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The Effect of Women Executive on the Bank Risk (Study on Banking Firms Listed in Indonesia Stock Exchange in the Period of 2017-2021)

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Abstract

The purpose of this study was to look into the effect of women executives on bank risk in banks listed on the Indonesia Stock Exchange between 2017 and 2021. Women executives are used as the independent variable. The dependent variable is bank risk, which is a proxy for non-performing loans (NPLs) and capital adequacy ratio (CAR). The financial statements of banks listed on the Indonesia Stock Exchange from 2017 to 2021 were used as the data source for this study. This study used the purposive sampling method to select the sample. Panel Data with the Fixed Effect Model (FEM) approach was applied in this study as the research model. According to the findings of this research, women CEOs have a negative effect on nonperforming loans (NPLs) and a positive impact on capital adequacy ratios (CAR). As a result, women executives can reduce bank risk, but only marginally. This is due to the fact that there currently no regulations requiring gender equality on company management boards, particularly in Indonesian banks, as well as challenges from social society toward women. The findings support the resource dependence theory, which states that women executives reduce firm risk.

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1. Introduction

Banks, as intermediate entities, play a significant role in the national economy by channeling funds from fund owners (fund suppliers) to fund receivers (fund users) (Putera, 2020). Of course, banks confront dangers at all times and in all locations. The value of NPL (Non-Performing Loan) and Capital Adequacy Ratio (CAR) may be used to calculate banking risk (OJK, 2016). Companies must have an effective risk management plan since these activities determine the company's sustainability and growth (Khaw & Liao, 2018). Implementing a robust governance framework, also known as Good Corporate Governance (GCG), will aid the organization in developing the best approach to mitigate potential risks (Mathew et al., 2018).

Researchers have long been interested in determining the impact of gender variations on risk choice, and it has been demonstrated that women directors are psychologically more risk adverse than male directors (Adhikari et al., 2018; Chan et al., 2016; Dong et al., 2017; Faccio et al., 2017; Palvia & Vahamaa, 2015; Peltommki et al., 2015). Hoang (2021) discovered that a women CEO is perceived to be better capable of leading a corporation efficiently in the face of economic crisis than her male counterpart. According to the findings of Bernile, Bhagwat, and Yonker (2017), diversity on the management board can reduce the company's risk by increasing the variety of factors in decision-making and dispute resolution. Diversity can also increase the quality of choices made by the board. Another study found that women executives had a large and beneficial influence on bank risk (Adams & Funk, 2013). However, there are other academics who contend that having a women CEO on the management board does not lower bank risk, such as Hwang (2021) and Tran (2020). Therefore, this study represents the novelty of women executive effect on bank risk. Based on the background description and difference from previous studies, this study aims to evaluates the relationship between women executive and bank risk of bank listed on the Indonesia Stock Exchange from 2017–2021.

2. Literature review and hypotheses developlement

2.1. Resource Dependence Theory

Board members are in charge of monitoring and accessing external information from diverse sources (Biswas & Kumar, 2022). According to the Resource Dependence Theory, the board of directors becomes a provider of resources such as advice and advice, power rights, information channels between the company and external parties, and special access to other important resources outside the company that are typically controlled by stakeholders (Pekovic & Vogt, 2021).

The presence of women who lead the firm on both the management board and the board of directors indicates diversity in the firms board composition (Chatjuthamard et al., 2021). The more diversified the board's membership, the more diverse and valuable the company's resources. Furthermore, the availability of unique information has the potential to boost the management board's involvement (Innayah & Pratama, 2021).

The variety of the firm board's composition influences its resources such as board knowledge, board experience, legitimacy, and reputation (Agyemang-Mintah & Schadewitz, 2017). As per Resource Dependence Theory, the presence of female directors on corporate boards strengthens linkages between businesses and stakeholders, lending legitimacy to diverse key stakeholders such as workers, consumers, and investors (Liu, 2021). Women CEOs have distinct and valued resources, thus they are seen as effective communicators between the company, external resources, and the environment on which the organization depends (Martnez et al., 2020).

