BOARD STRUCTURE AND FIRM PERFORMANCE OF FINANCIALLY DISTRESSED COMPANIES: EVIDENCE FROM MALAYSIA

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Abstract. This study aims to investigate the connection between board composition and a company's financial performance. To determine whether board size, board independence, and board gender composition affect a company's financial performance, experiments on board size, board independence, and board gender composition were conducted. Considering the high level of family ownership in Malaysian publicly traded companies, the analysis presents data from a developing market. From 2018 to 2022, a sample of 25 PN17 publicly traded companies in Malaysia served as the basis for the study. A multiple regression analysis revealed that board size and gender composition positively and substantially correlate with financial performance; thus, appointing more female board members will improve the company's financial performance. Therefore, a business justification exists for the Malaysian government's effort to require publicly traded companies to have at least 30 percent female board members. Nonetheless, according to the study's findings, board independence does not affect corporate performance. Therefore, the appointment of independent board members will not affect the economic performance of the companies.
Keywords: *board characteristics, financial performance, PN17 companies, Malaysia*

Introduction

The Securities Commission Malaysia defines corporate governance as the method and framework used to direct and manage the business and affairs of the company to promote business prosperity and corporate accountability with the ultimate goal of realizing long-term shareholder value while considering the interests of other stakeholders (MCCG, 2021). Therefore, Dicuonzo et al. (2022) pertain that the governance dimension benefits shareholders through the company’s management system and effective processes. On the other hand, several previous researchers have found that weak corporate governance contributes to financial difficulties for the company even worse during a financial crisis (Guizani and Abdalkrim, 2023; Shahimi et al., 2021; Younas et al., 2021). Financial distress is the inability or difficulty of a company to satisfy its financial obligations to creditors. A company in financial distress may incur costs associated with the situation, such as greater exclusivity in the financing, opportunity costs of projects, and less vibrant employees. Consequently, board composition plays a significant role during economic crises, as making sound decisions promptly is essential to the company's long-term viability. Thus, several factors must be considered, including the number of board members. Aside from that, the number of independent directors makes the transaction transparent and dependable.

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Nonetheless, some previous researchers have found that the presence of female board members reduces earnings manipulation in management (Khan et al., 2022).

The composition of a company's board of directors is one of the most prominent aspects of its internal governance mechanisms. In other words, the board of directors' main objective is to reduce agency issues between principals and agents through surveillance management. A strong board composition may improve the performance of the company. For instance, the Malaysian government has enacted a policy requiring publicly traded companies to have at least 30% female board members (MCCG, 2021). As a result of the interaction between institutional and societal characteristics, this context offers an intriguing research opportunity (Abdullah et al., 2022). Specifically, we investigate the effect of board structure on the performance of financially distressed companies in Malaysia. According to agency theory, if the interests of management and shareholders are contradicted, the separation of ownership and management control can lead to agency problems which could increase the agency expenditures as well. For example, Jensen and Meckling (2019) demonstrate that managers who own a proportion of their business are less likely to deviate from maximizing shareholder wealth by employing perks, disregarding operations, or participating in poor operational processes to maximize individual benefits. In addition, the informational asymmetry that can result in a conflict of interest between owner-managers and external financing sources is especially widespread in small businesses where managerial ownership is dominant (Abdullah et al., 2022). Since managers are the ones that operate the firm, they have a greater understanding of the company than stockholders. However, this creates reluctance among the shareholders and agency concerns between the two parties. Nevertheless, some previous research suggests that agency concerns may be mitigated by management shareholdings debt financing, the involvement of outside board, and supervision by the significant owners (Guizani and Abdalkrim, 2023; Ain et al., 2021; Kao et al., 2019).

