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Sustainability Performance, Ownership Structures, and Corporate Financial Stability of Shariah-compliant Companies in Malaysia

Mohamad Azwan Md Isa[1*], Norashikin Ismail[2], Mohd Halim Kadri[3]
[1,2] Fakulti Pengurusan dan Perniagaan, Universiti Teknologi MARA, Cawangan Johor, Kampus Segamat, 85000 Segamat, Johor, Malaysia
[3]Fakulti Perakaunan, Universiti Teknologi MARA, Cawangan Johor, Kampus Segamat, 85000 Segamat, Johor, Malaysia

*Authors' Email Address: *[1]moham821@uitm.edu.my, [2]noras479@uitm.edu.my, [3]mhalim@uitm.edu.my*

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*Corresponding Author

ABSTRACT

The launching of the United Nation's SDGs Agenda 2030 in 2015 has boosted sustainability practices among the corporate sectors. Since then, the studies related to corporate sustainability practices and financial performance have gained extensive interest among researchers and academics. Nonetheless, studies on the association between sustainability performance (SUSP) and corporate financial stability (CFS) are still scarce and the results remain inconclusive. Therefore, this study aimed to examine the association between the SUSP and CFS focusing on the Shariah-compliant companies in Malaysia. In addition, this study attempted to investigate the moderating roles of different forms of ownership structures on the SUSP-CFS nexus. Using balanced panel data from 2021 to 2023, the Fixed Effect models as suggested by the Hausman test, indicate that the SUSP has mixed association with CFS. In addition, concentrated ownership has a negative but insignificant influence on the CFS whilst managerial ownership shows positive but insignificant influences on the CFS. In terms of moderating roles, concentrated ownership indicates a weakening effect on the SUSP-CFS association whilst managerial ownership poses a strengthening effect on the SUSP-CFS association. This study benefits the management of companies, investors and policymakers as well as enriching the body of knowledge on sustainability-financial stability literature. The corporate sectors need to sustainability practices through ESG initiatives in their strategic planning. The investors have to support the corporate sustainability practices by taking into account the sustainability factors in their investment decisions. Policymakers are to play more attentive roles in encouraging the corporate sectors in their sustainability practices by providing efficient infrastructure, robust ESG frameworks, and effective incentive packages. With these concerted efforts, the global SDGs agenda can be materialized successfully besides ensuring the financial stability of the Shariah-compliant companies in Malaysia.

Keywords: *concentrated ownership, corporate financial stability, ESG, managerial ownership, sustainability performance*

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INTRODUCTION

Corporate financial stability (CFS) has increasingly gained attention among researchers particularly in the aftermath of economic events or financial crises (Wymeersch, 2008; Jakubík & Teplý, 2011; Lupu 2015; Cooper, Henderson, & Kish, 2019; & Nguyen et al., 2023). The CFS has been affected by the multi-decade's higher-than-anticipated inflationary pressure. The geo-political instability has also dragged the CFS into uncertainty. Large-sized companies have experienced a significant decline in profitability due to abrupt increases in costs whilst small- and mid-sized companies have faced the probability of bankruptcy due to a rising trend in liquidity and credit risks (IMF, 2022). In Malaysia, the corporate sector has been facing a difficult operating environment, which was mainly contributed by upraised input costs owing to supply-chain disorders, increasing global commodity prices and weakening ringgit value (BNM, 2023).

These factors have depressing effects on the corporate sector's profitability. The average operating margin for the overall corporate sector was merely 6.6% from 2015 to 2019. Notably, 19 percent of the Top 100 publicly listed companies (PLCs) at Bursa Malaysia have recorded low operating margins below the threshold (6.6%) from 2020 to 2023. Even worse, the corporate sector's ability to service debt obligations has declined based on the rising trend in the debt-to-equity ratio (DER) for the corresponding four-year period (Refinitiv Eikon, 2024). As of February 2024, 42 percent of the Top 100 PLCs have a DER of more than 100% (Refinitiv Eikon, 2024), implying that the PLCs have an extremely high credit risk. Notably, each PLC's DER has surpassed the respective industry's median as released by BNM. The trend is alarming as the annual DER of the PLCs was increasing over the period from 2020 to 2023 and was far too high compared to the average DER (23.2%). Mugun Odhiambo and Momanyi (2019) noted that high DER has a negative impact on the companies' financial performance. Nuswantara et al. (2023) added that the companies with high DER are financially distressed which can bring them towards bankruptcy. In regard to the declining operating margin and rising credit risk, it triggers the financial instability of the corporate sectors in Malaysia.

In the meantime, sustainability issues have gained profound interest among the corporate sectors over the last two decades. The emergence of environmental and social issues such as renewable energy, carbon emission, workforce diversity, labour practices, and consumer data privacy and security have become increasingly concerning. The fact is that these issues may intrude on the sustainability performance (SUSP), which ultimately influences the CFS. On one hand, SUSP enhances corporate reputation and brand image and influences investors' decisions on the companies (Chen, Song & Gao, 2023). The companies that perform well in sustainability practices would be able to attract public sympathy (Cohen, 2023), more secure and trusted by the stakeholders (Atkins, 2020; Chen et al., 2023). Furthermore, SUSP contributes towards financial efficiency (Iazzolino et al., 2023), creates greater business value (Hagen, 2021) and establishes a pragmatic corporate culture (Bukhari, 2023).

