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Does board diversity in Islamic banks matter?

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Abstract

Purpose – This paper discusses the diversity of boards and the performance of Islamic banks in three different conditions. Specifically, I will prove whether the diversity of the board is important for the performance of Islamic banks in normal conditions, turbulence, and recovery?

Methodology – The data includes all Islamic and conventional commercial banks in Indonesia during 2018-2022. The research period is divided into three, namely normal conditions, turbulent conditions, and recovery conditions. Data were analyzed with a panel regression model.

Findings – The results show that the level of board diversity in Islamic banks is lower than that of their conventional counterparts. In general, the level of board diversity is very important to encourage better bank performance. The effect of board diversity on performance is only significant in recovery conditions, but in times of turbulence it is the opposite. In addition, I also find that diversity is most important for the BoD, while for the BoC it is the opposite.

Novelty – This study is different from previous research. This study examines the factors of board diversity as a whole, and focuses on board diversity as a whole. Therefore, this research will better reflect the actual conditions.

Originality – This is the first paper to study the relationship between board diversity and bank performance in three different conditions. It is also the first to compare the effects of diversity on Islamic banks with their conventional counterparts.

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Introduction

Does board diversity in Islamic banks matter? The psychology and organizational literature suggests that demographic diversity is critical for improving the performance of cognitive tasks, such as strategic decision making. Demographic diversity allows transfer of information, knowledge and experience, thus encouraging higher quality cognitive performance. However, high diversity (heteroginity) is also recognized as less effective, because it will lead to substantive conflicts. Conversely, low diversity (homogeneity) is more effective, but tends to be of less quality. Meanwhile, the resource dependency and agency literature views board diversity as valuable to firms. In the resource dependency literature, board diversity is seen as a resource that can be used to provide valuable input to managers, thus promoting high-quality decision-making (Anderson et al., 2011; Ben-Amar et al., 2013). Meanwhile, the agency literature views board diversity as important for two reasons. First, it can reduce agency conflicts, where high board diversity (especially board independence) will increase the monitoring function. Second, it can improve advisory and counseling functions (Pfeffer & Salancik, 1978).

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Globally, the diversity of boards in the banking sector has been extensively studied. However, there is little consensus about its relationship to performance. Some studies show that board diversity has a positive impact on bank performance (eg., Garcia-Meca et al., 2015; Aesanmi et al., 2019), while others report a negative or insignificant relationship (eg., Kaymak & Bektas, 2008; Dinu & Bunea, 2017; Mohammad et al., 2018; Settima & Dzolkarnaini, 2018). Meanwhile, more specific studies on Islamic banks are very limited. In the context of Islamic banks in Indonesia and Malaysia, Jabari & Muhamad (2020) have studied the effects of board diversity on bank performance. However, their study only focused on gender diversity, and found a positive effect of this diversity on bank performance. In contrast to them, Elgadi & Ghardallou (2022) actually found a negative and significant relationship between gender diversity and the performance of Islamic banks in Sudan. In addition, Ali & Azmi (2016) tested the effect of religious diversity on Islamic banks in Malaysia, unfortunately, religious diversity did not significantly affect the performance of Islamic banks. Finally, Khan et al. (2023) also found an ambiguous relationship between diversity and the performance of Islamic banks in Pakistan. They found that diversity of background had a positive impact on performance, but diversity of age and nationality had a negative impact, and gender and tenure diversity were not significant.

This study aims to improve the literature on board diversity as well as address gaps from previous studies. Previous studies have predominantly focused on particular diversity, especially gender diversity (Abdelfattah et al., 2020; Aggarwal et al., 2019; Hassan et al., 2020), so they do not reflect the true level of diversity. In addition, elements of diversity such as gender, nationality, age, education and tenure tend to be studied separately, not as a unit (eg Talavera et al., 2018; Shettima & Dzolkarnaini, 2008; García-Meca et al., 2015; Pathan & Faf, 2013; Kaymak & Bektas, 2008; Mohammad et al., 2018; Dinur & Bunea, 2017; Onuorah et al., 2019; Rafinda et al., 2018; Ozatac, 2011; Ali & Azmi, 2016; Fernandes et al., 2017; and Ahmad & Alshbie, 2016). In fact, this diversity does not stand alone, but as a unit consisting of several elements that influence one another. As an illustration, a high level of education may be less valuable if it is not matched by experience, conversely a low level of education balanced by high experience will be more valuable. The diversity of individuals in a team (such as a company board) also does not stand alone, but synergizes with other individuals. In addition, previous studies have also focused on the important role of board heterogeneity, so that their homogeneity tends to be seen as something that is not good. In psychology and organizational literature, the important role of heterogeneity or homogeneity is very dependent on conditions or situations. In business organizations, heterogeneity may be much needed, especially for solving cognitive tasks, but in military organizations heterogeneity becomes very unnecessary. In addition, diversity (heterogeneity) may be needed in normal environmental situations, but vice versa when the environmental situation is abnormal. Pathan & Faff (2013) have provided evidence that the effect of board diversity on bank performance is different. In the US context, gender diversity significantly increased performance in the pre-Sarbanes-Oxlet Act (SOX) period (1997-2002), but this effect diminished post-SOX (2003-2006) and the global financial crisis (2007-2011).

This paper aims to review the relationship between board diversity and bank performance (profitability and risk), particularly in the context of Islamic banks. In addition, this study will compare the effect of board diversity on bank performance in three different conditions, and as a whole also compare it to conventional banks. In particular, this paper will contribute to the literature in several ways. Mainly, this study developed a new model to measure the level of diversity of boards as a whole. Previous studies have focused on certain factors of board diversity, and this has produced inconsistent findings. In addition, previous studies also tended to study diversity separately, not as a unit. For example, women's gender is significantly associated with higher performance than their male counterparts (Dezsö & Ross, 2012; Hafsi & Turgut, 2013; Ismail & Manaf, 2016; Terjesen et al., 2016), while more educated boards significantly higher performance than their less educated counterparts (Mahadeo et al., 2012; Ali et al., 2013). The question is, what is the effect of diversity on performance, if the board is low-educated women vs. highly educated men boards? Likewise, if it is associated with other factors of diversity, such as nationality, age, and tenure. Will the effect of diversity differ on performance, if the board is women, less educated, of foreign nationality, younger, and less tenure vs. board men, highly educated, local nationality, older, and high tenure.

I developed the Board Diversity Index (BDI) to measure diversity. This index can be composed of a number of diversity factors, and in this context is focused on five diversity factors, namely gender diversity, nationality, age, education, and tenure. In addition, this paper contributes to research related to governance and banking, especially Islamic banks which are still limited, especially in Indonesia. Finally, our analysis makes an important contribution to the literature regarding the important role of board diversity in three different conditions, namely normal conditions (before the Covid19 pandemic), turbulence (during the pandemic), and recovery (post-Covid19 pandemic). In these three conditions, the performance of Islamic banks varies greatly, especially when compared to their conventional counterparts. Under normal conditions (before the pandemic), the performance of Islamic banks was higher than conventional banks, but when the pandemic hit they actually underperformed conventional banks, while in recovery conditions, conventional banks tended to perform better than Islamic banks. In addition, Islamic banks in Indonesia are also known for their large board sizes, and this will have an impact on the level of diversity and bank performance.

Literature Review

What Is Board Diversity?

Board diversity refers to the combination of attributes, characteristics, and expertise each board member contributes to the decision-making process (Ingley & Van der Valt, 2003). In the psychology and organizational industries, demographic diversity within work groups is viewed positively, because it can enhance the performance of cognitive tasks (i.e. tasks that involve thinking to generate plans or ideas, solve problems, or make decisions) (Pelz, 1956; Bantel & Jackson, 1989; Pelled, 1996). Work groups with high diversity (heterogeneity) will work more slowly than work groups with less diversity (homogeneity). For example, Hambrick & Mason (1984) found that homogeneous top management teams tend to make decisions more quickly than heterogeneous teams. This is because heterogeneity will usually trigger substantive conflict, however, the performance of work groups with high diversity is of far higher quality. For example, Hoffman & Maier (1961) found that mixed groups tended to produce higher quality solutions than either groups of males or groups of females alone. Specifically, the literature on board diversity has also proven that board diversity has a positive impact on company performance (Ciocirlan & Pettersson, 2012; Sitthipongpanich & Polsiri, 2014; Alnabsha et al., 2018; Aggarwal et al., 2019; Alshbili et al., 2019; Birindelli et al., 2019; Baker et al., 2020). This is because the diversity of the board can enhance the widespread transfer of information, knowledge, and experience, thereby encouraging effective and efficient decisions. In addition, board diversity can also increase independence, thus encouraging decision-making that is friendly to minority shareholders (Agyemang-Mintahy & Schadewitz, 2019; Elmagrhi et al., 2018; Ferrero-Ferrero et al., 2015; Glass et al., 2016; García-Meca et al., 2015).