Therefore, ownership structure may be related to corporate performance. Brunninge et al. (2007) pertain that the board serves as an important interface between management and shareholders. Although the agency theory states that independent boards must be preferable, the relationship between board structure and company performance is only sometimes as straightforward as is widely understood. Consequently, a board with a predominance of independent directors is more likely to prioritize the shareholders' well-being. It is also likely to promote autonomous decision-making and reduce any potential conflicts. Previous findings regarding the relationship between board structure and company success are inconclusive. By instituting board gender diversity, other research implies that it promotes effective company performance by considering several factors such as the decision-making process and the effectiveness skills that encounter risky problems in taking prominent decisions for the company’s well-being. Therefore, several studies are proving that female directors contribute to the survival of distressed companies. The relationship between corporate governance and business performance is essential for developing effective corporate management and public regulatory frameworks. Prior literature, on the other hand, has mostly focused on corporate governance procedures in the United Kingdom, the United States, and other Western industrialized nations (Mariano et al., 2021; Kao et al., 2019). However, in other regions, notably Asia, businesses operate within a diverse institutional and legal framework, which may substantially impact the connections between corporate governance and company performance (Idris and Ousama, 2021). Nevertheless, certain

research (Guizani and Abdalkrim, 2023; Abdullah et al., 2022; Younas et al., 2021) has also examined Malaysia and Singapore's emerging economies. However, in most nations, wide-ranging activities encompassing practically all parts of the organization have occurred.

This research investigates the impact of board structure and firm performance on financially distressed businesses. Despite the Asian financial crisis of 1997, the Covid-19 epidemic was one of the most conspicuous financial catastrophes that severely impacted world economies. Due to the unusual circumstance, most firms are compelled to close because of government restrictions. Countries have been adversely affected, and the extremely infectious nature of COVID-19 has compelled the authorities to enact lockdown procedures (Ozili, 2020). These policies have a significant negative impact on firms' market needs. Such measures, including limited travel policy, social distance, stay-at-home, and closure of extraneous operations, have substantially impacted the company's overall performance (Rohan, 2022). On the other hand, some organizations change their business operations and implement a work remotely method, which influences the businesses in both positive and negative ways. The regulations enforced by numerous countries worldwide in response to the COVID-19 epidemic offer substantial issues for corporate governance.

Literature review

Financial distressed companies in Malaysia context

Financial distress occurs when a corporation is unable to satisfy its debt commitments to its creditors and borrowers, and persistent financial difficulties can lead a company to collapse. Businesses listed on the Malaysian Stock Exchange that fall within the "Practice Note 17" category tend to be in a precarious financial position. The Malaysian Stock Exchange released Practice Note 17/2005 under the designation PN17 (Manaf et al., 2021). A firm that meets the criteria for PN17 is anticipated to provide a regularisation plan to the Securities Commission to clear up its PN17 classification and disclose the outcome of its business recovery. According to Shayan-Nia et al. (2017), several investors cannot comprehend why these firms become PN17. Often, these businesses either have a history of poor management or none. They do not have a track record of competent management. There is a shortage of knowledge and information among shareholders who own shares of firms categorized as PN17. In certain instances, investors are oblivious to the delisting of these firms (Mohammed, 2012).

Board independence and firm performance

Board independence is a crucial corporate governance tool for enhancing business performance. Thus, board independence is a fundamental component of corporate governance that has attracted considerable attention from researchers and academics who have conducted extensive research on board independence and business performance (Okoyeuzu et al., 2021). The notion of board independence relates to the degree to which a company's board of directors is composed of individuals who are not connected with the company's management team or significant shareholders. Board independence is vital since it enhances the board's capacity to act in the best interests of the company's shareholders and reduces agency expenses. Generally, empirical data demonstrates a connection between board independence and distressed businesses (Daily and Dalton, 1994). In addition, one of the most consistent findings in the

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research is that board independence is positively correlated with firm success. According to a meta-analysis of 118 studies conducted by Daily and Dalton (2003), the financial performance of companies with more independent boards is preferable. This indicates that independent directors play a crucial role in overseeing and regulating the management team, which can result in improved financial performance. Similarly, a study conducted by (Mariano et al., 2021) to examine the influence of corporate governance to predict the risk of financial distress in British firms concludes that a low extent of independence is more likely to result in financial distress. These results correspond with Fama and Jensen (1983) hypothesis, which states that boards with a greater number of independent directors have a greater propensity to act in the best interests of shareholders and minimize agency costs, both of which contribute to improved business performance. Nonetheless, the findings regarding the association between board independence and business success are inconsistent since other researchers have demonstrated that board independence is inversely related to firm performance.