On the other hand, SUSP requires the corporate's strong commitment operationally and financially (Efthymiou, Kulshrestha & Kulshrestha, 2023). The report stated the corporate sectors' expenditure on sustainability practices has increased year by year and this imposed an extra financial burden on the companies as more resources need to be allocated to improve SUSP (Ang et al., 2022; Pérez et al., 2022). This becomes a new challenge to the corporate sectors in the integration of SUSP as the relevant costs are exorbitant and instant (Papageorgiou & Suntheim, 2019). The survey by PwC (2022) revealed that 75% of global companies had to commit to sustainability practices despite its negative impact on their profitability in the short term. The debate is still ongoing on whether the sustainability practice is an effective business strategy for improving corporate efficiency and profitability in the near future and distant future (Andrey, 2023). Due to these arguments, it is crucial to investigate further the SUSP-CFS nexus, particularly among the Shariah-compliant companies in Malaysia, which was not deeply explored in previous studies.

Meanwhile, the ownership structure (OWNS) is one of the core internal structural characteristics, which plays a very pivotal role in the corporate sector by affecting the corporate policies and decisions besides having influences on the corporate culture, and business operation and process (Chen & Tan, 2013; Handoyo et al., 2023). In addition, the OWNS demonstrates its significance in terms of effective management monitoring and incentives (Batra, Saini & Yadav, 2023), quality of corporate reporting (Raimo et al., 2020) and innovation in the businesses (Lee, 2023). A stable OWNS contributes to creation of the corporate value in the long term and promotes a higher level of investments, especially during the crisis period (Lardon, Beuselinck & Deloof, 2019). Moreover, an ideal OWNS not only contributes towards the better financial performance of the companies (Sarpong-Danquah, Oko-Bensa-Agyekum & Opoku, 2022; Nashier & Gupta, 2023), but it also helps in elevating the companies' efficiency and reducing the cost of capital (Habib et al., 2022; Faysal, Salehi & Moradi, 2020).

Specifically, the companies with large, concentrated ownership (CONC) will be actively monitored, thus reducing the agency problem and costs that might arise (Nashier & Gupta, 2023). However, Maniruzzaman, Hossain and Sayaduzzaman (2024) claimed the larger CONC increased the agency problem and had no significant influence on the companies' financial performance. In Malaysia, the CONC was revealed to have a positive effect on the firm performance of the Shariah-compliant listed companies (Shahrier, Ho & Gaur, 2020). However, Karim, Manab and Ismail (2023) contradicted the results by concluding that CONC had a significant negative influence on the operating-based performance whereas, CONC had no significant effect on the market-based performance of Malaysian non-financial companies. In contrast, Mohamad et al. (2020) proved the CONC had no significant relationship with both the operating and market performances of Malaysian companies.

The previous studies on the relationship between SUSP and CFS are still scarce and yet inconclusive. Maquieira et al. (2024) claimed the overall SUSP, proxy by the ESG score, has a significant relationship with CFS specifically the environmental and social performances whereas, Bakri et al. (2023) revealed only environmental performance significantly relates to CFS whilst social and governance performances are not significant. Meanwhile, Antunes et al. (2023) noted that only governance performance has a significant but negative relationship with the CFS. Interestingly, the SUSP (ESG) was found to reduce the CFS according to Magnússon (2023). The result was supported by Cohen (2023), who concluded the higher cost incurred in mitigating the environmental and social risks diminishes the CFS. However, Kanoujiya et al. (2023) argued the SUSP alone does not influence the CFS. These inconclusive findings revealed in the abroad markets have brought about doubt on which contention is applicable to the Malaysian corporate sector.

The relationship between OWNS and CFS is also indecisive. Tarighi et al. (2022) and Santoso and Nugrahanti (2022) claimed managerial ownership enhanced CFS whilst Chen et al. (2020) and Gerged et al. (2022) emphasized that no significant impact was caused by managerial ownership on the CFS. Meanwhile, Donker et al. (2009), Ramly (2013) and Al-Absy (2020) evidenced that concentrated ownership significantly increases the CFS. The results were also supported by Peljhan et al. (2020) and Fernando et al. (2020), who noted that concentrated ownership was considered as an ideal organizational attribute to better protect the owners' interest in the companies, thus contributing to CFS. On the contrary, Rubio-Misas (2020), Olga et al. (2022) and Gerged et al. (2022) argued that concentrated ownership diminishes the CFS due to the misalignment of interests between owners and managers, which contributed to the agency problem, thus raising the agency cost and financial instability. Notably, the relationships between different forms of OWNS and the CFS are inconclusive and debatable, thus requiring further examination.

Motivated by the above arguments, we aimed to examine the association between SUSP and CFS specifically of the Shariah-compliant companies in Malaysia. We purposely focused on the Shariah-compliant companies as they were expected to embrace more sustainability practices, which are in line with the Shariah principles and *Maqasid Shariah* such as the preservation of life and wealth. In addition, we attempted to investigate the roles of OWNS in moderating the SUSP-CFS association.

To the best of our knowledge as per the literature search, this study is the first attempt, in a Malaysian corporate setting, to investigate the SUSP-OWNS-CFS relationship using the adjusted z-score (Emerging Market Score) proposed by Altman (2005) to proxy the CFS along with two different forms of OWNS. This study is crucial because it will shed light on how important the SUSP is in enhancing the CFS through delivering good values to all levels of stakeholders as per Stakeholder theory (Freeman, 1984). Furthermore, the presence of OWNS will help incentivise the corporate management towards committing to SUSP, which ultimately benefits the companies and maximises the owners' wealth as per Agency theory (Jensen & Meckling, 2019). The remainder of the study is arranged as follows; the next section presents the literature review and hypotheses, followed by the data and methodology, then the results are analysed and discussed, and lastly, we conclude the study.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Jia and Li (2022), and Shih et al. (2021) explained the SUSP (proxy by environmental pillar) has a positive significant influence on the CFS. Their results implied that the more companies engage in environmental activities, the higher their financial stability. The results are in accordance with Cooper and Uzun (2019), who noted that the more concerned the companies are about the environmental issues, the more support the companies will gain from the stakeholders. Their studies further revealed that the positive influence of the SUSP is more pronounced for the companies with higher volatility in their stock return. Meanwhile, Citterio and King (2023) concluded that SUSP played a pivotal role in predicting bankruptcy. Their result suggested that the appropriate measures and actions taken by the companies pertaining to the ESG-related risks will bring about financial stability, thus preventing the companies from going into bankruptcy. In addition, the investment in ESG activities should be considered as a long-term strategy by the companies despite the ESG's adverse influence on profitability in the short term (Hsiao et al., 2022). The study further iterated that the investment for the social activities has deferred positive significant impact on the overall CFS.

