

Female Directors, Foreign Directors, Firm Performance, and Credit Risk: Evidence from ASEAN Banking Firms 2020-2024

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ABSTRACT

Objective: This study aims to analyze the influence of female directors, foreign directors, board size, bank size, net interest margin (NIM), and loan-to-asset ratio (LTA) on financial performance (ROA) and credit risk (NPL) in banks across five ASEAN countries. **Method:** Using panel data from 2020–2024 (N=35, T=5; 175 observations), the research employs panel regression with Chow, Hausman, and LM tests to determine the most appropriate estimation model, resulting in the application of the Random Effects Model (REM) using GLS. **Results:** The findings reveal that female directors significantly decrease financial performance, while foreign directors significantly enhance it, although neither influences credit risk. The control variables show mixed effects: larger boards and banks reduce performance and increase credit risk, NIM increases performance but simultaneously elevates risk, and LTA significantly raises credit risk. **Novelty:** This study offers new empirical insights by simultaneously examining board diversity, governance structure, and financial indicators in a cross-country ASEAN banking context during the post-pandemic period, highlighting the governance–risk–performance trade-off often overlooked in previous studies.

INTRODUCTION

In an increasingly complex and dynamic global economic environment, the role of corporate governance is becoming increasingly important, particularly in the banking sector, which plays a systemic role in national and regional financial stability. Banks in Southeast Asia face significant challenges following the COVID-19 pandemic and amid fluctuating global interest rates. These challenges relate not only to financial performance but also to credit stability, as reflected in the credit risk borne by banks. A crucial aspect of corporate governance is the composition of the board of directors, reflecting the strategic capacity, diversity of perspectives, and effectiveness of internal oversight. In this context, the presence of female directors and foreign directors are two dimensions of diversity that are interesting to study empirically, particularly in relation to financial performance and corporate risk. [1]

Gender diversity in boards of directors has become a major focus in the corporate governance literature. From [2] reported that female representation on boards of public companies in Southeast Asia increased to 20% in 2023 from 17.1% in 2021. The Association of Southeast Asian Nations (ASEAN), which consists of Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, shows rapid economic growth but with heterogeneous banking stability. Some countries face high credit risk, while others are relatively stable. This condition

raises the need to examine the role of governance, especially board composition, in explaining variations in financial performance and credit risk across ASEAN countries [3].

The presence of female directors on boards has become an important topic in the governance literature. Several studies have found that female directors strengthen oversight, increase transparency, and encourage more prudent decision-making [1] [4]. [5]. However, other results show a negative impact on profitability due to potential communication differences or a still limited number of representatives [3] [6]. On the other hand, the presence of foreign directors is also a concern. Foreign directors are believed to be able to enrich the board's perspective through global experience, international networks, and the transfer of managerial knowledge [7] [8] [9]. However, obstacles to adapting to local regulations and differences in organizational culture have also been reported to reduce effectiveness [10] [11].

The presence of foreign directors on boards is often associated with global knowledge transfer, access to international networks, and the adoption of more advanced managerial practices. However, empirical evidence regarding the influence of foreign directors on firm performance and risk in ASEAN remains mixed. Study [1] found that national diversity on boards is positively related to corporate governance practices in Southeast Asian banks. Study [3] in Vietnam found that the presence of foreign directors is negatively correlated with bank risk, but does not significantly impact financial performance. This suggests that the contribution of foreign directors may be more technocratic in risk management than in growth strategy. Thus, the role of foreign directors in bank performance and credit risk remains ambiguous and needs to be empirically studied.

Banking financial performance is generally measured by Return on Assets (ROA), which reflects the bank's ability to generate profits from managed assets, while bank stability is assessed through Non-Performing Loans (NPL), which indicate the level of credit risk. Both indicators are important because they reflect the balance between profitability and risk in banking operations. [12]

In financial performance, the Southeast Asian banking industry faces challenges in the form of dynamics influenced by fluctuations in *Net Interest Margin*. According to [13], the size of bank operations, the level of risk taking, and diversification of related income affect *Net Interest Margin* with different results in each country. The study Another study [14] found that *the Loan to Deposit Ratio*, operational efficiency, and policy interest rates have a significant influence on *Net Interest Margin* in both the long and short term. The dynamics of *Net Interest Margin* need to be controlled because they are related to bank profitability.

Bank stability can be influenced by its asset structure and credit risk profile, which can be measured using the LTA. This ratio reflects the proportion of a bank's assets held in credit, so a higher LTA value means greater exposure to credit risk. Research [15] found that LTA, cost efficiency, and liquidity significantly influence bank performance and stability.

Two factors that need to be considered regarding bank stability are board size and bank size. Board size is related to supervisory capacity and diversity of expertise in decision-making. A larger board size can provide the potential to provide more resources which can have a positive impact on performance, but if it is too large it can create coordination problems which can have a negative impact [16]. Research [17] documents a positive relationship between board size and performance, but study [18] finds mixed results. Bank size provides a reflection of economies of scale, diversification capabilities and access to funding. In ASEAN, research [19] shows a negative effect of bank size on stability, namely that larger banks can take higher risks, so it needs to be controlled when assessing the impact of the board on performance/risk.