It is also crucial to highlight that the appropriate degree of board independence may vary based on a range of criteria, such as the company's size and complexity, its industry, and its distinct issues. Adeabah et al. (2019) indicate that board independence is negatively associated with bank efficiency in the analysis of 21 banks between 2009 and 2017. This research is underpinned by the stewardship hypothesis, which embraces optimistic ideas about humans. In contrast, Potharla and Amirishetty (2021) found that the link between board size and board independence and a company's financial success is non-linear and U-shaped. It suggests that board size and independence provide value to the company up to a particular threshold. Over this threshold, an increase in board size and independence will have a detrimental impact on the firm's performance. In contrast, the resource dependency theory trumps the stewardship theory below the threshold level, and beyond the threshold level, the opposite is true. In contrast, Lipton and Lorsch (1992) discovered that businesses with more independent directors had better shareholder profits. These findings imply that board independence may be required to promote shareholder openness and accountability.

Board gender diversity and firm performance

The term "board diversity" refers to the heterogeneity of the board members, which can encompass a variety of characteristics, including age, gender, education, competence, independence, tenure, ethnicity, and country. According to Aggarwal et al. (2019), the agency theory and the resources-based theory are two key viewpoints used to understand the influence of board diversity. Furthermore, agency theory concentrates on the supervising role of the board. It proposes that a diverse board increases management's surveillance function since it comprises directors from various backgrounds and with distinct viewpoints (Guizani and Abdalkrim, 2023). Consequently, gender diversity on boards may be utilized to manage agency issues. Moreover, gender diversity on boards improves oversight since women pose greater inquiries and are less inclined to disturb shareholder interests, minimizing agency conflicts (Adams and Ferreira, 2009). On the other hand, the resource dependence approach (Pfeffer & Salancik, 1978) proposes that diverse boards are in a good situation to act advising because their members possess expert knowledge, expertise, information, and external connections (Gul et al., 2011). Hence, based on agency and resource-based viewpoints, it is suggested that a more diverse board has superior

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oversight and advisory capacities, thereby enhancing performance and decreasing financial distress. In addition, a large body of research indicates that women undertake less risky judgments and have relatively low levels of overconfidence than males (Arun et al., 2015). In addition, women are more likely to concentrate on methods that prevent the worst consequences and provide greater protection, such as a reduced chance of financial misreporting (Gupta et al., 2020) and a lower inclination to incur debt, which minimizes the probability of financial distress (García and Herrero, 2021).

In addition, a few prior empirical researches have studied the association between board gender diversity and financial distress. According to this research, the involvement of women increases board effectiveness and decreases financial distress. For example, Darrat et al. (2016) found that enterprises with a larger share of female board participation are less likely to declare bankruptcy, consistent with research that indicates a favorable correlation between board gender diversity and operating performance due to increased oversight. Additionally, Guizani and Abdalkrim (2023) asserts that board gender diversity might assist in enhancing board performance by protecting organizations from being overly vulnerable to financial distress and insolvency in the sample of 367 non-financial firms that are traded on Bursa Malaysia.

Theoretical framework

According to Shikalepo (2020), several phases are involved in research. The theoretical framework is one of the most significant frameworks that must be included in a research paper since numerous academics have sought to articulate the conception of a theoretical framework. The theoretical framework in *Figure 1* outlines the dependent, and independent variables used to examine the influence of board structure (independent variable) and company performance (dependent variable) on financially distressed companies in Malaysia.

