



THE MODERATING EFFECT OF SHARIAH COMPLIANCE ON THE RELATIONSHIP BETWEEN CORPORATE RISK TAKING AND FIRM PERFORMANCE

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ABSTRACT

The aim of this study is to examine the moderating effect of Shariah compliance on the relationship between corporate risk-taking and firm performance. The study's data was acquired from DataStream (Thomson Reuters) and annual reports extracted from the Bursa Malaysia website. To analyze the data, the study used panel data analysis, specifically pooled OLS, random and fixed effect were employed. In order to identify the most appropriate model, the study employed the Breusch-Pagan-Lagrange multiplier (LM) test and Hausman test. Additionally, robust standard error estimation was utilized to address the possible presence of serial correlation and heteroskedasticity. The study reveals that Shariah compliance moderate the relationship between corporate risk taking and firm performance. The findings are useful to inform managers on how to tailor their investment strategies to the needs of their clients, especially to the needs of average-risk investors to make an informed decision as well as to who might consider shariah compliant portfolio as part of their investment diversification.

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1. INTRODUCTION

In today's globalized economy, businesses operate in an environment characterized by increasing complexity, uncertainty and competition. To thrive in such a dynamic environment, organizations often take risks in their pursuit of growth and profitability. The concept of risk-taking has been a focal point of investigation in the field of corporate finance for a significant period. Researchers and practitioners have been intrigued by the relationship between risk and return, commonly referred to as "high risk, high reward." The significance of corporate risk-taking lies in its ability to influence a company's performance, which has prompted extensive interest in the subject. However, the effect of risk taking on firm performance is not a direct relationship but is influenced by different factors.

The performance of firms has garnered significant attention in various previous studies and scholarly works. Corporate performance symbolizes the value that a company must be competitive in order to survive in today's dynamic business environment. Corporate performance refers to the economic profits or losses generated by market-adjusted operating conditions and market-adjusted profits accumulated over multiple periods and is used to measure the firm performance (Bhagat et al., 2004). Conversely, risk-taking assumes a vital role in the decision-making processes of corporations. This is because it involves evaluating possible outcomes and selecting the most favourable course of action to achieve desired goals. The success of most companies depends on the ability of their management or executives to evaluate risks and to decide which path to choose.

Taking risks may enhance firm performance, however, scholar have different opinion on the extent of risk-taking impact on firm performance (Hughes & Morgan, 2007; Chen & Ma, 2011; Danso et al., 2016). According to John et al. (2008), effective risk management can enhance the value of investments and facilitate advancements in production technology. Faccio et al. (2011) argues that corporate risk-taking is beneficial for long-term business expansion. However, excessive risk-taking, as highlighted by Altunbas et al. (2011), can result in instability and impede economic growth. However, the attributes of Shariah compliant firm such as low asset to debt ratio (Rashid & Wei, 2019) and restriction on the amount of debt they can hold (Cheong, 2020) may mitigate the extreme risk-taking behavior. Thus, Shariah compliance may potentially moderate the risk-taking and firm performance relationship.

In Islamic finance, the term "Shariah-compliant" refers to financial instruments or firms that meet Shariah standards. On the other hand, Shariah compliance means the application of Islamic principles and standards in business practice to ensure ethical and socially acceptable behavior (Bank Negara Malaysia, 2019). Shariah compliance must meet the standards set forth in the Sharia law. Sharia law derives from divine revelation (Al-Quran) and the teachings of Prophet Muhammad (Al-Hadith) (Adam & Bakar, 2014). The core tenets of Islamic finance consist of the prohibition of interest (riba) and the promotion of risk sharing. These principles have spurred the creation of alternative financial products and structures within Islamic finance such as profit and loss sharing that are consistent with these principles (Ali, 2007).