Conceptually, this research is based on *Velocity Theory*, *Agency Theory*, and *Resource Dependence Theory (RDT)*. *Agency Theory* emphasizes the role of the board in mitigating conflicts of interest between management and shareholders, [20]. *Resource Dependence Theory* framework [21] explains that board diversity also serves as a mechanism for obtaining external resources needed by the organization. Female directors can strengthen social legitimacy, increase public trust, and encourage more inclusive governance practices. [22] Meanwhile, foreign directors bring cross-border expertise, international networks, and access to global best practices that can improve a bank's competitiveness. [8] Volatility theory [23] explains that an institution's financial performance and risk are heavily influenced by uncertainty and fluctuations in economic and financial variables. In the banking context, volatility is reflected in changes in interest margins, non-performing loan levels, and unstable asset and liability structures. High levels of volatility indicate greater uncertainty, thus increasing the likelihood of declining profitability and increasing credit risk. Therefore, an analysis of the board of directors' influence on bank performance needs to take this potential volatility into account, as internal bank characteristics such as *net interest margin* (NIM) and *loan to asset ratio* (LTA) often fluctuate and become additional sources of risk. Thus, volatility theory provides a framework that financial stability is influenced not only by the board's strategic decisions, but also by the bank's ability to navigate uncertain internal and external dynamics.

This study aims to analyze the influence of female and foreign directors on the financial performance and risk of banking companies in five ASEAN countries during the period 2020–2024. To produce a comprehensive analysis, this study also considers control variables that are theoretically and empirically relevant to the performance and risk of banking companies, namely board size as an indicator of supervisory capacity and decision-making complexity, bank size which reflects the scale of operations and risk diversification, *Net Interest Margin* as a proxy for interest income efficiency, and *Loan to Asset Ratio* as an indicator of credit distribution aggressiveness and risk exposure. This study is expected to provide theoretical and practical contributions in the development of more inclusive and resilient corporate governance, as well as provide empirical evidence that can be used as a basis for regulators and stakeholders in formulating policies that support board diversity and strengthen risk management in the banking sector.

Hypothesis Development

Female Directors and Corporate Performance

The presence of female directors on boards of directors is believed to have a positive contribution to the financial performance of banking companies in ASEAN. Based on agency theory [20], women tend to have a more collaborative leadership style and tighter oversight, thereby increasing the effectiveness of corporate governance. Resource dependency theory also emphasizes that women bring new perspectives, different social networks, and a more inclusive managerial approach, which can collectively increase corporate efficiency and innovation. Research [5] uses panel data from five ASEAN countries and shows that women on boards of directors are able to strengthen strategic decision-making. This finding is supported by the International Finance Corporation report, which states that companies with gender diversity on boards of directors have better financial performance and are more resilient in facing crises. In addition, previous studies also show that gender diversity on boards of directors contributes to increased operational efficiency and profitability of banks in Southeast Asia [5]. Therefore, the first hypothesis states that the presence of female directors has a positive effect on the financial performance of banking companies in ASEAN.

H1: Female Directors have an impact on Financial Performance

Foreign Directors and Corporate Performance

Foreign directors on the board of directors are seen as strategic assets that can improve a company's financial performance through global knowledge transfer, international management practices, and cross-border business networks. Resource dependency theory emphasizes that the presence of foreign directors reflects a company's openness to international standards and innovation [24]. Study [22] shows that nationality diversity on the board of directors contributes to increased operational efficiency and profitability of banks in Southeast Asia. Research [9] uses panel data from ASEAN banks and finds that foreign directors are able to broaden the scope of business strategies and strengthen global competitiveness. In addition, previous research also shows that foreign directors can strengthen a company's legitimacy in the international market and increase access to global investors. Therefore, the third hypothesis states that the presence of foreign directors has a positive effect on the financial performance of banking companies in ASEAN.

H2: Foreign Directors have an impact on Financial Performance

Female Directors and Corporate Risk

In addition to improving performance, female directors are also believed to reduce the risk level of banking companies. Agency theory [20] states that women have a tendency to be more conservative in taking risks, thereby strengthening internal control systems and reducing exposure to financial risk. This approach is in line with findings in behavioral finance which show that women are more cautious in investment decisions and risk management. Research [25] shows that female directors have a negative influence on company risk, especially in the context of Indonesian banking. Research [26] reveals that women are able to correct biases in important decision-making, thereby

reducing the potential for operational and credit risks. Research [8] also shows that the presence of women on the board of directors contributes to reducing credit risk and increasing the company's financial stability. Thus, the second hypothesis states that the presence of female directors has a negative effect on the risk of banking companies in ASEAN.