Women on boards have superior social skills than men on boards, which can assist companies reduce uncertainty associated with their reliance on the external environment. This leads to improved board decision-making and information flow (Galletta et al., 2021). According to the findings of Adeabah's (2019) research, to help management in "grey zones" and to limit uncertainty from external dependencies, the board offers resources that include women's representation.

2.2. Bank Risk

Accounting-based metrics, such as credit risk, can be used to assess bank risks (Dahir et al., 2018). Credit risk is defined by Desda (2019) as the threat that arises as a consequences of a business partner (counterparty) or debtor experiencing uncertainty or failing to meet their commitments to pay for credit granted by the bank. According to Sukma (2019), it is a loss incurred because the borrower is unable or unwilling to perform or pay its commitments until they are due. These occurrences can be reduced by applying risk management, which begins with identifying, measuring, monitoring, and managing portfolio risks (Santosa et al., 2020). The bank's ability to manage credit that has been issued to debtors, where the bank must collect back the credit that has been given in order to limit the possibility of debtor default. Credit payment failure by the debtor is defined as "no payment" made by the debtor to pay off the principal and interest owed to the bank (Mosey et al., 2018).

Loan risk analysis, for instance, is an important part of the lending business for financial firms. Banks must adhere to tight supervision when meeting capital requirements and dealing with a financial crisis (Belas et al., 2018). Lenders' key concerns are mainly tied to making decisions on evaluating specific credit risks (Wang et al., 2020). Observing this, it appears that credit risk management must be developed in order to be carried out on an ongoing basis. Banks must actively assess customers who may be in arrears so that banks can anticipate this from the beginning (Amato & Gallo, 2019). Indonesia regulates bank risk measurement based on the Non-Performing Loan (NPL) ratio and Capital Adequacy Ratio (CAR) in Bank Indonesia Regulation Number 21/12/PBI/2019 concerning amendments to Bank Indonesia Regulation Number 20/4/PBI/2018 concerning Macroprudential Intermediation Ratios and Macroprudential Liquidity Buffers for Conventional Commercial Banks, Islamic Commercial Banks, and Islamic Business Units (Bank Indonesia, 2019).

2.3. Hypotheses development

According to Hoang and Wu (2021), firms with women CEOs will experience lower financial risks than companies with male CEOs. Other research have found that having women on boards enhances board oversight (Baker & Lopez, 2019). With an increase in the number of women on the board, the company's performance will improve, demonstrating that gender diversity on the board of directors has a good effect, when combined with the support of the legislation, which is a significant component (Alvarado et al., 2015).

H1. Women executives have a negative and significant effect on the bank risk listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period.

3. Research methods

3.1 Data and samples

This research investigates the effect of women executives on bank risk. This study's population consists of all banks registered on the Indonesia Stock Exchange (IDX) between 2017 and 2021. A strategy known as the sampling method was used to collect samples. Purposive sampling was utilized as the sample approach. The researchers employed the following criteria: banks listed in IDX from 2017 to 2021, banks that use rupiah units in their financial reports, banks that do not engage in mergers and acquisitions corporate actions, and banks that have complete financial reports.

Table 1. Sampling criteria

Sample criteria	Number of banks
Banking firms listed on the Indonesia Stock Exchange (IDX) between 2017 and 2021	44
Banking companies that do not use rupiah units in their financial statements for the 2017-2021 period	(1)
Banking companies that carry out corporate mergers and acquisitions in the 2017-2021 period	(1)
Banking companies that do not have complete financial statements	(1)
Total sample used	41
Total Observations	204

3.2 Research variable

3.2.1 Independent variable

A variable that impacts or provides a trigger to the dependent variable is referred to as a "independent variable" (the dependent variable). The independent variable in this study is a proxy for the number of women on the board and the number of women on the CEO.

