

Impact of Chief Executive Officer Characteristics on Financial Performance: Evidence from Top 100 Malaysian Public Listed Companies

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Abstract: This study examines the effect of chief executive officer (CEO) characteristics on firm financial performance for the top 100 Malaysian Public Listed Companies (PLCs) during 2016 to 2020. The multicultural diversity of Malaysia means that CEOs are demographically heterogeneous and the findings indicate that CEO age, nationality and financial expertise are associated with firm financial performance, measured by both return on assets (ROA) and return on equity (ROE). In addition, there is also evidence that CEO gender and affiliation to a top world-ranked university are also related to ROE. The results of this study contribute valuable insights and information relevant to future researchers, board members, and investors. Specifically, the study adds to the literature on a new CEO characteristic, which is their affiliation at the top world-ranked university. Further, the findings from this study may assist the Board of Directors (BODs) in assessing the current CEO or in selecting prospective candidates.

Keywords: Chief Executive Officer Characteristics, Financial Performance, Top 100 Public Listed Companies.

1. INTRODUCTION

In the early 2020s, the global economy was hit by the COVID-19 pandemic, which resulted in many industrialists, entrepreneurs, and businessmen, struggling to overcome the challenges, specifically its effects on financial performance. Malaysian firms have not been spared as well, and many are struggling to survive. As firm financial performance is one of the major foci of investors, it needs to be aligned with the goals of the firm. All firms have set goals, and being financially stable is a crucial part of survival. A firm is much like a ship led by its captain; in the case of firms, the chief executive officer (CEO) is responsible for overseeing smooth business operations, and steering the company to successful performance. CEO play a vital role in leading, strategizing and directing their firms toward the goals that have been set. Amran et al. (2014) argued that a CEO's actions is grounded in the unique characteristics of a leader. As CEOs are responsible to their firm's shareholders (Amran et al., 2014), their individual characteristics are essential in order to ensure that the firm can perform financially well, particularly in times of crises. In crisis management, firms must reset and regain the confidence of the stakeholders by ensuring sustainability and survival (Lucero et al., 2009; Hasnan et al., 2020).

Based on the Resource Dependence Theory as stated by Amran et al. (2014), in order to take on the position of CEO,

an individual needs to possess certain characteristics and qualities. Hambrick (2007) posited that the CEO plays a crucial role in leading the firm, using his or her personal values and experience. In the Upper Echelons Theory, firm performance is linked to the CEO's background and personality. The theory also suggests that top managers' characteristics are crucial, especially when dealing with complex strategies (Ting et al., 2015). Thus, CEOs characteristics are crucial and significant to be studied.

Several Malaysian studies have examined how CEOs manage their companies based on certain demographics criteria, such as age, gender, international experience, multiple directorships, and educational level. Using a sample of government-linked companies (GLCs), Amran et al. (2014) looked into the relationship between CEO and chairman characteristics and performance by focusing on professionalism, age, and ethnicity. Similarly, using the GLCs as their sample, Mohd Razali et al. (2016) explored how CEO characteristics, such as tenure of service and educational background, play a role in environmental disclosure. Another study has focused on the relationship between CEO characteristics and leverage (Shazlin et al., 2020). A comparative study by Ahmad et al. (2022) has focused on CEO characteristics in the food and beverage industry in Malaysia, Indonesia, and Singapore.

However, Altarawneh et al. (2020), who conducted a literature review on CEO characteristics, argued that very few studies have linked CEO characteristics to financial performance of companies, especially public listed companies (PLCs). Therefore, this study fills this gap by providing a better perspective on the relationship between CEO characteristics, comprising CEO age, tenure of service, multiple

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directorships, gender, nationality, and financial expertise, and the financial performance of the top 100 Malaysian PLCs. Also, the study includes two other unique CEO characteristics, namely political connections and being alumni from top world-ranked universities.

Interestingly, incorporating political connections is becoming a popular research area, especially in Malaysia, and particularly after the revelation of massive fraud cases involving political figures. Hoang et al. (2021), who explored how political connections affect financial reporting quality in Malaysian listed companies, found that GLCs and politically-connected directors produce lower reporting quality. Bliss and Gul (2012) argued that politically connected firms in Malaysia significantly associated with negative equity. In addition, these firms reported higher leverage and significantly lower return on assets (ROA) compared to the non-politically connected firms. Nonetheless, studies on whether or not the CEOs' political connectedness affects firm financial performance, are relatively scarce. This motivates the study to explore how political connections influence CEOs in managing the firm, and in turn, how it impacts financial performance.

Another point worth noting is the social status of the CEO. A study on the U.S. companies in the 1960s shows that the social status of executives influences how they react and make decisions. Their social status makes them a part of a corporate elite group, based on where they were born, their educational credentials, and their social networking with others of the same social status (Palmer & Barber, 2001). It is believed that networking and social status can influence how companies are managed. Hence, CEOs' alumni networking is a valuable asset for the company. Educational background can indicate a CEO's extent of knowledge and skills (Hambrick & Mason, 1984). Graduates from renowned educational institutions have a higher possibility of becoming the CEO of a larger company because they normally have a clearer vision of achieving company goals (Jalbert et al., 2002). Top-ranked universities are recognized both domestically and internationally, and the alumni from such elitist universities have good networking that is beneficial to the company, in terms of the policies, processes, and activities. However, to the best of the researchers' knowledge, very few studies are available on the relationship between CEOs coming from top world-ranked universities and firm financial performance.

Since CEOs plan their strategies based on cognitive, social, and physiological characteristics (Shazlin et al., 2020), this study investigates CEO characteristics and their association with firm financial performance, measured by ROA or return on equity (ROE), of the top 100 Malaysian PLCs. CEO characteristics include age, tenure of service, multiple directorships, gender, nationality, financial expertise, political connections, and being an alumnus of top-ranked universities. Using regression analysis, all CEO characteristics were simultaneously analysed to examine the association with firm financial performance. The study finds that CEO age, nationality and financial expertise are significantly associated with ROA and ROE. And, CEO gender and affiliation to a top world-ranked university are also related to ROE. The findings from this study can be applied by regulators in re-

considering the existing practices related to corporate governance, while motivating other researchers to investigate CEO characteristics more intensively.

