

Board Diversity And Risk-Taking: Empirical Evidence of Indonesian Banking Industry

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Abstract

Aim of this research to prove influence board diversity on the risk-taking behaviour of Indonesian banks. Sample is used 53 bank commercial with periode from 2000-2018. We find effect positive from board diversity on risk taking commercial bank in Indonesia. Size of the diversified role of the board of director significant effect on risk. Our study provides significant findings with respect to the development of risk-taking model behavior of Indonesian banks. Implication this study contribute to develop *upper echelon theory*. The more diverse the board will have a positive effect on risk taking. Contributes to practice related to how to improve the quality of bank risk-taking decisions from Top Management.

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1. Introduction

Risk taking model is created with from diversity which have board of directors on banking risk taking. Effect diversity from board is essential in relation to the study of bank risk taking in Indonesia. This is pivotal as the board of directors has an important in making decisions related to bank risk (Bank Indonesia 2008). In addition, another reason is the consideration of the number of previous studies on the effect of board diversity on bank risk taking, which is still under-researched. Previous research have examined diversity of bank executive officers on bank risk taking in Germany (Berger, Kick, and Schaeck 2013) and board directors diversity on corporate risk in the United States (Bernile, Bhagwat, Yonker 2018). Than, examined the effects of board of directors' diversity on the performance of companies and banks in various countries (Kagzi and Guha 2017). Therefore, the study of the effect of board diversity on banks' risk taking in Indonesia is deemed important for further research.

Our research is proposed to test whether board diversity affect banking risk taking in the Indonesian setting. The measure of bank risk uses credit risk with Non-Performing Loans. Market risk is proxied by Net Interest Margin. Operational risk represented by Operational Expenses to Operating Income and liquidity risk used Loan to Deposit Ratio.

Our results show various findings on the effect of board_diversty and, that have a positive effect and no influence on bank risk in *BUKU 1*, *BUKU 2* and *BUKU 3* and *BUKU 4*. It was found board of director diversity had a positive effect on NPLLOAN in *BUKU 2*; on NIM in *BUKU 2* and *BUKU 3* and *BUKU 4*, it positively affected *BOPO* in *BUKU 2* and *BOPO* in *BUKU 3*; and has a positive effect on LDR in *BUKU 1*.

2. Literature Review

Many previous studies have shown that positive effect from board diversity to performance of company (Goll, Irene., Sambharya, Rakesh B., Tucci 2001) (Erhardt et al. 2003), (Adams, Renee B., Ferreira 2009), (García-Meca et al. 2015). For studies examining the effect of board diversity, the number of studies is limited. Previous studies have found that the effect of board diversity has a positive effect on risk taking bank (Pathan 2009), (Berger et al. 2013), and (Bernile et al. 2018)

Results of prior research indicate power of the relationship board diversity with risk depends on optimization and effectiveness of the board's role. (Bernile et al. 2018). Previous studies have also shown that board diversity has a positive effect on performance (Bernile et al. 2018); (Carter, Simkins, and Simpson 2003), (Wei et al. 2005), (Mcintyre, Murphy, and Mitchell 2007), (Campbell and Vera 2008), (Adams, Renee B., Ferreira 2009), (Bear, Rahman, and Post 2010), (Mahadeo, Soobaroyen, and Hanuman 2012), (Hafsi and Turgut 2013), (García-Meca et al.



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2015),. Previous studies have also proven that board diversity positively affects bank risk taking (Berger et al. 2013). The risk of having women as directors in the financial sector is less than men (Adams and Ragunathan 2017), female executives can reduce corporate risk-taking, (Faccio, Marchica, and Mura 2011), Gender quotas on the bank's board of directors can also to reducing bank risk-taking (Skala and Weill 2018).

