is bank size which is in the range of 22.4626 to 26.9549 with

an average of 24.4926. This indicates that the greater the bank size value, the greater the total asset value owned by a bank. Furthermore, there is a bank age that ranges from 7 to 170 years. Assuming that the longer the bank has been established, the more resilient it will be in dealing with banking risks that occur. Then, there is a deposit ratio which has the lowest value of 0.0315 and the highest value is 0.9828 with an average value of 0.7318. The average value which is quite high indicates that banksin ASEAN-5 have risks that tend to be lower. The last variable, namely the GDP generated by calculating the natural logarithm of real GDP in each country. Highest GDP value is 27.8016 whichis Indonesia's GDP in 2021, and the lowest value is 26.2913 which is Philippines's GDP in 2015. Average GDP in ASEAN-5 countries was 26.8043 which shows that there is no significant difference between GDP in ASEAN-5 countries.

4.2 Regression Test Result

Table 2. Risk Governance Variable Regression Test

	CR		LR		OR		Zscore	
	Coef.	**P>|t|**	**Coef.**	**P>|t|**	**Coef.**	**P>|t|**	**Coef.**	**P>|t|**
RC_Size	-0,0001	0,7230	0,0047	0,6820	0,0000	0,1710	-0,0356	0,2120
RC_Meet	0,0002	0,0130	-0,0224	0,0010	0,0000	0,3720	0,0089	0,5900
Board_Size	0,0007	0,0000	0,0388	0,0000	0,0000	0,5790	-0,0363	0,1500
Board_IND	0,0025	0,4400	0,1028	0,6660	-0,0003	0,6650	0,0821	0,8890
BANK_SIZE	-0,0009	0,0470	-0,0102	0,7680	-0,0003	0,0100	0,1991	0,0210
DEP	-0,0086	0,0430	-0,1798	0,5620	-0,0006	0,4890	0,6378	0,4060
GDP	0,0144	0,0000	0,3202	0,0000	0,0008	0,0010	-0,4121	0,0480
BANK_AGE	0,0000	0,5610	-0,0029	0,0040	0,0000	0,8690	0,0014	0,5750
R-Squared		0,5035		0,1565		0,1434		0,0894
Prob > F		0,0000		0,0000		0,0000		0,0016

Based on the results of the regression performed, it appears that RC Size has a negative and not significant effect on credit risk, while RC Meet has a positive and significant effect at a significance level of 5% on Credit Risk. This shows that hypothesis 1a is not rejected, due to a negative relationship to credit risk. The negative effect of RC size on credit risk was also found in research by Abid et al [2] who found something similar. Furthermore, if we look at liquidity risk, itcan be seen that RC Size has a positive and insignificant effect, while RC Meet has a negative and significant effect at a significance level of 1%, when referring to the hypothesis, then hypothesis 1bis not rejected. Then, for RC Size and RC Meet, it appears that they have a positive and insignificant effect on operational risk, so hypothesis 1c is rejected. The effect of RC Size on Zscore/insolvencyrisk has a negative and not significant effect, while RC Meet has a positive and not significant effect. So, this shows that hypothesis 1d is not rejected. When referring back to the regression results table,it appears that risk committee size has absolutely no significant effect on bank risk taking, although previous research such as research from Malik et al [45], which states that the greater the number ofrisk committees will make the effectiveness of management risks continue to increase, however, this study proves that risk committee size is not a strong reason for bank risk taking behavior. This is due to the fact that the greater the risk committee size, the greater the opportunity for free riders to occur,

and the decision-making process can also be influenced by the quality and expertise of the committee members, the flow of reporting in a bank, as well as the culture of the bank itself. The results of a similar study were also found by Jensen who stated that the size of the committee would pose a risk of not being optimal in decision making [37]. Overall, it can be seen that the risk governance variable is dominated by insignificant results on credit risk, liquidity risk, operational risk, and insolvency risk. It can be concluded that governance risk has no significant effect on bank risk taking behavior.

