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The Influence of Bank Risk on the Opportunity of Dividend Policy Changes in Commercial Banks

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ABSTRACT

This study aims to analyze the influence of bank risk on the opportunity of dividend policy changes in commercial banks in ASEAN-5, using a sample of 53 banks over the period 2018–2023. Bank risk is measured through variables such as Z-Score, Non-Performing Loans (NPL), and Capital Adequacy Ratio (CAR), with the analysis conducted using binary logistic regression on three categories of dividend changes: dividend increase, dividend decrease, and dividend no-change. The results show that bank risk has a significant negative effect on dividend no-change. This finding is consistent with the signaling dividend theory, which emphasizes the importance of dividends as a signal of financial stability. Bank risk has a positive effect on dividend increase, while capital risk has a positive effect on dividend no-change, in line with the residual theory of dividends, which considers the adequacy of capital as a factor.

SARI PATI

Penelitian ini bertujuan untuk menganalisis pengaruh risiko bank terhadap peluang perubahan kebijakan dividen pada bank umum di indeks ASEAN-5, dengan menggunakan sampel sebanyak 53 bank selama periode 2018–2023. Risiko bank diukur melalui variabel seperti Z-Score, Kredit Bermasalah (Non-Performing Loans/NPL), dan Rasio Kecukupan Modal (Capital Adequacy Ratio/CAR), dengan analisis dilakukan menggunakan regresi logistik biner pada tiga kategori perubahan dividen: kenaikan dividen, penurunan dividen, dan tanpa perubahan dividen. Hasil penelitian menunjukkan bahwa risiko bank memiliki pengaruh negatif yang signifikan terhadap kondisi tanpa perubahan dividen. Temuan ini sejalan dengan teori dividen sebagai sinyal (signaling dividend theory), yang menekankan pentingnya dividen sebagai sinyal stabilitas keuangan. Risiko bank memiliki pengaruh positif terhadap kenaikan dividen, sementara risiko modal memiliki pengaruh positif terhadap kondisi tanpa perubahan dividen, sesuai dengan teori dividen residual yang mempertimbangkan kecukupan modal sebagai salah satu faktor.

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INTRODUCTION

The banking sector plays a crucial role in the global economy, particularly in the ASEAN-5 region, which includes Indonesia, Malaysia, Singapore, Thailand, and the Philippines. As financial institutions, banks have a primary function of collecting funds from the public and channeling them into credit. Through this role, banks contribute to economic growth while maintaining financial stability. However, in carrying out their operations, banks face various risks that can affect their performance and strategic policies, including dividend policy.

Dividend policy is one of the important decisions for banks, as it is directly related to the distribution of profits to shareholders and the accumulation of earnings as capital reserves. Banks with high risk tend to retain earnings to strengthen capital reserves and enhance financial resilience. This phenomenon has become increasingly relevant amid the dynamic economic developments in the ASEAN-5 region, such as the impacts of the global financial crisis, the COVID-19 pandemic, and the implementation of increasingly stringent financial regulations. Therefore, understanding how banking risks affect dividend policy becomes an important research topic, as it can provide insights into determining optimal banking strategies.

One of the key aspects of this research is how banking risk variables influence dividend distribution decisions in commercial banks within the ASEAN-5. Bank risk, measured by the Z-Score, reflects financial stability and resilience against potential bankruptcy. The higher the Z-Score, the lower the bank's bankruptcy risk, allowing for a more stable dividend policy. Conversely, banks with low Z-Scores tend to be more cautious in distributing dividends due to uncertainty in their financial condition.

In addition, credit risk, measured by the Non-Performing Loans (NPL) ratio, also plays a role in dividend policy. Banks with high NPL levels indicate poor credit quality and therefore tend to retain earnings to strengthen reserves against potential losses from bad loans. This can lead to reductions or even suspensions of dividend payments to maintain the financial stability of the bank.

Furthermore, capital risk, measured by the Capital Adequacy Ratio (CAR), reflects the bank's capital adequacy in facing financial risks. Banks with high CAR have stronger capital resilience and greater flexibility in distributing dividends. Conversely, banks with low CAR need to be more cautious with their dividend policies to ensure compliance with capital regulations and maintain solvency.