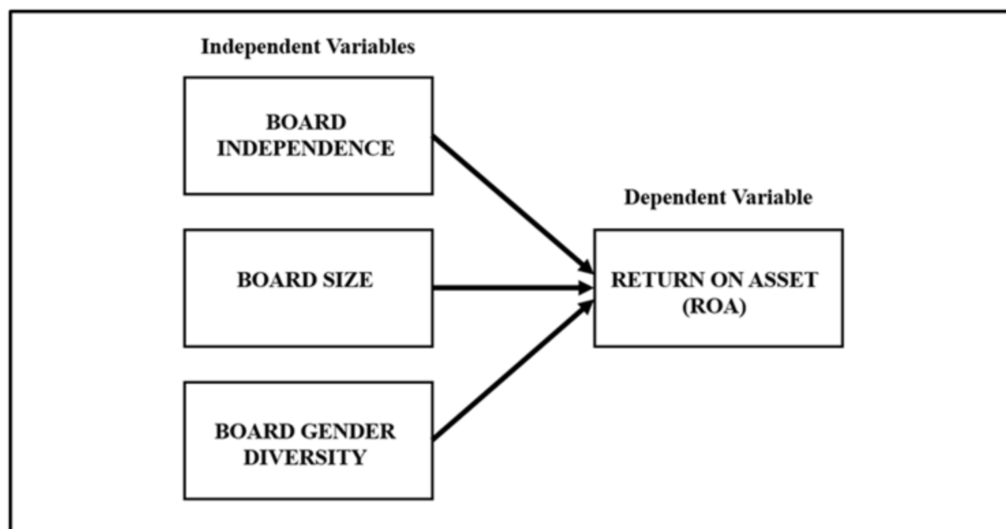

Figure 1. *Theoretical framework.*

Hypotheses development

H1: There is a significant impact of board size on the firm performance of publicly listed PN17 companies in Malaysia.

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H2: There is a significant impact of board independence on the firm performance of publicly listed PN17 companies in Malaysia.
H3: There is a significant impact of board gender diversity on the firm performance of publicly listed PN17 companies in Malaysia.

Agency theory and firm performance

The agency theory has been applied to understand the relationship between the board structure and the firm's performance. According to the agency theory, a contradictory relationship exists between the management and the shareholders. The agent must serve the principal's best interests without regard to his or her self-interest in a specific commercial transaction (Zaid et al., 2020). A conflict of interest may arise in this circumstance if the objective of the principal and the agent are not aligned. Hence, this may elevate the agency's costs. Generally, an agent works on behalf of the principal to maximize shareholder value. But shareholders are unable to routinely supervise every activity of managers in the firm, culminating in asymmetric information, which can lead to ethical concerns and an absence of consensus (Nguyen et al., 2020). So, to monitor and ensure that the management acts to enhance the shareholder's wealth, the company incurred agency costs. Agency theory demonstrates an accurate reflection of corporations incurring agency costs. Regardless, corporate governance mechanisms establish guidelines and standards to reduce agency problems, which is still an additional expenditure that organizations endure.

According to substantial empirical research (Fama and Jensen, 1983), an agency concept asserts that the board has an essential function in ensuring management behaves most beneficially for shareholders. Hence, the board's primary responsibility is to oversee management. Management, which consists of professional managers with negligible shareholdings, is perceived as seeking their desires to the detriment of the firm's owners. To prevent power abuse, the board of directors preserves ultimate authority by ratifying and reviewing significant managerial decisions, although delegating most choices to management (Fama and Jensen, 1983). Consequently, according to agency theory, the board of directors is a crucial control mechanism in a company (Guizani and Abdalkrim, 2023). The board is viewed as a tool to lower agency expenditures; hence, agency conflicts arise from owners' and managers' divergent goals (Ain et al., 2021). In regards to the source of directors' authority, the generally recognized agency theory in the social science area differs from the legal opinion. Legally, the source of directors' authority is state law, although agency theory holds that shareholders assign executives power (Zaid et al., 2020). Hence, agency theory stresses the decision-making process concerning how the board oversees managers to reduce disputes between shareholders and management. Warrad and Khaddam (2020) contends that modernistic corporate governance concepts support a decision-making process that analyses and integrates the legal and reasonable demands, interests, and perceptions of its stakeholders in a coherent, ethical, and balanced manner. The board's significant responsibility in management is to enhance the board's motivation to supervise management; agency theory recommends ownership by the manager to connect the interests of managers and shareholders, a larger number of external directors on the board, and non-dual control to boost the board's independence (Merendino and Melville, 2019).

