Does the Age of Board Members Affect Firms' Financial Performance? A Case of ESG Leader Companies in Indonesia

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Abstract

Many scholars across the globe have attempted to investigate the effects of board diversity on firms' financial performance and yielded inconclusive results. In this paper, the author aims to discover the effects of one of the board diversity attributes on firms' financial performance in Indonesia, namely age diversity (measured by standard deviation), as well as the variables surrounding the board members' ages (average age and the presence of millennials). A purposive sampling method was used to select the research sample, which resulted in 41 companies that are listed in the ESG Sector Leaders IDX KEHATI index. The time frame of the observation is from 2018 to 2022. Using panel data regression, the author finds out that age diversity in BOC has a positive relationship with ROA, the average age of BOC has a negative relationship with ROE, while the presence of millennials on BOD & BOC combined has a positive relationship with ROA. The negative association between average age and ROE indicates that boards with a younger average age outperform boards with an older average age. However, interestingly, the board members' age does not significantly affect the financial performance indicator, reflecting the market perspective as measured by Tobin's Q.

Keywords: age diversity; board diversity; financial performance; millennials

A. INTRODUCTION

The board of directors (BOD) and board of commissioners (BOC) carry out essential roles in a company. A study even claimed that how successfully boards can improve their performance will define "the trajectory and character of companies in the coming years" (Bird et al., 2004). As a result, the composition of the boards becomes a notable issue. One of the strategies to improve board performance is through board diversity, which is considered capable of fostering innovation (Makkonen, 2021), strengthening decision-making (Ali et al., 2022), as well as expanding human and social capital (Belkacemi et al., 2021).

Board diversity refers to the varied or diversified composition of a company's board of directors and/or commissioners based on specific attributes or criteria. Milliken and Martins (1996) divide the attributes into two categories: observable or demographic diversity (e.g., age, ethnicity, and gender) and underlying or cognitive diversity (e.g., education, experience, technical talents, and socioeconomic background). There is already legal support to encourage board diversity, as demonstrated by several countries establishing a gender quota on boards. For example, 8 of the 27 EU member states have established mandatory gender quotas for listed enterprises as of January 2022 (Person & Siebold, 2022). However, regulations supporting other aspects of diversity have not been typically considered, including age diversity.

Meanwhile, research by PwC revealed that age diversity is believed to be critical to accomplishing diversity of viewpoints in the boardroom by 79% of more than 700 directors in their study (PricewaterhouseCoopers, 2022). The author also conducted a preliminary study concerning the topic in February 2023. Based on the result, more than 80% of the 60 respondents agreed that it is important for the younger generation, individuals below 40, to be involved in the boardroom to offer a novel perspective. Most respondents' responses are driven by their conviction that age does not determine competency. Moreover, because they grew

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up in the age of technology, the younger generation is deemed to be more innovative, agile, and proficient in technology.

Furthermore, the Indonesian Ministry of State-Owned Enterprises (SOEs) declared in their official document that they had a target that 10% of SOEs directors are millennials by 2023, and the realization reached 5% in 2021 (IDX Channel, 2022). The Minister of SOEs, Erick Thohir, through his post on his personal Instagram account, stated his view that the young generation could benefit the state-owned firms because they are full of passion and idealism, free from corrupt illicit conduct, and tend to have far-reaching worldwide networks. This target aligns with the Financial Services Authority (FSA) recommendation for companies to improve their board diversity, including age diversity, to accomplish more impartial and comprehensive decision-making by considering diverse perspectives and interests (Financial Services Authority, 2014).

Therefore, a regulation concerning age diversity has emerged as an important subject. However, before delving into the regulation, it is critical to prove that age diversity, as an attribute of board diversity, has a favorable impact on the company. Financial performance, which can reflect the overall economic health of the company and the managerial performance, can be utilized as the dependent variable to assess the impact brought by board diversity.