Board Diversity Factors and Measurements

The factors of board diversity are very broad, and in general they can be divided into two parts, namely those that are difficult to observe (such as attitudes, personalities, needs, etc.) and those that are easy to observe. This study only focuses on five factors of diversity that are easily observable, namely gender, nationality, age, education, and tenure.

Gender is one of the most studied factors of diversity. Naturally, men and women have different characteristics, and therefore will affect their performance. The leadership literature has shown that there are significant differences between male and female leadership styles, with male agents tending to be superior to their female counterparts. Male agents (leaders) tend to be more assertive, more controlling, more confident, aggressive, ambitious, dominant, assertive, independent, courageous, and more competitive than their female counterparts (Eagly et al., 2000). Gender diversity has been measured in several ways. Some studies (eg, Adams & Ferreira, 2007; Hillman et al., 2007) use dummy variables, where a score of 1 is assigned to the board where there are women and 0 to the opposite. Unfortunately, this measure is biased. As an illustration, a 1/10

women's board diversity level is considered the same as a 5/10 or 9/10 women's board diversity level, but the three are different. Therefore, several recent studies have used the ratio or percentage of female boards to total boards (eg, Bøhren & Strøm, 2010; Gul et al., 2011; Ahern & Dittmar, 2012; Dezsö & Ross, 2012; Mahadeo et al., 2012; Lückerath-Rovers, 2013; Terjesen et al., 2016). However, such measurements are also biased. A lower ratio indicates a lower level of gender diversity. For example, out of 10 board members there is only 1 female board, then the ratio is 1/10 = 10%. However, if out of 10 board members and 9 of them are women, then the ratio is 9/10 = 90%, and this does not show gender diversity at all. High gender diversity occurs when the number of female boards equals the number of male boards.

In contrast to gender, nationality is one of the least studied factors of diversity. Whereas nationality has a very big role in shaping individual characteristics. Nationality can affect performance, especially triggered by the dimensions of national culture, such as power distance, individualism or collectivism, masculinity or femininity, and uncertainty avoidance. National diversity is also generally measured by a dummy variable, where a score of 1 is given to a board consisting of at least two nations, and a score of 0 to a board consisting of one nation. Such measurements tend to be biased, because each nation has different characteristics. For example, company A has a board consisting of the nations of Japan and the United States, and this is considered the same as company B, which has a board consisting of the United Kingdom and Canada, even though the two are different. In company A, the diversity of nationality is very high (heterogeneous), because Japanese national culture contrasts with US national culture, while company B tends to be homogeneous, because British national culture tends to be the same as Canadian national culture.

Apart from nationality, age is also one of the diversity factors that receives less attention from researchers (Ali et al., 2013). Several studies have reported that older executives tend to be less willing to make changes (Bentel & Jackson, 1989; Wiersema & Bantel, 1992). They tend to be in the "status quo" to maintain the "safe zone", but in contrast with younger executives, where they are generally more creative, innovative, and like a challenge. Consequently, those who are younger are significantly associated with a higher risk of bankruptcy than those who are older (Platt & Platt, 2012). Therefore, age diversity is seen as important as a counterweight to improve company performance. In general, age diversity is measured by the average age of the board (eg, Bilimoria & Piderit, 1994; Bonn et al., 2004). Unfortunately, measurements like these are also biased. As an illustration, company A has 10 board members, where each board is 40 years old (homogeneous), so the average age is 40 years. Company B also has 10 board members, where each board is 50 years old (homogeneous), so the average age is 50 years. The two companies have no age diversity at all (homogeneous), but company B seems to have higher diversity than company A.

Educational diversity is also believed to affect the cognitive performance of the board. In general, a high level of education is seen as contributing more to the quality of decision making than a lower level of education. There are two ways to examine the effect of education on cognitive performance. First, through the last level of education, for example bachelor, master, and doctor (eg Ararat et al., 2015). Second, through knowledge clusters, for example science, engineering, economics and business, art, law, etc. (Hart, 1995; Rose, 2007). However, the first method is more commonly used, for reasons of ease of obtaining data, while the data for the second method tend to be more difficult to obtain. In addition, the interpretation bias for the first method is lower than for the second method. For example, is the economics cluster at the doctoral level better than at the master's and bachelor's levels? Is bachelor of economics + master of economics better than bachelor of economics + master of law? In the context of working groups (company boards), educational diversity is generally measured by a dummy variable, where a score of 1 is given for the level of postgraduate education and a score of 0 for education lower than that.

Tenure diversity is also seen as having a positive effect on performance. High tenure is believed to influence organizational dynamics through the socialization process (Sturman, 2003). In this context, boards with high tenure tend to have a broad understanding of organizational systems, organizational culture, and ways to access organizational resources (Bell et al., 2011). However, tenure that is too high can also encourage the "status quo" (Bantel & Jackson, 1989),

which will hinder performance (Michel & Hambrick, 1992). As with age diversity, tenure diversity is generally measured by the average tenure of boards (eg, Bilimoria & Piderit, 1994).

Board Diversity and Firm Performance

There are at least five theories that support a positive relationship between board diversity and firm performance. First, agency theory, which has been widely used in demographic diversity literature (eg. Boadi & Osarfo, 2019; Farag & Mallin, 2017; Ghost, 2017; Kaymak & Betas, 2008; Kusi et al., 2018; Shettima & Dzolkanaini, 2018; Talavera et al., 2018). This theory focuses on the diversity of (non-executive) supervisory boards, especially those that are independent. This theory views that the diversity of independent boards can reduce agency conflicts. Second, the resource dependency theory, which views the diversity of the board as a very valuable resource for the company. This theory can be used to explain the diversity benefits of executive and non-executive boards. The diversity of the executive board can promote higher quality decision-making, while the diversity of non-executive boards can promote the performance of the oversight and advisory functions, which in turn will impact on quality decision-making. This theory has also been widely used by researchers to explain the relationship between board diversity and bank performance (eg Boadi & Osarfo, 2019; Farag & Mallin, 2017; Ghosh, 2017; Talavera et al., 2018).

Third, the stakeholder theory, which views that there is a symbiotic relationship between the company and its stakeholders, such as shareholders, investors, employees, the community, etc. Therefore, corporate boards as agents are automatically burdened with responsibility for meeting the needs of stakeholders, forcing corporate boards to become more diverse. Several studies on board diversity have used this theory to explain this relationship (eg. Abou-El-Sood, 2019; Birindelli et al., 2018; García-Sánchez et al., 2018; Kilic et al., 2015; Kusi et al., 2018; Mohammad et al., 2018; Orazalin, 2019; Tapver et al., 2020). Fourth, critical mass theory, which shows that a minority of board members with certain characteristics (eg age, gender, education, tenure, etc.) will fully contribute to the duties and functions of the board after reaching a certain threshold (Kanter, 1997). Several studies in the financial sector have adopted this theory in explaining the relationship between diversity and bank performance (eg Farag & Mallin, 2017; Ghosh, 2017; Kramaric & Miletic, 2017). Specifically, Kramaric & Miletic (2017) found that the presence of women's boards significantly improves bank performance. There is a positive relationship between gender diversity and performance in at least three female board, but if it is less than that threshold, the relationship becomes negative. Fifth, the theory of human capital, which proposes that differences in opinion and position due to demographic differences can be classified as part of human capital. Several studies use this theory to explain this relationship (eg De Cabo et al., 2012; Farag & Mallin, 2017; Ghosh, 2017; Singh, 2007; Talavera et al., 2018).