Shariah-compliant firms are distinguished from non-Shariah-compliant firms by several characteristics, such as the amount of leverage, risk, and activities they are allowed to engage in. For instance, Cheong (2020) provides an example wherein Shariah-compliant firms face constraints on their debt capacity and cash holdings. In addition, Shariah certification reduces risk, and in turn, Shariah-compliant firms pay lower borrowing costs. (Khaw et al., 2019). In addition, Sharia restricts business activities, including pork and alcohol, gambling, tobacco, pornography and weapons, gold and silver, and for-profit financial transactions are not recognized (Hussain et al., 2016). Islam promotes social solidarity by emphasizing trade and exchange of goods and assets, which encourages risk sharing. Shariah is also critical for non-Muslims doing business with Muslim individuals or organizations, as they can expect to follow certain Shariah principles to conduct business in a manner acceptable to their Muslim partners.

Despite numerous previous research endeavors investigating the correlation between corporate risk-taking and firm performance. However, the majority of previous literature predominantly concentrated on the domain of Islamic banking (Hassan & Mollah, 2014; Isa & Lee, 2020; Alman, 2012; Nainggolan et al., 2022; Cheah et al., 2023). Additionally,

the other area of concern on research focusing only on the performance aspects of Shariah and non-Shariah compliant firms (Ho & Mohd-Raff, 2019; Farooq & Alahkam, 2016; Bugshan et al, 2021; and Saba et al., 2021). Although these studies provide valuable insights into the performance and determinants on these types of firms performance, a notable gap in the literature is the lack of studies that specifically examine the moderating effect of Shariah compliance on these two variables.

This study seeks to address this gap by investigating the association between corporate risk-taking and firm performance, with the consideration of Shariah compliance as a moderator in this relationship. By introducing Shariah compliance as a moderator, the study can gain better and deeper insight into the complex dynamics that influence corporate performance and financial decision making. Moreover, the inclusion of Shariah compliance as a moderator variable adds a unique dimension to the analysis, providing insight into the specific impact of Shariah principles on financial outcomes. The subsequent sections of the paper are structured as follows as Chapter 2 provides a comprehensive review of the literature and outlines the put forward a hypothesis. Chapter 3 elucidates the data and the method used in the study. Chapter 4 presents the findings and corresponding discussions. Finally, Chapter 5 offers a concluding summary.

2. LITERATURE REVIEW

2.1 Corporate risk taking and firm performance

Several studies have examined the relationship between risk-taking and firm performance. Chong et al. (2018) found a positive relationship between risk-taking and performance influenced by factors such as board composition and sustainability practices, with political ties having a negative effect. Walls (2005) conducted a 20-year study in the oil industry and emphasized the importance of risk-taking on firm performance. Pratono (2018) studied small and medium enterprises in Indonesia and found a positive effect of risk-taking on firm performance. In contrast, Quon et al. (2012) conducted a study involving 24 comparisons and found no significant impact of corporate risk management on firm performance. Their analysis did not yield evidence of a significant relationship between these variables. A meta-analysis by Pham and Dao (2022) found a conditional positive relationship between risk-taking and performance based on industry dynamics, firm size, and risk management practices. Naldi et al. (2007) found that entrepreneurial orientation positively influences risk-taking behavior, which in turn improves firm performance.

Mohammed and Knapkova (2016) conducted a study of 12 companies listed on the Prague Stock Exchange to analyze the relationship between comprehensive risk management and firm performance. They found a positive correlation between risk management and return on assets, but the results were not significant. Chen and Ma (2011) found that executive stock options contribute to increased risk-taking, which indirectly affects firm performance. In addition, Gibb and Haar (2010) conducted a study of 167 New Zealand companies and found that higher levels of risk-taking and innovation were associated with better firm performance regardless of the degree of competition.

In a study conducted by Kallamu (2015), a sample comprising of 37 financial firms listed on the Bursa Malaysia Stock Exchange was utilized to investigate the influence of risk management committee characteristics on firm performance, specifically focusing on return on assets. Conversely, Gordon (2012) discovered that the improper utilization of risk management committees can result in heightened risk and have adverse effects on firm performance. Study by Tao and Hutchinson (2012) established a direct correlation

between the presence of risk management committees and improved performance. The size of risk management committees is also important as it affects the management and improvement of risk performance of a financial firm. While Ferrero-Ferrero et al. (2012) found that board characteristics, including independence and expertise, influence firm performance and risk behavior, especially in times of crisis. Hoyt and Liebenberg (2011) observed a positive relationship between firm value and corporate risk management implementation, as measured by Tobin's Q.