Li, Zhang and Zhao (2022) also suggested high SUSP enhances financial stability. Furthermore, the study proved the extent of SUSP impact on companies' financial stability is more noticeable for non-manufacturing companies. The study was in support of Cooper and Uzun (2019), who claimed that companies with lower SUSP, will have lower financial stability especially the companies in the mining and manufacturing industries. Meanwhile, Shih et al. (2021) noted the extent of SUSP impact on companies' financial stability is more pronounced for companies with high systematic risk, fragile business foundation, serious pollution and high energy consumption. The studies also highlighted that the impacts of the SUSP differ between the industries or sectors. Moreover, the companies that are highly exposed to the credit, market and environmental risks will experience lower financial stability. With regard to governance performance, Lisin et al. (2022), and Saidane and Abdallah (2021) proved that governance posed the largest impact on improving the companies' financial stability. In addition, their studies revealed that there is a positive interaction between the SUSP and the companies' size in enhancing the CFS. The result signifies that better financial performance contributes to an increase in the size of companies. The larger the size, the higher transparency and ESG disclosure or reporting are expected from the companies. Consequently, this results in an improvement in the SUSP, thus increasing the companies' financial stability.

In contrast, Cohen (2023) revealed that the SUSP (environmental and social pillars) negatively influenced the CFS. The companies, which are highly exposed to environmental and social risks, need to spend more to mitigate both types of risk, thus lowering their financial performance, and consequently reducing their financial stability. In addition, too much focus on environmental and social issues will distract the companies' management from their core business operation which can lead to lower revenue and profitability. Next, the robustness test of the study indicates that social performance has the most significant negative impact on the CFS particularly of the large-sized companies whilst the governance posed no significant impact on the CFS. The finding by Cohen (2023) on the environment is consistent with Saidane and Abdallah (2021). However, Saidane and

Abdallah (2021) concluded that governance has a positive significant influence on the CFS. Meanwhile, a high SUSP (combined ESG score) has no significant impact on the CFS specifically during the period of economic upsurge (Habermann & Fischer, 2023). Nevertheless, an increase in the SUSP in the prior year resulted in a decline in CFS in the following year. Their study further indicated that social performance plays a key role in influencing overall financial stability despite its no immediate impact in the short term. However, the governance performance positively and significantly influences the financial stability during the economic upsurge. Nonetheless, the change in governance performance in the prior year indicates no significant influence on financial stability in the current year. More importantly, their results contradicted the studies by Citterio and King (2023) and Aslan, Poppe and Posch (2021), who claimed the significant influence of the SUSP on financial stability. Therefore, we hypothesised that:

H1: Sustainability performance has a positive association with the corporate financial stability of Shariah-compliant companies in Malaysia.

Empirically, managerial ownership (MANG) has a positive influence on the CFS as revealed by the majority of studies (Tarighi et al., 2022; Santoso & Nugrahanti, 2022; Bakar & Noordin, 2021; Ghahroudi, Hoshino & Fakhraei, 2019; Khurshid et al., 2019). Their results imply that the larger the MANG, the higher the financial stability of the corporate sector. Rationally, the top management or directors, who hold the companies' shares or become part of the owners, will certainly decide and act with high prudence, accountability and responsibility, thus ensuring the CFS. In addition, the MANG is able to align the interests and vision of both principals and agents, thus mitigating the agency conflict (Jensen & Meckling, 2019) and enhancing financial stability. Ratnawati, Abdul-Hamid and Popoola (2016) proved that MANG prevents the management from earnings manipulation. The study suggested that optimal MANG is crucial to playing effective roles in preventing misconduct among managers, thus ensuring the financial stability of the corporate sector. Nonetheless, Chen, Chen and Lien (2020) and Gerged, Yao and Albitar (2022) claimed that MANG has no statistically significant impact on the CFS. Meanwhile, Lim and Yen (2011) found the lower MANG leads to a convergence of interest between the principals and agents, thus overcoming the agency conflict Type I (owner-agent conflict). However, once the percentage of MANG gets larger, particularly among the executive directors; that will lead to the act of expropriation at the expense of the minority shareholders, thus contributing to the agency conflict Type II (owner-owner conflict). This circumstance is not favourable and damages the companies' reputation among the market investors and leads to financial instability of the companies. Therefore, we hypothesised that:

H2: Managerial ownership positively influences the corporate financial stability of Shariah-compliant companies in Malaysia.