Although the five theories above support a positive relationship between board diversity and firm performance, the empirical evidence is inconsistent. In the context of gender, several studies have found positive effects of this diversity on firm performance (e.g. García-Meca et al., 2015; Lu & Boateng, 2018; Abou-El-Sood, 2019; Adeabah et al., 2019; Adesanmi et al. ., 2019; Gangi et al., 2019), while others found a negative effect (eg Dinu & Bunea, 2017; Yu et al., 2017; Rafinda et al., 2018; Shettima & Dzolkarnaini, 2018), and not significant (for example, Ozatac, 2011; Ahmad & Alshbie, 2016; Dinu & Bunea, 2017; Mohammad et al., 2018; Rafinda et al., 2018). In line with this, empirical evidence about the effect of age diversity on firm performance is also inconsistent. Several studies have found positive (eg Fernandes et al., 2017), negative (eg, Wang & Hsu, 2013; Talavera et al., 2018), and non-significant (Arnaboldi et al., 2020) effects. Likewise with educational diversity, where some studies show that work groups with educational homogeneity can perform better than work groups with educational heterogeneity (eg, Murray, 1989; Mahadeo et al., 2012). However, several other studies have shown that work groups with educational heterogeneity perform better than work groups with educational homogeneity (eg Bantel, 1993; Kim & Lim, 2010). In contrast to gender, age, and education, nationality diversity is the least studied factor of diversity. Several existing studies show that this diversity is negatively related to performance (García-Meca et al., 2015; Rafinda et al., 2018). This is because significant differences in national culture will lead to cultural conflict, which will impact on performance. Meanwhile, the

evidence on the effects of tenure diversity on firm performance is more consistent than other factors of diversity. In general, tenure diversity has a negative impact on firm performance (eg, Wang & Hsu, 2013; Sun & Liu, 2014; Kaymak & Bektas, 2008). Specifically, several studies report that there is a non-linear relationship between tenure and performance, where the lower and higher tenure tends to be less good for performance. Ideally, a good tenure is between the two, that is, neither too low nor too high (Bantel & Jackson, 1989; Brown et al., 2017).

The inconsistent results of studies on the relationship between board diversity and company performance can be caused by many factors, including bias in the measurement of diversity. Previous studies have tended to focus on specific factors of board diversity, and have tended to study diversity individually, not as a whole. As stated by Ingley & Van der Valt (2003) that diversity is a combination of attributes, characteristics, and skills, and therefore cannot stand alone, but are interrelated to form a unit. Specifically at the individual level, diversity will be formed from the synergy between diversity factors such as gender, nationality, age, education, and tenure. Whereas at the work group level (such as company boards), diversity is formed from a broader and more complex synergy of the diversity of individuals (group members).

Research Methods

The data includes all pure Islamic and conventional banks in Indonesia from 2018 to 2022. The data does not include banks with a dual system. During this period, there were 13 Islamic banks and 84 conventional banks. However, in 2020, three of the Islamic banks in Indonesia, namely Bank Syariah Mandiri, BRI Syariah, and BNI Syariah, will merge to become Bank Syariah Indonesia, so that the number of samples for Islamic banks will be reduced to 11 banks. While 7 of the conventional banks do not have complete data. Thus, the final sample size was 89 banks, consisting of 11 Islamic banks and 78 conventional banks.

Table 1. Scoring for Board Diversity Factors

Diversity factors	Subfactor	Skoring
1. Gender	1.1 Women	1
	1.2 Men	2
2. Nationality	2.1 1st nation	1
	2.2 2nd nation	2
	2.3 3rd nation	3
	2.4 …	…
	2.5 nth nation	n
3. Age	3.1 <1 year	0
	3.2 1 year	1
	3.3 2 year	2
	3.4 …	…
	3.5 n year	n
4. Education	4.1 Non-graduate	1
	4.2 Bachelor	2
	4.3 Master	3
	4.4 Doctor	4
5. Tenure	5.1 <1 year	0
	5.2 1 year	1
	5.3 2 year	2
	5.4 …	…
	5.5 n year	n

Bank performance (the dependent variable) is represented by profitability (ROA) and risk (NPL/NPF). Both data were obtained from the annual reports of each bank. For board diversity (independent variable) it is measured through the diversity index. This index consists of five diversity factors, namely gender diversity, nationality, age, education, and tenure. Previous studies have focused on specific factors of board diversity, and have tended to study diversity on its own, rather than as a whole. Whereas diversity is a combination of attributes, characteristics, and skills

(Ingley & Van der Valt, 2003), and therefore cannot stand alone, but are interrelated to form a unit. Therefore, the diversity index (combined diversity) is more relevant to measure the level of diversity, because it reflects the actual level of diversity.

For board diversity, both the board of directors (BoD) and commissioners (BoC) or a combination of both are measured through a diversity index. This index is composed of five diversity attributes, namely gender diversity, nationality, age, education, and tenure. Systematically, the formulation of the diversity index is, as follows:

$$BDI = Gen\_Div + Nat\_Div + Age\_Div + Edu\_Div + Ten\_Div \quad (1)$$

Where: BDI = board diversity index, which is the total number of diversity attributes; Gen_Div is gender diversity; Nat_Div is the diversity of nationalities; Age_Div is the age variance; Edu_Div is educational diversity; Ten_Div is tenure diversity. However, before calculating the index value, scoring is carried out for each board diversity factor, as shown in Table 1.

Gen_Div is measured via the standard deviation of the value distribution of all board members. The standard deviation is a statistical measure for assessing the inequality of a data set, where the higher the value, the distribution of the data is very unequal to one another, which indicates the presence of diversity (variance) in high data, and conversely the smaller the standard deviation value indicates the diversity (variance) of the data very small. For example: if the number of boards is 5 people, consisting of 5 men and 0 women, then the data distribution and standard deviation values are:

		Board 1	Board 2	Board 3	Board 4	Board 5		STDev.
Gen_Div	=	2	2	2	2	2	=	0.00

If out of the 5 members of the board there is 1 woman on the board, then the level of gender diversity will be:

		Board 1	Board 2	Board 3	Board 4	Board 5		STDev.
Gen_Div	=	2	2	2	2	1	=	0.45

If out of the 5 members of the board there are 2 women's boards, then the level of gender diversity will be:

		Board 1	Board 2	Board 3	Board 4	Board 5		STDev.
Gen_Div	=	2	2	2	1	1	=	0.55

If out of 5 board members there are 3 women board members, then the gender diversity index (STDev) is 0.55, and if all board members are women, then the diversity index will return to 0.00 (homogeneous). So the greater the standard deviation value, indicates a high level of diversity, and vice versa. The level of diversity will be very high if the number of men boards is equal to the number of women's boards. It should be noted that the STDEv will not change if the scoring for the men's board is changed to 1 and for the women's board is changed to 2. For example: if out of 5 board members there are 2 women board, then the gender diversity index (STDev) is:

		Board 1	Board 2	Board 3	Board 4	Board 5		STDev.
Gen_Div	=	1	1	1	2	2	=	0.55

Other diversity attributes are also calculated in the same way. Skoring untuk Nat_Div sesuai dengan Table 1. For example, out of 5 board members, 1 of whom is Indonesian, 1 Singaporean, 1 Malaysian, 1 Thai and 1 Filipino, the diversity index is:

		Indonesian	Singaporean	Malaysian	Thai	Filipino		STDev.
Gen_Div	=	1	2	3	4	5	=	1.58

It should be noted that STDEv will also not change if the scoring for nationality is changed, for example the score for Indonesian is changed to 3, Singaporean to 5, Malaysian to 1, Thai to 2, and Filipino to 4, then the diversity index is:

		Indonesian	Singaporean	Malaysian	Thai	Filipino		STDev.
Gen_Div	=	3	5	1	2	4	=	1.58

or the scoring for Indonesia is changed again to 5, Singaporean to 2, Malaysian to 4, Thai to 1, and Filipino to 3, then the diversity index is:

		Indonesian	Singaporean	Malaysian	Thai	Filipino		STDev.
Gen_Div	=	5	2	4	1	3	=	1.58

The score for Age_Div corresponds to the age of each board, as well as for Edu_Div and Ten_Div.