Drawing from previous empirical research, the study posits that there exists a significant relationship between corporate risk-taking and corporate performance. However, this relationship is complex and the relationship between risk-taking and firm performance remains unclear as some studies still find contradictory results. Therefore, this area needs further investigation, particularly in the context of growing markets like Malaysia. It can be influenced by a number of factors. It is important for companies to carefully assess and manage risk, taking into account the specific contextual factors that may influence the relationship between risk-taking and performance. When companies understand the dynamics of risk behavior and its impact on performance, they can make informed decisions and implement strategies that optimize performance outcomes.

2.2 Moderating Effect of Corporate Risk Taking and Firm Performance

2.2.1 Shariah compliance and firm performance

Numerous studies have undertaken comparisons between Shariah-compliant and non-Shariah-compliant firms regarding their impact on firm performance. According to the discovery, firms that are Shariah compliant can be more financially successful than firms that are not. This is supported by studies such as those by Akguc and Al Rahahleh (2018) and Tahir and Ibrahim (2020), who found that higher profit margins and asset turnover contribute to better performance of Shariah-compliant firms. In addition, Farooq and Alahkam (2016) found that non-financial firms that do not comply with Shariah principles perform worse than their Shariah-compliant counterparts. Farooq and AbdelBari (2015) also found that Shariah-compliant firms tend to be less aggressive in managing their earnings compared to non-Shariah-compliant firms.

Habib and Islam (2014) compared the performance of the MSCI India Islamic Index and the MSCI Malaysia Islamic Index from 2003 to 2013, including an examination of the behavior of these Islamic indices during the recent financial crisis. The results showed that the Islamic index in India underperformed while it outperformed the corresponding conventional index in Malaysia during the study period. However, both the Indian and Malaysian Islamic indexes outperformed their counterparts during the crisis. Proponents of Islamic finance argue that Shariah-compliant companies, which are characterized by low leverage, a focus on sectors other than finance, and socially and ethically responsible investments, tend to have higher profitability (McGowan & Muhammad, 2010).

Sadeghi (2008) demonstrated the positive impact of Shariah compliance on the performance and liquidity of Malaysian listed companies. Derigs and Marzban (2008) emphasized that firms that comply with Shariah prioritize investors' interests and development rather than focusing only on financial profits. Saba et al. (2021) discovered that Shariah-compliant firms displayed superior performance compared to non-compliant firms across financial indicators such as return on assets (ROA), return on equity (ROE), and earnings per share (EPS). Similarly, Pepis and Jong (2019) demonstrated that Shariah compliance has a positive influence on long-term financial performance, as evidenced by

higher ROA and return on sales (ROS). Overall, compliance with Shariah principles and Islamic financial practices can contribute positively to firm performance.

2.2.2 Shariah Compliance and Corporate Risk Taking

Several studies have examined the relationship between Shariah compliance and corporate risk-taking. Evidence suggests that Shariah-compliant firms tend to be less volatile and have lower corporate risk than non-compliant firms. Dharani and Natarajan (2011) found in their study of Indian companies, and Cheong (2021) further highlighted that Shariah-compliant companies demonstrate greater resilience. This resilience is attributed, in part, to the presence of a Shariah Committee, which provides guidance to boards on the risk implications of financial transactions from an Islamic standpoint. Within Islamic principles, excessive risk-taking is prohibited, and the involvement of the Shariah Committee is believed to contribute to maintaining this restraint. However, Rasli et al. (2020) found that effective Shariah governance has little impact on risk taking. According to Basiruddin and Ahmed (2020), having financial expertise within an organization and conducting frequent meetings of the Shariah Committee can effectively mitigate the risk of noncompliance. Abdullah et al. (2007) conducted a study that found lower performance of Shariah-compliant funds compared to non-Shariah-compliant funds. This suggests that compliance with Shariah principles may impose constraints or limitations on investment strategies, potentially affecting the overall funds' performance.