H3: Female Directors Influence Corporate Risk

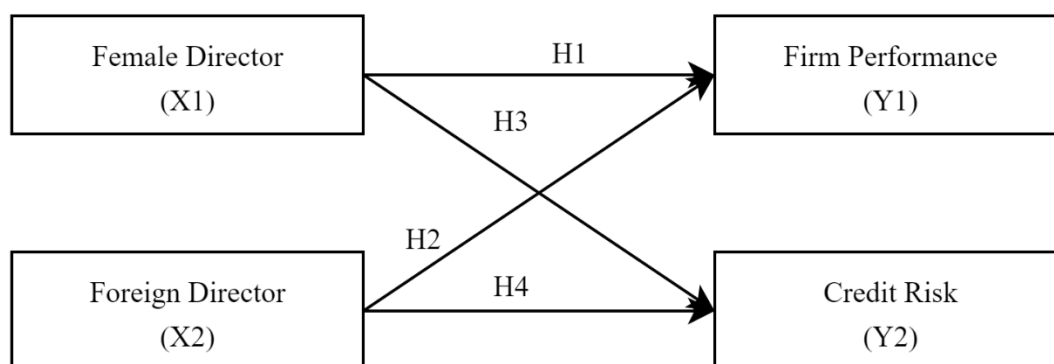
Directors and Corporate Risk

The presence of foreign directors is also expected to reduce the risk of banking companies through the implementation of stricter risk management standards and international experience in dealing with market volatility [4] states that cultural diversity in the board of directors enriches strategic discussions and strengthens risk mitigation. In the context of cross-cultural governance, foreign directors bring a global perspective that can help companies deal with regulatory uncertainty and market changes [10]. Study [26] shows that foreign directors contribute to reducing credit risk and increasing the financial stability of companies. Research [11] also shows that the presence of foreign directors can strengthen sustainability practices and risk control in the financial sector. Based on these findings, the fourth hypothesis states that the presence of foreign directors has a negative effect on the risk of banking companies in ASEAN.

H4: Foreign Directors have an influence on Corporate Risk

Conceptual Framework

The conceptual framework in this research be described as follows:



RESEARCH METHOD

This research uses a quantitative approach, namely a type of research that aims to test the hypothesis that has been established from the beginning of the research by collecting data as an objective research instrument and analyzing it using statistics.

Data Types and Sources

Object in study This is report annual on company banking listed on the Stock Exchange in each ASEAN country (Indonesia, Malaysia, Singapore, Thailand, and the Philippines) in 2020 – 2024. The type of data used in study This is data secondary. Method collection data in research This that is with method documentation. Data secondary is data which is obtained in form Already So Which in the form of

publication- publication And Already collected by person other [27] . Method documentation done with collection data from book, journal, And media Internet in the form of report annual company banking listed on the Stock Exchange of each country and has published on the company's *website during the period 2020-2024*. [8]

Population and sample

The population in this study is all banking companies listed on the stock exchanges of ASEAN countries, specifically Indonesia, Malaysia, Singapore, Thailand, and the Philippines. In the context of quantitative research, the population is the entire subject or object that has certain characteristics and is the target of generalization of research results [8].

The conceptual observation unit of this study is the bank, while the analytical unit in data processing is bank-year *for the 2020–2024 period*. By selecting 35 ASEAN member banks as the population with a total of 175 observations,

The research sample was determined using purposive sampling, which is a sampling technique based on certain criteria relevant to the research objectives [28] . The sample criteria in this study are: (1) banks have complete annual data for all research variables, namely company performance (ROA), credit risk (NPL), female directors, foreign directors, board size, bank size, net interest margin, and loan to asset ratio throughout the 2020–2024 period; (2) the bank's annual report or financial report is available in a public and consistent format; and (3) the bank is part of the banking system in an ASEAN member country with active operational status during the observation period.

Table 1. Sample Selection

Criteria	Amount
Banks in 5 ASEAN Countries (Malaysia, Singapore, Indonesia, Thailand, Philippines)	105
Banks in 5 ASEAN countries that do not have complete annual data for all research variables (ROA, NPL, female directors, foreign directors, board size, bank size, NIM, LTA) throughout the period 2020–2024	(37)
Banks in 5 ASEAN countries that do not publish annual reports/financial reports in public format or are inconsistent	(14)
Banks in 5 ASEAN countries that did not have active operational status during the observation period	(10)
Selected bank samples	35
Research period	2020-2024
Total Sample	35
Total	175

Identification And Indicator Variables

The dependent variables in this study are Company Performance and Credit Risk. Meanwhile, the independent variables are Female Directors and Foreign Directors. The control variables in this study are Board Size, Bank Size, Net Interest Margin, and Loan-to-Asset Ratio. The following table shows the variable indicators:

Table 2. Variable Indicator

Variables	Indicator	Scale
Company performance (Y)	$ROA = \text{Laba sebelum pajak} / \text{Rata} - \text{rata total aset.}$ Source: [29]	Ratio
Risk (X1)	$\text{Risk} = \text{Net non-performing loans} / \text{Net loans}$ Source: [16]	Ratio
Female Director (X1)	Proportion of Female Director $\text{Composition} = \text{Number of Women on the Board of Directors} / \text{Number of Members of the Board of Directors}$ Source: [25]	Ratio
Foreign Director (X2)	$\text{Number of foreign directors} / \text{Total Directors}$ Source: [6]	Ratio
Board Size (Control)	$\text{Number of directors on the board of directors.}$ Source : [29]	Ratio / Discrete
Bank Size (Control)	(Ln Total Assets) Source : [29]	Ratio (log)
Net Interest Margin (Control)	$\text{Net interest income} / \text{Earning Assets}$ Source : [16]	Ratio
Loan to Asset Ratio (Control)	$\text{Total Loans} + \text{Total Assets}$ Source : [16]	Ratio

Source: Data Processed by the Author

Data Collection Techniques

The data analysis technique uses panel data regression with the help of EViews software. Panel regression is an econometric approach to test and measure the relationship between variables in data across units and time. The analysis stages include: model selection (Chow Test, Hausman Test, and Lagrange Multiplier Test), classical assumption testing (if necessary), and hypothesis testing conducted through t-test (partial) and testing the coefficient of determination (R^2 and Adjusted R^2) to assess how much variation in the dependent variable can be explained by the independent variables in the panel regression (Baltagi, 2021) model.

1. Model Selection Test (CEM, FEM, REM)

This test aims to determine the most appropriate panel regression framework by considering unobserved heterogeneity across units/time periods. The Common Effects Model (CEM/pooled OLS) assumes the same intercept and slope for all units and periods. The Fixed Effects Model (FEM) allows for differences in intercepts (units/time periods) and thus controls for heterogeneity correlated with the explanatory variables. The Random Effects Model (REM) models the differences in intercepts as random

components uncorrelated with the explanatory variables (more efficient if these assumptions are met).

Table 3. Model Selection Test

Testing	Results	Decision
Chow Test	Prob. > 0.05	CEM
	Prob. < 0.05	FEM
Hausman test	Prob. > 0.05	BRAKE
	Prob. < 0.05	FEM
Lagrange	Prob. > 0.05	CEM
Multiplier Test		
	Prob. < 0.05	BRAKE

Source: (Baltagi, 2021) (Gujarati D. N., 2020) (Hsiao, 2022)

Test interpretation:

a) Chow test (CEM vs FEM): if $p \geq 0.05 \rightarrow$ choose CEM; if $p < 0.05 \rightarrow$ choose FEM.

b) Hausman test (REM vs FEM): if $p \geq 0.05 \rightarrow$ choose REM; if $p < 0.05 \rightarrow$ choose FEM.

c) Lagrange Multiplier Test (CEM vs REM): if $p \geq 0.05 \rightarrow$ choose CEM; if $p < 0.05 \rightarrow$ choose REM.

2. Test Classical Assumptions

Classical assumption tests are required when using CEM or FEM models because they are based on OLS. Commonly used classical assumption tests include: normality tests, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests. If the selected model is REM, classical assumption tests are not required because the estimation method used is Generalized Least Squares (GLS).

3. Hypothesis Testing

Hypothesis testing was conducted using a t-test at a significance level of $\alpha = 0.05$. If the p-value < 0.05 , the independent variable has a significant effect on the dependent variable. If the p-value ≥ 0.05 , the independent variable does not have a significant effect. In addition, the coefficient of determination (R^2 and Adjusted R^2) values are also reported to assess the proportion of variation in the dependent variable that can be explained by the regression model.

RESULTS AND DISCUSSION

1. Descriptive Statistical Test

Table 4. Descriptive Statistical Test

	Y1	Y2	X1	X2	X3	X4	X5	X6
Minimum	-2.180000	0.000000	0.000000	0.000000	2,000,000	15.95530	1,540,000	2.610000
					20,000,00			
Maximum	2,760,000	7.860000	0.750000	0.500000	0	43.19890	18.61000	90.65000
Mean	1.091371	2.194857	0.232700	0.060437	9.737143	32.28513	3.883314	61.35777
Std. Dev.	0.608646	1.412663	0.156413	0.111345	3.450728	6.050717	2.533093	17.20045
Observations	175	175	175	175	175	175	175	175

Source: Data Processed by Eviews, 2025

Financial Performance (ROA) had an average value of 1.09%, with a minimum value of -2.18% and a maximum of 2.76%. This indicates that banks in the ASEAN region generally achieve reasonable profitability. Corporate Risk (NPL) had an average value of 2.19%, with a minimum value of 0% and a maximum of 7.86%. This indicates that most banks maintain credit risk levels within safe limits, although there are significant differences between banks. Female directors have an average proportion of 23.27% on the board of directors, with a maximum value reaching 75% and a minimum of 0%. This indicates that there are still banks that have not included women on the board of directors. Foreign directors showed an average representation of 6.04%, with a maximum value of 50% and a minimum of 0%. This figure indicates that foreign director participation is still relatively low in ASEAN banks, and their involvement varies widely across institutions. Board size averaged 9.74 members, with a minimum of 2 and a maximum of 20. This reflects differences in corporate governance structures across banks, from very lean to quite large boards. Bank size, measured using the natural logarithm of total assets, averaged 32.29, a minimum of 15.96, and a maximum of 43.20. This value reflects the highly variable scale of operations across banks in the ASEAN region, from small to large institutions. Net Interest Margin (NIM) averaged 3.88%, with a minimum of 1.54% and a maximum of 18.61%. This figure indicates significant differences in net interest income efficiency across banks. Loan to Asset Ratio (LTA) averaged 61.36%, with a minimum of 2.61% and a maximum of 90.65%. This indicates that most banks in ASEAN use a large proportion of their assets for lending, which is the bank's primary activity.