The rest of this paper is structured as follows. Section 2 reviews the relevant literature and develops the hypotheses of the study. Section 3 focuses on the research methodology used to test the hypotheses, followed by Section 4 which presents the results from the descriptive, correlation, and regression analyses. Section 5 provides a discussion on the findings. Lastly, Section 6 provides the conclusion and recommendations for further research on CEO characteristics, as well as the practical contributions, particularly for the regulators.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. CEO Characteristics and Firm Financial Performance

Based on the Upper Echelons Theory, certain qualities are needed to hold an executive position, like the CEO's position (Amran et al., 2014). The CEO is the highest-ranking executive in a firm and CEOs become the major target when firm performance is being examined (Peni, 2014). The Upper Echelons Theory also posits that the outcome and performance of companies can be predicted based on the managers' background (Hambrick & Manson, 1984). Financial performance has mainly been used by prior researchers to assess the effectiveness of managers' capabilities. Several studies have looked into the relationship between CEO characteristics and financial performance with mixed results. For instance, Peni (2014) found that the age of the CEO is positively related to ROA, while Shazlin et al. (2020) found that a firm's profitability and tangibility are insignificantly correlated to CEO age. The inconsistent findings from prior studies motivate the current study to examine the association between CEO characteristics and firm financial performance. The following subsections discuss each CEO characteristic included in the study.

2.1.1. CEO Age

Although research has found that CEO age has an insignificant influence on firm value (Vintila et al., 2015), the Companies Act 1965 in Malaysia prohibits the appointment of a person over the age of 70 years as a director of a public company or its subsidiary. Bialowas and Sitthipongpanich (2014) argued that older CEOs possess greater experience, which positively affects firm value and financial performance. Serfling (2013) examined how CEO age impacts a firm's stock volatility and risk management; they found that older CEOs have a lower risk appetite and tend to opt for less risky investments. Ting et al. (2015) added that younger CEOs are risk-takers and are more aggressive in their investment decisions. Peni (2014) claimed that older executives have a competitive advantage compared to younger executives, who inevitably have less business experience, hence contributing to a positive relationship with financial performance. Further, Ahmad et al. (2022) reported CEO age and firm performance are positively correlated. Based on the conflicting findings discussed above, it is hypothesized that:

H1: There is a significant association between CEO age and firm financial performance.

2.1.2. CEO Tenure

CEOs of PLCs need to retire at least once every three years, but are eligible for re-election by the Board of Directors (BODs) (Amran et al., 2014). Hambrick et al. (1993) argued that executives tend to be committed to their role as long as the company is performing well, which leads to the CEO being reappointed by the BODs. Isidro and Gonçalves (2011) revealed that CEOs of Portuguese-listed companies who are about to leave the job do not seem to increase earnings management due to the possibility of being re-appointed within the same firm, either to the same position or other relevant positions due to their job familiarity and network connections, which definitely can increase their tenure of service. This further emerges as one of the reasons behind the continuing leadership by the same CEO. Such outcome is attributable to the CEOs' familiarity with the internal processes and procedures of the firm, having taken on this position for many years. Even though Bialowas and Sitthipongpanich (2014) evidenced that CEOs' tenure in a firm does not determine firm value. However, recent research has found otherwise. Saleh et al. (2020) posited that longer CEO tenure leads to higher performance, and Ahmad et al. (2022) added that this is due to the in-depth understanding of the business and its daily operations. Hence, the following is proposed:

H2: There is a significant association between CEO tenure and firm financial performance.

2.1.3. CEO Multiple Directorships

Equipped with a set of skills and knowledge, CEOs can be appointed as directors on more than one board, especially those who serve larger firms and sit on larger boards (Ferris et al., 2003). Section III of Bursa Malaysia Practice Note No.13 and Bursa Malaysia Listing Requirements allow directors to hold up to 25 directorships; 10 in public companies and 15 in non-public companies. However, there is no maximum directorship requirement specified in the Companies Act 1965. Thus, researchers have disputed on the pros and cons of having multiple directorships. Some have claimed that directors with too many directorships are less committed due to their busyness, while others have argued that diverse knowledge and experience acquired from holding multiple directorships help to improve firm performance.

An individual who serves multiple boards is defined as a busy person who may be unable to attend important board meetings, such as audit and compensation committee meetings (Kamardin et al., 2014). This could result in a reduction of firm oversight, which consequently may affect firm value (Ferris et al., 2003). Saleh et al. (2020) suggested a reduction in the number of directorships held to avoid heavy workload that would jeopardize their performance in the firms they serve. However, Chiranga and Chiwira (2014) and Shazlin et al. (2020) found that there is no significant association between multiple directorships and firm performance. Based on the above arguments, a non-directional hypothesis is developed:

H3: There is a significant association between CEO multiple directorships and firm financial performance.

2.1.4. CEO's Gender

The issue of gender is a concern in Malaysia as highlighted by the Corporate Governance Blueprint 2011, which focuses on greater gender diversity in the BODs. Research done by Grant Thornton revealed that there was a significant rise of female CEOs in Malaysia to 38 percent, and it was the highest percentage ever recorded during the study (The Malaysian Reserve, 2022). This indicates an active involvement of women in the business world. A study of Japanese listed companies on female CEOs by Kubo and Nguyen (2021) reported that their *sarariwomen* have worked in the same organization since they were fresh graduates and gradually promoted to the top position of the firm after so many years in service. Sun and Zou (2021) discovered that firms with female CEOs generally have better performance than firms with male CEOs. However, Amran et al. (2014) found that gender does not have any effect on Malaysian GLCs' performance. Comparing Malaysian, Indonesian, and Singaporean samples, Ahmad et al. (2022) reported a similar finding. Using Chinese PLCs as the sample, Wu (2021) also found an insignificant relationship between CEO's gender and financial performance; however, the finding reveals that there is potential gender discrimination, whereby male CEOs receive higher salaries. Examining CEO's gender, Hamelin et al. (2022) find that male-led zero-debt firms perform better than non-zero-debt firms, while female-led zero-debt firms underperform non-zero-debt firms. Their finding indicates that no debt is associated with higher performance for male-led firms, but with lower performance for female-led firms. This suggests that gender differences is a significant factor to influence firm financial performance and worth to be examined. Thus, the study hypothesized that:

H4: There is a significant association between CEO's gender and firm financial performance.

2.1.5. CEO Nationality

A CEO is appointed by the BODs; he or she could be a candidate promoted internally from within the firm, or external party either local or foreigner. It has been argued that a local insider CEO can deliver better performance as he or she understands the local business culture and ethics (Wan Mohammad et al., 2020). Nonetheless, a CEO should have the agility and ability to respond to globalization or internationalization, which would require implementing changes to firm policies (Lin & Liu, 2011). In this regard, foreign CEOs may be more efficient and can benefit the firm in terms of their experience in a highly competitive environment with greater information sources, skill sets, and socio-cognitive power (Huson et al., 2004). Dragotă et al. (2020) found higher turnovers in companies led by foreign CEOs and argued that it is probably due to the difficulties in adapting to a new environment in a new country, including communication difficulties and unfamiliarity with the local business culture and lifestyle, which might adversely affect firm performance. Taken together, the status may influence CEO behaviour pertaining to how they would manage and lead the firm and maximize shareholders' value. Hence, the following is hypothesized:

H5: There is a significant association between CEO nationality (native) and firm financial performance.