Standard deviation (STDev) is superior for measuring diversity than other measures, such as dummy variables (as used by: Adams & Ferreira, 2007; Hillman et al., 2007), ratios or percentages (as used by: Bøhren & Strøm, 2010; Gul et al., 2011; Ahern & Dittmar, 2012; Dezsö & Ross, 2012; Mahadeo et al., 2012; Lückerath-Rovers, 2013; Terjesen et al., 2016), and the average value (as used by: Bilimoria & Piderit, 1994; Bonn et al., 2004). Weaknesses of dummy variables, ratios or percentages, and mean values to measure diversity have been described in the literature section.

Data analysis used an panel regression model, with one of the best models of common effect (1), fixed effect (2), or random effect (2) through the Chow test, Laagrange multiplier, and Hausman test. Systematically, the general regression model is:

$$y_{it} = \alpha + \sum \beta_n X_{it-1} + \sum \beta_m C_{it-1} + \varepsilon_{it} \quad (2)$$

where: y is firm performance (ROA and NPL/NPF), X is predictor, C is control variables; t0 is the current year; t-1 is the previous year; β is the slope; α is a constant; and ε is the residual error.

Results and Discussion

Statistics

The results of the data analysis show that in general, the profitability of Islamic banks is higher than their conventional counterparts, but this is inversely proportional to their level of risk. The average return on assets (ROA) of Islamic banks is 1.22% with a ratio of non-performing financing (NPF) of 1.50%, while the ROA and non-performing loan (NPL) of their conventional counterparts is 0.77 % and 1.46%. However, this condition is inversely proportional when there is economic turbulence, where their profitability and risks are even worse than conventional banks (see Table 2, Panel A). Meanwhile, the size (assets) of Islamic banks is still smaller than conventional banks. Their average total assets are around IDR 57.52 trillion, with the largest contributors being Bank Syariah Indonesia (BSI) (IDR 282.47 trillion) and Bank Danamon Syariah (IDR 197.20 trillion). The average assets of conventional banks reach IDR 90.61 trillion, with the main contributors being state-owned banks, such as Bank Mandiri, Bank BRI and BNI. In contrast to this, the leverage of Islamic banks is smaller than that of conventional banks (63% Lev_{IB} vs 82% Lev_{CB}).

There is a negative and significant correlation between bank profitability (ROA) and risk (NPL). Increasing the risk of bad credit will reduce bank profits, and vice versa. In addition, the increase (decrease) in bank profitability is also significantly related to the increase (decrease) in leverage and the size (assets) of the bank. Banks with high levels of leverage tend to have higher profits compared to banks with low leverage. This is quite logical, because the main component of bank leverage is deposits (third party funds), and the higher the amount, the higher the credit distribution. Therefore, at the same time, an increase in leverage will be offset by an increase in company assets (size). Specifically, the correlation between profitability, risk, leverage, and bank (asset) size can be seen in Table 3.

Although in terms of size (assets) Islamic banks are inferior to their conventional counterparts, in terms of board size they are superior. Unfortunately, this advantage can actually have a negative impact on banks. The average board member of Islamic banks is around 11 people, consisting of 6 BoD people and 5 BoC people, while conventional banks have around 9 people, consisting of 5 BoD people and 4 BoC people. When compared with the total assets, on average each BoD member from Islamic banks controls around IDR 9.41 trillion, and each BoC member oversees around IDR 11.25 trillion. In contrast to this, on average each BoD member from conventional banks controls around IDR 17.46 trillion, and each BoC member oversees around IDR 20.09 trillion. These findings suggest that the governance structures of Islamic banks are

inefficient, especially when compared to their conventional counterparts. Board size that is too large tends to reduce the effectiveness of the governance system, and also results in reduced profits due to excessive salary and compensation expenses. The results of the correlation analysis in Table 2 also show that there is a negative and significant relationship between bank size and board size. Banks with larger (asset) size tend to have smaller boards, while banks with smaller asset sizes tend to have larger boards. In addition, banks with larger board sizes are also significantly associated with low profitability, as also found by Elgadi & Ghardallou (2022) in the context of Islamic banks in Sudan, and Pathan & Faff (2013) on Islamic banks in the US.

Table 2. Statistical Summary

	All Conditions		Normal		Turbulence		Recovery	
	IB (n=59)	CB (n=390)	IB (n=26)	CB (n=156)	IB (n=22)	CB (n=156)	IB (n=11)	CB (n=78)
Panel A. General Statistics								
Bank data								
ROA	1.22	.77	1.29	.95	.68	1.18	1.14	.59
NPL	1.50	1.46	1.55	1.37	1.71	1.55	1.31	1.14
Bank Size	4.46	4.26	4.39	4.19	4.47	4.27	4.57	4.36
Leverage	.63	.82	.63	.84	.62	.83	.64	.78
Board data								
Board Size	11.21	9.70	11.15	9.91	11.17	9.91	11.40	8.87
BoD Size	6.11	5.19	6.05	5.33	6.12	5.33	6.20	4.62
BoC Size	5.11	4.51	5.10	4.53	5.50	4.58	5.20	4.25
BDI	9.99	11.51	9.90	11.21	11.60	9.98	9.91	11.93
DDI	6.28	9.02	6.07	2.25	9.07	6.29	6.69	9.49
CDI	9.97	10.76	9.90	1.62	10.91	9.80	10.45	10.65
Panel B. Specific for Board Diversity								
BDI								
Gender	.62	.29	.64	.29	.60	.29	.63	.29
Nationality	.24	.23	.26	.24	.21	.24	.23	.22
Age	6.94	7.82	7.08	7.78	6.98	7.79	6.55	7.96
Education	.80	.63	.79	.63	.81	.63	.82	.63
Tenure	1.32	2.51	1.11	2.25	1.35	.63	1.65	2.80
DDI								
Gender	.64	.25	.63	.25	.65	.25	.65	.25
Nationality	.18	.18	.18	.19	.18	.19	.18	.13
Age	4.09	6.13	4.07	6.10	4.09	6.09	4.15	6.27
Education	.47	.59	.48	.59	.47	.59	.45	.59
Tenure	.87	1.85	.67	1.67	.88	1.92	1.22	2.23
CDI								
Gender	.27	.28	.31	.27	.23	.27	.30	.28
Nationality	.21	.19	.25	.20	.18	.20	.22	.15
Age	7.02	7.30	7.16	7.33	6.82	7.34	7.13	7.18
Education	1.03	.68	.98	.67	1.04	.67	1.08	.69
Tenure	1.42	2.29	1.19	2.17	1.51	2.40	1.71	2.32

Note: The data displayed is the average value (mean) which is free from extreme data (outliers); Some extreme data (outliers) have been eliminated; BDI = board diversity index; DDI = BoD Diversity Index; CDI = BoC Diversity Index.

The results of the data analysis also show that the large board size of Islamic banks is not matched by a high level of board diversity. Their board's level of diversity is even lower than that of their conventional counterparts. The board diversity index of Islamic banks (BDI_{IB}) is only 9.99, while that of conventional banks is 11.51 (BDI_{CB}). This finding shows that in general, Islamic banks prefer boards with the same background (homogeneity), while their conventional counterparts tend to choose boards with diverse backgrounds (heterogeneity). Although in general the boards of Islamic banks tend to be homogeneous, under conditions of turbulence it is the opposite (BDI_{IB} 11.60 vs. BDI_{CB} 9.98). Specifically, the level of board diversity of Islamic and conventional banks

in Indonesia is dominated by the board of commissioners (CDI_{IB} 9.97 vs. DDI_{IB} 6.28), as well as conventional banks (CDI_{CB} 10.76 vs. DDI_{CB} 9.02). The main contributors to the diversity of the BoC tend to be the same as the BoD, both in the context of Islamic and conventional banks. The main contributors were diversity related to age, tenure, and education, while gender and nationality contributed less (see Table 2, Panel B). The low contribution of gender and nationality diversity is due to the low presence of female boards and boards of foreign nationality in the banking industry in Indonesia.