2. Panel Data Model Selection Test

To determine the regression model to be used in the study, three data tests were used: the Chow test, the Hausman test, and the Lagrange multiplier test. Each of these tests will produce a recommendation for the best method.

a.) Chow Test

Table 5. *Chow Test Results (Y1)*

Redundant Fixed Effects Tests

Equation: MODEL_FEM_Y1

Cross-section fixed effects test

Effects Test	Statistics	df	Prob.
Cross-section F	2.610419	(34,134)	0.0001
Cross-section Chi-square	88.940145	34	0.0000

Source: Eviews Processed Data, 2025;

Table 5 above shows the results of the *Chow test* that the *probability (prob) value of the Cross-section Chi-square* is 0.000, which is smaller than the significance level of 0.05, so H_1 accepted. Based on these results it can be concluded that *fixed effect model* more appropriate to use compared to *common effect model*.

Table 6. *Chow Test Results (Y2)*

Redundant Fixed Effects Tests

Equation: MODEL_FEM_Y2

Cross-section fixed effects test

Effects Test	Statistics	df	Prob.
Cross-section F	13.446111	(34,134)	0.0000
	259.74550		
Cross-section Chi-square	7	34	0.0000

Source: Eviews Processed Data, 2025;

Table 6. above shows the results of the *Chow test* that the *probability (prob) value of the Cross-section Chi-square* is 0.000, which is smaller than the significance level of 0.05, so H_1 accepted. Based on these results it can be concluded that *fixed effect model* more appropriate to use compared to *common effect model*.

b.) Hausman test

Table 7. Hausman Test Results (Y1)

Correlated Random Effects - Hausman Test

Equation: MODEL_REM_Y1

Cross-section random effects test

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross-section	14.070678	6	0.0289

Source: Eviews Processed Data, 2025;

Table 7 above shows the results that *the probability (prob) value of the random cross-section* is 0.0289 is smaller than the significance level of 0.05, so H_1 is accepted. Based on these results, it can be concluded that the *fixed effect model* is more appropriate to use compared to *the random effect model*.

Table 8. Hausman Test Results (Y2)

Correlated Random Effects - Hausman Test

Equation: MODEL_REM_Y2

Cross-section random effects test

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross-section	2.954073	6	0.8146

Source: Eviews Processed Data, 2025;

Table 8 above shows the results that *the probability (prob) value of the random cross-section* is 0.8146 is greater than the significance level of 0.05, so H_1 is accepted. Based on these results, it can be concluded that the *random effect model* is more appropriate to use compared to *the fixed effect model*.

c.) *Lagrange Multiplier Test***Table 9.** Results of the *Lagrange Multiplier Test* (Y1)

Lagrange Multiplier Tests for Random Effects

Null hypothesis: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided

(all others) alternatives

	Hypothesis Test		
	Cross-section	Time	Both
Breusch-Pagan	9.677041 (0.0019)	3.035064 (0.0815)	12.71210 (0.0004)
Honda	3.110794 (0.0009)	1.742143 (0.0407)	3.431545 (0.0003)
King Wu	3.110794 (0.0009)	1.742143 (0.0407)	2.657178 (0.0039)
Standardized Honda	4.049200 (0.0000)	2.179118 (0.0147)	-0.351897 (0.6375)
Standardized King Wu	4.049200 (0.0000)	2.179118 (0.0147)	0.121207 (0.4518)
Gourieroux, et al.	--	--	12.71210 (0.0006)

Source: Eviews Processed Data, 2025;

Table 9 above shows that the *Breusch-Pagan cross-section probability (prob) value* of 0.0019 is smaller than the significance level of 0.05. Based on these results, it can be concluded that *the random effect model* more appropriate to use than *the common effect model*.