3.2.2 Dependent variable

The dependent variable represents the variable that is profoundly affected or influenced by the independent variable. The dependent variable in this research is bank risk. The risk that happens in the bank is the risk that emerges as a consequence of the business partner's or debtor's uncertainty or incapacity to complete their duties to repay the bank's credit. Furthermore, bank risk is related to a bank's ability to survive or even recover from bankruptcy. The Non-Performing Loans (NPL) to Capital Adequacy Ratio can be used to measure bank risk (CAR).

3.2.3 Control variable

A control variable is one that seeks to limit or reduce the effect of non-examined external factors, such that the independent variables are not influenced by causes other than those under investigation. To maintain as much consistency as feasible in the relationship between the dependent and independent variables. This study took into account the firm size, board of commissioner size, proportion of foreign board of commissioners, and proportion of independent commissioners.

3.3 Regression model

Panel data is a combination of cross-sectional and time series information. Panel data is information collected from the same group over a specific time period. Panel data will provide NT observation units if the research has T time periods (t = 1,2,...,T) and N groups (I = 1,2,...,N). This is the regression equation model for the panel data in this study:

$$BRiskNPL = \beta0 + \beta1WCEO_{it} + \beta2TotalWBoard_{it} + \beta3FSIZE_{it} + \beta4COMSIZE_{it} + \beta5FORGPR_{it} + \beta6INDPR_{it} + e_{it}$$

$$BRiskCAR = \beta0 + \beta1WCEO_{it} + \beta2TotalWBoard_{it} + \beta3FSIZE_{it} + \beta4COMSIZE_{it} + \beta5FORGPR_{it} + \beta6INDPR_{it} + e_{it}$$

Keterangan:

$\beta0$ = Constant (intercept)
$\beta1 \ldots \beta5$ = Regression coefficient (slope)
BRIsk = Bank Risk (NPL & CAR)
WCEO = Female CEO
TotalWBoard = Number of Women's Management Boards
FSIZE = Company Size
COMSIZE = Size of the Board of Commissioners
FORGPR = Proportion of Foreign Commissioners
INDPR = Proportion of Independent Commissioners
e = Regression Error
it = i_{th} object and t_{th} time

4. Results and discussion

4.1 Descriptive Statistics

This study using descriptive statistical analysis to describe the variables used in the study, The researcher conducted a descriptive statistical analysis consisting of the average (mean), median, maximum value, minimum value, and standard deviation obtained from each sample of banking firms listed on the Indonesia Stock Exchange (IDX) during the 2017-2021 period of 41 companies banking with a total of 204 observations of data which is the result of winsorizing carried out using Stata 17 with a winsorizing level of 1% - 99% to minimize data outliers.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. dev.	Min	Max
NPL	204	0,0182	0,0149	0,0002	0,0992
CAR	204	0,2664	0,1793	0,1004	1,6992
WCEO	204	0,0735	0,2616	0,0000	1,0000
TotalWBoard	204	1,8431	1,6415	0,0000	7,0000
FSize	204	31,2793	1,7653	27,2226	35,0844
COMMSize	204	4,8873	2,0347	2,0000	11,0000
FORGPR	204	0,1162	0,1902	0,0000	0,5000
INDPR	204	0,5739	0,1023	0,2500	1,0000

4.2 Multicolinearity test

A multicollinearity test was used to determine the correlation between variables in the research. The magnitude of the correlation value equal to or greater than 0.80 indicates the presence of multicollinearity.

Table 6. Correlation matrix

	NPL	CAR	WCEO	TotalWBaord	FSize	COMMSize	FORGPR	INDPR
NPL	1							
CAR	-0,24***	1						
WCEO	-0,16**	0,09	1					
TotalWBoard	-0,09	-0,14**	0,15**	1				
FSize	-0,28***	-0,35***	-0,08	0,28***	1			
COMMSize	-0,18**	-0,23***	0,008	0,19***	0,79***	1		
FORGPR	-0,05	-0,003	0,05	-0.0002	0,13*	0,34***	1	

INDPR	0,07	-0,13*	0,04	-0,01	-0,13*	-0,22***	-0,24***	1

According on the data in Table.6, there is no multicollinearity since there is no correlation coefficient amongst variables with a value greater than 0.80. The investigation can then infer that there is no association between variables.