Nevertheless, defining the variables relating to the board members' age is critical, which is usually mixed up in past research. A conversation about incorporating new perspectives into the boardroom implies that the variable being examined is age diversity or age spread. Meanwhile, arguments over whether younger or older boards have different performances imply that the focus is on the average age. Both variables will be covered in this study. Moreover, the Ministry of SOEs' goal of appointing millennial board members raises the question of whether millennials can enhance the enterprises' financial performance. Hence, it will be discussed in this study as well.

Age Diversity

Most of the previous studies in Indonesia which discussed the age diversity on boards employed the board members proportionally or above a specific age as the measurement, whereas this kind of measurement cannot portray the diversity of age within the board. Hence, the author will use the standard deviation of the board members' age as the measurement. The higher the standard deviation, the more diverse the age of the board members is.

Regarding the past research on age diversity, the results yielded inconclusive findings. The scholars who found a negative linkage between age diversity and firms' financial performance argued that age diversity might cause in-group and out-group problems, increasing internal conflict and decreasing financial performance (Richard & Shelor, 2002, Tanikawa et al., 2017). On the other hand, several studies revealed a positive association and believed that the reason is that younger and older board members in the same boardroom can complement each other's characteristics or traits, which then enables improved strategic planning (Fernández-Temprano & Tejerina-Gaite, 2020; Kagzi & Guha, 2018). Specifically, Kagzi & Guha (2018) stated that younger boards tend to be more technologically literate and highly educated, while older boards offer significant experience required for enhanced decision-making. Furthermore, the favorable linkage accords with the agency, signaling, human capital, and resource dependency theories. The author anticipates a positive linkage between age diversity and corporates' financial performance.
H1. Age diversity on boards has a positive relationship with firms' financial performance.

Average Age

Research regarding the effect of board members' average age on firms' financial performance will answer whether younger or older boards perform better. The earlier research related to this variable in some countries revealed contradictory results. Prior Jonson et al. (2019), who conducted the research in Australia,

discovered a positive association between average age & financial performance, which means that older boards outperform the younger boards, and believed that wisdom and experience which come with age might be the cause. Meanwhile, most scholars discovered a negative relationship, meaning that younger boards perform better than older boards. It might be attributed to the argument that younger boards are more inclined to take greater risks and less reluctant to implement organizational adjustments to boost company performance (Taljaard et al., 2015). This finding coincides with the signaling theory, where younger boards are believed to be able to transmit signals that organizations are becoming more competitive and inventive. Hence, the following hypothesis is proposed.

H2. The average age of board members has a negative relationship with firms' financial performance.

Millennial Board Members

According to (Kupperschmid, 2000), the word generation refers to a group of persons with common birth years and experiences that affect and are affected by many types of critical events in the world. These common experiences create generational qualities or personalities, including attitudes toward work. Based on Jean Twenge, a psychologist specializing in generational distinction, the millennial generation was born from 1980 to 1994.

According to (Gobeski, 2015), as a leader, millennials are generally more proactive and future-oriented than the previous generations. They oppose authoritarian techniques and instead desire to be inclusive and collaborative. Consequently, millennials are becoming less responsible and self-contained (Medyanik, 2016). When issues emerge, it is difficult to pin the blame on a single person since they tend to be more of a collective voice or moderator than the real leader. However, despite the quite young age, numerous public firms in Indonesia have already appointed millennials to be members of their boards. The Indonesian Ministry of SEOs even set a goal that 10% of SOEs directors will be millennials by 2023. This begs the concern of whether or not millennials are prepared to embark on board-level employment.

However, because the preliminary survey that the author conducted showed a positive notion of the young board members, the author hypothesized that the presence of millennial board members and firms' financial performance are positively associated.

H3. The presence of millennial board members has a positive relationship with firms' financial performance.

Theories on Board Diversity

The author summarizes the theories related to board diversity that might be attributed to this study's result in the following table.

