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Board Characteristics and Firm Performance: Moderating Role of Sharia Compliance

by

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This research thesis is wholeheartedly dedicated to my parents whose support and continued encouragement have been my strength and source of inspiration in all of my endeavors.

CERTIFICATE OF APPROVAL

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Abstract

This study examines the influence of board characteristics and Sharia compliance on firm performance. The Board Characteristics variables include Board size, Board independence, CEO duality, and female Representation on the Board, Firm-specific variables include leverage, firm size, and Sales Growth with Sharia compliance used as a moderating variable. Firm performance is assessed through two metrics: Return on Capital Employed and Tobin's Q. Tobin's Q is a market-based measure of performance and ROCE serves as a book-based measure of performance. This dual approach provides a broader understanding from both financial and market perspectives. The study identifies a critical gap in existing literature regarding the integration of Sharia governance and its role in enhancing ethical decision-making, transparency, and stakeholder inclusivity. This gap highlights the gap in research on ethical governance from an Islamic point of view. The target population is 90 firms in the non-financial sector of Pakistan from 2010 to 2023. Using a dynamic panel data analysis with the Generalized Method of Moments (GMM). The results shows a female's representation on board has positive and CEO Duality , Board size and Board Independence has negative impact on firm performance. These findings show the significance of a well-structured board enhancing the performance of a firm. Additionally, Sharia compliance enhances governance effectiveness by promoting ethical decision-making, transparency, mitigating risk, and boosting financial performance, also strengthening stakeholder confidence.

Keywords: Board Characteristics, Firm Performance, Sharia Compliance, Generalized Method of Moments.

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Abbreviations

BI	Board Independence
BS	Board Size
CEOD	CEO Duality
CG	Corporate Governance
FRB	Female Representation in Board
FS	Firm Size
GCG	Good Corporate Governance
GMM	Generalized Method of Moment
ISL	Islamic Label
Lev	Leverage
ROCE	Return on Capital Employed
SC	Sharia Compliance
SCQ	Sharia Compliance Committee
SG	Sales Growth
TQ	Tobin's Q

Chapter 1

Introduction

1.1 Theoretical Background

Corporate governance is a set of mechanisms that includes internal corporate strategies, such as policies, practices, and procedures. Managers implement these policies, practices, and procedures to lead a company on a clear path and achieve its goals (Alabdullah & et al., 2022).

This study analyzes the influence of board characteristics on business performance. It investigates the influence of good corporate governance practices and policies on these companies from an Islamic context. It is expected that corporations increase their awareness and adopt good corporate governance mechanisms to perform better than their counterpart (Ramli & Ramli, 2016). Corporate governance gained significant attention after the Enron scandal in 2001, leading to efforts to enhance firm performance, improve management, and safeguard stakeholders' interests, including those of stockholders in Pakistan. The Code of Corporate Governance was introduced in Pakistan in 2005. According to the recent law of the code of corporate governance under section 154, the Board consists to have at least two independent directors or one-third of the total Board of director. The latest corporate governance rules must have at least one female director in listed companies when they update their Board after the current term. In recent years corporate governance has been a key element that helps managers to make better decisions. Agency theory considers corporate governance (CG) systems, particularly the Board of Directors (BoD), as a crucial component of the control mechanisms that help manage and mitigate issues arising from the principal-agent relationship (Hidayat & Utama, 2015). Good corporate governance revolves around transparency, fairness, and effectiveness in the management of the corporation.

The excellent mechanism in corporate governance enhances the long-term performance and sustainability of business, increases shareholder confidence, minimizes the chance of loss, and protects against mismanagement. It provides proper control that helps to increase the value of a business, maximize profit, and enhance the financial performance of a business. It also makes business effective, balanced, and transparent which reduces possible risks and losses (Alabdullah & et al., 2022).

The Board of Directors (BOD) serves as the cornerstone and a vital element of corporate governance (CG), driving organizational success. The board is responsible for appointing the executive directors and senior management to oversee the organization's functional responsibilities. Ultimately, the primary objective of any business is to enhance shareholder wealth. Therefore, the board plays an important role in shaping the firm's vision, mission, and strategic objectives (Al-Absy & Hasan, 2023). Corporate governance always played an important role in monitoring and controlling all business activities and processes transparently. Agency theory suggests the separation between ownership and management leads to improving the monitoring and controlling activities to maximize their interest. To mitigate the agency problem, non-executive directors are experts in monitoring and controlling management activities, consequently helping to enhance the performance of a company. The agency problem arises when agents, such as managers, have goals that conflict with the interests of shareholders. This often occurs because managers and shareholders have different priorities. In simple terms, managers may act in their self-interest and ignore what shareholders expect from them. These issues arise when agents making key decisions have little or no personal financial stake in the results of their actions. Agency theory suggests that giving agents fair rewards can support aligning their interests with those of the shareholders.

Corporate governance plays an important role in addressing these conflicts by creating systems to ensure that managers and shareholders share the same goals.

Agency theory supports separating leadership roles from ownership and control to reduce such problems. It also suggests that having the same person as CEO and chairperson (CEO duality) may negatively affect a firm's performance. To address this, employees should be held accountable, with rewards and penalties used to encourage them to focus on the company's goals (Cheng, Wen, Leng, & Yat, 2023).

In previous studies, we can see that agency theory is the heart of corporate governance study. Agency theory describes the negative relationship between a stakeholder's principal (shareholder) and agent (manager). According to Affes and Jarboui (2023), both shareholders and management have different objectives which can create a conflict of interest.

Managers focus on maximizing their power and wealth in business, on the other hand, shareholders have different objectives, they are concerned with maximizing the value of their shares, Good corporate governance minimizes conflicts and improves the performance of a business boosting the value of the company and increasing the return for shareholders. Agency theory is important for understanding how corporate governance affects business performance and how it can minimize the conflicts of interest that can create a better environment for a business.

Some researcher considers a broader view of corporate governance not including only management and shareholders it also includes other employees, creditors, and customers. This is known as stakeholder theory. Hence all stakeholders aim to broaden the corporate governance and try to build a positive and long-term relationship between all internal and external stakeholders not only focusing on the particular part of corporate governance managers and shareholders.

In contrast, agency theory only focuses on the key parties of corporate governance but stakeholder theory is based on cooperation among all stakeholders to improve the firm's financial performance and enhance the value of the company. Stakeholder theory also introduces the idea of reciprocity, meaning that people are more likely to act in ways that benefit both the principal's interests and self-benefits (Silpachai, Siengthai, & Levermore, 2024) state that factors like gender diversity like having more females on the board are related to improving the business performance. Sharia compliance means following Sharia rules in all actions done in an organization. Its main objective is to help avoid issues by making certain organization's policies, rules, systems, and operations follow Sharia principles (Devi, Ermawati, Supriyaningsih, Hasimi, & Utamie, 2022).

Sharia compliance in finance refers to the adherence to Islamic law, ensuring that all financial transactions align with principles developed from the Quran and Hadiths. Its principles are drawn from two primary sources: the Quran and Hadiths. Muslims believe the Quran contains the word of Allah, while the Hadiths and Sunnah represent the teachings and actions of Prophet Muhammad (Peace Be upon Him) (Ullah, Haroon, Hussain, & Rehman, 2022). Central to this compliance is the prohibition of Riba (interest), meaning that financial institutions must avoid interest-based transactions and instead engage in profit-sharing activities, like Mudarabah and Musharakah, where profits and losses are common among participating parties. Additionally, sharia-compliant firms must avoid involvement in these sectors that are considered Haram (forbidden) in Islam like gambling, and alcohol-related business (Javed, Bukhari, & Bashir, 2022).

Sharia principles emphasize that financial transactions are ethical and socially responsible, and Sharia principles focus on honesty, avoiding anything illegal or harmful, and morally wrong actions. Islamic finance is based on religion, transparency, balanced transactions, fairness, and financial dealing or done with fairness and respect for the society/community and environment. It discourages risky or uncertain behavior and on the other hand, encourages careful making and ethical financial dealings.

These principles not only affect how firms operate but also how they make decisions and use resources. In Sharia compliance firms, following Islamic principles affects how the board works and the firm well performs. For instance, research shows that board skills and diversity positively correlate with performance metrics in Sharia-complaints firms, suggesting that directors with capabilities in Islamic finance are better performing at navigating the complications of Sharia compliance while improving overall firm value. Moreover, Sharia compliance not only forms the governance structures but also impacts stakeholder views and trust, which can subsequently affect financial performance. Literature has shown that Sharia-compliant firms often focus long long-term value creation over short-term profits, supporting their strategic objective with ethical standards. This focus can lead to improved ROCE and Tobin's Q as firms efficiently manage risks and capitalize on prospects within a complaint framework (Ullah, Khan, & Khan, 2023). A board of directors with a good understanding of Islamic principles can support ethical practices in their firms, leading to more perfect financial statements and better performance from managers. These abilities in the directors of Shariah-compliant (SC) firms, combined with efficient corporate governance practices, are possible to play a vital role in improving the firm's strategic direction and, in turn, its overall performance. Their knowledge helps to continue compliance without hurting profits or efficiency (Zaigham & Tariq, 2024).