In regard to concentrated ownership (CONC), Donker, Santen and Zahir (2009), Ramly (2013), and Al-Absy (2020) suggested that CONC significantly increases the CFS. The positive impact of the CONC was also supported by Peljhan, Zajc Kejžar and Ponikvar (2020) and Fernando, Li and Hou (2020). The CONC is considered an ideal organisational characteristic to mitigate the principal-agent problem (agency conflict Type I), thus better protecting the principal's or owners' interest (Jensen & Meckling, 2019). The larger CONC means huge incentives and capabilities to control, direct monitoring and supervision on the board of management (Faisal, Majid & Sakir, 2020; Nurim, Sunardi & Raharti, 2017), thus urging the agents (managers) to act in the best way to enhance firms' value and ensure the financial stability of the companies. In contrast, the larger CONC was found to cause the CFS to deteriorate (Olga et al., 2022; Gerged et al., 2022). The CONC may overcontrol or restrict the companies' management from making the best decisions with respect to matters that do not directly benefit the owners such as involvement in philanthropic activities and social activities. In addition, too strict monitoring and supervision could negatively influence management performance, motivation and efficiency. Consequently, the CFS will be at stake. Furthermore, Faisal et al. (2020) and Nurim et al. (2017) revealed that CONC had a negative impact that led to agency conflict Type II, namely between the majority and minority shareholders. The top shareholders with larger control might misuse the power through earnings manipulation and expropriation of minority shareholders' interests, thus negatively affecting the firms' value and ultimately diminishing CFS. Therefore, we hypothesised that:

H3: Concentrated ownership negatively influences the corporate financial stability of Shariah-compliant companies in Malaysia.

With respect to the moderating roles, MANG was found to significantly strengthen the impact of the SUSP (economic, social and governance) on the Banking companies' performance in Indonesia (Tristanto et al., 2023). Similar findings were highlighted by Wu et al. (2022), who suggested that the MANG strengthens the positive influence of the SUSP and companies' value in China. Moreover, in Jordan, the MANG strengthens the negative relationship between corporate environmental disclosure and earnings manipulation (Alhmood et al., 2023). The results imply that MANG plays a crucial role in enhancing the companies' performance and value when interacting with the SUSP. In addition, the results suggest that the MANG is important to minimise unethical practices such as earnings manipulation among the top management. Therefore, we hypothesised that:

H4: Managerial ownership has a strengthening moderating effect on the association between sustainability performance and corporate financial stability of Shariah-compliant companies in Malaysia.

In regard to the CONC, a study on Chinese companies revealed that the CONC plays an important role in mitigating the positive impact of CSR performance on information asymmetry (Rehman et al., 2022). The CONC was also found to have a significant weakening effect on the positive influence of the CEO power on the stock price crash risk in China (Shahab et al., 2020). Meanwhile, Buertey (2021) noted that CONC reduced the positive relationship between board gender diversity and CSR reporting assurance. Similarly, in China, the CONC weakened the positive impacts of CSR practices on financial performance (Ang et al., 2022). Nonetheless, there was no significant moderating effect of CONC on the positive nexus between ESG performance and firms' value revealed by Wu et al. (2022). Therefore, we hypothesised that:

H5: Concentrated ownership has a weakening moderating effect on the association between the sustainability performance and corporate financial stability of Shariah-compliant companies in Malaysia.

Gaps of the Study

Based on the literature reviewed, there are still several potential gaps of study related to sustainability performance (SUSP) and corporate financial stability (CFS) that can be further investigated. Firstly, the previous studies have shown mixed and inconsistent results in terms of the relationship between the SUSP and the CFS, where positive results outweigh negative results. The studies by Jia and Li (2022), Citterio and King (2022), and Castenholz (2021) revealed a positive relationship whilst Cohen (2023) and Hsiao et al. (2022) claimed a negative relationship. Meanwhile, Habermann and Fischer (2021) proved that the SUSP has no relationship with the CFS.

The conflicting results can be attributable to different proxies used to measure the SUSP. Some studies measured the SUSP using the aggregate (combined) ESG score (Citterio & King, 2022; Harymawan et al., 2021) whereas, some other studies used disaggregate (individual) pillar (E/S/G) score (Jia & Li, 2022; Saidane & Abdallah, 2021) to proxy the SUSP. In addition, the ESG scores or ratings to measure the SUSP were obtained from different sources such as Refinitiv Eikon, FTSE Russell, Bloomberg and MSCI. Different sources or databases have used different indicators, criteria, bases or metrics for the construction of the scores, and different mechanisms in the calculation of the scores, thus resulting in various outcomes in the studies.

As for the measures of CFS, most studies such as by Mulyaningsih et al. (2023), Habermann and Fischer (2023), and Cooper and Uzun (2019) used the most common measure, namely Altman's Z-score whilst Lisin et al. (2022) and Castenholz (2021) applied the alternative measure for Altman's Z-score, namely Ohlson's O-score whereas, Hsiao et al. (2022) used the change (delta) of Z-score. Meanwhile, Castenholz (2021) also applied Shumway's Hazard Model; Atif and Ali (2021) used Merton's Distance to Default (DD) and Credit Default Swap (CDS) spread, and Aslan et al. (2021) employed averaged one-year Corporate Transition Probabilities to measure or proxy the CFS. Different proxies for the CFS had possibly contributed to the conflicting findings as each model or proxy uses different input data with unique assumptions.

Different samples from different countries also contributed to the mixed results. For example, Saidane and Abdallah (2021) studied the African firms that have low or poor performance in the SUSP (ESG scores), particularly in the environmental and social aspects. Meanwhile, Atif and Ali (2021), Lisin et al. (2022) Habermann and Fischer (2021), Castenholz (2021), Citterio and King (2022), and Aslan et al. (2021) focused on the US, European and North American firms, which are known as the developed markets with very high performance in the sustainability and CFS. Hsiao et al. (2022), Li et al. (2022), and Shih et al. (2021) concentrated on Chinese firms and Harymawan et al. (2021) looked into the Indonesian firms, where both countries are among the largest economies in the world in the developing markets. Therefore, this current study will present the results from the Malaysian context, which can be a significant contribution to enriching the literature and body of knowledge in the sustainability area as Malaysia was ranked as the top three countries in Asia with the best corporate sector sustainability reporting and disclosure in 2022 following Japan and Singapore (KPMG, 2023).