Ismail et al. (2020) conducted a study of 302 Shariah-compliant companies listed on Bursa Malaysia, and their outcome recommend that board committee independence is influenced by inter-firm corporate risk. In a separate study, Khaw et al. (2019) examined the impact of Shariah certification on corporate risk and found that Shariah-compliant companies Business risk tends to be low. Jaafar et al. (2020) focused on systemic risk in Shariah-compliant firms and identified leverage and growth as critical factors. Overall, these studies suggest that Shariah compliance can influence corporate risk-taking, emphasizing the importance of factors such as board committee independence and specific micro variables for effective risk management in Shariah-compliant companies. Khaw et al. (2019) specifically analyzed the impact of Shariah certification on corporate risk within a sample of 729 non-financial companies listed on Bursa Malaysia. Their study used regression analysis and panel data techniques, with financial leverage as a proxy for financial policy. The results of their study support the hypothesis that Shariah certification plays a role in reducing the risks associated with leverage.

From these results, we can conclude that the observance of Sharia law as a moderator in the relationship between corporate risk-taking and firm performance. By adhering to Shariah principles and implementing effective governance practices, firms can improve their financial performance while reducing excessive risk-taking. These discoveries carry significant implications for businesses that are active in Islamic markets as well as for policymakers and regulators in designing regulations that promote Shariah compliance and its positive impact on corporate performance.

H1: Shariah compliance moderates the relationship between corporate risk taking and firm performance.

2.2.3 Social norm theory and Shariah compliance

Social norms are generally accepted guidelines for appropriate behavior within social groups (Lapinski & Rimal, 2005). These norms can be unwritten rules or informal agreements that govern people's behavior in society (Pristl et al., 2021). In the context of Islam, social norms are shaped by religious teachings and principles that define proper behavior and interpersonal relationships (Hassan, 2012). Religious beliefs play an important role in influencing consumer decisions in societies with a significant Muslim population, such as Malaysia, the aforementioned characteristics and effects of Shariah compliance are particularly relevant (Alam et al, 2011). In addition, religious beliefs can impact individual and organizational performance by increasing commitment and aligning actions with religious values (Abu Bakar et al, 2018; Noegroho & Wulansari, 2020).

Religious beliefs have a significant impact on performance, as several studies have shown. Cantrell and Yust (2018) found that religious beliefs are associated with lower earnings management and a more conservative approach to financial practices, ultimately leading to better bank performance. In addition, Purwanto (2021) highlighted how religious beliefs and social influences affect individuals' perceptions of the benefits of using Shariah-compliant banking services. Factors such as pricing, social influence, and attitudes toward Islamic personal finance were identified by Amin et al. (2011) as important determinants affecting individuals' interest to adopt Islamic banking. A study conducted in Kuwait showed that cultural and religious factors are the most important determinants of Islamic banking adoption (Othman & Owen, 2001). These discoveries shed light on the impact of religious convictions on individuals' financial choices and their inclination towards Shariah-compliant financial offerings.

In conclusion, religious beliefs and behavior in Muslim societies are significantly shaped by social norms, which in turn impact decision-making processes. These factors influence a range of outcomes, including consumer choices, business engagement, bank performance, and adoption of Shariah-compliant financial services. Recognizing and understanding these dynamics is critical for individuals, organizations, and policymakers seeking to manage and leverage the influence of religious beliefs on various facets of society, particularly in finance and banking.

3. METHODOLOGY

The proposed methodology for this study involves examining the moderating effect of Shariah compliance on the relationship between corporate risk-taking and firm performance in Malaysia over a 10-year period from 2012 to 2021, with data for this study obtained from Bursa Malaysia and DataStream. The research sample for this study comprises 200 non-financial companies, with the exclusion of financial institutions such as banks, real estate companies, and insurance companies. A total of 1,875 annual reports were analyzed for the study to provide comprehensive information on the companies' operations and financial performance.