Table 1. Theories on Board Diversity

Theory	Explanation
Agency Theory	Agency theory discusses the agency problem, which arises from a conflict of interest between the principals (shareholders) and the agents (firm's management). One method for reducing the agency problem is through board independence, which is expected to provide a balanced interest in the boardroom. Board independence itself can be achieved by expanding diversity on boards (Taljaard et al., 2015).
Signaling Theory	Based on signaling theory, corporations use visual indicators to gain reputation and status among stakeholders (Spence, 1973). Furthermore, because of asymmetry of information, the public typically depends on symbols and acts to assess the quality and reputation of organizations (Miller & del Carmen Triana, 2009). As a result,

	board composition, whether done purposefully or accidentally by the firm, can convey signals to the market. Board diversity shows stakeholders that the company values inclusiveness (Vairavan et al., 2020). Furthermore, because the younger generation is regarded to be more inventive, having younger board members can send a strong signal to stakeholders that the firm is devoted to its development.
Human Capital Theory	Becker's (1964) human capital theory reviews how an individual contributes in terms of experience, talents, and education that may be used to the organization's benefit. Because different individuals have diverse human capital attributes, as board diversity rises, so does the unique human capital. According to previous research, having board members from both the older and younger generations will benefit the organization since younger boards are more technologically savvy (Featherstone, 2018), while older boards can contribute their perspectives with their greater experience and wisdom (Prior Jonson et al., 2019). In conclusion, human capital theory supports the notion that age diversity may benefit businesses.
Resource Dependency Theory	According to Pfeffer and Salancik (1978), resource dependency theory addresses the benefits provided by employees within the company through linkages with external organizations. Because diverse boards have more access to knowledge and networks, the diversity on BOD and BOC is projected to increase the company's resources and performance (Sutarti et al., 2021). In conclusion, this theory implies a favorable association between age diversity and firm's financial performance.

B. RESEARCH METHOD

A purposive sampling method is used to select the research sample for this study. The first criterion is companies listed in the ESG Sector Leaders IDX Kehati index, which comprises representatives of all sectors on the Indonesian Stock Exchange who have the best ESG scores as determined by the KEHATI Foundation. Using this index, the author expects that the companies have implemented good corporate governance, including those related to diversity so that the author can investigate its impact on the companies. However, since financial sector companies typically have different capital structures and financial reports than other companies, they are omitted from the sample. Moreover, the other criteria are companies with at least one board turnover within the frame, 2018 - 2022, and firms that publicize their board members' ages or birth years. As an outcome, this study uses 41 companies as the research sample, observed from 2018 - 2022. All the data is gathered from secondary data collection through companies' annual reports and websites.

The methodology that is used in this paper is multiple linear panel data regression. However, for robustness, a statistical comparison test is held first to ensure that the sample companies' financial performance has no significant differences before and after the COVID-19 pandemic. Then, classical assumption tests are conducted, consisting of normality, multicollinearity, hetereroscedasticity, and autocorrelation tests. Afterward, the author runs Chow, Hausman, and Lagrange Multiplier tests in order to decide the appropriate regression model between Pooled Least Square (PLS), Fixed Effect (FE) Model, and Random Effect (RE) Model.

Below is the regression model adopted from past research (Selviani, 2018; Sutarti et al., 2021).

$$FP1 = \alpha + \beta_1 \, x \, ADvt_i + \beta_2 \, x \, AvgA_i + \beta_3 \, x \, PMln_i + \beta_4 \, x \, BSize_i + \beta_5 \, x \, FSize + \varepsilon$$

$$FP2 = \alpha + \beta_1 \, x \, ADvt_i + \beta_2 \, x \, AvgA_i + \beta_3 \, x \, PMln_i + \beta_4 \, x \, BSize_i + \beta_5 \, x \, FSize + \varepsilon$$

$$FP3 = \alpha + \beta_1 \, x \, ADvt_i + \beta_2 \, x \, AvgA_i + \beta_3 \, x \, PMln_i + \beta_4 \, x \, BSize_i + \beta_5 \, x \, FSize + \varepsilon$$

Where α denotes the constant or intercept, β_1 - β_6 denote the coefficient of each variable, i denotes the types of boards (i = 1, 2, 3; 1 = BOD; 2 = BOC; 3 = BOD & BOC combined), ε denotes the error term, and the rest are explained in the following table.