The vital role of dividends for shareholders has driven many studies analyzing dividend policies. Santosa et al. (2023) examined dividend policy in Indonesia's banking sector during the COVID-19 pandemic. Fama and French (2001) analyzed dividend policy in the United States within the non-financial sector. Additionally, Al-Kayed (2017) studied the determinants of dividend policy in Islamic commercial banks and commercial banks in Saudi Arabia. These studies show that various factors, including banking risks, can influence the dividend policies implemented by banks in different countries.

This research aims to analyze the effect of banking risks on dividend policy in commercial banks in the ASEAN-5. Specifically, this study focuses on three main aspects: examining the effect of bank risk on dividend policy, the effect of credit risk on dividend policy, and the effect of capital risk on dividend policy. By looking at the relationship between each type of risk and dividend policy, this research is expected to provide a comprehensive overview of how the risk levels faced by banks influence dividend distribution decisions in the ASEAN-5 region.

Furthermore, the analysis is conducted using the binary logistic regression method with a sample of 53 conventional commercial banks in ASEAN-5 during the period 2018–2023. Bank risk was measured using the Z-Score indicator, credit risk was measured using the Non-Performing Loans (NPL) ratio, and capital risk was measured using the Capital Adequacy Ratio (CAR). The binary logistic regression method was applied to evaluate the influence of each type of risk on dividend policy, which was classified into three categories: dividend increase, dividend decrease, and no change in dividends.

The findings of this study are expected to provide significant contributions to various stakeholders. First, for investors, this research provides insights into how banking risks can affect dividend policy, serving as a consideration in investment decision-making. Second, for regulators, the results of this study can serve as a basis for formulating more effective policies to maintain the stability of the banking sector and protect the interests of shareholders. Third, for bank management, this research helps in designing optimal dividend policy strategies by considering the various risk factors faced.

LITERATURE REVIEW

Signaling Dividend Theory

The signaling dividend theory explains that companies use dividend policy as a signal to investors regarding the company's financial condition. In the banking industry, information related to profitability, risk, and financial stability is often difficult for investors to interpret due to the complexity of bank operations. Therefore, changes in dividend policy can provide signals about the company's future performance prospects. An increase in dividend payments indicates that management is capable of generating sustainable profits and maintaining stability even in potentially changing economic conditions. Conversely, a decrease in dividend payments can be interpreted as a sign that the company may be facing financial difficulties or declining profits, prompting the company to preserve liquidity in order to cover increasing risks.

Miller and Modigliani (1961) stated that in an efficient capital market, a company's value does not depend on its dividend policy. Several years later, Miller and Rock (1985) developed the signaling theory, arguing that companies use dividend policy as a signal to convey future prospects to outside parties with less information. Therefore, news of increased dividend payments provides a positive signal regarding improved company performance.

Residual Theory of Dividends

The residual theory of dividends, introduced by Miller and Modigliani (1961), states that companies will only distribute dividends after fulfilling their investment needs. This theory suggests that investment needs take precedence over dividend payments because companies tend to prioritize long-term growth and capital appreciation over short-term returns to shareholders. In this approach, dividend distribution depends on the profits remaining after all profitable investment opportunities have been financed. According to Dickens, Casey, and Newman (2002), companies with greater investment opportunities tend to pay lower dividends, as they prefer to use available cash to fund these investments. Therefore, this theory prioritizes long-term growth and capital appreciation over short-term shareholder returns.

The residual dividend theory can be analyzed through two main relationships: the relationship between profitability and dividend payments and the relationship between investment levels and dividend distribution. Companies with high profitability typically have more earnings, allowing them to pay larger dividends. However, if the company is still in a growth phase and requires significant investment, the profits

earned are more likely to be reinvested rather than distributed to shareholders.

Regulatory Hypothesis

The regulatory hypothesis explains how government regulations influence the behavior and performance of companies, particularly in highly regulated sectors such as banking. This theory suggests that regulations aim to protect public interests, especially in maintaining financial system stability, safeguarding consumers, and preventing behaviors that could negatively impact a country's economy. In the banking sector, regulation plays a crucial role in maintaining public trust and ensuring that banks operate with controlled risk levels.

In the banking industry, the regulatory hypothesis explains that regulations set by banking authorities—such as requirements regarding the Capital Adequacy Ratio (CAR), liquidity, and credit restrictions—can influence banks' business strategies and management decisions. Capital regulations require banks to maintain adequate capital to cover potential losses, encouraging banks to be more cautious in taking on credit risk.