Stewardship theory and firm performance

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Stewardship theory proposes an intriguing alternative to agency theory and argues for smaller boards with fewer independent directors (Dicuonzo et al., 2022). Stewardship theory is an approach that contends that people are intrinsically motivated to perform the tasks and responsibilities entrusted to them for the benefit of others or organizations. It contends that people are more collective-minded and pro-organizational than individualistic and therefore strive towards achieving organizational, group, or societal objectives because doing so provides them with a higher level of contentment (Griffin and Pustay, 2015). Consequently, stewardship theory presents a framework for describing the intentions of managerial behavior in different kinds of organizations. Thus, the stewardship theory also perceives inside directors and managers to be trustworthy and work towards the organization's best interest, leaving fewer possibilities for agency problems, as the agency theory contends. This theory thus supports internal board representation and small board sizes.

Materials and Methods

Data collection

This study utilized secondary data to collect the relevant samples. This study gathered data for the study over the period from 2018 to 2022 from the Bursa Malaysia portal. Therefore, information on the board structure of the company which consists of board size and board gender diversity was extracted from the company's corporate governance report. Apart from that, to compute the return on assets (ROA) the information on total assets and net income was retrieved from the annual reports of the company.

Sampling

This study's sample consists of 25 financially distressed firms listed on the Bursa Malaysia to investigate the relationship between the board structure and company performance. In particular, financially distressed companies are classified under Practice Note 17/2005, designed under PN17 in the Bursa Malaysia portal. It persisted from 2019 to 2022, attributable to the COVID-19 outbreak that began in late 2019. So, this study will assess the influence of the board structure on the company performance before and after the Covid-19 outbreak since the research analyzed from 2018 to 2022. The Bursa Malaysia is the primary platform we used for data collection. As of February 2023, 25 PN17 companies from various industries were chosen from Bursa Malaysia. All of the information was gleaned from the companies' annual reports from 2018 to 2022. *Table 1* depicts the industries and the number of companies in each.

***Table 1**. The industries and number of companues.*

Industries	Number of companies
Construction	2
Consumer goods and services	3
Energy	6
Healthcare	1
Industrial goods and services	4
Property	1
Technology	2
Telecommunications and media	1

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Transportations	3
Transportations and logistics	2
Total	25

Data analysis

Multiple regression is a statistical method for analyzing the connection between a single dependent variable and several independent variables. Multiple regression analysis intends to anticipate the value of a single dependent variable's value based on the independent variables' known values. In this instance, the multiple regression model will be used to examine the impact of board composition on the performance of financially distressed companies in Malaysia. The regression model is as follows:

$$ROAi = \beta 0 + \beta 1\ BSIZE + \beta 2\ BIND + \beta 3\ BGEN \qquad \text{Eq. (1)}$$

Where, ROAi=Net income/Total assets, BSIZE=Total number of directors on the board, BIND=Total number of independent directors on the board, and BGEN=The ratio of women to men on a board.

Results and Discussion

Descriptive analysis results are presented in *Table 2*. *Table 2* presents the descriptive statistics of the sample firms for 97 firm years. First and foremost, based on the findings, the mean board size of financially distressed companies is 6.69. Then, Table 3 depicts that the minimum board size is four while the maximum is 12. Therefore, on average, each board consists of seven directors. Thus, the standard deviation of 1.933 indicates that there is a moderate degree of variation in the board size across the sample. This suggests that some boards may have more directors than others and that the distribution of board sizes is not entirely centered around the mean. This is in line with a study that found that the optimal board size for a corporation is seven or eight members (Jensen, 1993). A larger board size would increase operating costs, inadvertently minimize profits, and lower a firm's performance (Abdullah et al., 2022). In addition, having the optimal number of directors will minimize friction and disagreement among board members, making the decision-making process even more effective and faster. Furthermore, the findings reveal that the mean board independence of financially distressed companies is 3.72. Therefore, independent directors make up more than half of the board size. Hence, the companies have met the requirements as stipulated in the MCCG which publicly listed firms should have at least one-third of the board comprising independent directors (MCCG, 2021). The standard deviation of 1.008 indicates that there is a relatively low degree of variation in the level of board independence across the sample. This suggests that most of the boards in the sample have similar levels of independence, with a few outliers having significantly higher levels. Therefore, the minimum number of independent directors is two while the maximum is seven as shown in *Table 2*.