2.1.6. CEO Financial Expertise

Firm performance and survival can be influenced by the CEO's financial expertise (Shazlin et al., 2020). Even though it is not mandatory for one to be equipped with finance-related work experience, it may be one of the elements assessed by the BODs in reviewing their capacity to be a CEO. A CEO with financial expertise is defined as a CEO who has prior working experience in either financial institutions or financial-related positions (Yang et al., 2021). Financial information is crucial in a firm's reporting and serves as a factual interpretation of the firm's condition to the stakeholders. Therefore, a financially literate CEO may be more competent to assess and plan relevant strategies for the firm by thoroughly analysing financial information.

Hambrick and Mason (1984) posited that a CEO's career experience can significantly affect the types of actions taken by a manager or an entire top management team. Bialowas and Sitthipongpanich (2014) evinced that directors with financial or business knowledge and experience, have a positive impact on firm's stock price. Ting et al. (2015) stated that CEOs use their expertise to significantly impact a firm's strategic planning and decision-making. However, according to Isidro and Gonçalves (2011), CEOs who possess finance qualifications, are not only good at running a business and make it grow, but are also more prone to exercise aggressive earnings management, which negatively affects firm financial performance. Therefore, a non-directional hypothesis is proposed:

H6: There is a significant association between CEO financial expertise and firm financial performance.

2.1.7. CEO Political Connections

A company with political connections is defined as a company with shareholders who are linked to top personnel, such as a Member of Parliament, a minister or the head of the state, or closely related to top government officials (Faccio, 2006). Hoang et al. (2021) stated that there are four types of political connections: GLCs, politically-connected directors, cronyism, and family ties between the firm's directors and government leaders (i.e., the ministers). Hasnan et al. (2019) explored the relationship between Malaysian family-owned firms and political connections to see the impact on financial performance. The findings reveal that there is minimal political influence on firm performance and that political connections do not bestow any benefits on Malaysian family-based firms. However, a study conducted by Imai (2006) in Thailand, has shown that a family business with political connections enjoys private economic advantage from the active participation of their politically-connected family members. It has been revealed that firms with political connections have better performance than those without such connections. Crony capitalism in Thai businesses has indirectly benefited from participation in politics.

Networking established from the political connections of the CEO helps firms to obtain external resources, have access to useful information, and find reliable strategic partners, which may impact firm outcomes (Bialowas & Sitthipongpanich, 2014). Political connections of the CEO can benefit the firm in terms of obtaining relevant business opportunities, which

in turn, increases the firm value. Hoang et al. (2021) found that there are no relationships between firms connected through family ties and crony capitalists; however, Malaysian firms with politically connected board members tend to release low quality information. Hence, whether a CEO's political connections create or destroy value, especially in emerging markets, is an empirical question. Hence, the next hypothesis is:

H7: There is a significant association between CEO political connections and firm financial performance.

2.1.8. CEO Alumni of Top World-ranked Universities

It is a common practice to hire individuals based on their educational background, especially for executive positions. Education does play an important role in the hiring of a CEO; the BODs still uses educational qualifications as the main criteria to evaluate potential CEOs. Higher education represents a CEO's intellect and ability to handle challenging situations (Bhagat et al., 2010). Zandi et al. (2015) studied CEOs with a Master's in Business Administration (MBA), which has become a prerequisite to being appointed. However, they found insignificant relationship between having MBA and being appointed as a CEO. Jalbert et al. (2002) found that there was an elite group among the CEOs of large firms and most of the CEOs are graduates of Harvard University. Bialowas and Sitthipongpanich (2014) stated that CEOs who are alumni of long-established universities are preferable because of their vast networking. Bhagat et al. (2010) found that a CEO's education is not significant in a BODs' decision-making process, although it is an important criterion for CEO appointment. Using public listed Financial Times Stock Exchange (FTSE) firms in the U.K. as sample, Urquhart and Zhang (2022) found that CEOs who graduated from highly ranked universities improved firm performance by 4.65 percent. Due to these conflicting results, this study proposes the following hypothesis:

H8: There is a significant association between CEO alumni from top world-ranked universities and firm financial performance.

3. RESEARCH METHODOLOGY

3.1. Sample Selection

This study used secondary data extracted from the annual reports published on the Bursa Malaysia website. The sample comprised the Top 100 PLCs on Bursa Malaysia based on their market capitalization value as of 31 December 2021. These firms were selected due to the perception of high effectiveness and efficiency in daily business activities, which contributed to their higher revenue (Mohamad & Said, 2010). Furthermore, according to Zabri et al. (2016), these firms are known to practice good governance, adopt necessary measures to protect their reputation, and continuously manage firm value. A firm's market capitalization has become a universally accepted and a common indicator of business valuation that represents the aggregate value of the firm (Prasad & Shrimal, 2014). These firms are listed on the Bursa Malaysia Main Market in 12 sectors, namely construction, consumer products and services, energy, financial services, healthcare, industrial products and services, plantation,

property, technology, telecommunications and media, transportation and logistics, and utilities. Details of the firms and the market value are presented in Appendix A.

3.2. Data Collection and Variables Measurement

The detailed CEO characteristics were extracted from the annual reports from the Bursa Malaysia website. A total of 500 annual reports were extracted, representing the Top 100 Malaysian PLCs based on the market capitalization value, for five years starting 2016 to 2020. The eight independent variables representing CEO characteristics, comprising age, tenure, multiple directorships, gender, nationality, financial expertise, political connections, and being alumni from top world-ranked universities, were manually collected from the Profile section. Out of these 100 firms, 30 CEO characteristics were excluded due to incomplete information within the five-year period under study (i.e. 2016-2020). Thus, the remaining 470 firm-year observations were collected to meet the study objectives. In addition, for CEO alumni measurement, the list of the Top 100 World-Ranked Universities 2022¹ issued by the QS website was used to identify whether a CEO graduated from any of these universities. The dependent variable of financial performance was measured using ROA and ROE, as it would be interesting to compare the results using different financial performance measurement (Kubo & Nguyen, 2021). The study used ROA and ROE as these financial ratios provide a clearer representation of company's financial health and performance. There are also two control variables, namely firm size and firm leverage. The summary of variables measurement is presented in Appendix B.