The primary focus of this study is the dependent variable of firm performance, which is assessed using Tobin's Q, a widely utilized measure in prior studies on firm performance (Buallay et al., 2017; Dakhlallah et al., 2020). The independent variable, corporate risk-taking, is evaluated through proxy variables, specifically leverage, as indicated by previous studies (McShane et al., 2011; Ali et al., 2022). Additionally, the moderating variable is represented by Shariah compliance, which is incorporated as a dummy variable.

Control variables such as firm size, net sales growth, and dividend yield are included to control for potential confounders. The study uses statistical techniques such as pooled ordinary least squares (OLS), random effects analysis, and fixed effects analysis. Diagnostic tests are performed to address issues such as serial correlation, heteroskedasticity, and multicollinearity. Breusch-Pagan and Hausman tests are used to determine the most appropriate model for the data.

To analyse the data we used the following Equation (1).

$$Tobin's\ Q_{i,t} = \beta_1Leverage_{i,t} + \beta_2Shariah\ Compliance_{i,t} + \beta_3Leverage * Shariah\ Compliance_{i,t} + \beta_4Firm\ size_{i,t} + \beta_5Net\ sales\ growth_{i,t} + \beta_6Dividend\ Yield_{i,t} + \theta_{it} + \sigma_{it} + \varepsilon_{i,t} \quad (1)$$

where *Tobin's Q_{i,t}* is the firm performance, $\beta_1Leverage_{i,t}$ is the leverage which is the level of debt used by the firm, $\beta_2Shariah\ Compliance_{i,t}$ is a binary variable indicating whether the firm is Shariah-compliant or not, $\beta_3Leverage * Shariah\ Compliance_{i,t}$ is the interaction term between Leverage and Shariah Compliance, $\beta_4Firm\ size_{i,t}$ is the natural logarithm of total assets, $\beta_5Net\ sales\ growth_{i,t}$ is the percentage change in net sales from the previous year, $\beta_6Dividend\ Yield_{i,t}$ is the dividend per share divided by the stock price, θ_{it} represents time-specific fixed effects, σ_{it} captures firm-specific fixed effects and $\varepsilon_{i,t}$ is the error term, accounting for unobserved factors and random fluctuations.

Based on this framework, this study examines whether shariah compliance moderates the relationship between firm risk-taking and firm performance.

To examine the proposed hypotheses, the study employed pooled ordinary least squares (OLS) analysis, and also random and fixed effects models. Prior to testing the models, the data was minorized at the 1st and 99th percentiles to address outlier problems. Furthermore, a correlation analysis was conducted to assess the presence of multicollinearity among the study variables. Diagnostic tests, including the White test and the Breusch-Pagan-Lagrange multiplier test (LM), were utilized to identify potential issues of heteroscedasticity and serial correlation in the data. To address these concerns, robust standard error calculations were applied in each model.