Table 2. *Descriptive statistics (N=97).*

Variables	Minimum	Maximum	Mean	Standard deviation
ROA (%)	-1.815	0.56	-0.18	0.345
Board size	4	12	6.69	1.933

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Board independence	2	7	3.72	1.008
Board gender (%)	0.00	0.60	0.86	0.724

Moreover, the findings imply that the average female representative on board is 0.86 which is relatively less than one, which means not all the firms fulfill the requirement stipulated by the MCCG. The Malaysian government has introduced a policy requiring publicly listed firms to have a board of at least 30% female (MCCG, 2021). However, most companies do not have female representatives on the board. At the same time, some of the studies imply that the representation of female directors on the board strengthens corporate governance and reduces earning management issues which subsequently enhance the firm performance. However, the standard deviation of 0.724 indicates that there is some variation in this percentage across different boards. This means that some boards may have higher percentages of female representatives, while others may have lower percentages. According to the analysis, the minimum number of female representatives on board is 0 while the maximum number is 0.60%. *Table 3* presents the descriptive statistics breakdown. *Table 3* shows the descriptive statistics for each year (2018-2022) to understand the trend of the variables throughout the period. Descriptive statistics provide a quick and easy way to summarize and organize large amounts of data, allowing the findings to be presented clearly and understandably. Firstly, the above table indicates that the mean board size steadily declined from 6.91 in 2018 to 6.43 in 2020. At the same time, in 2021 the mean board size substantially decreases by 7% from the preceding year which is from 6.43 in 2020 to 5.95 in 2021. In addition, it drops to 5.82 in 2022. Therefore, this massive decline during 2021 and 2022 could be because of the covid-19 pandemic, as companies may have reduced the size of their board of directors as a way to reduce costs during the economic downturn caused by the COVID-19 pandemic. Therefore, according to the breakdown analysis, this study can imply that the mostly all the firms acquire seven boards of directors on average except in 2021 and 2022. Therefore, on average, each board consists of six directors. This is in line with a study that found that the optimal board size for a corporation is six to eight members (Jensen, 1993). However, the MCCG 2017 does not stipulate any specific provisions for optimum board size.

***Table 3**. Breakdown of descriptive statistics for five years (2018-2022).*

Variables	Analysis	2018	2019	2020	2021	2022
ROA (%)	Mean	-0.84	-0.21	-0.14	-0.34	-0.14
	Minimum	-0.30	-1.38	-1.10	-1.82	-0.57
	Maximum	0.14	0.08	0.54	0.28	0.56
	Std. Deviation	0.125	0.331	0.305	0.515	0.336
Board size	Mean	6.91	7.00	6.43	6.16	7.00
	Minimum	4	4	4	4	4
	Maximum	10	10	11	11	12
	Std. Deviation	1.540	1.877	1.912	1.922	2.646
Board independence	Mean	3.73	4.00	3.57	3.58	3.69
	Minimum	3	2	2	2	2
	Maximum	6	7	6	6	6
	Std. Deviation	0.883	1.272	0.926	0.961	0.947
Board gender (%)	Mean	0.14	0.17	0.11	0.12	0.92
	Minimum	0.00	0.00	0.00	2	0.00
	Maximum	0.60	0.50	0.33	6	0.25
	Std. Deviation	0.127	0.138	0.105	0.089	0.098