1.2 Gap Analysis and Problem Statement

The study reports a critical gap in the current literature by examining the moderating role of Sharia compliance in the relationship between board attributes and firm performance, particularly in the context of Pakistan. While previous research has extensively explored the effect of board characteristics such as board independence, board size, CEO duality, and Female representation on firm performance, it has largely overlooked the influence of Sharia compliance as a moderating factor. Sharia compliance, which promotes ethical decision-making, transparency, and stakeholder inclusivity, could significantly alter governance dynamics.

However, its role remains underexplored, especially in emerging markets like Pakistan, where cultural and religious norms have a substantial impact on business practices. In this study, we examine the impact of Board characteristics on firm performance Board characteristics have a positive, negative, or no impact on performance and check the Sharia compliance makes corporate governance better or weaker.

Sharia compliance adds a responsibility to make ethical decisions. Sharia compliance follows a stakeholder approach so the expectation is that Sharia compliance will have a positive influence and also examine whether sharia compliance helps improve Board characteristics in Pakistan. This research provides a novel perspective by integrating Sharia principles into corporate governance analysis, providing a deeper understanding of ethical governance mechanisms and their impact on firm performance.

In examining the influence of Board characteristics on firm performance, particularly within the environment of Sharia compliance in Pakistan, there exists a notable gap in the literature regarding how these factors interact.

While previous literature has examined the relationship between board characteristics including board independence, board size, diversity, and firm performance, they frequently do not reflect the unique influence of Sharia compliance on these dynamics, Research indicates that Sharia compliance highlights ethical decision-making and a stakeholder approach, which could improve corporate governance and increase board efficiency.

However, it remains unclear whether Sharia compliance strengthens or weakens the relationship between Board Characteristics and firm performance in Pakistan. This study aims to report this gap by examining whether Sharia compliance positively impacts Board characteristics and, on chance, boosts overall firm performance.

The discoveries from Riaz, Hussain, Raza, and Khan (2023) suggest that certain board characteristics positively affect Performance; the role of Sharia compliance in shaping these relationships has not been fully explored. This represents the need for further research to better understand its implications for how it affects corporate governance.

1.3 Research Question

1. Does Board Characteristics have an impact on firm performance?

2. Does Sharia compliance moderate the relationship between board characteristics and firm performance?

3. Do sales growths have an impact on firm performance?

4. Does leverage have an impact on firm performance?

5. Do firm sizes have an impact on firm performance?

1.4 Objective of the Study

1. To provide an analysis of the influence of Board Characteristics on firm performance.

2. To examine the role of Sharia compliance in strengthening the relationship between board characteristics and firm performance.

3.To identify the effect of sales growth on firm performance.

4.To examine the effect of leverage on firm performance.

5. To analyze that firm size has an impact on firm performance.

1.5 Significance of Study

This study highlights the importance of board characteristics and Sharia compliance in improving company performance, particularly in an emerging market like Pakistan. With corporate governance and ethical practices becoming essential for business success and sustainability, the research offers valuable insights for various groups, including managers, investors, lenders, and policymakers.

1.5.1 Management

This study helps management understand how both good corporate governance and Sharia compliance can improve business performance. Companies that follow ethical, fair, and transparent practices can build trust avoid risk, and grow a sustainable environment, especially in Muslim-majority regions how good corporate governance like having the right board size, independent directors, and more females on the board can boost the company's performance. Including Sharia compliance in governance structures adds an extra layer of value for management.

Sharia principles, which focus on moral behavior, fairness, and involving all stakeholders, provide a context for decision-making that focuses on fairness and responsibility. Following these principles helps companies act responsibly and make fair decisions. By adhering to these principles, firms not only focus on fairness ethical behavior, and common expectations but also build trust among stakeholders, including customers, employees, and the wider community. As trust within the company grows, it improves the brand's reputation, mitigates the chances of agency issues, enhances customer loyalty, and fosters stronger relationships with stakeholders and financial performance. This improves overall trust, mitigates potential risks, and supports greater transparency and responsibility in business practices.

1.5.2 Investors

For investors, the research highlights Sharia-compliant firms as not only stable and ethical investment options but also financially stronger choices with significant long-term growth prospects. This stability provides investors with confident investment opportunities. These firms avoid interest-based loans and high-risk activities, making them a harmless, ethical, and more socially responsible option for investors. Moreover, these firms also offer opportunities for sustainable, long-term returns, attracting investors who prioritize ethical and social business practices. The findings emphasize that Sharia-compliance firms are not only ethically responsible but also financially prudent position. The combination of ethical and financial prudence positions provides a competitive investment for investors. Investing in these firms enables investors to balance between financial returns and ethical values, making them ideal for those seeking long-term and socially responsible investment opportunities.

1.5.3 Lenders

This study highlights that Sharia-compliant firms can serve as a secure and lower-risk option for lenders. Their commitment to ethical principles ensures consistent financial stability making them reliable partners in the long term. These companies operate within a well-defined framework of ethical principles that focus on financial stability and maintain a strong corporate governance system. This approach not only enhances trust but also enhances future growth. These responsible business practices make them attractive to lenders feel more confident and secure giving them credit. For lenders, the study shows that Sharia-compliant companies are considered reliable and less risky. This enhances lenders' confidence in providing credit to these firms. As a result, Sharia-compliant companies are viewed as reliable, and responsible, presenting a strong opportunity for lenders, seeking safe lending opportunities.

1.5.4 Policymakers

For policymakers and regulatory bodies, the study underscores the significance of promoting honest and transparent business practices through Sharia compliance. Encouraging companies to follow Sharia principles can strengthen corporate governance, create a transparent business environment, and support a stable economy. The findings also help policymakers design better regulations that integrate ethical values into governance. Governments can benefit by using the study to promote ethical and transparent business practices. Encouraging Sharia-compliant corporate governance helps create a more transparent and responsible business environment, leading to economic stability and reducing financial misconduct.

This study fills a gap in research by exploring how sharia compliance impacts the association between board characteristics and company performance. It shows how ethical practices can make boards more effective, increase shareholder trust, and improve overall performance. The findings also provide a foundation for further studies on ethical governance in other emerging markets.

1.6 Organization of Study

This study is organized into five comprehensive chapters. The first chapter begins with an overview of the topic and highlights the introduction, theoretical background, research gap, and problem statement.

Additionally, it presents the research questions, research objectives, and significance of the research. The second chapter of this study provides a detailed review of relevant literature. The third chapter of this study focuses on the methodology of the study. It describes the data sources, variable selection, and econometric model. The econometric models used in this study are the Generalized Method of Moments for analysis. Chapter four of this study discusses the results of the econometric model. This chapter discusses the findings in detail and compares them with the existing body of literature. The last chapter five of this study provides information on the discussion of findings, recommendations of the study, and conclusion.

Chapter 2

Literature Review

2.1 CEO Duality and Firm Performance

Mohan and Chandramohan (2018), investigated how CG attributes like board size, board composition, and CEOD affect firm performance. They also explored the effect of these governance and firm-specific variables on performance metrics including ROE and price-to-book ratio. Using panel data OLS regression model to analyze the data. Using the sample of 30 Bombay-listed firms. The analysis shows that CEO duality and board size negatively impact firm ROE and price-to-book ratio, while board structure statistically shows no significant impact on firm performance. Financial leverage and asset turnover influence firm performance. This study suggests separating CEO and chair roles for better performance, but these results may vary due to the addition of other variables. The results highlight the need for a more nuanced method of governance practices, as their impact can be contingent on specific firm contexts and external factors.

Xuan (2024) analyzed the connection among CEO characteristics and Tobin's Q the moderating role of CEO age. Using 380 Vietnamese firms for the period 2013 to 2022. Applying pooled OLS and regression models, the research revealed that CEO age strengthened the tenure-performance link while weakening the negative impact of CEO duality. A key finding of the research was that firms with younger CEOs owing less than 1% of shares performed better. The conclusions highlight the nuanced role of leadership dynamics in shaping market efficiency. Additionally, the study suggests that age-related experience and ownership structure can have a key role in enhancing organizational performance and shareholder value. The research further highlights the importance of aligning leadership characteristics with firm-specific contexts for long-term growth and market competitive positioning in the market.

Danilov (2024) aim to investigate the performance of IT companies from the S & P 6500 index using a representative of 66 IT companies for the period 2003 to 2022, with a focus on corporate finance and governance-related factors. They employ linear models with fixed and random effects, along with quantile regression models, to analyze firm performance based on governance and financial variables.

The key factors contributing positive impact on firm performance include firm size, sales growth, liquidity ratios, and board characteristics like board independence and female representation. Firm age, dividend payout, board size, and CEO duality have negative impacts with quantile regression emphasizing specific impacts on profitability levels. The research shows the significance of efficient CG practices in enhancing firm performance, while also suggesting that larger board size and CEO duality can hinder a firm's performance. These findings offer essential guidance for companies aiming to optimize both their financial and governance strategies for improved long-term performance.