Table 2. List of Variables

Variable	Dimension	Explanation	Reference(s)
Dependent Variables:			
FP1 (Financial Performance 1)	Return on Assets (ROA)	A measure of company's profitability relative to its total assets	Fernández-Temprano & Tejerina-Gaite (2020); Kagzi & Guha (2018); Lubis et al. (2022); Zulkarnain & Mirawati (2018)
FP2 (Financial Performance 2)	Return on Equity (ROE)	An indicator reflecting the return earned on the investment of common stockholders	Selviani (2018); Sutarti et al. (2021); Tanikawa et al. (2017)
FP3 (Financial Performance 3)	Tobin's Q	Ratio of a company's market value to its total assets	Kristina & Wiratmaja (2018); Prior Jonson et al. (2019); Rismawati (2019)
Independent Variables:			
ADvt (Age Diversity)	Standard deviation of the board members' age	The diversity or spread of the board members' age in a company, measured by standard deviation	Fernández-Temprano & Tejerina-Gaite (2020); Prior Jonson et al. (2019)
AvgA (Average Age)	Average age of the board members	The average of the board members' age in a company	Bonn et al. (2004); Horváth & Spirollari (2012); Taljaard et al. (2015)
PMln (Proportion of Millennials)	Proportion of millennial directors and/or commissioners on boards	Percentage of millennial directors and/or commissioners in comparison to the total board members	Wardhani et al. (2022)
Control Variables:			
BSize (Board Size)	Total of board members	The average number of the board members in a company from 2018 - 2022 coded into 4 categories ($\leq 6 = 1$; $>6 - 9 = 2$; $>9 - 12 = 3$; $>12 = 4$)	Selviani (2018); Sutarti et al. (2021); Prior Jonson et al. (2019)
FSize (Firm size)	Total assets	The natural logarithm of the company's total assets	Sutarti et al. (2021); Rismawati (2019)

C. RESULTS AND ANALYSIS

In order to reveal the linkage between board members' age and firms' financial performance, this research uses panel data regression with three independent variables, three dependent variables, and two control variables. Below are the descriptive statistics of all those variables. As stated in Table 3, this study employs balanced panel data from 41 companies during five years from 2018 to 2022, yielding total observations of 205. The financial performance of all the companies over five years is positive, with a mean of 0.07158 for the ROA, 0.15483 for the ROE, and 1.55862 for Tobin's Q. However, the negative number in the minimum cell of ROA & ROE indicates that enterprises had losses during the time frame.

The explanatory variables are divided into three distinct variables according to the board type, which includes BOD, BOC, and BOD & BOC combined. The mean age diversity for BOD, BOC, and BOD & BOC is 5.71425, 8.16040, and 8.25666, respectively. The board with the oldest mean age is the BOC, which has an average age of 60.95283 years. Meanwhile, the mean age of the BOD is 53.90996 years. The average percentage

of millennials on boards is less than 5% across all board kinds. However, as seen in the maximum column, one corporation has a millennial percentage of 40% on their BOC.

Table 3. Descriptive Statistics

Variable	Label	Observation	Mean	Std. Dev.	Min	Max
Dependent Variables						
Return on Assets	ROA	205	0.07158	0.08025	-0.13800	0.46300
Return on Equity	ROE	205	0.15483	0.29347	-1.50300	2.38400
Tobin's Q	TOBINQ	205	1.55862	2.20891	0.07676	17.04147
Independent Variables						
Age Diversity on BOD	AD_BOD	205	5.71425	2.75474	0.95743	12.69596
Age Diversity on BOC	AD_BOC	205	8.16040	3.25597	1.00000	15.00000
Age Diversity on BOD & BOC	AD_BODBOC	205	8.25666	2.32231	2.73679	14.16898
Average Age of BOD	AA_BOD	205	53.90996	3.81414	46.70000	66.83333
Average Age of BOC	AA_BOC	205	60.95283	5.27443	45.16667	75.00000
Average Age of BOD & BOC	AA_BODBOC	205	57.05968	3.71425	47.83333	68.11111
Proportion of Millennials on BOD	PM_BOD	205	0.02477	0.05646	0.00000	0.25000
Proportion of Millennials on BOC	PM_BOC	205	0.01309	0.05025	0.00000	0.40000
Proportion of Millennials on BOD & BOC	PM_BODBOC	205	0.01957	0.03972	0.00000	0.20000
Control Variables						
Board Size (BOD)	BS_BOD	205	1.73171	0.73513	1.00000	3.00000
Board Size (BOC)	BS_BOC	205	1.39024	0.58065	1.00000	3.00000
Board Size (BOD & BOC)	BS_BODBOC	205	3.90244	0.29745	3.00000	4.00000
Firm Size	FS	205	30.83719	1.22334	28.65006	33.52569