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Furthermore, the overall mean of female directors is 0.86, which is significantly lower than that of the male-dominated board. The mean of the board gender increased slightly from 0.91 in 2018 to 1.14 in 2019. Hence, listed companies do not comply with the government policy of having a minimum of 30% women on the boards of listed firms. Therefore, a company should fulfill at least two female representatives on the board. Therefore, this factor has a high possibility on the firm performance of financially distressed companies as Karim et al. (2022) enhance the governance of the firm by reducing the earning manipulation in the company. According to *Table 4*, the mean ROA during the period was -0.18%. Furthermore, the maximum and minimum values show the potential to generate yields using available assets based on the proportion of periodic earnings to total assets. The lowest value of ROA is -1.815% while the highest value is 0.56. Therefore, from the year 2018 until 2022 the average ROA is less than one which is negative; this is due to this study utilizing the data set of financially distressed companies of the past three years. However, in 2021 the ROA decreased sharply to -0.34, the lowest in five years. Thus, this can arise from the effects of government measures to curb the spread of Covid-19, which ultimately affected business for all industries in 2021. Therefore, we can conclude that the unprecedented economic downturn due to the covid-19 has rubbed salt into the wound of all the financially distressed companies.

***Table 4**. Pearson correlation analysis (N=97).*

Analysis	Variables	ROA	Board size	Board independence	Board gender
Pearson correlation	ROA	1.000	0.189	0.069	0.142
	Board size	0.189	1.000	0.565	-0.114
	Board independence	0.069	0.565	1.000	0.045
	Board gender	0.142	-0.114	0.045	1.000
Sig. (1-tailed)	ROA	-	0.032	0.250	0.083
	Board size	0.032	-	0.000	0.133
	Board independence	0.250	0.000	-	0.332
	Board gender	0.083	0.133	0.332	-

*Note: *p<0.10; **p<0.01 (2-tailed)*

We excluded four outliers' data as the value of the data sample substantially deviates from the overall pattern. Outliers are data points that substantially deviate from the overall trend or pattern of the data, possibly skewing the findings and leading to inaccurate conclusions. Outliers were identified as data points that deviated considerably from the dataset's overall pattern or trend. Individual points outside the margins of the box diagrams represented outliers (Esmael et al., 2019). In stem-and-leaf graphs, outliers appeared as data points significantly separated from the preponderance of data (Statistics Solutions Official Portal, 2023). *Table 5* presents results from Pearson's correlation analysis. Pearson's correlation analysis indicates that the correlation coefficient between ROA and board size is positive and statistically significant (r=0.189, p=0.032). Consequently, there is a tendency for the return on assets to increase as the size of the board increases. At the same time, the ROA has a significant and positive relationship with a board size (r=0.227). Hence, the larger the board size, the higher the return on assets. However, there is no statistically significant correlation between ROA and board independence (r=0.069, p=0.250). Apart from that, there is a statistically significant positive correlation between ROA and board gender diversity (r=0.142, p=0.083), indicating that as the proportion of women directors on the board increases; there is a tendency for the return on assets to increase as well. *Table 5*

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presents the model summary findings for the R, R-Square, Adjusted R-Square, and standard error of the estimate.

***Table 5**. Regression analysis.*

Variables	Coefficient	Standard error	t-value	p-value
Constant	-0.449	0.150	-2.989	0.004
Board size	0.046	0.022	2.084	0.040
Board independence	-0.028	0.042	-0.682	0.497
Board gender	0.520	0.303	1.719	0.089
R square		0.068		
Adjusted R square		0.038		
F statistics		2.29		
p-value		0.088		