Furthermore, based on the extensive review of the literature, almost all studies related to Malaysian samples had focused on the relationship between the SUSP (ESG scores or disclosure) and firms' financial performance (FINP) and value. The studies by Atan et al. (2018), Sadiq et al. (2020), Jasni and Yusoff (2021), Lee and Isa (2022), and Ismail et al. (2022), for example, used different proxies for the FINP and value such as return on asset (ROA), changes in ROA, return on equity (ROE), Tobin's Q, and weighted average cost of capital, respectively. The FINP is measured using a single financial metric, thus was unable to present the actual CFS. Therefore, this study is crucial to have an in-depth and inclusive examination of the relationship between the SUSP and the CFS in the Malaysian setting. In addition, to the best of authors' knowledge, the previous studies on Malaysian context have not specifically tested the relationship between the SUSP and CFS with different forms of OWNS as the moderators under the frameworks of Stakeholder and Agency theories like the studies conducted by Hsiao et al. (2022), Shih et al. (2021), and Saygili et al. (2022), which were tested on the other developed and developing countries.

This current study will test both the combined and individual pillars of ESG scores to proxy SUSP to come up with comprehensive and robust results. In addition, this study will employ the Emerging Market Score (EMS) by Altman (2005) to proxy the CFS. The EMS is an adjusted version of the original Z-score (Altman, 1968), which was meant for the manufacturing companies in the US market. The EMS was developed to better measure the CFS of both manufacturing and non-manufacturing companies in the emerging markets. As per the literature review, there was no previous study on the Malaysian corporate setting that has used the EMS as a proxy for CFS. Hence, to fill those gaps, this current study will investigate the Malaysian CFS using the EMS as the proxy in relation to the SUSP (proxies by combined and individual ESG scores) with the moderating effects of OWNS (proxies by managerial and concentrated ownerships).

DATA AND METHODOLOGY

In this study, we used convenience sampling due to the easy accessibility and availability of ESG scores in the Refinitiv database. In addition, the companies were selected from the FTSE4Good Bursa Malaysia (F4GBM) Index constituents. The F4GBM Index was launched in December 2014 to enhance the profiles and exposures of the listed companies at Bursa Malaysia with leading sustainability (ESG) practices besides stimulating the companies to disclose their best practices. As of December 2023, there were a total of 109 companies under the F4GBM. Out of the total, 10 companies were non-Shariah-compliant, 15 financial companies and 84 Shariah-compliant non-financial companies. We excluded financial companies because they have a unique capital structure and different accounting treatments besides different reporting requirements (Habermann & Fischer, 2023; Ahmad et al., 2023). However, the final sample was only 37 companies, which had complete ESG scores in the Refinitiv Eikon database from 2021 to 2023. The 37 companies constitute part of the Top 100 companies (37%) at Bursa Malaysia and duly represent the large- and mid-cap companies in Malaysia. Therefore, the results of the study can be generalizable to other companies in the Top 100 constituents and other small-cap companies at the exchange. The dependent variable of the study is the CFS using the proxy of adjusted Z-score (EMS) as tested by Shahwan and Habib (2020), and Habib and Kayani (2022). We manually calculated the EMS using the EMS model (Altman & Hotchkiss, 1993; Altman, 2005) as follows:

$$EMS = 3.25 + 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4$$

where:

EMS = Adjusted Z-score for the emerging markets companies
X1 = working capital / total assets
X2 = retained earnings / total assets
X3 = earnings before interest and taxes / total assets
X4 = book value of equity / total liabilities

Precisely, X1 measures the liquidity of companies in meeting short-term needs and obligations, X2 captures companies' sustainable profitability and reinvestment opportunity, X3 represents companies' operating efficiency in generating income from the assets utilised, and X4 indicates companies' level of solvency. Companies with an EMS of more than 5.85 are considered as 'financially stable and healthy' (Habib & Kayani, 2022). Otherwise, the companies are categorised as 'financially unstable'. The raw financial data for EMS was collected from the respective companies' financial statements. As for the independent variables, the combined ESG score is used to proxy SUSP (Saidane & Abdallah, 2021; Habermann & Fischer, 2023). The scores were sourced from Refinitiv Eikon. The concentrated ownership (CONC) was measured using the substantial shareholdings, namely 5% or more following Alhmood et al. (2023) and Al Lawati and Sanad (2023). The managerial ownership (MANG) was measured using the percentage of shareholdings by the companies' directors, CEOs and senior management (Tristanto et al., 2023; Wu et al. (2022). The raw data for CONC and MANG was manually collected from the companies' annual reports under the shareholdings analysis section.

This study also included three control variables namely the companies' size, age and dividend. Total assets (operating-based) were used to proxy the size (Ismail et al., 2022; Hsiao et al., 2022; Harymawan et al., 2021). In addition, we used the market capitalisation (market-based) following Cohen (2023), Hashmi et al. (2020), and Dang, Li and Yang (2018), who emphasised the importance of the right proxy for the size as different proxies captured different aspects of firms' size, and therefore have different implications. Both proxies of the firms' size will be tested in tandem or one model as there was no multi-collinearity issue between the two proxies based on the correlation coefficient below 0.8. As for the firms' age, we based it on the number of years of firm incorporation (Harymawan et al., 2021; Diantini, Darmayanti & Candraningrat, 2023). The larger and older companies are supposed to have more resources either financial or physical, thus can contribute more to the sustainability activities (Abdi, Li & Càmara-Turull, 2022). The dividend yield (DY) was also used as a control variable following Saygili, Arslan and Birkan (2022) and Shakil et al. (2019). The DY was found to have significant negative influences on the financial performance and value of companies (Saygili et al., 2022). The raw data for the control variables were sourced from the Refinitiv Eikon.