However, this theory recognizes that excessively strict regulations can produce unintended effects, such as reducing efficiency in the banking sector. Stringent regulations regarding capital adequacy in the banking industry may cause banks with weaker capital structures to focus on meeting regulatory requirements, which can impact their operational performance. As a result, banks may limit dividend payments (Kashyap and Stein, 1995).

Dividend Policy

According to Ambarwati (2010), dividends are cash or shares distributed by a company to shareholders as part of profit sharing. Dividends are distributed to shareholders through a decision-making process known as dividend policy. Sadalia (2010) explains that the decision regarding the amount of dividends to be distributed to shareholders is made by the board of commissioners. In practice, the board of commissioners typically holds meetings to discuss and determine the amount of dividend payments, considering two aspects: the financial condition in the previous period and financial projections for the future.

This is supported by Lintner (1956), who found that companies gradually adjust dividend payments in response to changes in earnings, in line with the company's applied dividend policy. Establishing a dividend policy is crucial for companies because the amount of dividends distributed affects the retained earnings available for future investment needs. Companies with limited investment opportunities tend to have more funds available for dividend payments to shareholders (Fama and French, 2001).

Bank Risk

According to Boyd and Graham (1988), bank risk can be measured using the Z-Score. The Z-Score has been widely used in banking literature as a measure of a bank's financial stability or risk-taking (Berger et al., 2017; Bai & Elyasiani, 2013). In general, the Z-Score is an indicator for measuring a bank's bankruptcy risk or financial resilience. The Z-Score calculates the distance between a bank's earnings and the volatility of those earnings relative to its equity. The higher the Z-Score, the more stable a bank's financial condition (Laeven & Levine, 2009).

Bank risk can influence dividend policy in the banking industry. Tran (2021) used the Z-Score as the main measure of bank risk to analyze its relationship with dividend policy. The study found that banks with higher Z-Scores, indicating lower risk, tend to pay dividends consistently. This suggests that stable banks have sufficient capital reserves to maintain regular dividend payments without compromising financial

stability. In determining dividend policy, Alhalabi et al. (2023) found that banks with good stability and low risk tend to increase dividend payments. This is consistent with Ashraf et al. (2016), who stated that banks are more likely to increase dividend payments when they experience improvements in profitability and asset quality.

Furthermore, Forti and Schiozer (2015) explained that bank risk negatively affects dividend policy, aligning with signaling dividend theory, which states that the market views dividends as signals conveying information about a company's profitability prospects. Supporting this, Ali (2021) studied dividend changes during the COVID-19 pandemic and found that despite the financial impact of the pandemic, companies chose not to cut or stop dividend payments to avoid sending negative signals to shareholders about long-term prospects.

H_{1a}: Bank Risk has a **positive** effect on dividend increase in commercial banks in ASEAN-5.
H_{1b}: Bank Risk has a **negative** effect on dividend decrease in commercial banks in ASEAN-5.
H_{1c}: Bank Risk has a **negative** effect on dividend no-change in commercial banks in ASEAN-5.

Credit Bank

Credit risk refers to the risk arising when borrowers fail to meet payment obligations as agreed. Credit risk can be measured using the ratio of non-performing loans (NPL) to total loans. Non-performing loans are loans experiencing payment difficulties. A loan is classified as an NPL if interest and principal payments have been overdue for at least 90 days. NPL is an indicator of credit quality within a bank's loan portfolio. A higher NPL indicates poorer credit quality (Budgaga, 2020). Banks with lower NPL ratios are considered safer and face lower credit risk (Silalahi et al., 2021).

Conversely, a high NPL ratio can influence a bank's strategic policies, including dividend payments. According to Budgaga (2020), credit risk significantly negatively impacts dividend payments by banks in the MENA region. This is supported by regulatory hypothesis theory, which suggests that bank regulators require commercial banks to maintain capital reserves to mitigate credit portfolio risk. Setiawan et al. (2024) also found that banks with high credit risk face regulatory pressure to increase capital reserves, leading them to reduce dividend payments. Similarly, Hsiao and Tseng (2016) found that credit risk can reduce bank profitability and retain earnings. Therefore, banks tend to reduce dividend payments to strengthen financial conditions and comply with capital reserve regulations.