3.3. Model and Analysis

In order to run the analysis and test the hypotheses, a regression model was applied to recognize the relationship between CEO characteristics and firm financial performance. The first model (Model A) was used to identify whether the independent variables of age, tenure, multiple directorships, gender, nationality, financial expertise, political connections, and being alumni from top world-ranked universities, have a relationship with firm financial performance, measured by ROA. The second model (Model B) used the same independent variables, to test against ROE to measure financial performance and compare the results. The panel regression models used in this study are:

Model A:

$$ROA_{it} = \beta_0 + \beta_1 CEOAGE_{it} + \beta_2 CEOTENURE_{it} + \beta_3 CEOMULDIR_{it} + \beta_4 CEOGENDER_{it} + \beta_5 CEONATION_{it} + \beta_6 CEOFINEXP_{it} + \beta_7 CEOPOLITIC_{it} + \beta_8 CEOALUMNI_{it} + \beta_9 SIZE_{it} + \beta_{10} LEVERAGE_{it} + \varepsilon_{it} \quad (1)$$

Model B:

$$ROE_{it} = \beta_0 + \beta_1 CEOAGE_{it} + \beta_2 CEOTENURE_{it} + \beta_3 CEOMULDIR_{it} + \beta_4 CEOGENDER_{it} + \beta_5 CEONATION_{it} +$$

$$\beta_6 CEOFINEXP_{it} + \beta_7 CEOPOLITIC_{it} + \beta_8 CEOALUMNI_{it} + \beta_9 SIZE_{it} + \beta_{10} LEVERAGE_{it} + \varepsilon_{it} \quad (2)$$

Notes:

i refers to company, *t* refers to year, and ε is Error term.

Please refer Appendix B for variables acronyms

All eight research hypotheses in this study were tested using three analyses². The data analysis started with descriptive statistics analysis followed by correlation analysis. For the correlation analysis, this study used the Pearson correlation matrix to obtain detailed descriptions of the variables (CEO characteristics and financial performance) and the correlation levels amongst them. To estimate the effects of the independent variables in the regression model, this study utilized a regression technique, similar to that used by Saleh et al. (2020). The results of the regression analysis determine whether or not the hypotheses are accepted. This study also estimated the direction of the independent variables in order to support the hypotheses.

4. RESULTS

The results of descriptive statistics which consists of mean, median, maximum, minimum, and standard deviation, are presented in Table 1. In terms of firm financial performance, the average ROA of the listed firms is 8.15 percent, with a maximum and minimum values of 96.95 percent and -14.92 percent, respectively. Meanwhile, ROE reported an average of 19.87 percent, with a maximum and minimum returns recorded at 331.67 percent and -68.81 percent, respectively. The average age for CEOs in Top 100 Malaysian PLCs is 55 years, while the oldest (maximum) is 79 years and the youngest (minimum) is 31 years. It is noted that a few older CEOs (i.e., more than 70 years old) have been appointed, which contradicts the Malaysian Companies Act 1965, Section 129 (1) that sets an age of not more than 70 years to be appointed as directors whether in public companies or its subsidiaries. The average age is consistent with Ahmad et al. (2022), Shazlin et al. (2020), and Amran et al. (2014).

The average tenure of service in the CEO position is 9.31 years and the maximum is 43 years. The minimum tenure is zero due to the fact that the CEO was just appointed when the sample firm published its annual report. A longer tenure of a CEO in a firm is commonly due to reappointment or being the founder of the firm. The average tenure of CEO position is consistent with the Malaysian study by Ahmad et al. (2022) and Ting et al. (2015). Regarding multiple directorships, on average, CEOs hold 2.23 directorships in other firms with a maximum of 14. This is consistent with Saleh et al. (2020), who found that the maximum number of directorships held by CEOs is 13, due to a lack of qualified individuals who could accept the position. In addition, the minimum directorship recorded is zero, indicating some CEOs have not sat on other boards. The value of leverage is 52.66 percent, with a high maximum of 140.22 percent, showing some firms have incurred a higher debt against its total assets during the period of study, which perhaps was used to assist the

¹ For the list of Top 100 World-Ranked Universities, refer to: <https://www.topuniversities.com/university-rankings/world-university-rankings/2022>

² The analyses were performed using Statistical Package for the Social Sciences (SPSS) software.

firms during the economic recession of 2018 and the COVID-19 pandemic. The leverage results in this study represent how CEOs managed the mix of long and short-term debts throughout the three-year period, including the times when the government imposed the Movement Control Order in the first quarter of 2020, which hit most of the business sectors in Malaysia.

Regarding the dichotomous variables, 98.30 percent of CEOs are male and the remaining 1.70 percent are female. This indicates that Top 100 Malaysia PLCs tend to appoint more male CEOs to lead the firms. This result is consistent with Ting et al. (2015) and Zandi et al. (2015), who reported that male CEOs represented more than 90 percent of their samples. As for CEO nationality, majority (82.34 percent) of the CEOs are Malaysian and only 17.66 percent are foreigners. This result is lower than that of Ahmad et al. (2022), who reported that foreign CEOs represent 33.3 percent of the food and beverage industry for three different countries. CEOs with financial expertise in the Top 100 Malaysian PLCs is at 41.49 percent in 2016-2020. The result shows that only 6.60 percent of the CEOs in Top 100 Malaysian PLCs have political connections. On average, 50.21 percent of CEOs who led Top 100 PLCs in Malaysia are alumni of top world-ranked universities. Bialowas and Sithipongpanich (2014) believed that networking with the alumni of top world-ranked universities help the CEOs to broaden their views, boost their confidence and enable them to manage and direct their company towards better performance. Results in this study are higher compared to a study conducted in Thailand, where less than 20 percent of CEOs are alumni of the longest-established university (Bialowas & Sithipongpanich, 2014).

Table 1. Descriptive Statistic Analysis

Panel A: Continuous Variables

Variable	Mean	Median	Minimum	Maximum	SD
ROA	8.15%	5.46%	-14.92%	96.95%	10.34%
ROE	19.87%	11.11%	-68.81%	331.67%	36.95%
CEOAGE	55.19	54.00	31	79	8.51
CEOTENURE	9.31	5.00	0	43.00	9.74
CEOMULDIR	2.23	1.00	0	14	2.71
SIZE	15.97	15.91	11.48	20.54	1.85
LEVERAGE	52.66%	50.17%	4.56%	140.22%	24.78%

Note: SD stands for standard deviation.

Panel B: Dichotomous Variables

Variable	Category	Dummy	Frequency	Percentage
CEOGENDER	Male	(1)	462	98.30
	Female	(0)	8	1.70
CEONATION	Malaysian	(1)	387	82.34
	Foreigner	(0)	83	17.66

CEOFINEXP	Yes	(1)	195	41.49
	No	(0)	275	58.51
CEOPOLITIC	Yes	(1)	31	6.60
	No	(0)	439	93.40
CEOALUMNI	Yes	(1)	236	50.21
	No	(0)	234	49.79

Note: Please refer Appendix B for variables acronyms.