Table 10. Results of the *Lagrange Multiplier Test* (Y2)

Lagrange Multiplier Tests for Random Effects

Null hypothesis: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided

(all others) alternatives

	Hypothesis Test		
	Cross-section	Time	Both
Breusch-Pagan	172.7266 (0.0000)	0.010287 (0.9192)	172.7369 (0.0000)
Honda	13.14255	0.101423	9.364902

	(0.0000)	(0.4596)	(0.0000)
King Wu	13.14255	0.101423	4.359943
	(0.0000)	(0.4596)	(0.0000)
Standardized			
Honda	14.68820	0.404745	6.235694
	(0.0000)	(0.3428)	(0.0000)
Standardized			
King Wu	14.68820	0.404745	2.000133
	(0.0000)	(0.3428)	(0.0227)
Gourieroux, et al.	--	--	172.7369
			(0.0000)

Source: Eviews Processed Data, 2025;

Table 10 above shows that the *Breusch-Pagan cross-section probability (prob) value* of 0.0000 is smaller than the significance level of 0.05. Based on these results, it can be concluded that *the random effect model* more appropriate to use. Therefore, the author concluded after conducting the three tests that *the random effect model* was the most appropriate to use in this study.

3. Classical Assumption Test

Model used is the Random Effect Model (REM) estimated using Generalized Least Squares (GLS), which theoretically takes into account the existence of non-homogeneous variance (heteroscedasticity) and autocorrelation in the error structure. Therefore, the residual normality test commonly performed in Ordinary Least Squares (OLS) regression is not a primary requirement in panel data regression with the REM approach. Emphasizes that inferential validity (t and F tests) in panel data does not depend on the normal distribution of residuals, but rather on the assumptions of heteroscedasticity and autocorrelation that have been addressed by the estimation method.

a.) Multicollinearity Test Results

Table 11. Multiconvergence Test Results (Y1)

Variable	Coefficient		
	Uncentered Variance	Centered VIF	Centered VIF
C	0.118085	66.39617	NA
X1	0.082345	3.633431	1.126239
X2	0.147698	1.327114	1.023769
X3	0.000183	10.94497	1.215012
X4	4.97E-05	30.12698	1.016639
X5	0.000304	3.671266	1.091438
X6	6.29E-06	14.35400	1.040282

Source: Eviews Processed Data, 2025;

The results of the multicollinearity test presented in table 11 above show that the value of each independent variable has a VIF figure smaller than 10, so it can be concluded that there is no multicollinearity problem.

Table 12. Results of Multiconvergence Test (Y 2)

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.647066	66.39617	NA
X1	0.451224	3.633431	1.126239
X2	0.809335	1.327114	1.023769
X3	0.001000	10.94497	1.215012
X4	0.000272	30.12698	1.016639
X5	0.001667	3.671266	1.091438
X6	3.45E-05	14.35400	1.040282

Source: Eviews Processed Data, 2025;

The results of the multicollinearity test presented in table 4.9 above show that the value of each independent variable has a VIF figure smaller than 10, so it can be concluded that there is no multicollinearity problem.

c.) Heteroscedasticity Test Results

Table 13. Heteroscedasticity Test Results (Y1)

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.118085	66.39617	NA
X1	0.082345	3.633431	1.126239
X2	0.147698	1.327114	1.023769
X3	0.000183	10.94497	1.215012
X4	4.97E-05	30.12698	1.016639
X5	0.000304	3.671266	1.091438
X6	6.29E-06	14.35400	1.040282

Source: Eviews Processed Data, 2025;

From Table 13, it can be seen that the *Chi-Square probability value* of *Obs*R-square* is $0.1320 > 0.05$. Therefore, it can be concluded that there are no symptoms of heteroscedasticity.

Table 14. Results of Heteroscedasticity Test (Y2)

Heteroskedasticity Test: Harvey

Null hypothesis: Homoskedasticity

F-statistic	2.138612Prob. F(6,168)	0.0515
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Obs*R-squared	12.41786	Chi-Square Prob.(6)	0.0533
Scaled explained SS	9.515438	Chi-Square Prob.(6)	0.1466

Source: Eviews Processed Data, 2025;

From table 14, it can be seen that the *Chi-Square probability value* of *Obs*R-square* is $0.0533 > 0.05$. Therefore, it can be concluded that there is no heteroscedasticity symptom.

4. Hypothesis Testing and Panel Data Regression Analysis

a.) Model 1

Table 15. Panel Data Regression Test Results (Y1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.345156	0.456126	2.949090	0.0036
X1	-0.774994	0.367909	-2.106483	0.0366
X2	1.233327	0.500747	2.462977	0.0148
X3	-0.011928	0.017357	-0.687222	0.4929
X4	-0.001729	0.009603	-0.180027	0.8573
X5	0.049630	0.023077	2.150632	0.0329
X6	-0.002750	0.003241	-0.848475	0.3974

Source: Eviews Processed Data, 2025;

Based on the results above, the regression equation can be formulated as follows:

$$Y = 1,345156 - 0,774994 + 1,233327 - 0,011928 - 0,001729 + 0,049630 - 0,002750$$

From the equation above, it is known that the constant value is 1.345156, meaning that if all independent variables are equal to zero, then financial performance will be worth 1.345156. Female Directors (X1) have a regression coefficient of -0.774994, which means that every increase in the proportion of female directors in one period (for example by 10% or 0.1 points) will decrease financial performance by 0.0774994. This result is consistent with research [30] which states that female directors tend to decrease market-based performance due to a more cautious and defensive decision-making style, which although good for risk management, does not necessarily lead to increased profits.