Table 3. Correlation Matrix

	ROA	NPL	BDI	DDI	CDI	Bank Size	Leverage	Board Size	BoD Size
ROA	1.00								
NPL	–.15**	1.00							
BDI	–.12*	.06	1.00						
DDI	–.08	.05	.54***	1.00					
CDI	–.16**	.17**	.76***	.18**	1.00				
Bank_Size	.18**	.06	–.11	–.20**	.11*	1.00			
Leverage	.12*	.03	.09	.17**	–.01	.33***	1.00		
Board Size	–.15**	.12*	.05	–.15**	.28***	–.73***	–.25***	1.00	
BoD Size	–.13**	.10	.01	–.07	.29***	–.74***	–.22***	.88***	1.00
BoC Size	–.16**	.10	.08	–.19**	.20***	–.56***	–.24***	.88***	.57***

Note: *significant 10%, **significant 5%, and ***significant 1%.

Regression Results

Table 4 reports the regression results. Model I to Model V are regressions for profitability (ROA) (the dependent variable), while Model VI to Model X are for risk (NPL/NPF). Model I and Model VI show regression results using the overall board diversity index (BDI), regardless of whether board diversity comes from the BoD or the BoC. The results show that board diversity has a significant effect on bank profitability and risk, even after controlling for bank size, leverage, and board size. High board diversity significantly increases a bank's profitability, and at the same time reduces its risk. However, Model I and Model VI are weak models, where the value of R-square, Adj. R2, and F-Statistics are relatively small. Model II and Model VII use BoD diversity (DDI) as a predictor, which is based on the argument that bank policies are the absolute authority of the BoD. The results are consistent with the previous model, where the diversity of BoD has a positive and significant effect on profitability, and a negative and significant effect on bank risk. However, the quality of the regression results is not better than the previous regression results. Furthermore, Models III and VIII use the diversity of BoC (CDI) as a predictor, the results are consistent with previous models, but have not produced better quality regression results. Models IV and IX share the BoD and BoC diversifications together. The results are consistent with previous models, and the quality of the regression results is better. The V and X models use multiple BoD and BoC together, and are accompanied by the interaction of the two (DDI*CDI). The results remain consistent with previous models, with the best quality regression results. Thus, the analysis and discussion will be focused on the regression results of Model V and X.

The regression results show that in general, board diversity (both BoD and BoC) has a positive impact on bank performance. High board diversity (heterogeneity) can boost profitability and reduce bank risk. In comparison, BoC diversity is more valuable than BoD diversity. The positive effects of BoD diversity on bank performance (profitability and risk) tend to be greater when the BoC diversity level is high. Directly, the BoC does not have the authority for managerial cognitive tasks such as making strategic policies. However, they can influence the policy-making process through their oversight and advisory functions. However, is this relevant for all bank typologies and for all conditions?

Table 4. Regressions

	Profitability (ROA)					Risks (NPL/NPF)				
	I	II	III	IV	V	VI	VII	VIII	IX	X
Constant	.32***	.10	.14*	.11	.18	.26**	.76***	-25**	.47***	.37***
BDI	.28**					-.36***				
DDI		.21**		.36***	.39***		-.16		-.31***	.57***
CDI			.27**	.27***	.31***			-.20*	-.34***	.27***
DDI*CDI					.30***					-.37***
Bank_Size	.67***	.62***	.42***	.47***	.42***	-.40***	-.39***	-.42***	-.41***	-.39***
Leverage	.29***	.34***	.54***	.63***	.57***	-.50***	-.40***	-.51***	-.41***	-.43***
Board Size	-.12*					-.06				
BoD Size		-.19*		-.35***	-.17		-.10		-.60***	-.52***
BoC Size			-.08	.19**	-.13			-.10	.51***	.45***
Memo Items										
R-squared	.45	.43	.45	.55	.62	.57	.56	.56	.66	.67
Adj. R^2	.30	.38	.34	42	.54	.45	.44	.45	.54	.60
F-Statistic	3.08***	3.80***	3.42***	6.57***	9.56***	4.86***	4.63***	4.82***	8.07***	9.36***
Obs.	449	449	449	449	449	449	449	449	449	449
Model	FE	FE	FE	RE	RE	FE	RE	RE	RE	RE

Note: The regression results shown in the table use overall data or combined data from Islamic and conventional banks for 2018-2022. The Roman numerals I to X indicate the model. BDI = board diversity index, DDI = directors diversity index, and CDI = commissioners diversity index. DDI*CDI = interaction between DDI and CDI. FE = fixed effect and RE = random effect. *Significant 10%, **significant 5%, and ***significant 1%.

The regression results based on bank typology and economic conditions are shown in Table 5, indicating that in general (all conditions), board diversity plays an important role in the performance of Islamic and conventional banks. However, the effect of multiple boards on bank performance varies. Under normal conditions, the diversity of the BoD of Islamic banks is significantly associated with an increase in profit, but not significantly with a decrease in risk. Under these conditions, the diversity of the BoC has no role whatsoever in the performance of Islamic banks. This contrasts with conventional banks, where the diversity of BoD and BoC interact to increase profitability and reduce bank risk. In this situation, BoD diversity is indeed more dominant than their BoC diversity. However, the effect of BoD diversity on bank performance is higher when it synergizes with BoC diversity.

Under conditions of turbulence, the diversity of the BoD of Islamic banks consistently has a positive impact on bank performance, but when their diversity interacts with high BoC diversity, the effect of diversity on bank performance decreases. This indicates that the variation between BoD and BoC under conditions of turbulence tends to produce non-substantive conflicts, as also found by Talavera et al. (2018) on the banking sector in China. As a consequence, the policies adopted are not supportive enough to encourage performance or even tend to worsen performance. In contrast to this, the diversity of the BoC in conventional banks is even more dominating. BoC heterogeneity is able to increase the positive effect of BoD diversity on the performance of conventional banks. However, the interaction of their diversity can only increase profitability, but not reduce risk. This is basically consistent with the law of directly proportional returns and risks, where an increase in return will be followed by an increase in risk, and vice versa.

The recovery condition refers to the post-turbulence condition. Under these conditions, economic conditions began to gradually improve, but it cannot be said that they have returned to normal. Under these conditions, the diversity of the BoC of new Islamic banks shows a positive and significant effect on bank performance. The positive interaction between BoD and BoC diversity shows that the positive effect of BoD diversity on the profitability of Islamic banks is increasing with BoC diversity. However, the diversity of the two has not reduced the risk. As for conventional banks, the diversity of BoD and BoC during the recovery period not only has a significant positive impact on increasing profits, but also significantly reduces risk.

Table 5. Regression based on Bank Typology and Conditions

	All Conditions		Normal		Turbulence		Recovery	
	IB	CB	IB	CB	IB	CP	IB	CB
Panel A. Bank Profitability								
Constant	.21*	–.29***	–.18*	.09	–.10	–.19*	–.22**	.22**
DDI	.16	.35***	.28***	.67***	.37***	–.14	.25**	.27**
CDI	.09	.39***	.14	.42***	.18*	.43***	.35***	.46***
DDI*CDI	–.22*	.30***	.09	.49***	–.37***	.26***	.33***	.32***
Bank_Size	.61***	.43***	.41***	.36***	.36***	.57***	.63***	.39***
Leverage	–47***	.46***	–.47***	–.44***	.44***	.52***	.40***	–.37***
BoD Size	.15	–.31***	–.23**	–.52***	.26**	–.43***	–.45***	.11
BoC Size	–.08	–.49***	.24**	–.20*	.26**	–.34***	–.33***	–.23**
Memo Items								
R-squared	.35	.83	.62	.66	.69	.59	.69	.64
Adj. R^2	.31	.51	.49	.48	.42	.46	.63	.56
F-Statistic	5.74***	72.00***	98.23***	65.58***	9.38***	9.85***	37.41***	14.70***
Obs.	59	390	26	156	22	156	11	78
Model	FE	RE	RE	RE	RE	FE	FE	FE
Panel B. Bank Risk								
Constant	.61***	.37***	–.29***	.12	–.13	.34***	–.29***	.36***
DDI	–.17	.20*	.10	.34***	.37***	.40***	.21*	–.37***
CDI	–.07	.14	–.07	.18*	.43***	.21**	.21*	.47***
DDI*CDI	.09	–.13	.09	–.44***	.40***	.24**	–.16	–.26**
Bank_Size	–.63***	–.49***	.39***	–.37***	.41***	–.48***	.51***	–.51***
Leverage	–.46***	.48***	–.54***	–.38***	.63***	–.44***	–.41***	.42***
BoD Size	–.53***	–.17	–.25**	.16	.27***	.46***	.36***	.15
BoC Size	.51***	.23*	–.11	–.15	.34***	–.08	–.23***	–.09
Memo Items								
R-squared	.75	.61	.46	.41	.74	.50	.69	.65
Adj. R^2	.70	.52	.40	.36	.58	.41	.46	.40
F-Statistic	16.23***	9.21***	6.51***	5.17***	9.56***	8.59***	8.85***	24.13***
Obs.	59	390	26	156	22	156	11	78
Model	RE	RE	CE	CE	FE	FE	CE	FE