Regarding control variables, this research utilizes a coding system of 1 to 4 for board size. The descriptive statistics table shows that the number of members of the boards fluctuates, with a lowest of 9 members in the BOD and BOC combined. Whereas, for the company size, the mean natural logarithm of the total assets is 30.83719, which equals IDR 51.1 trillion. This firm size is calculated by averaging each company's assets over the last five years. The maximum result is IDR 363.1 trillion, while the minimum is IDR 2.8 trillion.

Table 4 displays the mean or average of each variable for five years in the time frame. The disparities in financial performance are deeply examined in the comparison test. Regarding the independent variable, the proportion of millennial generation members on BOD and BOC combined increased yearly, rising from 0.01200 in 2018 to 0.03188 in 2022. Meanwhile, because the board size and the firm size are utilized as control variables, the numbers are fixed for the entire year.

Table 4. Average of EachVariables from 2018 to 2022

	2018	2019	2020	2021	2022
ROA	0.07552	0.06597	0.05060	0.07486	0.09094
ROE	0.16590	0.13919	0.07621	0.16838	0.22447
TOBINQ	1.70633	1.62915	1.55935	1.55506	1.34320
AD_BOD	5.70303	5.75031	5.70121	5.73990	5.67680
AD_BOC	8.57776	8.44716	7.92013	7.92013	7.93684
AD_BODBOC	8.48328	8.36672	8.22527	8.09126	8.11674
AA_BOD	52.92196	53.70692	53.76341	54.25293	54.90457
AA_BOC	60.07455	60.49128	61.17255	61.43087	61.59490
AA_BODBOC	56.04915	56.69524	57.11202	57.42336	58.01862
PM_BOD	0.01819	0.01722	0.02259	0.02974	0.03610
PM_BOC	0.00576	0.00836	0.00755	0.01789	0.02588
PM_BODBOC	0.01200	0.01398	0.01565	0.02435	0.03188
BS_BOD	1.73171	1.73171	1.73171	1.73171	1.73171
BS_BOC	1.39024	1.39024	1.39024	1.39024	1.39024
BS_BODBOC	3.90244	3.90244	3.90244	3.90244	3.90244
FS	30.83719	30.83719	30.83719	30.83719	30.83719

Financial Performance: Before & After COVID-19 Pandemic

Since the COVID-19 pandemic and the social-distancing regulation hinder business processes, the author is concerned that the financial performance of all companies was negatively affected by it, which caused an inaccuracy in the results of this research. Hence, the author conducts a comparison test between the sample corporates' financial performance in 2018 – 2019 (before the pandemic) and 2020 – 2022 (during & after the pandemic). To goal is to ensure the credibility of this research that there is no significant difference in the financial performance between the two time periods.

After testing the normality of the data, the author found that the data was not normally distributed. Therefore, the author uses the Wilcoxon test, a non-parametric statistical test suitable for non-normally distributed data. The results are shown in the following table.

Table 5. Wilcoxon Test Results

Financial Performance Measurement	z	Prob > |z|
Return on Assets (ROA)	-0.343	0.7313
Return on Equity (ROE)	-0.641	0.5212
Tobin's Q	-1.445	0.1485

As can be seen in Table 5, all of the p-values for each financial performance measurement are higher than 0.05, which is the significance level, meaning that the evidence is insufficient to disprove the null hypothesis and it assures that there is no significant difference between the sample corporates' financial performance before and after the COVID-19 pandemic. Consequently, the regression analysis will be conducted using the time frame of 2018 – 2022 without dividing it into two separate analyses (before and after the COVID-19 pandemic).