Foreign Directors (X2) has a regression coefficient of 1.233327, meaning that every increase in the proportion of foreign directors will increase financial performance by 1.233327. This indicates a significant contribution of foreign directors to managerial efficiency and the achievement of bank profitability. This finding is in line with research by [1] which states that foreign directors bring cross-border expertise and knowledge of best practices that support company performance, especially in the complex financial sector.

Board size (X3) has a negative regression coefficient of -0.011928, which means that every increase in one board member will decrease financial performance by 0.011928. This finding supports the study by [18] which shows that overly large boards can slow down strategic responses and reduce efficiency.

Bank Size (X4) has a regression coefficient of -0.001729, indicating that the larger the bank (measured by the log of total assets), the lower the level of profitability achieved. This finding can be explained by the phenomenon of "diseconomies of scale," where larger banks face higher operational complexity. research [19] which found that large bank size in ASEAN tends to lead to lower efficiency and lower profitability.

Net Interest Margin (X5) has a regression coefficient of 0.049630, meaning that every one-point increase in NIM will improve financial performance by 0.049630. NIM is an indicator of efficiency in generating income from intermediation activities. The higher the NIM, the better the bank's ability to maximize its net interest margin. This is supported by [14] who found that NIM significantly increases ROA in Southeast Asian banking.

The Loan to Asset Ratio (X6) has a regression coefficient of -0.00275, indicating that each increase in LTA will decrease financial performance by 0.00275. The greater the proportion of credit to total assets, the higher the exposure to credit risk which can impact profitability. This finding is consistent with a study by [15] which explains that overly aggressive credit distribution without adequate risk management can reduce bank performance.

b.) Model 2

Table 16. *Panel Data Regression (Y2)*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.767348	1.239580	-0.619038	0.5367
X1	-0.218691	0.884307	-0.247302	0.8050
X2	-0.940406	1.246007	-0.754736	0.4515
X3	0.096868	0.041568	2.330322	0.0210
X4	0.035241	0.028819	1.222835	0.2231
X5	0.007437	0.062235	0.119498	0.9050
X6	0.015647	0.007803	2.005296	0.0465

Source: Eviews Processed Data, 2025;

Based on the results above, the regression equation can be formulated as follows:

$$Y = -0,767348 - 0,218691 X_1 - 0,940406 X_2 + 0,096868 X_3 + 0,035241 X_4 + 0,007437 X_5 + 0,015647 X_6$$

Directors (X1) have a regression coefficient of -0.218691, which means that every increase in the proportion of female directors on the board of directors will reduce the company's risk by 0.218691. Findings [29] in the context of banks in ASEAN, that female

directors are able to contribute to reducing the company's operational and credit risks through increased supervision and more accountable decision-making.

Foreign Directors (X2) has a regression coefficient of -0.940406, which indicates that the presence of foreign directors can significantly reduce corporate risk. This finding is consistent with research by [3] in Vietnam which shows that foreign directors contribute to reducing bank risk through the adoption of global managerial practices and cross-jurisdictional knowledge, although the impact on profitability is not always significant.

Board Size (X3) has a coefficient of 0.096868, which means that the greater the number of board members, the company's risk will also increase by 0.096868. This can be explained through the perspective of coordination and effectiveness of supervision. Although a larger board has the potential to bring diverse expertise, research by [18] shows that a board that is too large can actually reduce the effectiveness of supervision and worsen decision-making, which ultimately increases risk.

Bank Size (X4) with a coefficient of 0.035241 shows that the larger the scale of bank operations (log assets), the company's risk increases by 0.035241. This finding is consistent with [19] which states that large banks tend to have higher risk exposure, due to involvement in more complex and aggressive financing activities.

Net Interest Margin (X5) with a coefficient of 0.007437 indicates that an increase in NIM is associated with an increase in company risk, although the impact is relatively small. This may reflect the bank's strategy in increasing margins by distributing credit to riskier segments, as explained by [14] .

The Loan to Asset Ratio (LTA) has a coefficient of 0.015647, which means that the greater the proportion of assets allocated to loans, the company's risk will increase by 0.015647. This is in line with [15] which shows that the higher the LTA, the greater the credit risk exposure faced by the bank, due to dependence on income from credit distribution activities.

5. R² Test Results

Table 17. Results of the R² (Y1) Determination Coefficient Test

R-squared	0.084038
Adjusted R-squared	0.051325
SE of regression	0.495992
F-statistic	2.568960
Prob(F-statistic)	0.020882

The value of the determinant coefficient R² is 0.051325 or 5.1325 %. From this calculation, it can be seen that the influence of female directors, foreign directors on financial performance with board size, bank size, NIM, LTA as control variables of 5.1325 % and the remainder by other variables not examined in this study.