*Note: *p<0.10; **p<0.01 (2-tailed)*

The R-value reflects the correlation between the actual and projected values of the dependent variable. In contrast, the proportion of the dependent variable to the variance estimated by the independent variables is referred to as R-Square. However, the adjusted R-Square conveys a more accurate value for determining the R-Square. *Table 5* reveals that the R-value is 0.260, indicating a positive but weak correlation between the independent variables and the dependent variable. Therefore, the R2 value of 0.068 suggests that only 6.8% of the variation in ROA can be explained by the independent variables included in the model. However, the adjusted R2 value of 0.038 indicates that the model is still reliable for predicting variations in ROA, after controlling for the number of independent variables included in the model. The estimated standard error of 0.33755 suggests that the model's predictions are typically off by about 0.34 percentage points. F-statistic evaluates the overall significance of the model by contrasting the variance attributed to the unresolved variance (Kumar, 2023). A large F-statistic and a small p-value indicate the statistical significance of the model. Therefore, *Table 5* reveals that F statistics is 2.248 are substantially correlated with a p-value of 0.088, surpassing the required threshold ($p<0.10$). The F value is statistically significant; consequently, the overall model is sufficient for hypothesis testing. This indicates that at least one of the three independent variables should be used to model ROA, which makes this application a better fit. As a result, H1 and H3 are supported, whereas H2 is not. Results in *Table 5* indicate that the board size and board gender diversity are positively associated with the company performance of financially distressed companies in Malaysia. In contrast, there is an adverse relationship between board independence and company performance.

There is a significant positive relationship between the board size and the firm performance of publicly listed PN17 companies in Malaysia. Therefore, the coefficient for board size is positive (0.046) and at the same time, the p-value is 0.040 ($p<0.10$). Therefore, we can conclude that the larger the board size, the higher the ROA. Hence, the findings are consistent with Hypothesis 1 which is that board size has a significant on the firm performance. If a different variable stays constant, one unit increase in the board size will trigger the ROA to increase by 0.046. *Table 5* indicates no correlation between the board independence and the firm performance of the publicly listed PN17 companies in Malaysia. Results in *Table 5* show that there is a significant positive relationship between the board gender diversity and the firm performance of publicly listed PN17 companies in Malaysia. Therefore, the coefficient for board gender

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diversity is positive and significant as shown in *Table 5*. Therefore, we can conclude that the more female representative on board, the higher the ROA. Hence, the findings are consistent with Hypothesis 3 which is that board gender diversity has a significant on the firm performance. If a different variable stays constant, one unit increase in the board size will trigger the ROA to increase by 0.046.

Conclusion

The main objective of the research is to examine the associations between board structure and corporate performance in Malaysia's listed PN17 companies (financially distressed companies in Malaysia). The positive association between board size and firm performance supports the resource dependency theory. In the absence of a requirement for board size, firms will be able to decide on the appropriate number of directors to suit their needs. Based on the evidence in this study, the size of the boards in Malaysian listed companies is consistent with the size recommended in several studies (Jensen, 1993). The positive correlation between the board size and the firm performance indicated that as the board size increase, the return on asset also significantly increases. Besides, a larger board enhances monitoring and can take collaborative decisions. Apart from that they can combine expertise and knowledge while gathering diverse resources as well. Therefore, according to the findings of the research, it is evident that the overall average board size is seven. However, in the absence of information regarding appropriate board sizes provided by the Malaysian Code of Corporate Governance (MCCG), Malaysian businesses must step up to the plate to determine the most suitable board size given their specific circumstances. Independent directors are one of the prominent corporate governance mechanisms for monitoring purposes. Hence, the Securities Commission through perpetual modifications of the Malaysian Code on Corporate Governance requires all the listed firms to have one-third of independent directors of the board size. Nevertheless, according to the findings of this study, board independence has an adverse influence on the performance of financially distressed companies. Malaysia is one of the developing countries that prioritizes the presence of women on boards. Consequently, one of the most notable initiatives undertaken by the Securities Commission through perpetual modifications of the Malaysian Code on Corporate Governance to improve the effectiveness of boards through enhancing board gender diversity and requiring listed firms to have a board with a minimum of 30% female directors enhanced firm financial performance MCCG (2021). Thus, according to the findings of this study, board gender diversity has a significant positive influence on the performance of financially distressed companies. Therefore, the findings of this study are consistent with the most recent study by Guizani and Abdalkrim (2023), which indicates that the presence of women on a company's board of directors decreases the likelihood that the company will experience financial distress.

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Conflict of interest

The authors confirm that there is no conflict of interest involved with any parties in this research study.

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