This study used secondary, annual and short-panel data covering the period from 2021 to 2023. The balanced panel with 111 observations was tested by employing the static panel data techniques of analysis, namely pooled ordinary least square (POLS), fixed effect (FE) and random effect (RE) following Saygili et al. (2022) and Ismail et al. (2022). Static panel data was selected as our sample period is short, only 3 years. In addition, we assume that the z-score (CFS) of the current year is independent of the z-score of previous years. Static panel analysis increases the efficiency of estimation and enhances the degree of freedom. In addition, the static models are able to control for unobserved heterogeneity, which allows for more accurate estimation and analysis. The estimation bias can also be minimized by pooling the data. We determined the appropriate estimation model for the final analysis based on the BP-LM test between POLS and RE and the Hausman (1978) test between RE and FE. Besides, we also used descriptive, correlation and diagnostic analyses. We run the tests in the EViews11 software based on the following models:

Baseline model:

$$CFS_{it} = \propto + \beta_1 SUSP_{it} + \beta_2 SIZE_{it} + \beta_3 AGE_{it} + \beta_4 DIV_{it} + \in_{it}$$

Moderating (interacting) model:

$$CFS_{it} = \propto + \beta_1 SUSP_{it} + \beta_2 OWNS_{it} + \beta_3 (SUSP_{it} * OWNS_{it}) + \beta_4 SIZE_{it} + \beta_5 AGE_{it} + \beta_6 DIV_{it} + \in_{it}$$

Where CFS, SUSP, OWNS, SIZE, AGE, and DIV are as explained above. The $\propto$ represents the constant term, β indicates the beta coefficients of the respective variables, ∈ is the error term, i represents the unit of analysis (individual company) and t indicates the respective year of observation (2021-2023).

RESULTS AND DISCUSSION

Descriptive Statistics and Correlation Analysis

Table 1 summarises the descriptive statistics. The sample of *Shariah*-compliant companies indicated a mean EMS of 7.73, implying that on average, the companies are financially stable as the EMS above 5.85 (Habib & Kayani, 2022). However, there is a large disparity between the minimum and maximum values, which means some companies are highly financially stable with the EMS as high as 18.37 whilst some companies are financially unstable with the EMS as low as 1.62. With respect to SUSP, there are companies with good performance above 80 whilst some performed poorly below 50. However, on average, the companies scored 55.4 and that can be considered a satisfactory performance.

Table 1: Descriptive Statistics

	EMS	ESGP	CONC	MANG	LOGTA	LOGMCAP	LOGAGE	DY
Mean	7.7328	55.4364	54.0502	4.7688	22.6219	8.9817	3.2498	3.1667
Max.	18.3674	82.4700	82.2900	48.5800	26.0508	11.1755	4.1271	25.0000
Min.	1.6181	28.0000	7.2300	0.0000	19.7000	5.7090	1.0986	0.0000
Std. Dev.	3.6989	13.8270	19.1510	9.3155	1.5532	1.3900	0.7108	2.8956
Skewness	1.1634	-0.1591	-0.6475	3.0611	-0.0715	-0.6199	-1.1621	4.1596
Kurtosis	3.8408	2.0515	2.6324	13.8363	2.3808	2.6843	3.9268	30.8979
Obs.	111							

As for the moderating variables, some companies' ownerships are extremely concentrated above 80% and some have low ownership concentration below 10%. But, on average, the companies have a high ownership concentration above 50%. Meanwhile, the *Shariah*-compliant companies show negligible or very low managerial ownership with an average of 4.7%. The size and age indicate a slight disparity between the lowest and highest values. However, dividend indicates a large disparity with a low average of 3%, which might be due to the post-pandemic effects.

As for the correlation matrix in Table 2, all the variables show negative and weak correlations with EMS except for MANG and DY. That implies when the variables increase, the EMS will decrease and vice versa. The results signify that when the companies performed in the SUSP, their financial stability deteriorated. Likewise, the companies that had high ownership concentration would face financial instability. However, managerial ownership contributed to increased financial stability. Meanwhile, larger and older companies have not necessarily been stable financially but the companies with high dividends would enhance their financial stability. In sum, there is no strong correlation between the independent and control variables (below 0.5), which means there is no issue of multi-collinearity in the data.

Table 2: Correlation Matrix

	EMS	ESGP	CONC	MANG	LOGTA	LOGMCAP	LOGAGE	DY
EMS	1.0000							
ESGP	-0.1810	1.0000						
CONC	-0.1572	0.0159	1.0000					
MANG	0.1046	-0.0334	-0.1666	1.0000				
LOGTA	-0.4056	0.2725	0.2774	-0.3966	1.0000			
LOGMCAP	-0.0948	0.2566	0.4340	-0.4224	0.7826	1.0000		
LOGAGE	-0.2426	0.1213	0.1139	-0.1678	0.4034	0.1132	1.0000	
DY	0.1022	0.0742	0.1246	0.0401	0.2580	0.1232	0.2032	1.0000

Regression

First, we regressed based on the POLS model and then followed by the Breusch-Pagan LM test. The p-value of the BP-LM test (<0.05) suggested that the RE model is appropriate for our result analysis. Next, we regressed based on the RE model which was followed by the Hausman test. The p-value of the Hausman test (<0.05) suggested that the FE model is the best estimation for this study. Therefore, in the next regression analysis, we based on the results from the FE models (see Table 3). The FE models are advantageous over the RE models as the FE is able to control for omitted variables, thus minimizing bias from unobserved variables that are time-invariant. In other words, the FE is able to handle the unobserved heterogeneity that does not change over the period. The FE also presents more consistent estimations than the RE in the event the explanatory variables are correlated with the error terms.