In order to address the risk of multicollinearity in the regression, Pearson correlation was computed. The strength of the correlation followed Cohen's (1988, pp 79-81) interpretation in Pallant (2016): a small correlation occurs when the values fall between 0.1 and 0.29, a medium correlation for values ranging from 0.3-0.49, and a strong correlation for values between 0.5 and 1.0. The risk of multicollinearity arises when two variables correlate at a value of 0.9 or higher (Pallant, 2016). Referring to Table 2, the highest correlation appears to be between ROA and ROE (0.635) at the 1 percent level of significance. The result also indicates that there is a significant negative correlation between ROA and CEONATION (-0.239), CEOFINEXP (-0.239), CEOMULDIR (-0.225), CEOPOLITIC (-0.175), and CEOAGE (-0.160), all at the 1 percent level. The finding suggests that older Malaysian CEOs, and/or who possessed financial expertise, holding multiple directorships and political connection, led to lower ROA during the 2016 to 2020 period. Similar finding is also reported for ROE, added a significant negative correlation with CEOGENDER (-0.163) at the 1 percent level, and with CEOTENURE (-0.105) at the 5 percent level, suggesting that male CEOs, and/or who hold the position longer led to lower ROE.

With regard to age of the CEOs, CEOAGE is positively correlated with CEOTENURE (0.495), CEOMULDIR (0.214), and CEONATION (0.158) at the 1 percent level, indicating that older Malaysian CEOs tend to have longer years of service in a firm and hold multiple directorships. A negative correlation is found between CEOAGE and CEOALUMNI (-0.111) at the 5 percent level of significance, suggesting that, as the CEO's age increase, the probability that they were graduated from the top world-ranked universities is less likely. Such finding is probably due to the age gap, as the study used the most current list of top world-ranked universities at the time of data collection (i.e. 2022).

The result also shows that CEOMULDIR has a positive correlation with CEOPOLITIC (0.242), and CEONATION (0.156), at the 1 percent significance level. And, the CEOPOLITIC is also positively correlated with CEOFINEXP (0.321). These correlations probably due to the fact that the political connections of a Malaysian CEOs are deemed as a value-added for them to be appointed as a director in other firms, not to mention if they are equipped with financial expertise. A significant negative correlation is found between CEOFINEXP and CEOTENURE (-0.215), and between CEOPOLITIC and CEOTENURE (-0.100), at the 1 percent and 5 percent level, respectively. This indicates that CEOs with financial expertise, and/or political connections, are less likely to serve a longer year of service. Worth noting, CE-

Table 2. Pearson Correlations Statistics Analysis.

n = 470	ROA (1)	ROE (2)	CEOAGE (3)	CEOTENURE (4)	CEOMULDIR (5)	CEOGENDER (6)	CEONATION (7)	CEOFINEXP (8)	CEOPOLITIC (9)	CEOALUMNI (10)	SIZE (11)	LEVERAGE (12)
(1)	1											
(2)	.635**	1										
(3)	-.160**	-.187**	1									
(4)	-.041	-.105*	.495**	1								
(5)	-.225**	-.156**	.214**	.088	1							
(6)	-.007	-.163**	.074	.065	.024	1						
(7)	-.239**	-.172**	.158**	.243**	.156**	-.055	1					
(8)	-.239**	-.095*	-.026	-.215**	.083	-.062	.009	1				
(9)	-.175**	-.097*	-.046	-.100*	.242**	.031	.099*	.321**	1			
(10)	-.086	-.089	-.111*	-.017	-.100*	-.117*	.038	.029	-.010	1		
(11)	-.517**	-.233**	.082	-.079	.287**	.036	.070	.350**	.268**	.172**	1	
(12)	-.156**	.180**	-.095*	-.197**	.105*	-.147**	-.049	.434**	.234**	.110**	.461**	1

* and ** denote significance at the 0.05 and 0.01 levels (2-tailed), respectively.

OTENURE is positively correlated with CEONATION (0.243) at 1 percent level of significance, indicating that Malaysian CEOs are more likely to serve longer than foreign CEOs. In addition, CEOGENDER is negatively correlated with CEOALUMNI (-0.117) at the 5 percent significance level, meaning that it is less likely that the male CEOs graduated from top world-ranked universities than female CEOs.

Regarding the control variables: SIZE and LEVERAGE, these variables correlate with both ROA and ROE, at 1 percent level of significance. For SIZE, significant positive correlations are found with CEOFINEXP (0.350), CEOMULDIR (0.287), CEOPOLITIC (0.268), and CEOALUMNI (0.172), at 1 percent level. This indicates that large firms more likely to have CEOs with financial expertise, and/or who hold multiple directorships, politically connected and alumni of top world-ranked universities. Meanwhile for LEVERAGE, it correlates with all independent variables except for CEONATION. A significant negative correlation is reported between LEVERAGE and CEOTENURE (-0.197), CEOGENDER (-0.147), and CEOAGE (-0.95), and positive correlations are found with SIZE (0.461), CEOFINEXP (0.434), CEOPOLITIC (0.234), CEOALUMNI (0.110), and CEOMULDIR (0.105). This suggests that older male CEOs who serve the firm longer, tend to avoid from high leverage, while larger firms with CEOs who possess financial expertise, political connections, alumni of top world-ranked universities, and hold multiple directorships, are more likely to have higher leverage.

The correlation between the independent variables was tested to ascertain the presence of a link to the dependent variable (proxied by ROA and ROE), for the purpose of assessing whether or not multicollinearity is a problem in this study. Here, the analytical method utilized was adapted from the work of Saleh et al. (2020) by using a benchmark correlation of ± 0.8 or less to indicate the non-existence of multicollinearity. As shown in Table 2, this study reveals that all correlations for the studied variables are within the acceptable range. As no correlation value is more than 0.8, this research model is thus deemed to be free from multicollinearity.

Regression analyses were performed to establish the relationship between CEO characteristics and firm financial performance: ROA and ROE. Table 3 shows the CEO characteristics that have a significant impact on ROA in Model A, and ROE in Model B. Both models consist of similar independent variables (i.e., CEOAGE, CEOTENURE, CEOMULDIR, CEOGENDER, CEONATION, CEOFINEXP, CEOPOLITIC, and CEOALUMNI). The results for the regression analyses are presented in Table 3. The results show adjusted R-squared value of 31.7 percent (Model A) and 20.8 percent (Model B), which means that 31.7 percent and 20.8 percent of the variation in firm financial performance is explained by the factors tested in the study, measured by ROA and ROE, respectively. The results in Table 3 indicate that three CEO characteristics have a statistically significant relationship with ROA in Model A: CEOAGE, CEONATION and CEOFINEXP. Meanwhile, five CEO characteristics are significantly associated with ROE in

Model B: CEOAGE, CEOGENDER, CEONATION, CEOFINEXP and CEOALUMNI.