Regression Results

After running the classical assumption tests, the author found that the data has passed the multicollinearity test since the variance inflation factor (VIF) results are all below the rule of thumb of 10. Regarding normality, the Shapiro-Wilk test shows that the data is not normally distributed. However, it will not affect the robustness of the regression analysis since the data is large enough and panel data regression, including using FE and RE models, is robust to normality (Wooldridge, 2001)—meanwhile, the Breusch-Pagan and the Wooldridge test show that the data has heteroskedasticity and autocorrelation issues. Therefore, the clustered standard error is employed in the regression to deal with it since it is robust to the two issues.

This research has nine regression models for three financial performance variables (ROA, ROE, and Tobin's Q) and three board types (BOD, BOC, and BOD & BOC combined). ROA will be used to measure financial performance in models 1 - 3. ROE will be used in models 4 - 6, while Tobin's Q will be used in models 7 - 9. Each financial performance measurement will be employed in three regression models, covering BOD, BOC, and BOD & BOC combined. Tables 6 – 8 below demonstrate the results of the regression.

Table 6. Regression Result for ROA

	ROA					
	Model 1		**Model 2**		**Model 3**	
Chow Test	0.0000		0.00000		0.0000	
Hausman Test	0.1032		0.1750		0.2096	
Lagrange Multiplier Test	0.0000		0.0000		0.0000	
Regression Model	**Random Effect**		**Random Effect**		**Random Effect**	
Variable	**Coef.**	**p-value**	**Coef.**	**p-value**	**Coef.**	**p-value**
Constant	0.25907	0.594	0.27616	0.232	-1.21961	0.666
AD_BOD	0.00197	0.179				
AD_BOC			0.0042259*	0.025		
AD_BODBOC					-0.00251	0.457
AA_BOD	0.00567	0.222				
AA_BOC			-0.00164	0.211		
AA_BODBOC					0.00225	0.329
PM_BOD	0.05204	0.646				
PM_BOC			0.11963	0.594		
PM_BODBOC					0.38812006**	0.005
BS_BOD	0.02048	0.512				
BS_BOC			-0.00791	0.691		
BS_BODBOC					-0.05402	0.775
FS	-0.01755	0.093	-0.00422	0.615	0.04409	0.698
N	205		205		205	
Prob > F	0.0000		0.0013		0.0000	
R-squared	0.0754		0.0336		0.0249	

*, **, *** denote the statistical significance level of 5%, 1%, and 0.1%, respectively.

Table 7. Regression Result for ROE

	ROE					
	Model 4		**Model 5**		**Model 6**	
Chow Test	0.0000		0.00000		0.0000	
Hausman Test	0.2382		0.1933		0.0068	
Lagrange Multiplier Test	0.0000		0.0000		0.0000	
Regression Model	**Random Effect**		**Random Effect**		**Fixed Effect**	
Variable	**Coef.**	**p-value**	**Coef.**	**p-value**	**Coef.**	**p-value**
Constant	1.26897	0.340	0.55655	0.203	1.32370	0.078
AD_BOD	-0.00197	0.778				
AD_BOC			0.00057	0.888		
AD_BODBOC					-0.06582	0.277
AA_BOD	0.00104	0.931				
AA_BOC			-0.0137323*	0.046		
AA_BODBOC					-0.01184	0.075
PM_BOD	-0.03201	0.909				
PM_BOC			1.19315	0.449		
PM_BODBOC					2.55201	0.336
BS_BOD	0.09078	0.300				
BS_BOC			-0.08865	0.170		
BS_BODBOC						
FS	-0.04265	0.153	0.55655	0.203		
N	205		205		205	
Prob > F	0.0050		0.0000		0.0000	
R-squared	0.0448		0.0620		0.0289	

*, **, *** denote the statistical significance level of 5%, 1%, and 0.1%, respectively.