Additionally, Kanas (2013) studied the relationship between U.S. commercial bank dividends and credit risk. The study explained that dividend reductions in response to rising credit risk align with regulatory expectations. Regulatory frameworks like Prompt Corrective Action (PCA) require banks to increase capital reserves when credit risk rises, limiting their ability to pay dividends. By retaining more earnings, banks can improve their capital adequacy ratio, reducing risk while complying with regulations aimed at maintaining financial stability. This reflects the residual theory of dividends, which states that dividends are distributed from residual profits after covering investment needs and capital reserves. Therefore, during periods of increased credit risk, banks tend to adopt conservative dividend policies to preserve capital and manage risk effectively.

H_{1a}: Credit Risk has a **negative** effect on dividend increase in commercial banks in ASEAN-5.
H_{1b}: Credit Risk has a **positive** effect on dividend decrease in commercial banks in ASEAN-5.
H_{1c}: Credit Risk has a **positive** effect on dividend no-change in commercial banks in ASEAN-5.

Capital Risk

Capital risk faced by banks refers to the potential inadequacy of capital to cover losses, making capital adequacy a crucial factor in ensuring a bank's ability to meet its obligations in case of borrower defaults. Capital functions as a loss reserve and guarantees funds for depositors. Therefore, capital adequacy improves bank liquidity and ensures sufficient funds are available to meet customer needs, especially when facing significant losses from credit defaults. The larger the loans disbursed by the bank, the more capital is required (Naceur and Kandil, 2008).

Considering the inherent risks in banking operations, regulators aim to maintain a stable money market through capital adequacy regulations to ensure banks can withstand economic fluctuations. In this context, the Capital Adequacy Ratio (CAR) is used to assess a bank's capital risk level. Ismaulina et al. (2021) explain that CAR measures a bank's ability to face potential risks and absorb losses from declines in risky asset values. A high CAR indicates better capacity to handle potential losses.

Several studies have examined and supported the regulatory hypothesis regarding the relationship between capital risk, as measured by CAR, and bank dividend policy. Setiawan et al. (2024) explained that banks with lower CAR are subject to stricter regulatory oversight, limiting their ability to distribute dividends. Conversely, Theis and Dutta (2009) stated that banks with higher CAR face less regulatory pressure, giving them more flexibility to pay dividends. Ashraf et al. (2016) found that banks in countries with strict risk-based capital requirements tend to pay fewer dividends as they focus on retaining capital rather than distributing it to shareholders.

H_{1a}: Capital Risk has a **positive** effect on dividend increase in commercial banks in ASEAN-5.

H_{1b}: Capital Risk has a **negative** effect on dividend decrease in commercial banks in ASEAN-5.

H_{1c}: Capital Risk has a **positive** effect on dividend no-change in commercial banks in ASEAN-5.

METHODOLOGY

Types and Sources of Data

This research uses panel data, which is a combination of cross-sectional and time series data. The panel data includes cross-sectional data such as dividend payments (binary), Z-Score, Non-Performing Loan (NPL) to total loans ratio, and Capital Adequacy Ratio (CAR). In addition, it comprises time series data consisting of annual data from 2018 to 2023 sourced from Bloomberg. The sample size consists of panel data covering 53 commercial banks in ASEAN-5 countries.

Population and Sample

The sampling technique used in this research is purposive sampling. The researchers selected samples based on the following criteria: (1) Commercial banks listed on the Stock Exchange in each ASEAN-5 country during the period of 2018–2023, and (2) commercial banks with available and complete financial reports throughout the period of 2018–2023. Based on these two criteria and after doing an outlier test, the researchers obtained a sample of 53 commercial banks in ASEAN-5 countries during the period of 2018–2023.

Operational Variable

This study has one dependent variable, three independent variables, and four control variables to be analyzed. The variables discussed in this research are as follows:

Dividend Policy

The dependent variable in this research is the change in dividend payments, defined as the percentage difference between the dividend in fiscal year *t* and the previous fiscal year *t-1*. Furthermore, commercial banks in ASEAN-5 are ranked each year into three groups: dividend

decrease, dividend increase, and dividend no-change. The indicator for the company's decision regarding changes in dividend payments uses binary variables, namely 0 and 1. For example, for dividend decrease, the binary variable is represented by 1 if the company decreases its dividend and 0 otherwise.