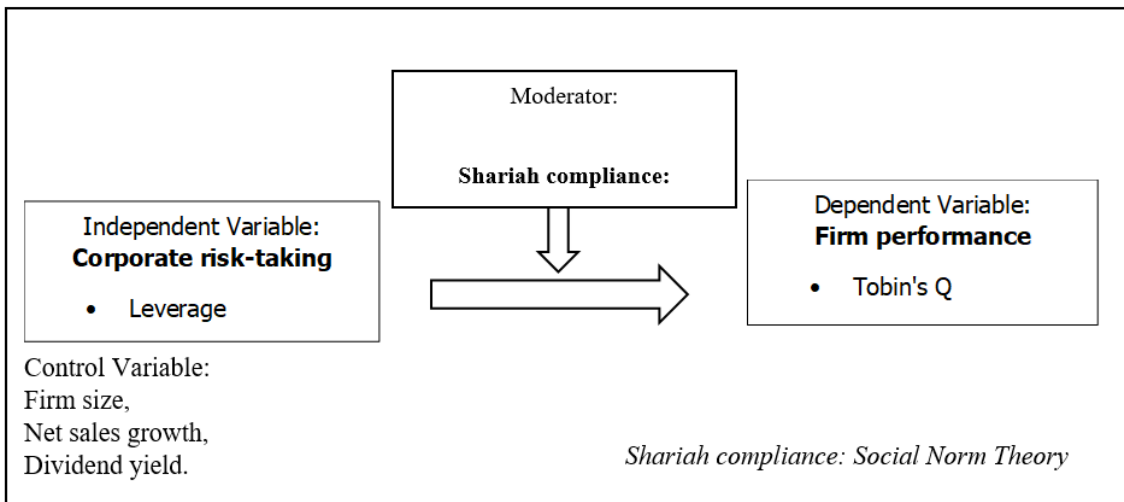


Figure 1 : Framework.

Table 1 : Variables definition.

Variables			Symbol	Measurements	Sources	References
Dependent						
Firm Performance	Tobin's Q	Market value divide replacement value of assets	Data stream		Buallay et al., (2017); Dakhllalh et al., (2020)	
Independent						
Leverage	Leverage	Total liabilities / total asset	Data stream		McShane et al.,(2011); Ali et al., (2022); Akguc & Al Rahahleh (2018)	
Moderator						
Shariah compliance	SC	value of 1 to companies that are deemed Shariah compliant according to the Securities Commission Malaysia report.	Annual report		Khaw et al. (2019); Akguc & Al Rahahleh (2018)	
Control						
Dividend Yield	Dividend Yield	Dividend per share / Share price	Data stream		Farrukh et al (2017); Bakri & Yong (2023).	
Firm size	Log (Size)	Natural logarithm of total asset	Data stream		Chong et al. (2018)	
Net sales growth	Net sales growth	percentage change in a company's sales revenue in 1 year	Data stream		Khaw et al. (2019); Farooq, O., & Alahkam, A. (2016).	
Industry fixed effect	Industry	Dummy equal to 1 for different industry	Data stream		Bakri & Yong (2023).	
Year fixed effect	Year	Dummy equal to 1 for different year	Data stream		Bakri & Yong (2023).	

4. RESULTS AND DISCUSSION

4.1 Descriptive statistics

Table 2 presents the descriptive statistics for the variables examined in this study, encompassing a time span of 10 years ranging from 2012 to 2021. The table includes the mean, standard deviation, minimum, and maximum values for each tested variable.

Table 2: The descriptive statistics + VIF analysis.

Variable	Obs	Mean	Std. Dev.	Min	Max	VIF
Tobinq	1879	3.1545	6.6197	-23.1400	34.7500	N/A
Leverage	1922	0.2157	0.1741	0.0000	0.8574	1.32
SC	1956	0.7357	0.4411	0.0000	1.0000	1.02
Lnsiz	1927	14.1590	1.6969	10.6249	18.1177	1.31
Dyeild	1881	2.5156	2.2376	0.0000	10.5700	1.05
Nsale	1905	10.2137	30.9860	-46.5000	192.7700	1.03

In Table 2, the mean values for the variables tested are as follows: Tobinq (3.1545), Leverage (0.215248), Sc (0.735685), Lnsiz (14.15895), Dyeild (2.515598) and Nsale (10.21366). These means provide a measure of central tendency or average value for each variable. The standard deviation of all the variables tested varies between the lowest value of 0.1741 and the highest value of 30.9860. The minimum and maximum values for each tested variable are displayed in columns five and six of Table 2, respectively. It should be noted that SC 0 is a dummy variable.

Table 2 also shows the variance inflation factor (VIF) values for the variables in the data set. VIF is a measure of multicollinearity that indicates how much the variance of an

estimated regression coefficient is increased by correlation with other independent variables. When the VIF value exceeds 10, multicollinearity problems occur. If the VIF for this study meets this criterion, the risk of multicollinearity in the study should be low.

Table 3: Correlation analysis.