Table 3. Regression Analyses of Model A and Model B.

	Model A		Model B	
	β	p-value	β	p-value
Constant	10.498	0.000	7.523	0.000
CEOAGE	-1.684	0.093	-2.108	0.036
CEOTENURE	0.054	0.957	0.000	1.000
CEOMULDIR	-0.915	0.361	-1.263	0.207
CEOGENDER	0.412	0.681	-2.627	0.009
CEONATION	-4.265	0.000	-2.350	0.019
CEOFINEXP	-2.292	0.022	-2.862	0.004
CEOPOLITIC	-0.245	0.807	-0.812	0.417
CEOALUMNI	-0.348	0.728	-2.346	0.019
SIZE	-10.204	0.000	-5.485	0.000
LEVERAGE	2.373	0.018	7.082	0.000
Adjusted R ²		0.317		0.208
n		470		470

5. DISCUSSION

The main objective of this study is to examine the relationship between CEO characteristics, comprising age, tenure, multiple directorships, gender, nationality, financial expertise, political connections, and being alumni from top world-ranked universities, and financial performance of the Top 100 Malaysian PLCs. In order to achieve this objective, three types of analyses were performed, i.e., descriptive statistics, Pearson correlation, and regression. Based on the regression analyses, the findings indicate that some CEO characteristics can predict firm financial performance. The regression analyses results show that CEOAGE, CEONATION and CEOFINEXP are significantly and negatively associated with financial performance of the Top 100 Malaysian PLCs, both measured by ROA and ROE.

Regarding CEOAGE, the negative association suggests that older CEOs are less efficient in generating profit through firm's assets and also equity investment. According to Boubaker et al. (2020), older CEOs take less risk in corporate investment decisions and financial policies. Boubaker et al. (2020) argued that older CEOs are more risk averse than younger CEOs because the costs of failure and the difficulty of getting rehired increase with age, especially as the retirement age approaches. Hence, older CEOs would be more inclined to opt for less risky investment to minimize casual fluctuations in firm performance. Feasibly, the negative association suggests that younger CEOs are better at managing firm's assets and equity, for a positive trend of ROA and ROE. With this, hypothesis H1 is thus, supported.

With respect to CEONATION, majority of the CEOs in the sample firms are Malaysian (82.34 percent), and only 17.66

percent of the CEOs are foreigners. The negative association between Malaysian nationality CEOs and financial performance may indicate that most of the sample firms were underperforming during the period of the study. Another plausible reason for the negative association is due to highly competent foreign CEOs in managing firm financial performance. If this holds true, the result is consistent with Rahman et al. (2017), who argued that having foreign CEOs on the BODs is indicative of a good vision and understanding of strategic management that could increase shareholders' returns in Malaysia. Jalbert et al. (2007) described that the cultural background of the CEOs could affect their behaviour and approach in managing the business. Jones (2019) in an article titled as "the importance of international experience for CEOs" reported that different cultural background results in highly developed adaptability, listening, solution-processing and risk-mitigation skills, which is extremely relevant to improve firm performance. Ahmad et al. (2022) claimed that foreign CEOs can offer valuable ideas, knowledge, and expertise, to improve firm financial performance as well as market value. Perhaps, the finding by Wan Mohammad et al. (2020) that local CEOs are more familiar with the business culture and operations that help to enhance firm performance, cannot be generalized to all Malaysian PLCs. This study finds that the Top 100 Malaysian PLCs require more foreign CEOs with greater globalization goals, to financially succeed.

In their study, Adams and Baker (2021) found that boardroom nationality influences firm outcomes differently in the U.K., depending on the financial aspect being measured. They found that North American directors are associated with profitable outcomes (i.e., ROE), while European directors tend to be linked to a better solvency position. In addition, they found that foreign CEOs are associated with greater solvency ratios, suggesting that foreign CEOs take regulatory legitimacy seriously. Adams and Baker (2021) mentioned in their study that they used data between 1999 and 2013; thus the 2007/8 global financial crisis might have probably influenced foreign CEOs to focus on firm solvency rather than profitability. Arguably, CEO nationality influences firm financial performance, and the influencing factors depend on various aspects. Possibly in this study, foreign CEOs contributed to higher financial performance due to their goals of scaling greater heights as the sample firms are the Top 100 PLCs, which based on market capitalization. Thus, hypothesis H5 is supported.

Concerning CEOFINEXP, the negative association is consistent with Yang et al. (2021), who examined the impact of CEO financial career experience on Chinese firms' innovation. They argued that the negative association between these variables is due to the crowding out effect of additional direct financial investments. Their finding seems to suggest that having financial experience did not influence CEO's decision to opt for higher return. Examining CEO education level and firm financial performance, Ahmad et al. (2022) reported insignificant findings and mentioned that CEOs with master's/doctoral degrees do not improve firm financial performance compared to CEOs who only have a bachelor's degree. Reported a similar finding, Boubaker et al. (2020) posit that there is no significant association between education level and type of education, and firm performance. Per-

haps, greater knowledge and expertise that stem from vast experience are needed by CEOs to generate higher returns. This explains the negative and significant association between CEO financial expertise and firm financial performance in this study. Hence, supporting hypothesis H6.

Interestingly, another two variables namely CEOGENDER and CEOALUMNI, show a negative and significant association with ROE, at the 1 percent and 5 percent level, respectively. Therefore, hypotheses H4 and H8 are accepted. Put two and two together, the findings seem to suggest that male CEOs, who are alumni of top world-ranked universities, are less efficient in managing the firm's equity investment to generate profits. Given that majority of the CEOs in the sample are male, the negative association suggests that male CEOs led to lower ROE. The finding is consistent with the results in Khan and Vieito (2013), who examined CEO gender and firm performance. Also using unbalanced panel data, whereby majority of the sample CEOs were male, Khan and Vieito (2013) concluded that firms with female CEOs are associated with an increase in performance compared to the firms managed by male CEOs. In the same vein, Kubo and Nguyen (2021), and Sun and Zou (2021) also posit that firms with female CEOs generally perform better than firms with male CEOs. Worth mentioning, although not significant, the coefficient of CEOGENDER in Model A, using ROA as financial performance measurement is positive, but the coefficient turn negative when the study used ROE. This specifically indicating that, holding all other factors constant, the ROE increases much more if the firm is managed by a female CEO.