Bank Risk

Bank risk refers to the potential losses arising from internal and external factors that affect financial health and operational stability. This risk is a crucial factor in dividend decisions, as banks tend to be more cautious in distributing dividends during periods of high risk. One measurement of bank risk is the Z-Score, which indicates that the higher the Z-Score, the lower the probability of failure and the better the financial performance of the bank (Goswami & Malik, 2024). The formula for calculating the Z-Score is as follows:

$$Z = \frac{ROA + (Equity/Total\ Assets)}{\sigma\ (ROA)}$$

Credit Risk

Credit risk in banks refers to the risk that arises when borrowers fail to fulfill their payment obligations as agreed upon. The level of credit risk can be measured by the ratio of non-performing loans to total loans. Non-performing loans are loans experiencing repayment difficulties. The formula for the NPL to total loans ratio is as follows:

$$NPL\ to\ Total\ Loans\ ratio = \frac{Non-performing\ Loans}{Total\ Loans}$$

Capital Risk

Capital risk faced by banks refers to the potential inadequacy of the bank's capital to cover losses. Capital risk is considered influential in dividend payment decisions, given the regulations on capital adequacy within the banking industry. One regulation that must be complied with by every bank is the Capital Adequacy Ratio (CAR). The formula for CAR is as follows:

$$Capital\ Adequacy\ Loans\ ratio = \frac{Total\ Capitals}{Risk-Weighted\ Asets}$$

Profitability

Profitability is an indicator used by companies to assess their ability to generate profits (Kasmir, 2019). The researcher selected Net Interest Margin (NIM) as a proxy for profitability because NIM reflects the bank's ability to manage the difference between interest income from loans and interest expenses from deposits or debts (Rose & Hudgins, 2013). The formula used is:

$$Net\ Interest\ Margin\ (NIM) = \frac{Net\ Interest\ Margin}{Average\ Interest-Earning\ Assets}$$

Liquidity

Liquidity indicates the company's ability to finance its operational activities and meet its short-term obligations. Companies with adequate liquidity tend to be more flexible in distributing dividends because they have sufficient cash and liquid assets. Liquidity in this study is proxied by the Loans to Deposit Ratio (LDR). LDR reflects a bank's ability to channel funds to be lent to the public (Sudiyatno et al., 2024). The formula for the Loans to Deposit Ratio (LDR) is as follows:

$$Bank\ Risk = Ln\ (Total\ Assets)$$

Leverage

Leverage measures the level of debt usage in a bank's financial structure. The variable used to measure the amount of debt is the total debt to total assets ratio. High debt usage increases interest payment obligations and financial risk. Therefore, banks with high leverage tend to be more cautious in setting dividend policies. The formula used is as follows:

$$Debt\ to\ Asset = \frac{Total\ Debt}{Total\ Assets}$$

Logit Regression Analysis

Several methods used to evaluate the binary logistic regression model in this study include model significance testing and model feasibility testing. Model significance testing is carried out using the Likelihood Ratio (LR) Test, Wald Z Statistic Test, and McFadden R^2 Test. To assess the overall feasibility of the model, the author uses the Hosmer and Lemeshow Goodness of Fit Test, which functions to determine the extent to which the model can accurately predict the data by comparing observed and predicted values. Furthermore, the author also conducts multicollinearity testing by examining the Variance Inflation Factor (VIF) values and Correlation Tests to ensure there is no high correlation between independent variables in the model. In general, the logit regression formula for panel data is as follows:

$$Logit(PayDiv)_{it} = \alpha + \beta_1 ZSCORE + \beta_2 NPL + \beta_3 CAR + \gamma_{it} + \varepsilon_{it}$$

Explanation:

α=	Constant term
β_1=	Regression coefficient of variable i
PayDiv=	Change in Dividend Payment
ZSCORE=	Z-Score
NPL=	Non-Performing Loans
CAR=	Capital Adequacy Ratio
γ_{it}=	Vector of Control Variables (Profitability, Liquidity, Firm Size, and Leverage)
ε_{it}=	Error term

RESULTS AND DISCUSSION

Results

Descriptive Statistics

Based on the results of descriptive statistical analysis, the independent variable Capital Adequacy Ratio (CAR) has an average of 20.51%, with a standard deviation of 5.65, a minimum value of 10.78%, and a maximum value of 42.84%, indicating that most banks have a good and stable level of capital adequacy. The variable NPL to Total Loans has an average of 2.66%, with a standard deviation of 1.41, a minimum value of 0%, and a maximum value of 8.16%, indicating that the level of credit risk in banks remains within a safe range. Meanwhile, the average Z-Score is 6.82, with a minimum value of -5.19 and a maximum of 27.31, suggesting that the banks in the sample have a good level of stability with a relatively low risk of bankruptcy.