4.2 Regression test

This study explores the effect of female CEOs on bank risk. A dummy variable was used to evaluate women CEO existence capital, whereas NPL and CAR were used to quantify bank risk.

Table 7. Women CEO regression on bank risk

Y	NPL	CAR
Model Regresi Data Panel	FEM	FEM
WCEO	**-0,00276**	**0,0099**
	(0,498)	(0,818)
FSize	**-0,0036***	**0,0619****
	(0,074)	(0,004)
COMMSize	**-0,0022***	**0,0077**
	(0,049)	(0,510)
FORGPR	**0,0038**	**0,332****
	(0,745)	(0,007)
INDPR	**0,0025**	**-0,0646**
	(0,793)	(0,519)
R Square	0,0714	0,0769
Prob>F	0,1281	0,0004
Obs	204	204

Table 8. Women CEO regression on bank risk

Y	NPL	CAR
Model Regresi Data Panel	FEM	FEM
TotalWBoard	**-0,0005**	**0,01001**
	(0,593)	(0,343)
FSize	**-0,0038***	**0,0629****
	(0,061)	(0,004)
COMMSize	**-0,0021***	**0,0062**
	(0,057)	(0,593)
FORGPR	**0,004**	**0, 3478****
	(0,728)	(0,005)
INDPR	**0,024**	**-0,0728**
	(0,797)	(0,466)
R Square	0,0722	0,0748
Prob>F	0,1364	0,0003
Obs	204	204

The regression findings suggest that women executives (WCEO & TotalWBoard) had a negative but non-significant influence on bank risk (NPL). The presence of a women CEO and women management board members at a bank reduces the value of NPLs, lessening the bank's risk. WCEO, in particular, produces a negative result (= -0.00276), as does TotalWBoard (= -0.0005). The probability value of 0.498 ($p>0.1$) for the WCEO proxy and 0.593 ($p>0.1$) for the TotalWBoard proxy implies that for the 2017-2021 period, women CEOs have an impact but not a substantial influence on the NPL of banks listed on the IDX.

The findings of a regression on women executives (WCEO and TotalWBoard) indicate a beneficial impact on bank risk (CAR). The presence of female CEOs and female management board members at a bank raises the CAR value, lowering bank risk. β= 0.01). The probability value of 0.818 ($p>0.1$) for the WCEO proxy and 0.343 ($p>0.1$) for the TotalWBoard proxy indicates that women CEOs have an influence, although not a significant effect, on the CAR of banks listed on the IDX for the 2017-2021 timeframe.

Conclusions and suggestion

The goal of this study was to look at how having women CEOs affected bank risk as a benchmark for Non-Performing Loans (NPL) and Capital Adequacy Ratio (CAR) in banking enterprises listed on the Indonesian Stock Exchange (IDX) from 2017 to 2021. The findings of data processing utilizing the STATA 17 program reveal that women CEOs and total women management board members have an effect on bank risk. Women's caution in overseeing and making judgments has a significant impact on their conduct as leaders, particularly in banks.

In terms of neighboring countries, Singapore, which already has an official code of governance confirmed by the Monetary Authority Singapore (MAS) regarding gender diversity in corporate senior management, is reported to have 12.2% representation of women on the management board of all companies listed on the Singapore Exchange. Singapore has a significant number of female top management personnel. Singapore's Code of Corporate Governance is driving this shift. Whereas this governance rule states that board members must evaluate the firm's needs in the form of a variety of skills, experience, gender, and corporate knowledge (Human Capital Leadership Institute, 2017). Indonesia does not yet have an official governance code to encourage gender diversity in all firms listed on the IDX.

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