	Tobinq	Levera	SC	Lnsiz	Dyeild	Nsale
Tobinq	1					
Leverage	-0.1797***	1				
SC	-0.0293	-0.1513***	1			
Lnsiz	-0.2068***	0.4578***	-0.0472**	1		
Dyeild	0.1359***	-0.078***	0.0208	0.0728***	1	
Nsale	0.1499***	-0.054**	0.019	-0.1047***	-0.1525***	1

*Denotes significance at the 10% level.

** Denotes significance at the 5% level.

*** Denotes significance at the 1% level

Table 3 displays the outcomes of the correlation analysis conducted between the variables. The correlation coefficient gauges the strength and direction of the linear association between two variables. In this instance, the values presented in the table signify the extent of correlation between the variables. A correlation greater than 0.60 indicates a strong linear relationship between two variables. While high correlations can provide valuable insight, they can also indicate the presence of multicollinearity. There are no correlations above 0.60 between any pair of variables. Therefore, there is no immediate indication of serious multicollinearity problems among the variables Tobinq, Leverage, SC, Lnsiz, Dyeild, and Nsale. All values are significant except 0.0208 (Dyeild* SC), 0.019 (Nsale* SC), and -0.0293 (Tobinq*Sc). The relationships between the variables are not strong enough to conclude a meaningful relationship between them.

Table 4 : Main result.

Regressors	Model I: Pooled OLS		Model II: Fixed effect (RSE)		Model III: Random effect (RSE)	
	Regression coefficient	t-statistics	Regression coefficient	t-statistics	Regression coefficient	z-statistics
Constant	17.6365	3.04***	-0.5208	-0.07	5.7809	1.37
Leverage	0.3352	0.21	-6.5494	-2.25**	-4.6345	-2.11**
SC	0.5215	0.93	1.1622	0.89	1.1900	1.15
L*SC	-7.0366	-3.92***	-6.6116	-2.46**	-6.4240	-2.8***
Lnsiz	-0.4494	-4.21***	0.3607	0.67	-0.1225	-0.41
Dyeild	0.2896	4.38***	-0.1158	-1.23	-0.0260	-0.3
Nsale	0.0340	7.42***	0.0221	3.02***	0.0241	3.49***
BP-LM Test			1576.46(0.0000)			
Hausman Test			49.80(0.0000)			
Industries	Yes		No		No	
Year	Yes		No		No	

RSE= Robust Standard error *Denotes significance at the 10% level. ** Denotes significance at the 5% level. *** Denotes significance at the 1% level.

Table 4 shows the main results of the different estimation procedures: Pooled ordinary least squares (OLS) with industry and year fixed effects, random and fixed effect both with robust standard errors. Due to potential problems in the model, such as heteroskedasticity and serial correlation, we use robust standard errors.

Considering the analysis performed, the results indicate that the variable $L^* SC$, which represents the interaction between leverage and Shariah compliance factors, has a significant and negative impact on both risk behavior and firm performance. The negative coefficients (-7.0366, -6.6116, -6.4240) are statistically significant ($p < 0.01$), indicating a strong and negative relationship between high leverage combined with Shariah factors, increased risk aversion and lower corporate performance. The principles of Shariah compliance in finance, which include the avoidance of interest-based transactions (Riba) and the promotion of ethical investments, can promote a conservative and risk-averse approach in companies. This alignment with conservative corporate policies has been shown to reduce corporate risk, as demonstrated by Sila et al. (2016), who found that companies can mitigate risk by adopting conservative corporate policies. Companies with higher financial leverage tend to be riskier (Serfling, 2014). In addition, Abdullah et al. (2007) showed that compliance with Shariah principles constrains investment strategies and affects fund performance. According to Omran's (2009) findings, adherents of Islam display a willingness to pay a higher price for investments in Shariah-compliant companies, despite the fact that these investments may provide lower anticipated returns in comparison to non-Shariah-compliant alternatives, indicating a preference for more conservative and ethical investment options. Gibb and Haar's (2010) findings suggest that taking calculated risks and encouraging innovation can lead to better performance in certain situations, even when competition prevails.