For the dependent variable, the statistical results show that the average dividend increase is 47%, dividend decrease is 22%, and dividend no-change is 31%, indicating that during the observation period, the majority of banks tended to increase or maintain dividends rather than reduce them. The maximum and minimum values of the dividend policy reflect the nature of the dummy variable, meaning the dividend payment variable in the sample data only has two values, namely 0 and 1. Accordingly, the maximum value in the sample is 1, while the minimum is 0. Furthermore, the dependent variable with the highest standard deviation is dividend increase, at 50%, indicating that the greatest data variation occurs in the dividend increase group.

For the control variables, it is noted that the Net Interest Margin (NIM) has an average of 3.62% with a standard deviation of 1.55, a maximum value of 7.28%, and a minimum value of 0.28%. The Loan to Deposit Ratio (LDR) has an average of 84.79%, with a standard deviation of 12.56, a maximum value of 116%, and a minimum value of 41.26%. The logarithm of Total Assets has an average of 13.62, with a standard deviation of 4.69, a maximum value of 21.5, and a minimum value of 5.66. Lastly, the Debt to Asset Ratio has an average of 8.60%, with a standard deviation of 5.07, a maximum value of 23.66%, and a minimum value of 0.01%.

Table 1. Descriptive Statistics

Variabel Independen	Minimum	Maximum	Mean	SD
CAR	10.78	42.84	20.51	5.65
NPL to Total Loans	0.00	8.16	2.66	1.41
Z-Score	-5.19	27.31	6.82	5.70
Variabel Dependen				
Dividend Increase	0.00	1.00	0.47	0.50
Dividend Decrease	0.50	1.00	0.22	0.42
Dividend No-Change	0.13	1.00	0.31	0.46
Variabel Kontrol				
NIM	0.28	7.68	3.62	1.55
LDR	41.26	116.00	84.79	12.56
Log Total Asset	5.66	21.50	13.62	4.69
Debt to Asset	0.01	23.66	8.60	5.07

Source: Eviews

Logistic Regression Test

The analysis of variables affecting dividend policy in the group of commercial banks in ASEAN-5 is tested using three different models. This is due to the dependent variable being divided into three groups: dividend increase, dividend decrease, and dividend no-change. The results of each binary logit regression model are as follows:

Table 2. Logit Regression Model 1

Dependent Variable: Dividend Increase/No Dividend Increase
Method: Binary Logit Regression
Total Observation: 318

Variable	Coef	Std. Error	Z	Prob.
C	-3,1109	1,1563	-2,6905	0,0071
CAR	-0,0378	0,0259	1,4622	0,1437
NPL to Total Loans	-0,0739	0,1083	-0,6827	0,4948
Z-Score	0,1000	0,0282	3,5517	0,0004***
NIM	0,1427	0,0861	1,6569	0,0975
LDR	0,0095	0,0110	0,8689	0,3849
Log Total Asset	0,1312	0,0299	4,3885	0,000***
Debt to Asset	0,0120	0,0278	0,4331	0,6649

Source: Eviews
*significant at alpha 5%
** significant at alpha 1%
*** significant at alpha 0,1%

Table 3. Logit Regression Model 2

Dependent Variable: Dividend Decrease/No Dividend Decrease
Method: Binary Logit Regression
Total Observation: 318

Variable	Coef	Std. Error	Z	Prob.
C	-3,9553	1,3491	-2,9318	0,0034
CAR	-0,0375	0,0321	-1,1660	0,2436
NPL to Total Loans	-0,0422	0,1262	-0,3348	0,7377
Z-Score	0,0115	0,0288	0,4007	0,6887
NIM	-0,0863	0,1006	-0,8586	0,3905
LDR	0,0394	0,0136	2,9015	0,0037***
Logaritma Total Aset	0,0014	0,0348	0,0410	0,9673
Debt to Asset	0,0303	0,0312	0,9703	0,3319