Peranginangin, Phillip, and Ming (2018), seek to examine the influence of a new Sharia screening methodology on price in informativeness in the Kuala Lumpur Stock Exchange (KLSE) and the behavior of Sharia-compliant companies. The research analyzes the return correlation of Sharia-compliant firms before and after the implementation of the more demands and comprehensive new screening methodology introduced in the market. Using data from KLSE, the study investigates how Sharia-compliant firms respond to market information while considering factors like CEO duality and government ownership. The findings reveal that Sharia-compliant institutions display significantly greater return correlation after following the introduction of the new screening methodology, suggesting that these firms more efficiently integrate both local market information and global. Additionally, the study finds that Sharia-compliant firms with CEO duality and greater government ownership tend to impound market information more quickly.

2.2 Board Size and Firm Performance

Ali, Fei, Ali, and Hussain (2021) evaluate the impact of corporate governance on the performance of non-financial enterprises registered on the PSX between 2005 and 2015. Using IV techniques, specifically the 3SLS model, the study found that larger and independent boards, along with foreign and institutional ownership, positively influenced firm performance.

In contrast, CEO duality negatively impacted performance, while ownership concentration reduced agency problems, leading to better outcomes. The study emphasizes the importance of governance mechanisms to optimize firm efficiency in emerging markets. These findings underline the critical role of intuitional ownership in fostering transparency and minimizing conflicts of interest. This study also underscores the significance of balanced board structures in promoting effective strategic decision-making and sustainable long-term growth.

Riaz et al. (2023) examined the influence of board attributes on business performance and ownership structure used as a moderator. The research used spans 80 non-financial institutions in Pakistan over 12 years.

Through multiple regression estimation, the conclusion indicates that board size enhances firm performance, simultaneously as board independence and gender diversity were found negative effect on firm performance. Ownership structure moderated the link between governance size, business, and performance.

The findings suggest a customized approach where board attributes and ownership framework are associated, is necessary for fostering firm success. The effective integration of ownership dynamics and board functions is essential for long-term sustainability. Furthermore, the study highlights the importance of carefully balancing board composition and ownership structures to optimize firm performance, particularly in developing markets like Pakistan. The study by Ud-Din et al. (2024) concludes that the effect of CEO duality on financial performance is linked to the degree of board independence, suggesting that an optimal governed board with independent directors can support to mitigate potential negative effects of CEO duality. These findings enhance the previous studies on corporate governance and financial performance, particularly in emerging markets like Pakistan.

The results reveal that the analysis recommends that policymakers emphasize improving the quality of corporate governance, particularly board structure when forecasting and enhancing financial performance.

Hidayat and Utama (2015) examine the influence of board characteristics on performance. Using spans of 293 firms registered on the Indonesian Stock Exchange for the period 2008 to 2012. By analyzing fixed-effect panel regression analysis, the study discovered that family directors and independent commissioners positively influence Tobin's Q. The results also found a U-shaped connection between board size and performance, indicating that both very small and very large boards can minimize the firm performance, while balanced size contributes positively. These findings highlight how cultural and market-specific factors shape the GCG. Additionally, the study emphasizes the importance of promoting diversity and expertise within boards to enhance decision-making commitment and stability, which ultimately contribute to enhancing firm performance. Khan, Saleem, Din, and Khan (2024) investigate the link among and financial performance of non-financial institutions and boardrooms in Pakistan. The study focuses on family-controlled businesses with concentrated ownership. It uses spans of 152 institutions registered on the Pakistan Stock Exchange from 2003 to 2018 period. Financial performance is calculated through ROA, MBR, TQ, and ROE, while boardroom independence is proxies by the proportion of non-executive directors. The study used the dynamic GMM estimation for analysis. The results show a negative connection among the financial performance of intermediaries and boardroom independence. This is due to the strong attraction of independent directors, with dominant shareholders and management. Additionally, CEO duality and board size negatively impact the company's performance. These findings provide valuable insights into corporate governance dynamics and provide recommendations for regulatory bodies to improve governance in emerging markets such as Pakistan.

2.3 Board Independence and Firm Performance

Croci, Ettore et al., (2024) evaluate the responsibilities of board characteristics in firm ability during times of crisis. Using data from US firms. Regression analysis of market reactions showed that larger and more active boards helped mitigate the negative impacts of crises. However, board independence was linked to weaker long-term performance, while CEO duality showed no noticeable effect. These findings suggest that diverse and proactive boards are crucial for guiding firms during uncertain conditions, though excessively independent boards might reduce adaptability. The study highlights the need for a balance between board independence and cooperation to strengthen long-term stability. Additionally, it shows the importance of adaptable boards and decision-making capability in responding to evolving crises. Furthermore, the research underscores the value of customized governance structures that align with unique crisis dynamics to enhance firm performance.

Eldaia, Hanefah, and Marzuki (2022) analyzed the authority of the board of directors effect on the performance of Takaful Malaysian firms for the period 2010 to 2017 using a qualitative approach. The analysis used panel fixed effect regression. Findings highlight a favorable link between BODE and performance. A company having a more independent and diverse board performs better and also shows that a high level of Sharia compliance with s high level of board effectiveness improves the performance of a business. The study emphasizes the importance of board independence and diversity in enhancing company performance, particularly in the framework of Islamic finance. It also highlights that integrating effective corporate governance practices, such as board competence and strong strategic control, can drive long-term business success. Furthermore, the findings underscore the need for continuous monitoring and improvement of governance mechanisms to maintain strategic advantage in the Takaful industry.

Cheng et al. (2023) examined how board attributes affect organizations results. Using spans of 100 Sharia-compliant firms in Malaysia's consumer products sectors, for the period 2011 to 2020. For the analysis using a Regression model, the findings highlighted that board composition, independence, meeting schedule, and gender diversity have a positive influence on a firm's performance, while CEO duality had a strongly adverse influence on firm performance. This study underscores the importance of adhering to governance frameworks, such as the Malaysian Code on Corporate Governance, to maintain performance in Sharia-compliant firms.

Additionally, it reveals how governance practices can be adjusted to align Sharia principles for improved results. The findings emphasize the importance for firms to continuously evolve their governance structures to enhance both compliance and ensure long-term profitability. Furthermore, the research highlights the contribution of gender diversity in promoting innovative decision-making. It also suggests that frequent board meetings strengthen accountability and strategic oversight, promoting sustainable growth.

Dawood, Rehman, Majeed, and Idress (2023) aim to evaluate the impact of CG on organizational financial outcomes in the commercial sector of Pakistan for the period 1980 to 2021. This research applies a qualitative approach and finds the financial performance of Pakistani banks is positively influenced by different corporate governance tools, like board size, long-term CEOs, independence, and audit committee size.

This research also examines how CG influences a company's performance, particularly in areas of ethical, legal, and environmental standards. Furthermore, the study represents the essential responsibility of governance mechanisms in the improvement of stakeholder trust, ensuring transparency and long-term growth. Strong governance practices are essential for maintaining investor confidence and protecting shareholder interest. The study highlights the need for continuous reforms in governance structure to adapt to evolving business landscapes.

Bayuny, Mustafa, Rani, Hidayah, and Redy (2024) explore the influence of board characteristics and firm-specific factors on the capital structure of Sharia-compliant companies in Indonesia's basic materials sector. The study analyzed data from 26 non-financial institutions during 2007 and 2020, applying the (GMM) estimation.

The research identifies key findings: larger board sizes were associated with higher leverage, and independent directors reduced debt levels by promoting prudent financial practices. Additionally, stronger supervision by the board of commissioners correlates with reduced leverage. Additionally, firm-specific factors significantly influence leverage decisions. These results underscore the importance of governance practices and firm-specific characteristics in shaping capital structure decisions within Sharia-compliant firm's practices. Bayuny et al. (2024) explore the influence of board characteristics and firm-specific factors on the capital structure of Sharia-compliant companies in Indonesia's basic materials sector. The study analyzed data from 26 non-financial institutions during 2007 and 2020, applying the (GMM) estimation. The research identifies key findings: larger board sizes were associated with higher leverage, and independent directors reduced debt levels by promoting prudent financial practices.

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Hasani and Muhammad (2022), explore the relationship between Sharia Supervisory Board remuneration, SSB cross-membership, audit committee independence, board independence, leverage, investment account holders (IAH), profitability, and firm size with the degree of Sharia compliance in Islamic banks. Sharia compliance is measured using an index developed in previous studies. The sample comprises 10 Islamic banks that published their annual reports on their official websites during the 2015-2020 period. Data investigation was conducted using multiple regression techniques with the EViews 10 software. The results indicate that audit committee independence, board independence, firm size, and SSB cross-membership have a significant impact on sharia compliance, while leverage and profitability SSB remunerations show no notable influence on the level of sharia compliance. These results highlight the important role of governance structures in improving Sharia compliance within Islamic banks. Further research is recommended to explore other additional elements influencing Sharia compliance across a larger sample could offer deeper insights.