The SUSP (ESGP) indicates a negative association, despite insignificant, with the EMS (CFS) in the baseline model. A similar result is shown in moderating model II (with MANG). However, the SUSP is positive, despite insignificant, associated with EMS in moderating model I (with CONC). The results imply that the SUSP association with the EMS varies depending on the absence or presence of different forms of ownership structures in the companies. The negative association is consistent with Cohen (2023) whilst positive results are in accordance with Li et al. (2022) and Lisin et al. (2022). Therefore, our H1 is not supported. The negative result suggested that the SUSP of Shariah-compliant companies in Malaysia does not help them to improve the CFS. The main reasons can be attributable to the increased and huge financial resources that are required for sustainability practices, thus diminishing their profitability and liquidity and even raising their leverage. The insignificant result justifies that the SUSP is still lacking among and less valued by the Shariah-compliant companies in Malaysia. Our result supports the latest study by Wong (2024), who studied 41 Malaysian companies and revealed negative insignificant influences of SUSP (ESG) on the firm’s financial performance.

Meanwhile, the CONC negatively influences EMS but is insignificant. However, the MANG positively influences EMS and it is also insignificant. The result signifies that the presence of CONC will contribute to companies' financial instability. This result is in support of Olga et al. (2022) and Gerged et al. (2022), who claimed strict control by the concentrated owners, might restrict the management from making the best decisions for the companies, thus adversely affecting their financial stability. The result on MANG is consistent with Tarighi et al. (2022) and Bakar and Noordin (2021). The management ownership is able to align the interest and vision between the owners and agents, thus reducing the agency's problem and cost (Jensen & Meckling, 1976). In addition, the management with shared ownership will deliver their tasks with high prudence and accountability in ensuring the companies' financial stability. Nevertheless, the H2 and H3 are not fully supported.

Table 3: Regression Results

	Baseline Model		Moderating Model I		Moderating Model II	
Variable	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**
C	2.0447	0.8703	7.1094	0.5634	0.465296	0.9707
ESGP	-0.0012	0.9165	0.0281	0.4608	-0.001251	0.9201
CONC			-0.0567	0.3018		
MANG					0.1170	0.3860
ESGP_CONC			-0.0006	0.3480		
ESGP_MANG					0.0007	0.6128
LOGTA	-0.6574	0.2781	-0.5293	0.4004	-0.7221	0.2402
LOGMCAP	0.9629	0.0629*	0.8911	0.0801*	1.0608	0.0458**
LOGAGE	3.6539	0.0332**	2.3465	0.1899	4.0860	0.0210**
DY	0.0326	0.4402	0.0581	0.1828	0.0383	0.3803
Durbin-Watson	2.2646		2.2803		2.3180	
R-squared	0.9629		0.9662		0.9638	
F-statistic	43.6912		44.5604		41.4669	
Prob(F-statistic)	0.0000***		0.0000***		0.0000***	

(*** $p < .01$, ** $p < .05$, * $p < .10$)

On the moderating effects, the results show insignificant effects by both moderating variables. The result implies the presence of both OWNS will not have significant effects on the SUSP-EMS nexus of the Shariah-compliant companies in Malaysia. Nonetheless, in regard to the magnitude of effects, both moderators are found to weaken the positive relationship between the SUSP and EMS (CFS). Our result is consistent with Wu et al. (2022). However, the H4 and H5 are not supported. Despite insignificant results, this study highlights that concentrated ownership and managerial ownership have shown their effects on the SUSP-CFS. The larger CONC, which is majority of government-related institutions, does not approve of the commitment of Shariah-compliant companies to sustainability practices. The CONC still believe the SUSP is not able to contribute to the companies' profitability but the SUSP is only depleting the companies' resources, thus triggering their financial instability (Ang et al., 2022; Pérez et al., 2022). The larger MANG is also not favourable as it can lead to rising agency conflict. The larger the conflict the larger agency cost is required to monitor the management actions. Therefore, fewer funds are allocated for SUSP, resulting in lower trust and legitimacy among the external stakeholders. This can lead to tarnished corporate reputation, thus contributing to corporate financial instability.

As for the companies' size, total assets have an insignificant negative relationship with the CFS. Meanwhile, market capitalisation indicates a significant positive relationship with CFS. The results prove the notions by Hashmi et al. (2020) and Dang et al. (2018), who suggested different proxies captured different aspects of firms' size, thus resulting in different implications. Our finding signifies that the total assets would not necessarily guarantee the financial stability of companies. In addition, the companies need to improve their market capitalisation in enhancing their financial stability. The share price, which is the main contributor towards the market capitalisation, is very sensitive towards the firms' financial performance and stability. The conflicting results between the two proxies on the EMS indicate that the operating measure of size based on the historical cost (TA) has an inverse impact on the CFS whilst the market measure of size (MCAP) is a more dynamic and more accurate representation of the market valuation on the companies' CFS.

The age indicates significant influence on the EMS, implying the older the companies the more stable they are financially. The companies that have been in the market for decades will be more persistent and stronger, thus having higher survivorship. Our study supports Harymawan et al. (2021) but conflicts with Hsiao et al. (2022), who showed a negative relationship between age and firms' financial situation. The companies that pay dividends also have higher financial stability according to our study. The high dividend will be able to retain the existing investors and attract new investors, thus contributing towards the enhanced financial stability of the Shariah-complaint companies in Malaysia. However, our study contradicts Saygili et al. (2022) and Abdi et al. (2021).

Diagnostic Tests

The results of each model show a very high R^2 and p-value of F-statistic < 0.05. That indicates the significance of the models with high explanatory power of each variable on the dependent variable (EMS). The Durbin-Watson statistics that are close to 2.0 suggest that the panel data does not suffer from serial or auto-correlation issues. In addition, we proved that there is no issue of heteroscedasticity in the panel data using the Residual Graph (see Figure 1). The values that are within -1 and +1 show that there are constant variances in the residuals. Furthermore, we regressed the explanatory variables against the residuals and the results indicate that there is no significant influence of the variables on the residuals, respectively (see Table 4). In addition, the p-value (> 0.05) of the F-statistic proves that there is no issue of heteroscedasticity in the data.