Table 4. Logit Regression Model 3

Dependent Variable: Dividend No-Change/No Dividend No-Change
Method: Binary Logit Regression
Total Observation: 318

Variable	Coef	Std. Error	Z	Prob.
C	5,6532	1,4342	3,9417	0.0001
CAR	0,0536	0,0270	1,9879	0.0468*
NPL to Total Loans	0,0866	0,1186	0,7301	0.4653
Z-Score	-0,1811	0,0407	-4,4456	0.0000***
NIM	-0,0109	0,1026	-1,0639	0.2874
LDR	-0,0495	0,0130	-3,8185	0.0001***
Logaritma Total Aset	-0,1416	0,0322	-4,3998	0.0000***
Debt to Asset	-0,0364	0,0320	-1,1396	0.2544

Source: Eviews
*significant at alpha 5%
** significant at alpha 1%
*** significant at alpha 0,1%

Likelihood Ratio Test

Logit regression model (1) produces an LR statistic value of 61.21008 with a probability of 0.00000, while logit regression model (2) has an LR statistic of 19.9258 with a probability of 0.005732, and logit regression model (3) shows an LR statistic of 116.0607 with a probability of 0.000000. All of these probability values are less than 0.05, indicating that all three models are statistically significant in explaining the relationship between the independent variables and the dependent variable.

McFadden R^2 Test

The McFadden R^2 value for logit regression model (1) is 0.139330, indicating that the model can explain approximately 13.93% of the variability in the data. In logit regression model (2), McFadden R^2 is 0.060850, which shows the extent of variation in dividend payment changes

explained by the variation of the independent variables. Logit regression model (3) produces the highest McFadden R^2 of 0.289763, meaning that the contribution of the independent variables to the dependent variable is 28.98%.

Hosmer and Lemeshow Goodness of Fit Test

The goodness of fit test is used to assess the model's suitability with the observed data. The Hosmer and Lemeshow values are 0.0666 for dividend increase, 0.8136 for dividend decrease, and 0.1899 for dividend no-change. Since all these values are greater than 0.05 (p-value), the null hypothesis is not rejected. This indicates that the models fit the observed data well and can be considered acceptable.

Multicollinearity Test

The author uses two methods to detect multicollinearity, which are the correlation test and Variance Inflation Factor (VIF). A model is considered to have multicollinearity if the correlation between variables exceeds 80%. Based on the test results using Eviews, no variables have correlations exceeding 50%. Therefore, it can be concluded that the model does not suffer from multicollinearity issues.

Furthermore, the author also conducted a multicollinearity check using the Variance Inflation Factor (VIF). The VIF calculation results show that the VIF values for the variables in all three models are below 10. This finding indicates that there is no multicollinearity problem in the models used in this research.

Table 5. Correlation Test

	CAR	NPL to Total Loans	Z-Score	Log Total Asset	LDR	NIM	Debt to Asset
CAR	1,00						
NPL to Total Loans	-0,05	1,00					
Z-Score	-0,18	-0,45	1,00				
Log Total Asset	0,06	-0,002	0,13	1,00			
LDR	-0,09	0,10	0,12	0,12	1,00		
NIM	0,12	0,19	-0,08	0,18	-0,08	1,00	
Debt to Asset	-0,27	-0,05	0,20	0,15	0,32	-0,24	1,00

Source: Eviews

Table 6. VIF Table

VIF	Model 1	Model 2	Model 3
CAR	1,148	1,148	1,148
NPL to Total Loans	1,377	1,377	1,377
Z-Score	1,402	1,402	1,402
Log Total Asset	1,163	1,163	1,163
LDR	1,161	1,161	1,161
NIM	1,113	1,113	1,113
Debt to Asset	1,294	1,294	1,294

Source: Eviews

Discussion

The Effect of Bank Risk on Dividend Policy

Based on the research results, bank risk, measured by the Z-Score, has a significant effect when there is no change in dividend payments and when there is an increase in dividends. This is evidenced by the p-value of the bank risk variable, which is significant at the 5% confidence level. Therefore, the author accepts Hypothesis 1a and Hypothesis 1c. However, Hypothesis 1b is rejected because the p-value for dividend decrease is greater than the 5% alpha level.