Table 3. Ownership Structure Variable Regression Test

			LR		OR		Zscore	
	Coef.	**P>|t|**	**Coef.**	**P>|t|**	**Coef.**	**P>|t|**	**Coef.**	**P>|t|**
STAT_OWN	0,1113	0,1840	0,1795	0,7990	-0,0068	0,7780	18,9267	0,2580
FOR_OWN	-0,0509	0,0940	0,1812	0,4770	-0,0087	0,3180	7,1578	0,2350
Board_Size	0,0009	0,3740	-0,0083	0,3550	0,0002	0,4460	0,1391	0,5060
Board_IND	0,0325	0,0350	-0,0060	0,9620	0,0031	0,4790	-3,0816	0,3030
BANK_SIZE	0,0141	0,0010	-0,1425	0,0000	0,0009	0,4450	-0,1752	0,8230
DEP	0,0015	0,9620	-1,6296	0,0000	0,0016	0,8660	-3,4857	0,5850
GDP	-0,0042	0,8150	0,2523	0,1130	-0,0042	0,4310	0,9326	0,7980
BANK_AGE	0,0000	0,8740	0,0005	0,1500	0,0000	0,6200	-0,0011	0,8860
R-Squared		0,5686		0,8437		0,1422		0,2175
Prob > F		0,0022		0,0000		0,8166		0,5285

In terms of the ownership structure, whether it is state owenership or foreign ownership, it appears that neither has a significant effect. The state ownership variable appears to have a positive effect on credit risk, while foreign ownership has a negative effect on credit risk, both variables seem insignificant. Based on this, it can be said that it does not reject Hypothesis 2a because ownership structure still seems to have a negative effect on credit risk. Effect of the two variables on liquidity risk, it can be seen that there is a positive influence even though it is not significant. This indicates that can reject hypothesis 2b which states that there is a positive relationship between ownership structure and liquidity risk. Meanwhile, for operational risk it can be seen that the two variables have a negative and insignificant effect, as well as the Zscore/insolvency risk which indicates that there is no significant relationship even though it has a positive influence. The regression results show that foreign ownership and its relation to bank risk taking behavior tend to be more influential because it is proven to have a negative effect on credit risk and operational risk, this is in line with the results of research from ElBannan which also found a negative effect on bank risk taking in Egypt [31]. This indicates that banks with a larger foreign ownership composition have a tendency to take lower risks compared to banks with a more dominant state ownership composition in a bank. The results of this analysis are also inversely proportional to research from Lang and So [41] which states that banks with a state ownership composition tend to avoid risk, and research from Chen et al. [22] who found that foreign ownership tends to take greater risks. Based on the regression results, it can be concluded that the ownership structure variable has no significant effect on bank risk taking behavior.

5 Conclusion

5.1 Conclusion

Reflecting on the financial crisis that occurred some time ago which shook the banking world enough, it resulted in new regulations aimed at strengthening the banking industry in dealing with risks that might occur. Based on the results of the regression analysis conducted on banks in ASEAN-5 (Indonesia, Malaysia, Singapore, Thailand and Philippines) which were carried out on 34 banks with total observations, the conclusions obtained from the following research are:

1. Risk Governance, which is described by the risk committee and also the risk meeting does not significantly influence the bank's risk taking behavior as described by credit risk, liquidity risk, operational risk, and insolvency risk. However, there are several negative and significant relationships, such as the Risk Committee Meeting on liquidity risk. Even though there are sub-variables that appear to significantly influence bank risk taking, in general, risk governance does not appear to significantly influence it.
2. The Ownership Structure, which is described by State Ownership and Foreign Ownership, also experiences the same thing as the risk governance variable, which does not significantly affect bank risk taking. However, there is still a negative relationship that affects, for example, credit risk and operational risk as described by the ZScore.

Based on these two conclusions, it can be said that risk governance and ownership structure do not significantly influence bank risk taking behavior, as illustrated by credit risk, liquidity risk, insolvency risk and operational risk.

5.2 Recommendation

Our findings also provide some recommendations:

1. For regulators is to increase regulations related to risk committees, especially regarding risk committee meetings which are seen to have a significant influence on risk decision making, it is hoped that regulators can take this matter as consideration to maximize the implementation of risk management in companies.
2. For banking companies, the objective is to mitigate risks, which consist of credit risk, liquidity risk, operational risk, and insolvency risk by improving risk governance. One way that companies can do is to increase the frequency of risk committee meetings periodically.This is in line with the results of this study which found that the frequency of risk committee meetings has a significant effect on bank risk taking behavior. In addition, companies should also be able to increase bank size by increasing total assets, so that they can improve risk mitigation, especially related to credit risk, liquidity risk, and operational risk.
3. For further research is to be able to complement the limitations of this study. The author suggests increasing the number of bank samples and using data not only referring to one database. The researcher also suggests adding more references so that the research can be more valid. In addition, the authors also suggest using multiple database references to complement research data to make it more perfect.

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