Jamaludin and Bahaudin (2022), aim to explore how board characteristics affect the performance of Sharia-compliant publicly registered companies in Malaysia. The study used data from 1612 observations of Sharia-compliant companies listed on Bursa Malaysia from 2013 to 2015, the study examines the effectiveness of selected board structures and recommendations outlined in the Malaysian Code on Corporate Governance (MCCG) 2012, shortly before the implementation of

MCCG 2017. The study analyzed several governance attributes such as board size, the presence of female directors, CEOD, board meeting frequency, ownership structure, and board independence.

The findings reveal mixed results, with board meeting frequency statically showing a notable adverse impact on company performance, while the influence of women directors was inconsistent. In contrast, other corporate governance characteristics, such as board size and independence, statically showed a significant positive link with performance. These conclusions provide to the literature on Shariah-compliant companies in Malaysia and provide comprehensive insights across different performance measures.

Din and et al. (2024) explore the link among CEO duality, board independence, and institution financial performance in registered companies in Pakistan, an emerging Asian market that exhibits distinctive institutional characteristics, including family-controlled businesses, increased independent board, and CEOD. A sample of 146 manufacturing companies is used, to cover the period from 2003 to 2012. To tackle potential endogeneity challenges, the research applied the dynamic GMM estimation approach. The results highlight an insignificant link among the financial condition of a firm and CEO dual when board independence is absent. However, when independent directors are significantly present on the board, a favorable link is found among financial condition and CEO duality.

Alabdullah and et al. (2022) investigate the relationship between CG and the profit-related performance of a company focusing on how key factors like board independence, board independence, and CEOD affect a company's financial performance. This study is based on previous research that has examined corporate governance as an internal control mechanism.

The study highlights that corporate governance attributes, including board size, independence, and CEOD, play a vital role in enhancing a company's profitability. Strong internal control and a well-organized board lead to better governance and finally, stronger financial performance. Moreover, the study highlights that balanced governance practices can mitigate risks and foster sustainable growth. It also highlights that aligning governance structures with organizational goals enhances decision-making efficiency. These findings emphasize the importance of continuous monitoring and adaptation of governance practices to address dynamic market challenges.

2.4 Females Representation on Board and Firm Performance

Kyere and Ausloos (2020), study aims to evaluate the influence of effective CG on the financial performance of non-financial firms listed in the UK. Using spans of 252 registered firms for the year only 2014, for analysis they used a cross-sectional regression model, that reveals the impact of corporate governance can have a negative, positive, or no significant influence on performance, depending on the mechanism chosen. The study emphasized the roles of board characteristics board size, independence, and diversity play critical roles in enhancing firm performance, while external factors such as market conditions and regulatory environments affect the performance. Their findings further suggest that the impact of CG mechanisms varies among organization-specific attributes, emphasizing the importance of customized governance practices to achieving organizational goals and external demands.

Pucheta-Martínez and Gallego-Álvarez (2019) analyzed the influence of board properties on institutions-specific performance, using a span of 10,314 firm-year observations from 34 countries covering the period 2016 to 2018. The analysis, conducted through Panel data regression, that board characteristics like board size, independence, and female directors positively impacted Tobin's Q, while CEO duality surprisingly presented a favorable relationship as well.

The findings reveal that the influence of board structures and governance practices may vary significantly across regions, underscoring the necessity for country-specific approaches. Moreover, the study highlights the importance of understanding account cultural and institutional influences that shape governance practices and their effects on firm performance worldwide. Additionally, the research also recommends further investigation into the interaction between governance mechanisms and regional market conditions to develop more effective frameworks.

Ramly and Nordin (2018), investigate the connection between risk committee (RC) independence, board independence, and risk-taking in Malaysian Islamic banks, focusing on data for the period 2010 to 2015. Using financial data from these banks to examine how Sharia supervisory board expertise affects credit risk management. The findings indicate that Sharia Supervisory Board members with expertise in both Sharia and banking fields help to reduce credit risk, when supported by knowledgeable Sharia advisors greater board and RC independence further mitigate credit risk. Additionally, the positive impact of the RC independence on credit risk-reducing significantly is strengthened by the active participation of female Sharia advisors in SSBs. These results highlight the significance of SSB expertise in collaboration with conventional CG strategies to enhance effective risk management strategies. Moreover, the results suggest that integrating both agency theory and resource dependence theory provides a more inclusive understanding of how corporate governance structure influences collaborative decision-making, and risk control within Islamic financial institutions.

The purpose of Zahid, Maqsood, Irshad, and Khan (2023), is to enhance the expertise of CG and environmental reporting by examining the influence of board gender diversity (BGD) on environmental performance, greenwashing behavior, and environmental disclosure. The study aims to explore how the presence of females on corporate boards influences companies' environmental practices, specifically regarding their genuine environmental initiatives versus misleading greenwashing. Applying it to data from Chinese firms to analyze this relationship, the study uses a panel regression estimation technique with fixed effects. The analysis reveals that a higher proportion of females on corporate boards leads to improved environmental performance and disclosure. The study suggests that females in top management positions play a key role in driving firms' proactive environmental creativities.

Notably, the association between board gender diversity and environmental outcomes was found to be nonlinear, showing significant improvements in effectiveness once female representation on the board reached or exceeded a threshold of 33.5%. Importantly, the study found no internal biases even after controlling for other governance factors and mitigating potential endogeneity. These findings carry suggestions for policymakers revealing the important role of board gender diversity in encouraging sustainably responsible practices and minimizing greenwashing behavior.

Amedi and Mustafa (2020) investigated how board elements affect the performance of manufacturing institutions that are registered on the Amman Stock Exchange from 2016 to 2018. Applying, multiple regression estimation, the study reveal that board size negatively affected firm performance, while board independence and the participation of female directors positively impacted ROE. The results suggest that smaller, more independent boards with female representation are likely to enhance corporate governance performance. The results emphasize the importance of diversity and efficiency in boosting firm profitability in Jordan. Additionally, the study underscores the importance of board composition in improving decision-making and accountability that crucial for long-term financial term financial success in the manufacturing sector.

2.5 Sharia Compliance and Firm Performance

Baig, Malik, and Ellahi (2024) explored the influence of organizational governance and Sharia governance mechanisms on credit ratings. Used spans of 22 Islamic financial institutions in Asia during the timeframe 2006 to 2018. For analysis using an ordered logistic regression model, the study found that strong Sharia Governance enhanced the connection between governance characteristics and credit ratings, emphasizing its contribution to enhancing credit worthiness. The results recommend that credit rating agencies should include Sharia governance evaluations to provide a more comprehensive assessment of Islamic Financial institutions. This highlights the strategic significance of governance structures in building trust among stakeholders. Furthermore, the study suggests that incorporating Sharia governance into the credit rating process could provide a more precise representation of an institution's long-term stability and ethical reputation.

Javed et al. (2022) evaluate the influence of Sharia compliance on the financial performance of five full-fledged Islamic financial institutions in Pakistan. During the period 2008 to 2020. The study, using a fixed-effect model, the analysis shows a notable relationship between Sharia compliance and profitability. The research highlights how Islamic principles can boost the financial performance in Islamic banking. These results suggest that integrating an ethical framework into financial operations is an effective approach to driving sustainable growth. Furthermore, the study highlights the importance of Sharia compliance in enhancing investors' trust and supporting sustainable financial practices, which can offer a reasonable advantage in the banking sector. It also suggests that Islamic banks can achieve better financial performance by supporting their operations with ethical and religious guidelines.

Zaigham and Tariq (2024), evaluates the conditional impact of board attributes on business performance, with Sharia compliance and ownership concentration acting as moderators in the Pakistani equity market during the 2010 and 2021 period. Using a moderated moderation model for analysis, the research revealed that the size of a board had significantly weakened Tobin's Q whereas gender diversity showed a favorable conditional influence. The independent audit committees and directors showed no noticeable outcomes on institutions performance. The research highlights the interaction between ownership framework and Sharia compliance in shaping the governance-performance relationship. Furthermore, the research emphasizes the significance of aligning organization governance strategies with Sharia principles and ownership structure to boost business performance in the scenario of Pakistan's developing markets.

Ullah et al. (2023) evaluate the influence of director skill diversity on firm performance in Sharia-compliant and conventional firms across Pakistan, Malaysia, Indonesia, and Bangladesh for the period 2009 to 2018. Regression analysis revealed that Islamic finance and ethics significantly enhanced performance in Sharia-compliant firms. The study emphasizes the value of skill diversity in improving governance and firm performance, especially in markets with strong ethical expectations. It also found that Sharia-compliant firms with various skill sets in finance and ethics established superior decision-making and risk management. In contrast, conventional firms did not experience similar benefits from skill diversity among directors. These findings suggest the importance of effective governance strategies for different firm types.