3. Research Methods

Data used in our study from the financial reports in published bank's websites from years 2000 to 2018. Sample used 53 banks commercial from population 94 banks. This study uses 11 variables in total. Dependent variables used NPLLOAN, NIM, *BOPO*, LDR. The independent variables in this study are BOARD_DIVERSITY. Control variables using in this research are BANKSIZE, BOARDSIZE, OWN1, OWN1-2, OWN1-5 and COM. We test two model specifications in this research.

$$R_{it} = \mu + \beta_j D_{i,t} + \varepsilon_{i,t} \quad (1a)$$

$$R_{it} = \mu + \alpha_i + \beta_j D_{i,t} \sum_{j=6} \beta_{j,i,t-1} + \varepsilon_{i,t} \quad (1b)$$

4. Results

Summary of Statistics

Classification of Commercial Banks are presented in Table 1.

Table 1. Classification Commercial Bank

Classification Commercial Bank	Number of Observations	Number of sample
<i>BUKU 1</i>	114	6
<i>BUKU 2</i>	475	25
<i>BUKU 3</i>	304	16
<i>BUKU 4</i>	114	6
Total	1007	53

Source: data processed

Board Diversity on bank risk

We provide the regression results on the effect of board_diversity on bank risk in Table 2. From model 1.a, we find that board_diversity has a positive effect on NPLLOAN in *BUKU 2*; against NIM in *BUKU 2* and *BUKU 3* and *BUKU 4*; against *BOPO* in *BUKU 2* and *BOPO* in *BUKU 3*; and to LDR in *BUKU 1*. Meanwhile, from model 1b, it is found that effect positive of board_diversity on the NPLLOAN *BUKU 1* and *BUKU 4*; against NIM of *BUKU 1*; against *BOPO* of *BUKU 1*, *BUKU2*, and *BUKU 3*; and on LDR in *BUKU 1*. These findings support the findings of Bernile et al. (2018) where the more diversity of the board of directors will lead to the occurrence of banking risks. The more diverse the board



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of directors from the demographic aspects (age, gender and ethnic diversity) and cognitive aspects (diversity of experiences, education graduates and skills) will cause differences in decision-making. The positive influence of board_diversity on banking risks (NPLLOAN, NIM, *BOPO* and LDR) in Indonesia is also consistent with (Berger et al. 2013) conducted on banks in Germany.

The results of hypothesis 1 also show that the board of directors has an important role for risk taking in Indonesia. Consistent from result this research with (Pathan 2009) and (Skala and Weill 2018), which prove that the board of directors positively affects bank risk taking. The findings of hypothesis 2 also support the criticism of (Berger et al. 2013) on theory of agency that not focus on the diversity of members in the Top Management Team, but focuses more on similarities or compatibility between executives in decision making. Associated with the upper echelon theory, the characteristics of the leadership in terms of the diversity aspect of the board of directors have a significant positive effect on bank risk taking in Indonesia.

Table 2. Regression of Board Diversity on Risk

	Panel A: <i>NPLLOAN</i>			
	<i>BUKU 1</i>	<i>BUKU 2</i>	<i>BUKU 3</i>	<i>BUKU 4</i>
Model 2a.				
BOARD_DIVERSITY	0.1956*	0.1257**	0.0543*	0.2303**
Adj R ²	0.0722	0.4764	0.4104	0.2313
Model 2b.				
BOARD_DIVERSITY	0.2540*	0.0669*	-0.0583*	0.3380***
BANK_SIZE	0.0044**	0.0017*	-0.0025**	-0.0012*
BOARD_SIZE	-0.1904*	0.0087***	0.2061**	-0.2135**
OWN1	0.0052*	-0.0036*	0.0080*	-0.0017*
OWN2	NA	0.0123**	-0.0377***	0.0139*
OWN5	0.0288**	-0.0241*	NA	0.0638*
COM	-0.0075*	-0.0071**	0.0071**	0.0186*
Adj R ²	0.1052	0.4436	0.2183	0.3048
	Panel B: <i>NIM</i>			
Model 2a.				
BOARD_DIVERSITY	0.1013*	-0.1775*	0.0438***	-0.2326*
Adj R ²	0.3504	0.6739	0.4967	0.4663
Model 2b.				
BOARD_DIVERSITY	-0.2519***	-0.0614*	0.3133*	-0.5808*
BANK_SIZE	-0.0118***	-0.0094***	-0.0057***	-0.0025*
BOARD_SIZE	0.1179*	0.4451***	0.2322***	0.5224*
OWN1	0.0010*	0.0001*	-0.0512***	-0.0142*
OWN2	NA	-0.0094***	0.0528***	-0.0175*
OWN5	-0.0027*	-0.0264*	NA	0.0737*
COM	0.0017*	0.0041*	0.0125**	0.0422*
Adj R ²	0.4319	0.7265	0.5909	0.3702
	Panel C: <i>BOPO</i>			
Model 2a.				
BOARD_DIVERSITY	0.7610*	-0.9848***	-2.0637**	0.9636*