Table 18. Results of the R² (Y1) Determination Coefficient Test

R-squared	0.071024
Adjusted R-squared	0.037846
SE of regression	0.689842

F-statistic	2.140717
Prob(F-statistic)	0.051271

The value of the determinant coefficient R^2 is 0.037846 or 3.7846 %. From this calculation, it can be seen that the influence of female directors, foreign directors on company risk with board size, bank size, NIM, LTA as Control Variables of 3.7846 % and the remainder by other variables not examined in this study.

Table 19. Partial Test Results (T-Test) (Y1)

Variables	t	p-value	Decision ($\alpha=5\%$)
X1	-2.106483	0.0366	Influential
X2	2.462977	0.0148	Influential
X3	-0.687222	0.4929	No effect
X4	-0.180027	0.8573	No effect
X5	2.150632	0.0329	Influential
X6	-0.848475	0.3974	No effect

Table 20. Partial Test Results (T-Test) (Y2)

Variables	t	p-value	Decision ($\alpha=5\%$)
X1	-0.619038	0.5367	No effect
X2	-0.247302	0.8050	No effect
X3	-0.754736	0.4515	No effect
X4	2.330322	0.0210	Influential
X5	1.222835	0.2231	No effect
X6	0.119498	0.9050	No effect

1) Female Directors Have a Significant Negative Impact on Financial Performance

Based on the regression results, the Female Director variable (X1) has a probability value of 0.0366, which is smaller than the significance level of $\alpha = 0.05$. This indicates that Female Directors have a significant negative effect on Financial Performance at a significance level of 5%. Agency Theory [20] explains that women's leadership style, which tends to be cautious, strengthens the supervisory function but slows down strategic decision-making. In the ASEAN reality, for example in Indonesia and Vietnam, the number of women on bank boards of directors has indeed increased, but is still relatively low. They are often placed in non-executive positions so that their contribution to short-term profitability is not immediately felt, and can even be perceived as reducing the bank's business aggressiveness [30]. The results of previous studies state that the contribution of women in the governance structure differs based on position, in the position of the board of directors the effect is insignificant or negative on ROA, while in the position of the board of commissioners the effect tends to be positive on company performance [31].

2) Foreign Directors Have a Significant Positive Impact on Financial Performance

The regression results show that the Foreign Director variable (X2) has a probability value of 0.0148, which is smaller than 0.05. Thus, it can be concluded that Foreign Directors (X2) have a significant positive effect on financial performance. This means that the higher the proportion of foreign directors on the board, the better the bank's financial performance. This result is consistent with the Resource Dependence Theory (RDT) [21] which explains that foreign directors bring global knowledge, international experience, and strengthen governance practices, thereby supporting increased efficiency and performance. Banks in Singapore, Malaysia, and the Philippines with the presence of foreign directors tend to be quicker to adopt digitalization and global governance standards, which contribute to financial stability and increased profitability. [3].

3) Female Directors Have No Significant Impact on Company Risk

Based on the research results, the probability value (p-value) for the Female Director variable (X1) is 0.8050, which is greater than the significance level of 0.05. This indicates that female directors do not have a significant influence on company risk. This indicates that the position of women on the board is not statistically strong enough to influence risk as measured by the NPL ratio. This is in accordance with the volatility theory that risk is more influenced by macroeconomic fluctuations, interest rates, and exchange rates than by board composition [23]. Although women are known to be more cautious in taking risks, this influence is not directly reflected in NPL because credit decisions are usually more dominantly determined by the risk management committee and banking regulations [32].

4) Foreign Directors Do Not Have a Significant Influence on Company Risk

The results of the study also show that the Foreign Director variable (X2) has a probability value of 0.4515, which is also greater than 0.05. Thus, it can be concluded that foreign directors do not have a significant effect on company risk. This finding is explained in the resource dependence theory [33] which emphasizes that the presence of foreign directors serves to enrich networks, resources and international legitimacy. These benefits do not impact credit risk control but rather on growth strategies, reputation and profitability. The challenge lies in adapting to differences in regulations, organizational culture, and systems in domestic law which limit the effectiveness of foreign directors in influencing technical aspects of risk management [34].

CONCLUSION

Fundamental Finding : This study demonstrates that female and foreign directors exert contrasting effects on bank financial performance in ASEAN, with female directors negatively influencing ROA and foreign directors enhancing it, while neither significantly affects credit risk. Additionally, board size and bank size reduce financial performance and heighten credit risk, NIM boosts performance but increases risk, and LTA significantly raises credit risk. **Implication :** These findings highlight the strategic importance of optimizing board composition and monitoring key financial indicators to

achieve a balance between profitability and risk management, reinforcing the need for governance structures that support both performance and systemic stability. **Limitation** : The study is limited by its focus on a relatively small sample of banks within five ASEAN countries over a five-year period, which may restrict broader generalization; moreover, the analysis does not incorporate external macroeconomic or institutional factors that may influence performance and risk. **Future Research** : Further studies should expand the dataset, include additional governance and ownership variables, integrate macroeconomic indicators, and explore alternative econometric techniques to develop a more comprehensive understanding of the governance–performance–risk nexus in the ASEAN banking industry.

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