Surprisingly, CEOALUMNI shows a negative and significant association with ROE, indicating that CEOs being alumni of top world-ranked universities do not efficiently increase firm's profit through equity investment. The result opposes the general intuition of positive nexus between education and firm financial performance. However, literature has inconclusive finding regarding the association of CEO education and financial performance. The result is consistent with Malaysian study by Ooi and Hooy (2022) who reported that foreign educational exposure has negative significant moderating effect on the relationship between risk taking and firm performance. Also, Boubaker et al. (2020) who investigate CEO elite education argued that although education quality through elite institutions affects derivatives use, the type of training that the institutions are specializing in, influenced its significance level and coefficient values. In their study, CEOs with political training from ENA (specializing in political science) reported the highest coefficient, followed by business training from HEC (specializing in management), and engineering training from Polytechnique (specializing in engineering). This indicates that not only the educational institutions that one's attend could shaped their corporate investment decision, but the training that they underwent in that institution are crucial too.

Noteworthy, both control variables labelled as SIZE and LEVERAGE for total assets and total liabilities, keep the same sign of coefficient and remain statistically significant

with ROA and ROE. However, the other CEO characteristics: tenure, multiple directorships, and political connections, are not significant to firm financial performance in both Model A and Model B, measured by ROA and ROE. Thus, all respective hypotheses, are not supported.

6. CONCLUSION

This study examined the relationship between CEO characteristics, namely age, tenure, multiple directorships, gender, nationality, financial expertise, political connections, and being alumni of top world-ranked universities, and the financial performance of the Top 100 PLCs in Malaysia from years 2016 to 2020. According to Hambrick and Mason (1984), firm outcomes can be predicted by referring to CEO's management background. From the regression analyses, the study finds that CEOAGE, CEONATION and CEOFINEXP are negatively and significantly associated with firm financial performance, both measured by ROA and ROE. In addition, CEOGENDER and CEOALUMNI are negatively associated with ROE. As the business world is becoming more globalised, demand for highly competent leaders is stronger than ever. The results suggest that younger CEOs, with foreign nationality, and having more than just financial expertise, are better able to improve firm financial performance. And, female CEOs without the affiliation in top world-ranked university are more efficient in managing the firm's equity investment to generate profits, and consequently increase firm financial performance. This study contributes to the literature on a new CEO characteristic, namely CEO affiliation to a top world-ranked universities. Based on the discussion above, the study finds that CEO characteristics are important information, especially to the BODs, in assessing current CEOs and also for appointing or nominating them. It is hoped that the findings of this study would help other PLCs in appointing their CEO. The finding is also beneficial to the policymakers and regulators, for instance, finding regarding CEO age suggests that policymakers need to reconsider the current age limit of 70 years for an individual to be appointed as a director in Malaysian PLCs. In addition, regulators should monitor the competency of these directors to ensure that PLCs are not negatively affected by their performance. Importantly, the proportion of some independent variable such as CEO's gender, nationality and political connections are unbalanced, thus, findings for such variables should carefully be interpreted. Future research may consider exploring other variables, such as the effect of CEOs behavioural characteristics on non-financial performance.

AUTHORS' INDIVIDUAL CONTRIBUTION

Conceptualization – S. H. and I.H.; Methodology – N. R. A. R. and S. H.; Formal Analysis – N. R. A. R.; Writing-Original Draft – N. R. A. R. and S. H.; Writing-Review & Editing – A. R. M. H. and S. H.; Supervision – S. H.; Project Administration – A. R. M. H., R.F.I. and S. H.; Funding Acquisition – S. H.

APPENDICES**Appendix A: Top 100 PLCs based on Market Capitalization by Bursa Malaysia as of 31 December 2021.**

Rank	Short Name	Board	Sector	Listed Capital ('000 Units)	Market Price (RM)	Market Capitalization (RM '000)
1	MAYBANK	Main Market	Financial Services	11,878,513	8.300	98,591,660
2	PBBANK	Main Market	Financial Services	19,410,692	4.160	80,748,478
3	PCHEM	Main Market	Industrial Products & Services	8,000,000	8.920	71,360,000
4	IHH	Main Market	Health Care	8,796,669	7.340	64,567,554
5	CIMB	Main Market	Financial Services	10,221,457	5.450	55,706,938
6	TENAGA	Main Market	Utilities	5,726,091	9.340	53,481,693
7	PMETAL	Main Market	Industrial Products & Services	8,076,219	5.780	46,680,546
8	HLBANK	Main Market	Financial Services	2,167,718	18.620	40,362,914
9	AXIATA	Main Market	Telecommunications & Media	9,174,987	4.160	38,167,945
10	MAXIS	Main Market	Telecommunications & Media	7,826,271	4.850	37,957,414
11	PETGAS	Main Market	Utilities	1,978,732	18.000	35,617,174
12	DIGI	Main Market	Telecommunications & Media	7,775,000	4.360	33,899,000
13	NESTLE	Main Market	Consumer Products & Services	234,500	134.200	31,469,900
14	MISC	Main Market	Transportation & Logistics	4,463,793	7.050	31,469,741
15	SIMEPLT	Main Market	Plantation	6,915,715	3.760	26,003,087
16	PPB	Main Market	Consumer Products & Services	1,422,599	17.100	24,326,442
17	KLK	Main Market	Plantation	1,081,018	21.780	23,544,567
18	IOICORP	Main Market	Plantation	6,285,199	3.730	23,443,792
19	MRDIY	Main Market	Consumer Products & Services	6,280,460	3.610	22,672,461
20	RHBBANK	Main Market	Financial Services	4,142,919	5.370	22,247,472
21	TOPGLOV	Main Market	Health Care	8,207,019	2.590	21,256,179
22	TM	Main Market	Telecommunications & Media	3,773,701	5.500	20,755,355
23	PETDAG	Main Market	Consumer Products & Services	993,454	20.600	20,465,152
24	HLFG	Main Market	Financial Services	1,147,517	17.340	19,897,943
25	HARTA	Main Market	Health Care	3,427,607	5.730	19,640,187
26	HAPSENG	Main Market	Industrial Products & Services	2,489,682	7.700	19,170,548
27	GENTING	Main Market	Consumer Products & Services	3,876,896	4.670	18,105,105
28	GENM	Main Market	Consumer Products & Services	5,938,045	2.880	17,101,569
29	SIME	Main Market	Consumer Products & Services	6,809,918	2.320	15,799,011
30	INARI	Main Market	Technology	3,702,339	4.000	14,809,356
31	DIALOG	Main Market	Energy	5,645,904	2.620	14,792,268
32	WPRTS	Main Market	Transportation & Logistics	3,410,000	4.050	13,810,500
33	QL	Main Market	Consumer Products & Services	2,433,657	4.570	11,121,813
34	AMBANK	Main Market	Financial Services	3,314,185	3.170	10,505,966
35	MPI	Main Market	Technology	209,884	49.360	10,359,895