Masruki, Hanefah, and Ismail (2019) evaluate the relationship between board size and firm performance in Sharia-compliant companies within Malaysia's Consumer product sector listed on Bursa Malaysia, utilizing spans of 77 institutions between 2014 and 2016. The study used regression estimation. The results reveal a strong positive correlation between board size and firm performance highlighting that larger boards, with diverse expertise and perspectives, provide to improve the firm's performance. Additionally, the study emphasized the need to appoint directors with Shariah expertise, especially in industries like food, pharmaceuticals, and drinks, to enhance Halal governance and ensure alignment with consumer expectations. The study also highlights these practices could enhance loyalty and trust among consumers. Ethical business practices can improve the firm's reputation and also attract more investments.

Kausar et al. (2023) explored the impact of corporate governance (CG) mechanisms on dividend policy, targeting how Sharia compliance moderates this relationship in Pakistan. The study analyzed data from the Pakistan Stock Exchange for the period 2014 to 2018, the study employed panel regression estimation using Eviews and Stata software. The findings revealed that Sharia-compliant institutions pay higher dividend payouts as related to non-Sharia-compliant firms, highlighting its importance in ensuring ethical association with investors' expectations.

The research suggests that Sharia compliance governance is more transparent and responsible dividend decisions that enhance the investors' confidence. The findings show Sharia compliance significantly moderated the link between CEOD, gender diversity, and DP. It also highlights the firms that adopt ethical practices to remain competitive in the markets, that beneficial for both financial and ethical considerations. Ramly and Nordin (2018), investigate the connection between risk committee (RC) independence, board independence, and risk-taking in Malaysian Islamic banks, focusing on data for the period 2010 to 2015. Using financial data from these banks to examine how Sharia supervisory board expertise affects credit risk management. The findings indicate that Sharia Supervisory Board members with expertise in both Sharia and banking fields help to reduce credit risk, when supported by knowledgeable Sharia advisors greater board and RC independence further mitigate credit risk. Additionally, the positive impact of the

RC independence on credit risk-reducing significantly is strengthened by the active participation of female Sharia advisors in SSBs. These results highlight the significance of SSB expertise in collaboration with conventional CG strategies to enhance effective risk management strategies. Moreover, the results suggest that integrating both agency theory and resource dependence theory provides a more inclusive understanding of how corporate governance structure influences collaborative decision-making, and risk control within Islamic financial institutions.

In this study, Sueb, Prasojo, Muhfiatun, Syarifah, and Putra (2022) examine the influence of Shariah Supervisory Boards (SSBs), maqasid Sharia, and risk-taking on the performance of Islamic banks across the globe. A quantitative research design utilizing a dynamic panel regression methodology with a two-step GMM. The study used data from the Bank scope database for the period 2014–2018. The findings reveal that both the characteristics of risk-taking and SSB have a statistically meaningful effect on the performance of Islamic financial intermediaries.

In particular, higher SSB characteristics such as board size, education level, expertise, discipline, cross-membership, and reputation are associated with improved performance in banks. Additionally, a higher level of risk-taking is associated with enhanced efficiency and stronger financial performance, when risk is high return also will be high. The study also shows that compliance with maqasid Sharia indicates that Islamic banks also follow Islamic laws, ensuring that their performance is associated with both Sharia principles and the firm's financial objectives. Thus, a higher quality SSB and a stronger maqasid Sharia index score significantly favorable impact on the financial performance of Islamic financial institutions.

Asif and Akhlaq (2024) are to explore the significance of Sharia compliance in modern business practices, with a particular focus on the growing role of ethical considerations of Muslim consumers and Islamic finance. It highlights how Sharia principles, based on the Quran and Sunnah, are principles of ethical business operations while addressing both challenges and opportunities associated with their implementation.

The methodology involves a qualitative review of existing literature and theoretical frameworks on Sharia compliance, examining key principles such as ethical behavior, gharar (uncertainty), social justice, transparency, the prohibition of riba (interest), and haram (forbidden) products in Islam. Case studies of businesses from both Muslim-majority and non-Muslim-majority countries were analyzed to gain insights into the practical implications. The findings reveal that following Sharia compliance promotes trust, ethical behavior, and stakeholder confidence, while also aligning with the beliefs of Muslim consumers. Companies that practice Sharia compliance have experience in enhancing long-term customer loyalty, brand reputation, and attraction from ethical investors. Challenges such as regulatory inconsistencies, issues with standardization issues, and complexities involved in integrating Islamic finance instruments continue to exist. Businesses in non-Muslim-majority countries face difficulties in balancing Sharia principles with local legal frameworks and corporate governance standards. Despite these challenges, the research highlights significant opportunities for businesses to engage with the growing Islamic market, which not only benefits businesses but also contributes to societal well-being.

Afifi, Abbas, and Ismail (2019) purpose of this conceptual paper is to explore how Shariah knowledge, particularly from the Shariah board, can be effectively transmitted throughout an organization's structure to improve performance and competitiveness within the global halal market. By transforming tacit Shariah knowledge into explicit knowledge, the paper aims to facilitate its distribution within the organization, thereby enhancing understanding, innovation, and team performance. The methodology adopted involves analyzing existing literature on knowledge management, business performance, and Sharia compliance, with a focus on the process of converting tacit Sharia knowledge into explicit knowledge. The paper highlights the critical roles of Sharia boards, standards officers, and organizational structures in ensuring that the Sharia knowledge into understandable and clear and can be easily transferred and distributed throughout the organization knowledge. The results of the conceptual framework suggest that effectively transferring Sharia knowledge through channels or social media can lead to a deeper understanding of Sharia principles, improve organizations' financial performance, build customer loyalty and greater innovation, helping Sharia-compliant businesses to succeed in a complex and competitive environment.

Pepis and de Jong (2019) analyzed the long-term influence of Sharia-compliant firm practices on the financial performance of firms, specifically focusing on whether Sharia-compliant attributes improve long-term firm value and attract more investors. The methodology adopts an event study design covering the period (2009-2018) of ten years, analyzing 120 firms through five quantitative Sharia compliance indicators, which include measures of leverage, liquidity, and interest-based income dependence. The study tests two hypotheses to assess, if Sharia compliance positively affects financial performance, with particular attention to (ROA) and (ROS). The results reveal that Sharia compliance enhances long-term financial performance, as evidenced by improvements in ROA and ROS, while also showing that the application of Sharia screening rules is a successful long-term managerial policy with positive effects, even for intermediaries not in Sharia-compliant industry sectors.

Ghori et al., (2024) investigated the impact of Sharia compliance on long-term financial performance in Pakistani firms from 2009 to 2018. Using a methodology of event study, the research revealed that Sharia-compliant practices significantly improved ROA and ROS, with compliant firms outperforming as compared to non-compliant ones in the long term, even in sectors not adhering to Sharia guidelines.

The study highlights the competitive advantage gained by businesses that adopt ethical and compliant business practices within Islamic markets. It underscores how Sharia compliance can serve as a strategic differentiator, even within more conventional industries. Furthermore, the conclusions emphasize the importance of ethical governance in building investor's confidence and enhancing the company's reputation. Furthermore, the results suggest that incorporating Sharia principles into overall corporate strategies can lead to sustained financial growth and enhance market competitiveness.

Wijayanti and Falikhatun (2024), investigate how the characteristics of Sharia Supervisory Boards (SSBs) influence their effectiveness in Islamic Banks (IBs) in Indonesia. A qualitative methodology was applied, which involved the review of annual reports, legal documents, journals, books, and prior research. Additionally, they analyzed eight essential key SSB characteristics across 14 IBs to evaluate their impact on SSB effectiveness. The study also presents a comparative analysis of the characteristics of the SSB in state-owned Islamic banks before and after a merger. The results reveal that the need for regulatory improvements can enhance the Sharia Compliance Board's effectiveness, dual roles held by SSB members and the lack of sufficient accounting and financial expertise highlight the need for regulatory improvements. These findings underscore the necessity for clearer accounting and financial guidelines to improve governance practices and ensure stronger oversight in Indonesia's Islamic banking sector. The study suggests that selecting expert SSB staff and providing specialized training could further enhance the quality of Sharia supervision. Additionally implementing a standardized regulatory framework would also contribute to greater consistency and better compliance across all Islamic banks and adopting a more robust Islamic financial system.

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Chapter 3

Data Description

The purpose of this study is to evaluate the influence of board characteristics on firm performance with the moderating role of sharia compliance.

3.1 Population and Sample of the Study

The sample of 90 firms has taken from the non-financial sector. The firms are selected based on market capitalization.

3.2 Variable Description

Dependent variable

In this study, ROCE and Tobin's Q are dependent variables. ROCE is a book-based measure whereas Tobin's Q is a market-based measure of performance or value.