The coefficient of the variable Leverage is -6.5494 (model II) and is statistically significant (t-statistic is -2.35, $p < 0.05$). This implies that leverage has a notable adverse effect on risk in the context of Sharia certification. In model III, the regression coefficient for Leverage is -4.6345 with a z-statistic of -2.11**, which also indicates a negative impact on firm performance. Hence, this model offers additional support for a substantial negative association between leverage and firm performance, confirming that Shariah certification can assist in mitigating the risks linked to leverage. This is also consistent with Khaw et al. (2019). This supports the argument that Shariah certification helps reduce the risks associated with Leverage. Similarly, Mollah and Zaman (2017) studied the relationship between Islamic banks' corporate governance structure, risk taking, and performance. Research by Ho and Mohd-Raff (2019) and Jaafar et al. (2020) also show that leverage significantly influences corporate performance.

Table 4 reveals that both the Breusch-Pagan-Lagrange multiplier test and the Hausman test demonstrate significant distinctions between the models, indicating that the fixed-effects model is the most suitable for this study. The Breusch-Pagan-Lagrange multiplier (BP-LM) test assesses the performance of the Ordinary Least Squares (OLS) regression model versus the Random Effects (RE) regression model. Similarly, the Hausman test compares the fixed effects regression model (FE) with the random effects regression model (RE).

5. CONCLUSION

In summary, this study used a variety of econometric techniques, including pooled ordinary least squares (OLS), random effects models, and fixed effects models, to analyze the data and examine the relationship between the variables of interest. Our study examined the effects of Shariah compliance and its interaction on risk behavior and firm performance. Based on the Breusch-Pagan Lagrange Multiplier and the Hausman test) indicate significant differences between the models, suggesting that the fixed effects model is a better fit than the fixed effects model in this study. The model II will be the best fitting model. The findings of this study support hypothesis 1, which suggests that Shariah compliance acts as a moderator in the relationship between corporate risk-taking and firm performance. The results indicate that the interaction term L_SC, representing the combined impact of leverage and Shariah compliance, has a significant and negative influence on both risk-taking behavior and firm performance. This suggests that high leverage combined with the presence of Shariah factors contributes to increased risk aversion and lower firm performance. Shariah compliance assumes a moderating function in the association between firm risk-taking and firm performance. The principles of Shariah can influence firms to adopt more conservative and risk-averse strategies, leading to a reduction in risk-taking behavior.

These results are consistent with previous research by Khaw et al. (2019) and Mollah and Zaman (2017), who also highlighted the impact of Shariah certification on risk management and performance. The negative coefficients and high significance levels suggest that Shariah compliance helps to decrease the risks related with leverage. In addition, the absence of correlations above 0.60 among the variables does not immediately indicate serious multicollinearity problems. The outcomes of this study enhance our comprehension of the interplay between leverage, Shariah compliance, risk behavior, and corporate performance. They emphasize the significance of taking into account both financial and ethical considerations in the decision-making processes of Shariah-compliant companies. These findings contribute to the broader understanding of how financial and ethical factors intertwine to shape the performance outcomes of such organizations. These findings have implications for practitioners and policymakers with respect to risk management strategies and the evaluation of Shariah-compliant investments. This study focuses specifically on Shariah-compliant firms. By analyzing the unique characteristics and constraints faced by these firms, the study provides valuable insights into how Shariah compliance affects their risk behavior and performance.

However, it is important to acknowledge the limitations of this study. The analysis was conducted based on a specific dataset and within a particular context, which may restrict the generalizability of the findings. Future research could explore these relationships in different industries or geographical regions, considering additional factors that may influence risk behavior and firm performance in Shariah-compliant firms. Although this study offers valuable insights into the interplay between leverage, Shariah compliance, risk behavior, and firm performance, the sample size is limited to the 200 largest firms by market capitalization in 2021. Further research in this area can contribute to the advancement of Islamic finance and enhance our understanding of how ethical principles shape financial decision-making processes.

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