36	AIRPORT	Main Market	Transportation & Logistics	1,659,192	5.980	9,921,967
37	VITROX	Main Market	Technology	472,267	19.920	9,407,565
38	F&N	Main Market	Consumer Products & Services	366,779	24.740	9,074,100
39	BKAWAN	Main Market	Plantation	399,535	22.700	9,069,455
40	SUNWAY	Main Market	Industrial Products & Services	4,934,074	1.720	8,486,608
41	GREATEC	Main Market	Technology	1,252,131	6.730	8,426,840
42	TIMECOM	Main Market	Telecommunications & Media	1,825,619	4.600	8,397,847
43	MYEG	Main Market	Technology	7,408,617	1.070	7,927,220
44	SCIENXTX	Main Market	Industrial Products & Services	1,550,998	4.790	7,429,280
45	D&O	Main Market	Technology	1,237,142	5.900	7,299,138
46	GAMUDA	Main Market	Construction	2,513,528	2.900	7,289,233
47	HONGSENG	Main Market	Technology	2,553,625	2.690	6,869,250
48	UWC	Main Market	Technology	1,100,633	6.210	6,834,928
49	YINSON	Main Market	Energy	1,100,124	6.000	6,600,742
50	UNISEM	Main Market	Technology	1,613,079	4.080	6,581,363
51	YTL	Main Market	Utilities	11,022,762	0.580	6,393,202
52	FRONTKN	Main Market	Technology	1,580,153	4.000	6,320,611
53	HEIM	Main Market	Consumer Products & Services	302,098	20.840	6,295,722
54	BIMB	Main Market	Financial Services	2,075,873	3.000	6,227,618
55	CARLSBG	Main Market	Consumer Products & Services	305,748	20.080	6,139,420
56	IOIPG	Main Market	Property	5,506,145	1.100	6,056,760
57	GENP	Main Market	Plantation	897,358	6.700	6,012,300
58	UTDPLT	Main Market	Plantation	416,269	13.880	5,777,808
59	LPI	Main Market	Financial Services	398,383	14.060	5,601,262
60	LCTITAN	Main Market	Industrial Products & Services	2,312,365	2.400	5,549,675
61	IJM	Main Market	Construction	3,645,489	1.520	5,541,143
62	FGV	Main Market	Plantation	3,648,152	1.480	5,399,264
63	BURSA	Main Market	Financial Services	809,299	6.550	5,300,909
64	SPSETIA	Main Market	Property	4,067,979	1.290	5,247,693
65	VS	Main Market	Industrial Products & Services	3,827,163	1.370	5,243,213
66	YTLPOWR	Main Market	Utilities	8,158,209	0.615	5,017,298
67	KPJ	Main Market	Health Care	4,489,159	1.110	4,982,967
68	ASTRO	Main Market	Telecommunications & Media	5,214,507	0.950	4,953,781
69	KOSSAN	Main Market	Health Care	2,557,872	1.920	4,911,114
70	ABMB	Main Market	Financial Services	1,548,106	2.860	4,427,583
71	SIMEPROP	Main Market	Property	6,800,839	0.595	4,046,499
72	SUPERMX	Main Market	Health Care	2,720,620	1.470	3,999,311
73	BAT	Main Market	Consumer Products & Services	285,530	13.980	3,991,709
74	CTOS	Main Market	Technology	2,200,000	1.810	3,982,000

75	PENTA	Main Market	Technology	712,317	5.550	3,953,360
76	UOADEV	Main Market	Property	2,327,599	1.670	3,887,091
77	MBSB	Main Market	Financial Services	7,171,484	0.535	3,836,744
78	AFFIN	Main Market	Financial Services	2,124,062	1.730	3,674,628
79	MALAKOF	Main Market	Utilities	5,000,000	0.720	3,600,000
80	AEONCR	Main Market	Financial Services	255,308	13.620	3,477,291
81	UMW	Main Market	Consumer Products & Services	1,168,294	2.970	3,469,833
82	MFCB	Main Market	Utilities	988,352	3.500	3,459,232
83	GASMSIA	Main Market	Utilities	1,284,000	2.650	3,402,600
84	MCEMENT	Main Market	Industrial Products & Services	1,310,202	2.550	3,341,014
85	ORIENT	Main Market	Consumer Products & Services	620,394	5.250	3,257,067
86	TAKAFUL	Main Market	Financial Services	835,622	3.700	3,091,803
87	AIRASIA	Main Market	Consumer Products & Services	3,898,053	0.790	3,079,462
88	MI	Main Market	Technology	900,000	3.380	3,042,000
89	SAM	Main Market	Industrial Products & Services	135,350	22.400	3,031,838
90	HLIND	Main Market	Consumer Products & Services	327,904	9.180	3,010,156
91	GCB	Main Market	Consumer Products & Services	1,054,807	2.800	2,953,459
92	ARMADA	Main Market	Energy	5,907,045	0.470	2,776,311
93	DRBHCOM	Main Market	Consumer Products & Services	1,933,237	1.430	2,764,529
94	MAGNUM	Main Market	Consumer Products & Services	1,437,749	1.900	2,731,722
95	SKPRES	Main Market	Industrial Products & Services	1,562,735	1.740	2,719,159
96	PMBTECH	Main Market	Industrial Products & Services	217,652	12.280	2,672,770
97	BJTOTO	Main Market	Consumer Products & Services	1,351,030	1.900	2,566,957
98	ECOWLD	Main Market	Property	2,944,368	0.845	2,487,991
99	DNEX	Main Market	Technology	3,155,325	0.760	2,398,047
100	DUFU	Main Market	Industrial Products & Services	542,512	4.290	2,327,375

Appendix B: Measurement of Variables

Variable	Acronym	Descriptions
Return on Assets	ROA	Earnings before interest and taxes (EBIT) divided by total assets
Return on Equity	ROE	Net income divided by total equity
CEO Age	CEOAGE	Age of CEO stated in the annual report
CEO Tenure	CEOTENURE	Number of years of service in the company
CEO Multiple Directorships	CEOMULDIR	Number of directorships in other companies
CEO's Gender	CEOGENDER	Value of 1 for male and 0 for female
CEO Nationality	CEONATION	Value of 1 if Malaysian and 0 for foreigner
CEO Financial Expertise	CEOFINEXP	Value of 1 if the CEO is a qualified financial expert, and 0 if otherwise
CEO Political Connection	CEOPOLITIC	Value of 1 if politically connected, and 0 if otherwise
CEO Alumni	CEOALUMNI	Value of 1 if from a top world-ranked university, and 0 if otherwise

Firm Size	SIZE	Natural logarithm of company Total Assets
Firm Leverage	LEVERAGE	Ratio of total debt divided total assets

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