3.2.1 ROCE

ROCE is a firm-specific variable it is a financial metric that measures the profitability of a company and how a company efficiently generates profit from its capital (Sotonye, Lateef, & Ene, 2024) return on Capital Employed (ROCE) is a financial metric that assesses how effectively a company makes a profit from its capital investments. It evaluates the returns generated from both debt and equity financing about the profitability of the company's operations. ROCE serves as a key indicator of a company's financial health and its capacity to deliver returns to investors.

$$\text{ROCE} = \frac{\text{Operating Profit}}{\text{Capital Employed}}$$

Here, operating profit is earnings before interest and tax Capital employed is total assets less current liabilities

3.2.2 Tobin's Q

Using the market-based method, the study uses Tobin's Q to assess an organization's financial performance. Brainard and Tobin's (1968) established Tobin's Q, a popular framework. It uses the market value/asset replacement cost ratio (Ullah et al., 2022). Tobin's Q is a financial ratio that assesses the market value of a company compared to the value of its assets. A high Tobin's Q indicates the investor views the company positively while a minimum Tobin's Q indicates governance problems and inefficiencies (Shakri, Yong, & Xiang, 2024).

$$\text{Tobin's Q} = \frac{\text{Book Value of Debt} + \text{Market Value of Equity}}{\text{Book Value of Assets}}$$

Independent Variable

Board characteristic independent variables are Board size, board independence, CEO Chairperson Duality, and female representation on the board. Firm-specific Independent variables are sales growth, leverage, and firm size.

Board characteristics

Board characteristics include board independence, CEO Chairman Duality, board size, and female representation.

3.2.3 Board Size

The board of directors is the top decision-making body in a company, playing a key role in shaping its strategic decisions (Bayuny et al., 2024). Board size refers to how many directors are on a company's board. A larger board may provide more ideas but if it is too big it can create a mismatch and delays in decisions so it can be less effective (Majeed, Jun, Zia-Ur-Rehman, Mohsin, & Rafiq, 2020). A large board is often regarded as inefficient and ineffective due to challenges in coordination, communication, and decision-making. The main problems come from challenges in organizing meetings, agreeing on decisions, and acting quickly can be challenging with more members. Additionally, a big board may struggle to work as a team due to a lack of shared goals and poor communication. Studies generally show that larger boards often perform worse, as they are less effective at using resources and making decisions (Zaigham & Tariq, 2024; Hidayat & Utama, 2015).

$$\text{BS} = \ln(\text{No of board directors})$$

It is hypothesized that there is an adverse connection between board size and firm performance.

3.2.4 Board Independence

Independent directors have contributed significantly to improving organizational performance. The main objective of independent director's selections is to reduce the agency's issues.

Agency theory describes the separate board to mitigate the principle and agent conflicts. Independent directors may better perform controlling management functions (Baig et al., 2024). Independent directors are professionals with no ties to a company's management, making them less likely to influence corporate decisions with personal opinions. They serve as an important control mechanism by offering objective decisions and fresh perspectives that go beyond traditional, finance-focused viewpoints. Independent directors mostly focus on the interests of all stakeholders, ensuring that firms are less likely to retain valuable information. Their focus is on promoting appropriate behavior within the organization and achieving established goals. As a result, they are expected to provide more impartial and independent assessments of a firm's management and performance compared to executive directors. Boards with more independent directors are generally more effective or better in governance, oversight, and management control.

Independent directors help reduce conflicts of interest by providing objective supervision and safeguarding shareholder interests. Their experience and objectivity to the board, enhance strategic decision-making and control processes.

Having more independent directors also contributes to strengthening internal controls, improving transparency, and supporting better decision-making to safeguard and advance shareholder interests (Pucheta-Martínez & Gallego-Álvarez, 2019).

$$\text{BI} = \left(\frac{\text{No of independent board}}{\text{Total number of board's directors}} \right) \times 100$$

It is hypothesized that Board independence has a positive influence on firm performance

3.2.5 CEO Chairman Duality

CEO duality occurs When the CEO of a company performs both the role of CEO and board chairperson. The role of the BOD is to supervise the CEO on behalf of shareholders. As a result, CEO duality typically leads to agency problems between executives and shareholders, negatively impacting firm performance (Lei et al., 2014). A dual role often weakens the board's power and makes it difficult to check the CEO's actions. CEO duality happens when the CEO also performs as the chairman of the board. Some studies highlight that changes in CEO duality have minimal impact, suggesting that other corporate governance mechanisms play a more significant role in influencing firm performance. Separating the responsibilities of the CEO and chairman may lead to monitoring costs, though these costs can often be outweighed by the benefits (Ali et al., 2021). Many studies have reported an adverse relationship between CEO duality and firm performance, with firms without CEO duality often demonstrating better outcomes. Such firms are expected to minimize bankruptcy risk and instill greater confidence among stakeholders, enhancing their ability to secure additional capital. Additionally, firms with separate leadership roles tend to perform better, as the separation of duties promotes more effective governance and decision-making (Mohan & Chandramohan, 2018).

$$\text{CEO Duality} = \text{Function of chairperson combined with CEO}$$

D=1 indicates the same person holds both roles.

D=0 indicates that roles are separate.

It is hypothesized that CEO duality hurts a firm's performance.

3.2.6 Female Representation

Females who are elected to the board play a crucial role in the board, it will positively influence board members, behaviors by encourage attending more board meetings. Board diversity improves, the decision-making power that enhances governance builds trust with stakeholders, and improves financial performance (Baig et al., 2024).

Women are often considered better workers due to qualities such as patience, multitasking abilities, strong educational backgrounds, integrity, risk awareness, and a commitment to following rules. Research highlights that women serving on boards are effective decision-makers and monitors. They play a significant role in enhancing firm value by influencing important decisions like acquisitions.

Additionally, having at least two women on boards has been shown to improve decision-making and oversight, ultimately benefiting shareholders. Furthermore, the positive impact of women directors on firm performance tends to grow as their representation increases (Zaigham & Tariq, 2024).

$$\text{Female Representation} = \frac{\text{No of females in the board}}{\text{Total members of the board}}$$

Board gender diversity (the percentage of females on the board of directors) positively influences firm performance.

Firm-Specific Variables

3.2.7 Sales Growth

Sales growth measures the percentage increase or decrease in company sales revenue over a particular period. Nazir, Azam, and Khalid (2021) reveal the ability of the firm to increase its market presence and revenue generation over time. Higher sales growth indicates better performance.

$$\text{SG} = \left(\frac{\text{current period sales} - \text{previous period sales}}{\text{previous period sales}} \right) \times 100$$

It is hypothesized that sales growth has a positive impact on firm performance.

3.2.8 Leverage

Financial leverage is defined as "the use of borrowed funds to enhance productivity and profitability." The purpose of financial leverage for companies is to assess the balance between equity and debt used to finance their assets.

It represents the proportion of debt within a firm's capital structure, typically represented by the debt-to-equity ratio. Firms use debt to expand their business when investing the borrowed amount it can earn more return, through high leverage firms can increase the return on equity but also increase financial risk (Adhia & et al., 2023).

$$\text{Leverage} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

Leverage has a positive relationship with firm performance.

3.2.9 Firm Size

Firm size defines the scale of a business or the overall size of a business often measured by total assets, revenue, and number of employees. The larger firm usually has more resources and capabilities.

Akram et al. (2021) Firm size, as a key characteristic, plays an essential role in contributing to a firm's success by influencing its profitability. Traditionally, firm size refers to its capacity to hold resources, produce at maximum output, and the range of services it offers.

$$\text{FS} = \ln(\text{Total assets})$$

Firm size has a positive relationship with firm performance.

3.2.10 Sharia Compliance

The Islamic economic mechanism is characterized by Islamic rules and policies to create a civil, justifiable, authentic, and stable society. Therefore, all unlawful actions are prohibited in the Islamic governance mechanism. As it prohibited all unlawful actions or unfavorable behavior to the life satisfaction of society, the Islamic governance mechanism can be defined by Sharia's ethical moralities (Kausar et al., 2023).

Sharia Company places an additional responsibility on the care of stakeholders. Making decisions that are beneficial for society it's not only a religious obligation it also an ethical obligation generally Sharia compliance firm's level of governance is better.

Islamic labels will be identified through the use of dummy variables.

Islamic Label = 1, if the Company is Sharia-compliant

= 0, otherwise

Sharia compliance has a positive relationship with firm performance.

3.3 Methodology

This study employs a quantitative research design to investigate the relationship between board characteristics and firm performance, targeting the moderating role of Sharia compliance.

Data is collected from 90 non-financial firms listed in Pakistan, selected based on market capitalization. The dependent variables include Tobin's Q, a market-based measure, and ROCE, a book-based metric reflecting profitability and efficient use of capital. The independent variables encompass board characteristics such as CEO duality, board size, board independence, and female representation, alongside firm-specific factors like sales growth, leverage, and firm size. Sharia compliance serves as the moderating variable, reflecting adherence to Islamic principles in governance. The study employs the Generalized Method of Moments (GMM) to address endogeneity issues and capture the dynamic relationships between variables.

The econometric models test both the direct effects of board characteristics on firm performance and the interaction effects of Sharia compliance. By incorporating lagged variables, the analysis captures the persistence of performance over time. The hypotheses are tested to determine whether Sharia compliance strengthens or weakens the link between board characteristics and firm performance, providing insights into how ethical governance frameworks influence corporate outcomes.

3.4 Econometric Model

The study will dynamic panel data analysis for the investigation of the relationship.