Table 8. Regression Result for Tobin's Q

	Tobin's Q					
	Model 7		**Model 8**		**Model 9**	
Chow Test	0.0000		0.00000		0.0000	
Hausman Test	0.6563		0.6302		0.6758	
Lagrange Multiplier Test	0.0000		0.0000		0.0000	
Regression Model	**Random Effect**		**Random Effect**		**Random Effect**	
Variable	**Coef.**	**p-value**	**Coef.**	**p-value**	**Coef.**	**p-value**
Constant	23.34098	0.041	11.74938	0.020	12.60438	0.001
AD_BOD	0.06417	0.119				
AD_BOC			0.02681	0.542		
AD_BODBOC					0.11500	0.286
AA_BOD	-0.06031	0.491				
AA_BOC			0.01027	0.676		
AA_BODBOC					-0.05912	0.449
PM_BOD	0.44027	0.832				
PM_BOC			-1.16886	0.428		
PM_BODBOC					0.75861	0.789
BS_BOD	1.03882	0.251				
BS_BOC			-0.23216	0.626		
BS_BODBOC					0.76813	0.317
FS	-0.6715203*	0.012	-0.34691	0.080	-0.3772759**	0.003
N	205		205		205	
Prob > F	0.0000		0.0080		0.0002	
R-squared	0.1893		0.0513		0.0977	

*, **, *** denote the statistical significance level of 5%, 1%, and 0.1%, respectively.

For the nine models, the F-test yields a p-value less than the significance level, which is 0.05, indicating that all of the explanatory factors are concurrently significant to influence the dependent variable. The regression models are significant in explaining the dependent variable. Meanwhile, the r-squared value indicates how extended the model describes the dependent variable. The r-squared of models 1 to 9 ranges from the smallest of 2.49% to the largest of 18.93%. The model with the largest r-squared is model 7, which discusses the effects of BOD's age on Tobin's Q. The r-squared is 18.93%, meaning that 0.1893 of the variability in Tobin's Q can be described by regression model 7. The author conducts Chow, Hausman, and Lagrange tests regarding the suitable regression model between PLS, FE, and RE models. The results indicate that the random-effect model is suitable for all nine models, except model 6, which is more suitable using the fixed-effect model.

Based on the regression results, the author discovered that model 2, 3, and 5 had 1 independent variable strongly linked with the dependent variable. Surprisingly, this study discovered that the age of board members had only a statistically significant impact on accounting-based measures of financial performance, particularly ROA and ROE. On the other hand, Tobin's Q, a market-based indicator of financial success, is not significantly influenced by the board members' age. In other words, the market does not consider the mean age of board members, its diversity, and the proportion of millennials on the boards as significant factors affecting the firms' performance. This finding opposes the signaling theory, which involves the younger generation on boards demonstrating firms' devotion to development and innovation (Taljaard et al., 2015). However, this supports the premise that, regardless of age, the market rates board members' competence based on their experience. (Kristina & Wiratmaja, 2018).

Nevertheless, the independent variables, which have a significant relationship with ROA and ROE, support this study's hypotheses. Age diversity in BOC is favorably connected with ROA, the average age of BOC negatively correlates with ROE, and the proportion of millennials on BOD & BOC combined is associated with ROA.

Hypothesis 1

The 1st hypothesis tested in this research is that there is a favorable association between board age diversity and companies' financial performance. Model 2 supports this hypothesis by demonstrating that age diversity on the BOC has a beneficial effect on return on assets (ROA). With a coefficient of 0.42259%, this variable is significant at the 5% significance level. Even though this coefficient is quite small, it might be understood as follows: ceteris paribus, increasing one score in the BOC's age diversity will raise the ROA by 0.42259%.

This result is consistent with previous research demonstrating a link between age diversity and business financial performance (Fernández-Temprano & Tejerina-Gaite, 2020; Kagzi & Guha, 2018). According to those research, the skills of young boards can complement the attributes of old boards and vice versa, allowing the business to improve its financial performance. In addition, it might also be ascribed to the resource dependency and human capital theory, which says that diverse boards provide greater outside networks, experience, and talents that can be used to the organization's advantage. In addition, this finding is consistent with agency theory, which contends that diversity on a company's boards may promote board independence and provide an equal interest in the boardroom, minimizing agency dilemmas and leading to greater financial performance.