The positive relationship between bank risk and dividend increases indicates that the lower the bank's risk, the greater the likelihood of increasing dividends. This is supported by the high average Z-Score during 2018–2019, along with increases in ROA and dividends. Conversely, when risk increased during the 2020–2021 crisis period, banks were more cautious about raising dividends despite improved profitability. During the recovery period of 2022–2023, stability and profitability improved again, leading to more banks to increase dividends, reinforcing the finding that low-risk banks are more confident in raising dividend payments.

Bank risk also has a significant negative effect on the dividend no-change policy. This negative relationship aligns with the research of Forti and Schiozer (2015), who found that high-risk banks tend to maintain dividend payments to avoid negative market perceptions. This finding is consistent with the signaling dividend theory, as the market views dividends as signals conveying information about a company's future profitability. An increase in dividends indicates strong long-term growth prospects and financial stability, while a cut or elimination of dividends sends a negative signal regarding poor future profitability and income volatility.

The signaling dividend theory also helps explain the insignificance of bank risk with dividend decrease. This is because banks tend to avoid cutting dividends and prefer to maintain a stable image through steady or unchanged dividend policies. Moreover, the average Z-Score in the sample is 6.82, with a median of 5.53 which indicates that banks have good stability and relatively low bankruptcy risk. Thus, banks do not face strong enough pressure to reduce dividends in response to increased bank risk.

The Effect of Credit Risk on Dividend Policy

The regression results show that the p-value > 0.05; therefore, Hypotheses 1a, 1b, and 1c are rejected. This indicates that the credit risk variable does not have a significant effect on dividend policy across all types of dividend changes. This research finds no significant relationship because most banks in the sample have relatively low credit risk and remain within safe regulatory limits. Based on the sample data, the average NPL is 2.66%, which is below 5%, indicating good bank health. When NPL to total loans remains within reasonable limits, banks do not feel the need to significantly adjust dividends, as they are not under substantial pressure from problematic loans.

The Effect of Capital Risk on Dividend Policy

Capital risk has a p-value < 0.05, leading to the acceptance of Hypothesis 1c, which states that capital risk has a significant positive relationship with dividend no-change. However, the author rejects Hypotheses 1a and 1b, as the p-values for dividend increase and dividend decrease are greater than the 5% significance level. This indicates that the capital risk variable does not have a significant effect on dividend changes in either the dividend increase or dividend decrease categories.

The positive relationship between capital risk and dividend no-change suggests that banks with high capital risk are more likely to maintain the same dividend policy. Research by Haq et al. (2024) reveals that for banks with high CAR, higher dividend payments reduce

the retained earnings available for expansion and capital strengthening. Therefore, banks prefer to maintain dividends at the same level to ensure sufficient capital reserves to face economic uncertainty or potential financial risks. This finding aligns with the residual theory of dividends, which considers regulatory pressures, such as capital adequacy requirements, as deductions from residual profits available for dividend payments.

However, the relationship between capital risk and both dividend increase and dividend decrease is insignificant. A contributing explanation is that all banks in the sample have CAR above the Basel III regulatory minimum of 10.5%. The average CAR in the sample is 20.51%, with the lowest CAR at 10.78%. As a result, banks are not under regulatory pressure to maintain sufficient capital. This perspective is consistent with the regulatory hypothesis, which states that banks with lower CARs will face tighter regulatory supervision, thereby limiting their capacity to distribute dividends.

CONCLUSION

This study examines how dividend policy is influenced by the risks faced by commercial banks in ASEAN-5, using a sample of 53 banks listed on the stock exchanges of these countries during the period from 2018 to 2023. The findings indicate that bank risk has a positive effect on dividend increases and a negative effect on dividend no-change. This finding supports the signaling dividend theory, which suggests that stable or increasing dividends serve as a positive signal of a bank's financial health and future prospects. Furthermore, capital risk, as measured by the Capital Adequacy Ratio (CAR), is found to have a positive effect on the decision to maintain dividends. This aligns with the residual theory of dividends, as banks prioritize capital stability to comply with regulatory requirements.

However, this study has several limitations that may affect the validity and generalizability of the findings. The research focuses solely on commercial banks in ASEAN-5, excluding Islamic banks, which may have different risk profiles and dividend policies. In addition, the dataset covers only the period from 2018 to 2023, which may not be long enough to capture dividend policy patterns over a full economic cycle. Lastly, there are alternative measurement methods for the variables that could provide deeper insights.

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