The impact of Board Characteristics on Tobin's Q has been estimated using the following econometric model based on GMM.

$$\begin{aligned} TQ_{i,t} = \beta_0 + \beta_1 SG_{i,t} + \beta_2 Lev_{i,t} + \beta_3 FS_{i,t} + \beta_4 BS_{i,t} + \beta_5 BI_{i,t} + \beta_6 CEOD_{i,t} \\ + \beta_7 FRB_{i,t} + \beta_8 TQ_{i,t-1} + \beta_9 ISL_{i,t} + \mu_{i,t} \end{aligned} \tag{3.1}$$

The variable at time t for the company i includes:

$TQ_{i,t-1}$ = Lag value of Tobin's Q

$BS_{i,t} = BoardSize$

$BI_{i,t} = BoardIndependence$

$CEOD_{i,t} = CEODuality$

$FRB_{i,t}$ = Female Representation in Board

ISL = Islamic Label

$SG_{i,t} = SalesGrowth$

$Lev_{i,t} = Leverage$

$FS_{i,t} = FirmSize$

The moderating role of Sharia compliance between Board Characteristics and Tobin's Q has been estimated using the following econometric model based on GMM.

$$\begin{aligned} TQ_{i,t} = &\beta_0 + \beta_1 SG_{i,t} + \beta_2 Lev_{i,t} + \beta_3 FS_{i,t} + \beta_4 BS_{i,t} + \beta_5 BI_{i,t} + \beta_6 CEOD_{i,t} \\ &+ \beta_7 FRB_{i,t} + \beta_8 ISL_{i,t} + \beta_9 TQ_{i,t-1} + \beta_{10}(BS_{i,t} \cdot ISL) + \\ &\beta_{11}(BI_{i,t} \cdot ISL) + \beta_{12}(CEOD_{i,t} \cdot ISL) + \beta_{13}(FRB_{i,t} \cdot ISL) + \epsilon_{i,t} \end{aligned} \tag{3.2}$$

The variable for the company i at time t include:

$TQ_{i,t}$= Tobin's Q

$TQ_{i,t-1}$= Lag value of Tobin's Q

$BS_{i,t}$ = Board Size

$BI_{i,t}$ = Board Independence

$CEOD_{i,t}$ = CEO Duality

$FRB_{i,t}$ = Female Representation in Board

$ISL_{i,t}$ = Islamic Label

$SG_{i,t}$= Sales Growth

$Lev_{i,t}$ = Leverage

$FS_{i,t}$ = Firm Size

The impact of Board Characteristics on ROCE has been estimated by using the following econometric model based on GMM.

$$\begin{aligned} ROCE_{i,t} = &\beta_0 + \beta_1 SG_{i,t} + \beta_2 Lev_{i,t} + \beta_3 FS_{i,t} + \beta_4 BS_{i,t} \\ &+ \beta_5 BI_{i,t} + \beta_6 CDUAL_{i,t} + \beta_7 FRB_{i,t} + \beta_8 ROCE_{i,t-1} + \beta_9 ISL_{i,t} + \mu_{i,t} \end{aligned} \tag{3.3}$$

$ROCE_{i,t-1}$=Lag value of Return on capital employed

$BS_{i,t}$ = Board Size

$BI_{i,t}$ = Board Independence

$CEOD_{i,t}$ = CEO Duality

$FRB_{i,t}$ = Female Representation in Board

$ISL_{i,t}$ = Islamic Label

$SG_{i,t}$= Sales Growth

$Lev_{i,t}$ = Leverage

$FS_{i,t}$ = Firm Size

The impact of Board characteristics on ROCE with Moderating Role of sharia compliance has been estimated using the following econometric model based on GMM.

$$\begin{aligned} ROCE_{i,t} = &\beta_0 + \beta_1 SG_{i,t} + \beta_2 Lev_{i,t} + \beta_3 FS_{i,t} + \beta_4 BS_{i,t} + \beta_5 BI_{i,t} \\ &+ \beta_6 CEOD_{i,t} + \beta_7 FRB_{i,t} + \beta_8 ISL_{i,t} + \beta_9 ROCE_{i,t-1} \\ &+ \beta_{10}(BS_{i,t} \cdot ISL) + \beta_{11}(BI_{i,t} \cdot ISL) + \beta_{12}(CEOD_{i,t} \cdot ISL) + \\ &\beta_{13} FRB_{i,t} \cdot ISL + \epsilon_{i,t} \end{aligned} \tag{3.4}$$

$ROCE_{i,t-1}$=Lag value of Return on capital employed

$BS_{i,t}$ = Board Size

$BI_{i,t}$ = Board Independence

$CEOD_{i,t}$ = CEO Duality

$FRB_{i,t}$ = Female Representation in Board

$ISL_{i,t}$ = Islamic Label

$SG_{i,t}$= Sales Growth

$Lev_{i,t}$ = Leverage

$FS_{i,t}$ = Firm Size

3.5 Summary of Hypothesis

H1: It is hypothesized that CEO duality hurts a firm's performance.

H2: Board gender diversity (the percentage of females on the board of directors) positively influences firm performance.

H3: It is hypothesized that there is an adverse relationship between board size and firm performance.

H4: It is hypothesized that Board independence has a positive influence on firm performance

H5: Sharia compliance positively moderates the relationship between board size and firm performance.

H6: Sharia compliance positively moderates the relationship between board independence and firm performance.

H7: Sharia compliance positively moderates the relationship between CEO Duality and Firm performance.

H8: Sharia compliance positively moderates the relationship between female representation on board and firm performance.

H9: It is hypothesized that sales growth has a positive impact on firm performance.

H10: Leverage has a positive relationship with firm performance.

H11: Firm size has a positive relationship with firm performance.

Chapter 4

Results and Discussion

Chapter 4 reveals, the research results generated from the data. This section focuses on the dynamic panel data examination by using the Generalized Method of Moments (GMM) technique.

4.1 Descriptive Statistics

Table 4.1 Descriptive statistics provide the summary of measurements for the variables used in this study, including measures of mean, median, standard deviation, kurtosis, and skewness. The variables include performance metrics, board characteristics, firm-specific variables, and moderating variable Sharia compliance. The key performance metrics show how firms are valued, how profitable they are, and how their board is structured. Key performance metrics Tobin's Q average value is 2.0456 meaning firms are valued at twice their replacement cost, indicating strong market confidence. The data varies with a standard deviation of 1.8193. Positive skewness 2.0500 and high kurtosis 6.7350 show some firms have very high market values. The maximum Tobin's Q value representing firms with strong investor confidence, while some firms are valued close to their book value, implying weaker growth potential. ROCE average profitability is 14.25% but the range is wide, from -38.74 to 88.67. Maximum value representing some firms efficiently utilizing their capital and minimum value indicating some firms are in losses and financial struggles. High variation standard deviation 16.7861 suggests a big variation in firm profits some firms perform very well while others struggle. BI on average 0.81352 of board members are independent. Most firms lean toward higher independence as shown by the median of 81.81%, most firms tend to have stronger board independence and negative skewness -0.81887. BS average board size is 8.33 with little variation (standard deviation 0.2029).

Maximum value indicating larger board could enhance decision making but slow the process, minimum value indicating small board may be efficient but lack of diversity. Positive skewness 0.5824 shows most boards are moderately sized. FBR is low with a mean of 11.2%.

Maximum value 44.4% showing strong diversity and minimum value showing poor diversity. Positive skewness 2.2733 shows a few firms have high female representation. CEO duality is rare, with a mean of 0.1246.

Maximum value showing some firms combined the CEO and Chairman role which may lead to strong leadership but weaker check and balance but others maintain a strict separation, potentially improving governance. completely separate role the High kurtosis (12.2682) suggests most firms don't have a dual role, and few firms still follow it. ISL on average, 72.54% of firms on average, indicating that most firms follow Sharia principles. The binary nature means firms are Sharia compliant or not. Negative skewness -1.0100 shows compliance is common, with fewer firms being non-compliant.

The average leverage ratio is 0.6306, meaning firms generally rely on debt for about 63% of their capital structure. Some firms are highly leveraged, as shown by positive skewness 2.4565. FS's average firm size is 19.91 with a low variation standard deviation of 0.4925.

Near normal skewness 0.4925 means size is evenly distributed where most firms have similar sizes without extreme outliers. SG's average sales growth is 13.24% but it varies a lot (standard deviation 0.2987). Negative skewness -1.0100 shows more firms have lower growth and fewer firms achieving exceptionally high growth rates overall, the data indicates that most firms follow Sharia principles, maintain moderate debt levels, have relatively uniform sizes, and show varying sales growth patterns with a tendency toward lower growth.