Note: The "All Conditions" column displays generalized regression results with data from 2018-2022. The "Normal" column displays regression results only for data in normal years, namely before the Covid19 Pandemic (2018-2019). The "Turbulence" column displays regression results for data in turbulent years, namely during the Covid19 Pandemic (2020-2021). The "Recovery" column displays the regression results for data in post-turbulence years (2022), in which the turbulence (Pandemic Covid19) has ended, but the economy has not yet returned to normal. IB is the regression result for Islamic banks, and CB for conventional banks. Panel A is the regression result for the dependent variable for profitability (ROA), and Panel B is for risk (NPL). *significant 10%, **significant 5%, and ***significant 1%. FE is a regression model with a fixed effect, RE is a random effect, and CE is a common effect.

Conclusion

Does board diversity in Islamic banks matter? The results of this study indicate that the diversity of boards in banks is important, including in Islamic banks. Board diversity can not only increase profitability, but can also reduce bank risk, both under normal conditions, turbulence and recovery. However, the level of board diversity in Islamic banks is relatively lower than conventional banks, even though the board size of Islamic banks is larger than that of conventional banks. In general (both in Islamic and conventional banks), the diversity of the board of commissioners (BoC) is higher than the diversity of the board of directors (BoD). Specifically for Islamic banks, the diversity of BoD and BoC does not significantly affect performance. Interestingly, the interaction of the diversity of the two has a significant impact on decreasing bank profits. Meanwhile, conventional banks tend to be the opposite. The diversity of BoD and BoC in conventional banks has a significant impact on increasing profits. The positive relationship between BoD heterogeneity and conventional banks' profits is stronger when their BoC variability is high. Unfortunately, these

variations tend not to reduce their risk. However, the effect of board diversity on bank performance also depends on economic conditions.

Based on the findings of this paper, there are four important implications for bank stakeholders, especially in the context of Islamic banks. First, Islamic banks need to streamline the board structure, both BoD and BoC. The board structure of Islamic banks is too large compared to conventional banks, which in fact have a much larger size (assets) than Islamic banks. Overall, this streamlining of the board structure can reduce pay and compensation burdens, while increasing effectiveness and efficiency in managerial (BoD) and oversight (BoC) functions. Second, the level of BoD diversity in Islamic banks is quite good and is proven to be able to improve performance, while the BoC diversity is higher than the BoD diversity, even when compared to conventional banks. Unfortunately, high diversity is less effective in driving company performance. Therefore, the diversity of the BoD needs to be further enhanced, while the diversity of the BoC needs to be re-evaluated. In particular, increasing the diversity of the BoD can be done by increasing gender equality, balancing between young and older boards, balancing between boards with lower tenure and those with higher tenure. In addition, boards of fresh graduates and boards of foreign nationals may also be considered to increase diversity. New graduates are generally more creative and innovative based on the latest knowledge and experience, while foreign nationalities allow for the transfer of knowledge, information and experience. Third, the diversity of the board needs to be adapted to environmental conditions. Under normal conditions and in recovery (post-turbulence), board heterogeneity is needed to produce quality policies. However, when turbulence occurs, board diversity that is low (homogeneity) may need to be reduced (homogeneity) to make decisions more effective and efficient.

Board diversity in this study only includes gender, nationality, age, education, and tenure. This includes only a subset of the diversity factors. Therefore, the next study is expected to add other factors of diversity, such as religious diversity, independence, duality, and board affiliation. In addition, my sample of Islamic banks is also very limited, because there are only 13 Islamic banks in Indonesia. Therefore, future studies are expected to use a cross-country sample of Islamic banks. The use of cross-country samples also makes it possible to study the diversity of boards on two systems at once, namely one tier and two tier. The two systems will probably describe different effects on board diversity.

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References

Abdelfattah, T., Elmahgoub, M., & Elamer, A. A. (2020). Female audit partners and extended audit reporting: UK evidence. Journal of Business Ethics, 1– 21. https://doi.org/10.1007/s10551-020-04607-0

Abou-El-Sood, H. (2019). Corporate governance and risk taking: the role of board gender diversity. *Pacific Accounting Review, 31*(1), 19-42. https://doi.org/10.1108/PAR-03-2017-0021

Adams, R.B., & Ferreira, D. (2007), A theory of friendly boards. *Journal of Finance, 2*(1), 217-250. https://doi.org/10.1111/j.1540-6261.2007.01206.x.

Adeabah, D., Gyeke-Dako, A., & Andoh, C. (2019). Board gender diversity, corporate governance and bank efficiency in Ghana: A two stage data envelope analysis (DEA) approach. *Corporate Governance (Bingley), 19*(2), 299– 320. https://doi.org/10.1108/CG-08-2017-0171.

Adesanmi, A. D., Sanyaolu, O. A., Isiaka, M. A., & Fadipe, O. A. (2019). Empirical analysis of board diversity and the financial performance deposit money banks in Nigeria. *Accounting, 5*(4), 127– 134. http://dx.doi.org/10.5267/j.ac.2019.5.001.

Aggarwal, R., Jindal, V., & Seth, R. (2019). Board diversity and firm performance: The role of business group affiliation. *International Business Review, 28*(6), 1– 7, 101600. https://doi.org/10.1016/j.ibusrev.2019.101600.

Agyemang-Mintah, P. and Schadewitz, H. (2019). Gender diversity and firm value: Evidence from UK financial institutions. *International Journal of Accounting & Information Management, 27*(1), 2-26. https://doi.org/10.1108/IJAIM-06-2017-0073.

Ahern K.R., & Dittmar, A.K. (2012). The changing of the boards: The impact on firm valuation of mandated female board representation. *Quarterly Journal of Economics*, 1-60. https://doi.org/10.1093/qje/qjr049.

Ahmad, M. A., & Alshbie, S. O. (2016). Women in Jordanian banks and performance: Financial accounting measurement. *Risk Governance & Control: Financial Markets & Institutions*, 6(3), 85– 159. https://doi.org/10.22495/rcgv6i3c1art1

Ali, M., & Azmi, W. (2016). Religion in the boardroom and its impact on Islamic banks' performance. *Review of Financial Economics, 31*(November 2016), 83-88. https://doi.org/10.1016/j.rfe.2016.08.001.

Ali, M., Ng, Y.L., & Kulik, C.T. (2013). Board age and gender diversity: A test of competing linear and curvilinear predictions. *Journal of Business Ethics, 125*(3), 1-16. https://eprints.qut.edu.au/63826/.

Alnabsha, A., Abdou, H.A., Ntim, C.G. and Elamer, A.A. (2018). Corporate boards, ownership structures and corporate disclosures: Evidence from a developing country. *Journal of Applied Accounting Research, 19*(1), 20-41. https://doi.org/10.1108/JAAR-01-2016-0001.

Alshbili, I., Elamer, A.A. and Beddewela, E. (2018). Ownership types, corporate governance and corporate social responsibility disclosures: Empirical evidence from a developing country, *Accounting Research Journal, 33*(1), 148-166. https://doi.org/10.1108/ARJ-03-2018-0060.