Adj R ²	0.2213	0.4364	0.1805	0.1400
Model 2b.				
BOARD_DIVERSITY	3.9137**	-0.7617***	-2.4207**	2.8238*
BANK_SIZE	0.0718***	0.0018*	-0.0104*	-0.0303*
BOARD_SIZE	1.2533***	-1.0330***	-1.0657*	-3.9606***
OWN1	0.0684*	0.2382***	0.0682*	0.3362***
Tabel 5 (Continue)				
OWN2	NA	-0.0880*	-0.0290*	0.0967*
OWN5	0.1357*	-0.1731**	NA	-0.9781*
COM	0.0272*	-0.0158*	0.0912*	0.1983*
Adj R ²	0.3848	0.4148	0.1784	0.3822
Panel D :LDR				
Model 2a.				
BOARD_DIVERSITY	-10.0493***	-0.6296*	-1.9926*	-1.1335*
Adj R ²	0.3222	0.2133	0.5097	0.1149
Model 2b.				
BOARD_DIVERSITY	-6.1436***	-1.1561*	0.0934*	-2.5065*
BANK_SIZE	0.0581*	0.0904***	0.0264***	0.1093***
BOARD_SIZE	-0.1622*	0.7462*	2.0830**	5.3640*
OWN1	-0.2125*	0.0132*	-0.1688**	-0.0972*
OWN2	NA	0.2913**	-0.1459**	0.1693*
OWN5	0.2633*	-0.6634***	NA	-2.7412**
COM	0.1907*	0.1268**	0.2886***	0.5191**
Adj R ²	0.3560	0.4587	0.5315	0.6259

*:10%, **: 5%, and ***:1%

Source: data processed views

5. Conclusion and Suggestion

We find that that board_diversity has a positive effect on bank risk in Indonesia. Different factors in the number and size of banks in each classification of *BUKU* 1, *BUKU* 2, *BUKU* 3 and *BUKU* 4 also influence board of directors in making decisions regarding bank risks in Indonesia. However, these results generally support the findings of previous studies.

This study provides the following theoretical contributions related to diversity proves that the diversity of each individual which is different from its demographic and cognitive aspects has a positive impact on a decision. This is confirmed by the finding that the diversity of the board of directors can have a positive effect on risk taking for banks in Indonesia. In practical terms, this research to give informations to upgrade Top Management in bank risk taking.

Associated with the upper echelon theory which emphasizes that the outcome of an organization is influenced by the characteristics of the leader. The characteristics of the leadership that are viewed from the diversity aspect of the board of directors have a positive impact on bank risk taking. Theoretical



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contribution related to diversity proves that the existence of diversity in each individual who is different from the demographic and cognitive aspects has a positive impact on a decision. This is confirmed by the findings that the diversity of the board of directors can have a positive influence on the risk taking of banks in Indonesia. This research also contributes to practice, which is related to how to improve the quality of bank risk-taking decisions from Top Management with.

Furthermore, this study is still limited to the study of banks in Indonesia in the classification of Commercial Banks based on Business Classification (*BUKU*) 1 to *BUKU* 4, has not examined in detail based on the classification of Islamic Bank or Non-Foreign Exchange Bank or studies based on Government Owned Banks, Private Ownership or Foreign Ownership. For this reason, this will be an opportunity for further research so that it can be studied more comprehensively.

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