Hypothesis 2

The 2nd hypothesis that the board members' average age is adversely connected with business financial performance is supported by the regression model 5. According to the regression results, the mean age of the board of commissioners (BOC) has a 5% significant negative effect on return on equity (ROE). -1.37323% is the coefficient of this variable, which suggests that ceteris paribus, increasing the average age of BOC by one score reduces the ROE by 1.37323%. This means that the older the board's average age, the lower the company's financial performance. Put another way, boards with younger average ages outperform boards with older average ages.

This counters the argument of Prior Jonson et al. (2019) that older boards have higher performance because of their knowledge and experience. One possible explanation is that age does not constantly imply a wealth of experience. Young board members may have more experience when they collect more work opportunities. Furthermore, this finding confirms the prior research's contention that younger boards are more inclined to take greater risks and less reluctant to implement organizational adjustments to boost a company's financial performance (Taljaard et al., 2015).

Hypothesis 3

The proportion of millennials on BOD and BOC combined is favorably connected with ROA at a 0.01 significance level. The coefficient, as shown in Table 6, is 0.38812006, which means that one point rise in this variable will raise the ROA by 0.38812006 points. It validates the 3rd hypothesis that there is a good association between the presence of millennials on company boards and business financial performance.

The result might be explained by the premise that millennial leaders are more agile and forward-thinking, emphasizing inventiveness and creativity, compared with the previous generations (Gobeski, 2015). As an outcome, these features enable them to contribute to improving the company's financial success. Therefore, because of the significant beneficial impact, the authors support the target set by the Indonesian Ministry of SEOs to achieve 10% of millennial board members in SOEs.

D. CONCLUSION

This study aims to examine the connection between board members' age and firms' financial performance utilizing three independent variables: age diversity, average age, and the proportion of millennials. Whereas the financial performance of the businesses is measured using three indicators: ROA, ROE, and Tobin's Q. Purposive sampling was used to select the research sample, which resulted in 41 companies from the ESG Sector Leaders IDX KEHATI index. This study's time frame is 2018-2022, and the dataset is examined using panel data regression.

According to the findings, the substantial impacts of the age of board members on company financial performance are revealed in models 2, 3, and 5. Age diversity on BOC, which is favorably connected with ROA, the average age of BOC, which has a negative relationship with ROE, and the presence of millennials on BOD & BOC combined, which have a beneficial correlation with ROA is the variables revealed to be significant in affecting financial performance. These significant results support the study's hypotheses that age diversity and the presence of millennials on boards positively correlate with company financial performance, whereas average board age has a negative linkage.

However, this research's notable discovery is that the age of the board members has no significant influence on Tobin's Q, a metric of financial performance that portrays the market viewpoint. Meanwhile, it has been demonstrated that age diversity, younger average age, and the inclusion of millennials on boards positively influence firm profitability or accounting-based financial performance assessments. As a result, in the future, investors may consider the composition of a company's boards when deciding on investment plans. Companies in Indonesia ought to also pay greater focus to the age diversity on their boards in an attempt to bring fresh perspective diversity in the boardroom and provide more opportunities for the younger generations, especially millennials, to take on board-level occupations, as this study shows that they can have a beneficial effect on firm performance.

Furthermore, although the result is not statistically significant, there is a negative relationship between the proportion of millennials on BOD and ROE, as well as between the proportion of millennials on BOC and Tobin's Q. Corporations must be mindful of and prevent tokenism, as it might be the possible reason for the negative relationship. Firms must still analyze and evaluate the person's skills when hiring directors. Companies should

not disregard the standard board member requirements and hire millennial directors to achieve the Ministry of SOEs' quota or target since the firm's financial performance is the consequence.

This study, however, has several limitations. Therefore, for future study, employing a qualitative technique to learn about the thoughts and opinions of the board members on this issue might provide a more extensive and comprehensive result. Furthermore, larger samples over a longer period can provide more robust results. At last, the future study may also investigate the influence of the participation of Generation Z on boards on companies' financial performance, as some public businesses in Indonesia have already engaged Generation Z on their boards at this relatively young age.

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