Table 4: Residual Regression

Variable	Coefficient	Prob.
C	-27.9704	0.6322
ESGP	0.0181	0.6644
CONC	-0.0096	0.9782
MANG	0.3080	0.3315
LOGMCAP	1.7803	0.3572
LOGTA	-1.5313	0.6752
LOGAGE	12.6445	0.3132
DY	0.6224	0.2935
Durbin-Watson	3.311057	
Prob (F-statistic)	0.417789	

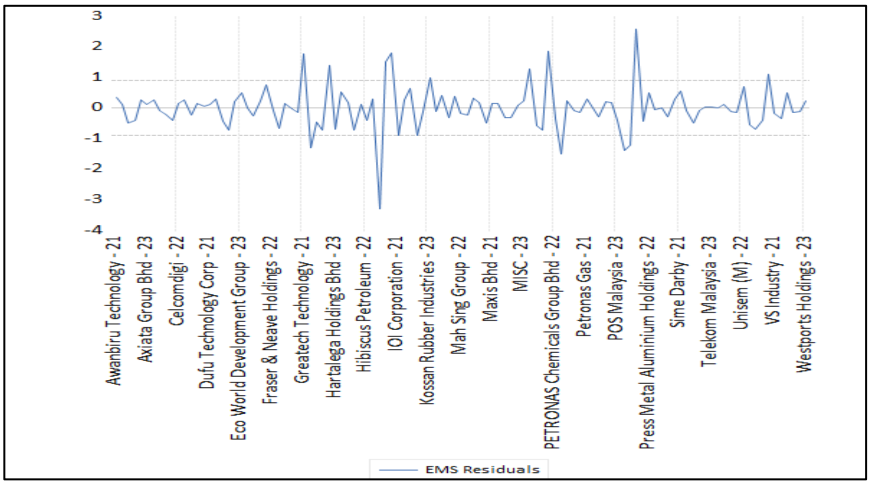

Figure 1: Residual Graph

CONCLUSION

In conclusion, sustainability performance has conclusively mixed association with the corporate financial stability of Shariah-compliant companies in Malaysia depending on the presence of different forms of ownership structures. The study highlights that the management and owners in Malaysian Shariah-compliant companies still lack concern about the SUSP based on the insignificant results. The results also signify that they do not fully value the importance of SUSP in improving the CFS. Meanwhile, the presence of ownership concentration will contribute to lower financial stability. In addition, ownership concentration does not contribute to enhanced SUSP-CFS association. The managerial ownership, on the other hand, is capable of promoting the CFS. However, the presence of managerial ownership also does not improve the SUSP-CFS nexus. That might be because of negligible managerial ownership in the majority of the Shariah-compliant companies, particularly the government-linked companies.

This study has several implications. With the rising demand from investors, who are ESG-concerned, the corporate sectors need to embrace and integrate ESG or sustainability practices in their business strategies and models. This will enable them to improve their corporate image, reputation and competitiveness in a current challenging business environment. Next, the corporate sectors can enhance their financial stability by delivering good values to all levels of stakeholders as propagated by the Stakeholder theory (Freeman, 1984). The management of companies also has to ensure there are ideal and robust ownership structures in their efforts to engage and commit towards ESG or sustainability practices. Strong support from the shareholders (owners) is crucial in order to achieve the sustainability objectives of the companies, thus contributing towards wealth maximisation of the owners and corporate financial stability as per Agency Theory (Jensen & Meckling, 2019). Ultimately, this will lead to the realisation of the UN's SDGs Agenda 2030.

As recommendations, the government must come up with a clear-cut ESG framework and policies in order to be implemented by the companies and the government also needs to find effective ways either through giving incentives or allowances to boost the sustainability practices among the corporate sector. Companies need to pay great attention to sustainability issues by having effective ESG strategies and plans integrated into their business model. The companies should believe that investment in the sustainability practices will improve their visibility, reputation, recognition and competitive advantage among the various groups of stakeholders. The owners or shareholders should play their roles in encouraging the management to engage in sustainability practices. This, in turn, will benefit the owners in wealth maximisation and enhance corporate financial performance and stability.

This study has several limitations. First, this study only focused on the Malaysian corporate sector specifically the Shariah-compliant companies. Second, this study only covered the period from 2021 to 2023 due to the limited availability of ESG data in the database. This study employed the static panel data analysis instead of the dynamic panel data analysis. Therefore, future studies are suggested to extend the sample into non-Shariah-compliant companies. The SUSP can also be further disaggregated into the individual pillars to have more robust results on the CFS. The moderating effects of other ownership forms such as institutional, government, family and foreign ownerships can also be tested in future studies. Last but not least, different methods of analysis and different proxies for the CFS can be applied to generate robust results in future studies.

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AUTHORS' CONTRIBUTION

Isa, M. A. M. took the lead in writing the manuscript as a postgraduate (DBA) student. Ismail, N. and Kadri, M. H. provided critical feedback and helped shape the research, analysis and manuscript as the main and co-supervisors.

CONFLICT OF INTEREST DECLARATION

We certify that they have no conflict of interest in the subject matter or materials discussed in this manuscript. We also certify that the article is the Authors' and Co-Authors' original work and has not received prior publication nor it is under consideration for publication elsewhere. This research/manuscript has not been submitted for publication nor has it been published in whole or in part elsewhere. We testify to the fact that all authors have contributed significantly to the work, validity and legitimacy of the data and its interpretation for submission to Jurnal Intelek.

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