Ararat, M., Aksu, M., & Cetin, A. (2015). How board diversity affects firm performance in emerging markets: Evidence on channels in controlled firms. *Corporate Governance: An International Review, 23* (2), 83-103. https://doi.org/10.1111/corg.12103.

Arnaboldi, F., Casu, B., Gallo, A., Kalotychou, E., & Sarkisyan, A. (2021). Gender diversity and bank misconduct. *Journal of Corporate Finance*, 1011834. https://doi.org/10.1016/j.jcorpfin.2020.101834.

Baker, S.R., Bloom, N., Davis, S.J., Kost, K., Sammon, M., & Viratyosin, T. (2020). The unprecedented stock market reaction to Covid-19. *The Review of Asset Pricing Studies, 10*(4), 742–758, https://doi.org/10.1093/rapstu/raaa008.

Bantel, K.A., & Jackson, S.E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal, 10*(Issue S1), 107-124. https://doi.org/10.1002/smj.4250100709.

Bantel, K. A. (1993). Strategic clarity in banking: Role of top management team demography. *Psychological Reports, 73*, 1187-1201. https://doi.org/10.2466/pr0.1993.73.3f.1187.

Bell, S.T., Villado, A.J., Lukasik, M.A., Belau, L. & Briggs, A.L. (2011). Getting specific about demographic diversity variable and team performance relationships: A meta-analysis. *Journal of Management, 37*(3), 709-743. https://doi.org/10.1177/0149206310365001.

Ben-Amar, W., Francoeur, C., Hafsi, T., & Labelle, R. (2011). What makes better boards? A closer look at diversity and ownership. *British Journal of Management, 24*,(1), 85-101. https://doi.org/10.1111/j.1467-8551.2011.00789.x.

Bantel, K. A., & Jackson, S. E. (1989). Top management and innovation in banking: Does the composition of the top team make a difference? *Strategic Management Journal, 10*, 107-124. https://doi.org/10.1002/smj.4250100709.

Bilimoria, D. & Piderit, S. (1994). Board committee membership: Effects of sex-based bias. *Academy of Management Journal, 37*(6), 1453-1477. https://doi.org/10.5465/256795.

Birindelli, G., Dell'Atti, S., Iannuzzi, A.P., & Savioli, M. (2018). Composition and activity of the board of directors: Impact on ESG performance in the banking system. *Sustainability, 10*(12). https://doi.org/10.3390/su10124699.

Boadi, I. and Osarfo, D. (2019). Diversity and return: The impact of diversity of board members' education on performance. *Corporate Governance, 19*(4), 824-842. https://doi.org/10.1108/CG-01-2019-0017.

Bøhren, Ø. & Strøm, R.Ø. (2010). Governance and politics: Regulating independence and diversity in the board room. *Journal of Business Finance and Accounting, 37*(9-10), 1281-1308. https://doi.org/10.1111/j.1468-5957.2010.02222.x.

Bonn, I., Yoshikawa, T. & Phan, P.H. (2004). Effects of board structure on firm performance: A comparison between Japan and Australia. *Asian Business & Management, 3*(1), 105-125. https://doi.org/10.1057/palgrave.abm.9200068.

Brown, A., Anderson, A., Salas, J.M. & Ward, A. (2017). Do investors care about director tenure? Insights from executive cognition and social capital theories. *Organization Science, 28*(3), 471-494, available at: https://doi.org/10.1287/orsc.2017.1123

Ciocirlan, C., & Petterson, C. (2011). Does workforce diversity matter in the fight against climate change? An analysis of fortune 500 companies. *Corporate Social Responsibility and Environmental Management, 19*(1), 47-62. https://doi.org/10.1002/csr.279.

De Cabo, M.R., Gimeno, R. & Nieto, M.J. Gender diversity on European banks' boards of directors. *J Bus Ethics 109*, 145–162 (2012). https://doi.org/10.1007/s10551-011-1112-6.

Dezsö, C.L. & Ross, D.G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal, 33*(9), 1072-1089. https://doi.org/10.1002/smj.1955.

Dinu, V., & Bunea, M. (2017). The impact of the gender diversity on the Romanian banking system performance. *Transformations in Business and Economics,* 17(2), 137– 147. https://www.researchgate.net/profile/Mariana-Bunea/publication/331206932_TIBE_2018The_impact_of_gender_diversity/links/60939206299bf1ad8d7da15d/TIBE-2018The-impact-of-gender-diversity.

Elgadi, E., & Ghardallou, W. (2022). Gender diversity, board of director's size and Islamic banks performance. *International Journal of Islamic and Middle Eastern Finance and Management, 15*(3), 664-680. https://doi.org/10.1108/IMEFM-09-2019-0397.

Elmagrhi, M.H., Ntim, C.G., Malagila, J., Fosu, S. and Tunyi, A.A. (2018), Trustee board diversity, governance mechanisms, capital structure and performance in UK charities. *Corporate Governance, 18*(3), 478-508. https://doi.org/10.1108/CG-08-2017-0185.

Farag, H., & Mallin, C., & Ow-Young, K. (2018). Corporate governance in Islamic banks: New insights for dual board structure and agency relationships. *Journal of International Financial Markets, Institutions and Money*, 54(May 2018), 59-77, https://doi.org/10.1016/j.intfin.2017.08.002.

Fernandes, C., Farinha, J., Martins, F. V., & Mateus, C. (2016). Determinants of European banks' bailouts following the 2007–2008 financial crisis. *Journal of International Economic Law*, 19(3), 707– 747. https://doi.org/10.1093/jiel/jgw060.

Fernandes, C., Farinha, J., Martins, F. V., & Mateus, C. (2017). Supervisory boards, financial crisis and bank performance: Do board characteristics matter? *Journal of Banking Regulation, 18*(4), 310– 337. https://doi.org/10.1057/s41261-016-0037-5.

Ferrero-Ferrero, I., Fernández-Izquierdo, M.A., & Muñoz-Torres, M.J. (2015). Integrating sustainability into corporate governance: An empirical study on board diversity. *Corporate Social Responsibility and Environmental Management, 22*(4), 193-20. https://doi.org/10.1002/csr.1333.

Gangi, F., Meles, A., D'Angelo, E., & Daniele, L. M. (2019). Sustainable development and corporate governance in the financial system: Are environmentally friendly banks less risky? *Corporate Social Responsibility and Environmental Management, 26*(3), 529– 547. https://doi.org/10.1002/csr.1699.

García-Meca, E., García-Sánchez, I-M., & Martínez-Ferrero, J. (2015). Board diversity and its effects on bank performance: An international analysis. *Journal of Banking & Finance, 53*(April 2015), 202-214. https://doi.org/10.1016/j.jbankfin.2014.12.002.

Glass, C., & Cook, A. (2016). Leading at the top: Understanding women's challenges above the glass ceiling. *The Leadership Quarterly, 27*(1), 51-63. https://doi.org/10.1016/j.leaqua.2015.09.003.

Gul, F.A., Srinidhi, B. & Ng, A.C. (2011). Does board gender diversity improve the informativeness. *Journal of Accounting and Economics, 51*(3), 314-338. https://doi.org/10.1016/j.jacceco.2011.01.005.

Hafsi, T. and Turgut, G. (2013). Boardroom diversity and its effect on social performance: Conceptualization and empirical evidence. *Journal of Business Ethics, 112*(3), 463-479. https://doi.org/10.1007/s10551-012-1272-z.

Hambrick, D., & Mason, P.A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*(2). https://doi.org/10.5465/amr.1984.4277628.

Hart, O. (1995). Corporate governance. *The Economic Journal, 105*(430), 678-689. https://doi.org/10.2307/2235027.

Hassan, A., Elamer, A. A., Sobhan, N., & Fletcher, M. (2020). Voluntary assurance of sustainability reporting: Evidence from an emerging economy. *Accounting Research Journal, 33*(2), 391– 410. https://doi.org/10.1108/ARJ-10-2018-0169.

Hillman, A.J., Shropshire, C. & Cannella, A.A. (2007). Organizational predictors of women on corporate boards. *Academy of Management Journal, 50*(4), 941-952. https://doi.org/10.5465/amj.2007.26279222.

Hoffman, L. R., & Maier, N. R. F. (1961). Quality and acceptance of problem solutions by members of homogeneous and heterogeneous groups. *The Journal of Abnormal and Social Psychology, 62*(2), 401–407. https://doi.org/10.1037/h0044025.

Ingley, C. B., Van der Walt, N. T. 2003. Board configuration: building better boards. *Corporate governance*, 3(4), 5-17. https://doi.org/10.1108/14720700310497078.

Ismail, K.N.I. and Abdul Manaf, K.B. (2016). Market reactions to the appointment of women to the boards of Malaysian firms. *Journal of Multinational Financial Management, 36*, 75-88. https://doi.org/10.1016/j.mulfin.2016.04.004.

Jabari, H.N., & Muhamad, R. (2021). Gender diversity and financial performance of Islamic banks. *Journal of Financial Reporting and Accounting, 19*(3), 412-433. https://doi.org/10.1108/JFRA-03-2020-0061.

Kanter, R.M. (1999). From spare change to real change: The social sector as beta site for business innovation. *Harvard Business Review, 77*(3), 122. https://go.gale.com/ps/i.do?id=GALE%7CA54556303&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=00178012&p=AONE&sw=w&userGroupName=anon%7Ef728e848&aty=open+web+entry.

Kaymak, T., & Bektas, E. (2008). East meets west? Board characteristics in an emerging market: Evidence from Turkish banks. *Corporate Governance: An International Review*, 16(6), 550– 561. https://doi.org/10.1111/j.1467-8683.2008.00713.x.

Khan, I., Khan, U.I., Uddin, M.J., Khan, S.U., & Marwat, J. (2023). Diversity of shari'ah supervisory board and the performance of Islamic bank: Evidence from a emerging economy of Pakistan. *Journal of Islamic Accounting & Business Research,* 22 March 2023. https://doi.org/10.1108/JIABR-09-2021-0240.

Kim, H. and Lim, C. (2010). Diversity, outside directors and firm valuation: Korean evidence. *Journal of Business Research, 63*(3), 284-291. https://doi.org/10.1016/j.jbusres.2009.01.013.

Kramaric, T.P., Miletic, M., & Pavic, I. (2017). Profitability determinants of insurance markets in selected central and eastern European countries. *International Journal of Economic Science*, 6*(2).* https://doi.org/10.20472/ES.2017.6.2.006.

Kray, L.J., Kennedy, J.A. & Van Zant, A.B. (2014). Not competent enough to know the difference? Gender stereotypes about women's ease of being misled predict negotiator deception. *Organizational Behavior and Human Decision Processes, 125*(2), 61-72. https://doi.org/10.1016/j.obhdp.2014.06.002.

Levi, M., Li, K. & Zhang, F. (2014). Director gender and mergers and acquisitions. *Journal of Corporate Finance, 28*, 185-200. https://doi.org/10.1016/j.jcorpfin.2013.11.005.

Lu, J., & Boateng, A. (2018). Board composition, monitoring and credit risk: Evidence from the UK banking industry. *Review of Quantitative Finance and Accounting, 51*(4), 1107-1128. https://doi.org/10.1007/s11156-017-0698-x.

Lückerath-Rovers, M. (2013). Women on boards and firm performance. *Journal of Management and Governance, 17*(2), 491-509. https://doi.org/10.1007/s10997-011-9186-1.

Mahadeo, J.D., Soobaroyen, T. & Hanuman, V.O. (2012). Board composition and financial performance: uncovering the effects of diversity in an emerging economy. *Journal of Business Ethics, 105*(3), 375-388. https://doi.org/10.1007/s10551-011-0973-z.

Michel, J.G. & Hambrick, D.C. (1992). Diversification posture and top management team characteristics. *Academy of Management Journal, 35*(1), pp. 9-37. https://doi.org/10.5465/256471.

Mohammad, S. J., Abdullatif, M., & Zakzouk, F. (2018). The effect of gender diversity on the financial performance of Jordanian banks. *Academy of Accounting and Financial Studies Journal*, 22(2), 1– 11. https://www.abacademies.org/articles/

Murray, A.I. (1989). Top management group heterogeneity and firm performance. *StrategicManagement Journal, 10*(S1), 125-141. https://doi.org/10.1002/smj.4250100710.

Onuorah, A. C., Osuji, C. C., & Ozurumba, B. A. (2019). Board composition, diversity index and performance: Evidence from four major nigerian banks. *Journal of Management Information and Decision Science*, 22(4), 342– 359. https://www.proquest.com/indexingvolumeissuelinkhandler/38743/ .

Ozatac, N. (2011). Gender diversity in board of directors and top management: The case of Turkish banks. *Actual Problems of Economics,* 115(1), 311– 319. http://buscompress.com/journal-home.html)

Pathan, S., & Faff, R. (2013). Does board structure in banks really affect their performance? *Journal of Banking & Finance, 37*(5), 1573-1589. https://doi.org/10.1016/j.jbankfin.2012.12.016.

Pelled, L.H. (1996). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science, 7*(6), 615-631. http://www.jstor.org/stable/2635051.

Pelz, D.C. (1956). Some Social Factors Related to Performance in a Research Organization. *Administrative Science Quarterly, 1*(3), 310-325. https://doi.org/10.2307/2390926.

Platt, H. and Platt, M. (2012). Corporate board attributes and bankruptcy. *Journal of Business Research, 65*(8), 1139-1143. https://doi.org/10.1016/j.jbusres.2011.08.003.

Rafinda, A., Rafinda, A., Witiastuti, R. S., Suroso, A., & Trinugroho, I. (2018). Board diversity, risk and sustainability of bank performance: Evidence from India. *Journal of Security and Sustainability Issues*, 7(4), 793– 806. https://doi.org/10.9770/jssi.2018.7.4(15).

Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance, 15*(2), 404-413. https://doi.org/10.1111/j.1467-8683.2007.00570.x.

Salancik, G.R., & Pfeffer, J. (19878). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly, 23*(2), 224-253. https://doi.org/10.2307/2392563.

Shettima, U., & Dzolkarnaini, N. (2018). Board characteristics and microfinance institutions' performance: Panel data evidence from Nigeria. *Journal of Accounting in Emerging Economies, 8*(3), 369– 386. https://doi.org/10.1108/JAEE-01-2017-0006.

Sitthipongpanich, T., &Polsiri, P. (2014). Board diversity, network, and firm value. *Journal of Economic and Social Development*, 1(1). https://hrcak.srce.hr/file/189827.

Sturman, M.C. (2003). Searching for the inverted U-shaped relationship between time and performance: meta-analyses of the experience/performance, tenure/performance, and age/ performance relationships. *Journal of Management, 29*(5), 609-640. https://doi.org/10.1016/S0149-2063_03_00028-X.

Sun, J., & Liu, G. (2014). Audit committees' oversight of bank risk-taking. *Journal of Banking and Finance, 40*(1), 376– 387. https://doi.org/10.1016/j.jbankfin.2013.12.015.

Talavera, O., Yin, S., & Zhang, M. (2018). Age diversity, directors' personal values, and bank performance. *International Review of Financial Analysis, 55*, 60– 79. https://doi.org/10.1016/j.irfa.2017.10.007.

Terjesen, S., Sealy, R., & Singh, V. (2009). Women directors on corporate boards: A review and research agenda. *Corporate Governance: An International Review, 17*(3), 320– 337. https://doi.org/10.1111/j.1467-8683.2009.00742.x.

Wang, T., & Hsu, C. (2013). Board composition and operational risk events of financial institutions. *Journal of Banking and Finance, 37*(6), 2042– 2051. https://doi.org/10.1016/j.jbankfin.2013.01.027.

Wiersema, M.F., & Bantel, K.A. (1992). Top management team demography and corporate strategic change. *Academy of Management Journal, 35*(1), 91-121. https://doi.org/10.5465/256474.

Yu, B., College, M., Lenard, M. J., College, M., York, E. A., & College, M. (2017). Female leadership in banking and bank risk. *Academy of Accounting and Financial Studies Journal, 21*(3), 1– 19. https://www.proquest.com/openview/6c4ce7a637e31c3fa697a5e148e343d0/1?pq-origsite=gscholar&cbl=29414.