Table 4.1: Descriptive Statistics

	TQ	ROCE	BI	BS	FRB	CEOD	LEV	FS	SG	ISL
Mean	2.0456	14.2484	0.81352	2.1192	0.1120	0.1246	0.6306	19.9109	0.1324	0.7254
Median	1.3434	10.5249	0.81818	2.0794	0.1250	0.0000	0.5316	19.1734	0.1196	1.0000
Maximum	9.9148	88.6700	1.0000	2.7726	0.4444	1.0000	4.5011	28.1526	2.4703	1.0000
Minimum	0.1483	-38.7427	0.09155	1.6094	0.0000	0.0000	-1.2770	14.1411	-0.9948	0.0000
Std. Dev.	1.8193	16.7861	1.46981	0.2029	0.0940	0.3304	0.5493	3.0808	0.2987	0.4465
Skewness	2.0500	0.9763	-0.81887	0.5824	1.0177	2.2733	2.4565	0.4925	1.4889	-1.0100
Kurtosis	6.7350	4.0614	5.093993	3.5182	4.7316	6.1678	12.2682	2.2761	13.7845	2.0202

4.2 Impact of Board Characteristics and Sharia Compliance on Firm Performance

This section covers the effect of board characteristics and Sharia compliance on firm performance using market-based measures. The performance is measured through TQ, a market-based measure used to analyze the performance of the firms. Moreover, the moderating impact of board characteristics is also tested. This study uses TQ as a measure of firm performance. TQ (-1) represents the lag value of performance in t-1. BI represents board independence which is computed by independent directors divided by a total number of directors.

Board is represented by BS and a natural logarithm is used to calculate the board size. CEOD represents the CEO Duality, meaning the CEO also acts as Chairperson of the board. FRB represents the female representation on the board which is determined by the number of female directors concerning total directors. ISL represents the Sharia compliance firm. Lev represents the leverage of the firm and is estimated by the debt-to-equity ratio. Firm size is measured through the market capitalization of the firm and the value of the size of a firm is captured by multiplying the number of outstanding shares by the market price of the share. SG represents sale growth i.e., measured through comparing the current period's sales with the prior period's sales.

4.2.1 Impact of Board Characteristics and Sharia Compliance on Tobin's Q Using GMM

Table 4.2 presents the results of the GMM estimation to analyze the impact of board characteristics, firm-specific variables, and sharia compliance on firm performance, determined by Tobin's Q. lagged Tobin's Q negative and significant results displays that a firm's past performance has a negative and significant impact on its current performance. The negative and significant CEOD harms the firm's performance because it weakens the board's ability to independently oversee the CEO, leading to governance inefficiencies. FRB has a positive effect with a coefficient of 1.2227 indicating a positive and significant impact on firm performance. BI has a negative relationship means that when there are more independent members on the board, it might reduce performance, possibly due to a delay in decision-making. BS coefficient is negative and significant which means that having a larger board adverse impact on firm performance due to inefficiencies in decision-making or difficulties in coordination. It confirms that the companies with large boards perform weaker than the companies with small boards. Small and efficient boards can contribute better than large boards where decision-making may be slow due to conflicting views.

Table 4.2: GMM Estimation

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
TQ(-1)	-0.711527	0.026705	-26.64433	0
BI	-6.742155	0.388686	-17.34602	0
BS	-12.09795	0.675972	-17.89713	0
CEOD	-2.405265	0.262807	-9.152216	0
FRB	1.222656	2.629756	0.464931	0.6421
FS	0.708177	0.035762	19.8024	0
SG	-0.627299	0.045286	-13.85206	0
LEV	4.272823	0.083251	51.32448	0
ISL	3.02797	0.245923	12.31267	0
	Effects Specification			
Cross-section fixed (first differences)				
J-statistic	71.67273			
Prob(J-statistic)	0.07731			
Test order	**m-Statistic**	**rho**	**SE(rho)**	**Prob.**
AR(1)	-3.211062	-890.325718	277.268287	0.0013
AR(2)	-4.164142	-1359.595405	326.500705	0

The coefficient of ISL (Sharia compliance) is positive and significant, indicating that Islamic principles improve firms' performance, improve governance, build trust, avoid high-risk activities, and contribute to better valuation.

The coefficient of SG is negative and significant that shows a SG has negative and significant impact on Tobin's Q this result might reflect that rapid sales growth comes with increased cost.

Lev coefficient value is positive and significant it shows that firms use debt effectively to finance growth opportunities. The coefficient of FS is positive and significant representing that big firms are more profitable in comparison to small firms.

4.2.2 Impact of Board Characteristics on Tobin's Q: the Moderating Role of Sharia Compliance between Board Independence and Sharia Compliance.

Table 4.3 presents the results of GMM estimation analyzing the interaction term between BI and ISL on Tobin's Q. This analysis assesses Sharia compliance moderates the relationship between board independence and firm value.

The lagged value of Tobin's Q has a negative and significant coefficient, that indicating past performance negatively influences the current firm value. The lagged value of Tobin's Q has a negative and highly significant coefficient, indicating that prior firm performance negatively influences current firm value. CEO duality (CEOD) negatively affects firm value. Female representation on boards (FRB) is associated with a negative and insignificant impact in this context.

While board independence (BI) has a positive coefficient it is statistically significant suggesting its direct impact. Board size (BS) has a negative and significant coefficient indicating inefficiencies associated with larger boards. This suggests that firms with smaller, more independent boards may experience better governance and decision-making efficiency. Additionally, a well-structured board can enhance firm performance by reducing managerial influence and ensuring accountability.

Table 4.3: GMM Estimation between BI and ISL

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
TQ(-1)	-0.070526	0.021176	-3.330469	0.0013
BI	1.546582	0.501659	3.082935	0.0027
BS	-5.386764	0.435082	-12.38104	0
CEOD	-1.919338	0.241309	-7.953875	0
FRB	-2.161386	1.30832	-1.652031	0.102
FS	0.357879	0.016686	21.44741	0
SG	-1.282426	0.057349	-22.36183	0
LEV	0.408412	0.041696	9.794937	0
ISL	4.784748	0.52475	9.118154	0
BI*ISL	-4.935672	0.633698	-7.788678	0
	Effects Specification			
Cross-section fixed				
(first differences)				
J-statistic	53.34995			
Prob(J-statistic)	0.499415			
Test order	m-Statistic	rho	SE(rho)	Prob.
AR(1)	-2.251271	-467.062124	207.465945	0.0244

Sharia compliance (ISL) independently contributes a strong positive effect on firm performance. Firm-specific factors reveal mixed impacts. The interaction term (BI*ISL) has a significant negative coefficient of -4.935672 (p-value = 0.0000), meaning that while board independence generally helps increase firm value, this effect becomes much weaker when Sharia compliance is involved. Sharia principles may introduce certain requirements, such as following ethical guidelines, ensuring fairness to all stakeholders, or limiting risky decisions.

These requirements can reduce the freedom of independent board members to apply traditional governance practices. As a result, Sharia compliance weakens the positive impact of board independence on firm value. Leverage (LEV) positively influences Tobin's Q with a coefficient of 0.408412 (p-value = 0.0000), whereas sales growth (SG) has a significant negative effect, with a coefficient of – 1.282426), (p-value = 0.0000). Firm size (FS) shows a positive and significant effect on firm value, with a coefficient of 0.357879 (p-value = 0.0000). The j-statistic is 53.34995 and the p-value = (0.4994) indicates no significant issues with the model instruments, suggesting they are valid for this analysis.

4.2.3 Impact of Board characteristics on Tobin's Q: the Moderating Role of Sharia Compliance between Board Size and Sharia Compliance.

Table 4.4 uses the GMM estimation technique, which is commonly applied in dynamic panel data analysis. This method accounts for both cross-sectional (variations between firms) and time series variations (changes over time within the same firms) in the data. It incorporates random effects to capture differences across entities. This method is particularly useful for addressing issues like endogeneity, where independent variables might influence past outcomes. This analysis assesses sharia compliance moderates the connection between board size and Tobin's Q.

The lagged value Tobin, 's Q (-1) term is negative and significant meaning past performance has a negative and significant impact on current performance. CEO duality has a negative and significant coefficient. While the coefficient recommends that having the CEO also serve as board chair might have a negative effect, the effect is statistically meaningful. FRB has a positive and significant coefficient. The result suggests a positive influence on Tobin's Q the effect is statistically significant. BI has a negative and significant coefficient because its p-value = (0.0000) which is less than 0.05. This means that higher board independence has a statistically significant negative impact on Tobin's Q. BS has a negative and significant coefficient suggesting that a larger board might negatively affect Tobin's Q, the effect is statistically significant.

Table 4.4: Impact of Board Characteristics and Sharia Compliance on Tobin's Q

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
TQ(-1)	-0.065102	0.016607	-3.920232	0.0002
BI	-1.410071	0.12889	-10.9401	0
BS	-3.290491	0.285492	-11.52569	0
CEOD	-0.750238	0.089867	-8.348301	0
FRB	1.477729	0.551236	2.680757	0.0087
FS	0.308941	0.015044	20.53598	0
SG	-1.371945	0.047808	-28.69709	0
LEV	0.298422	0.029497	10.11705	0
ISL	-2.491408	0.935501	-2.663179	0.0092
BS*ISL	1.651099	0.395442	4.175324	0.0001
	Effects			
	Specification			
Cross-section fixed				
(first differences)				
J-statistic	62.01242			
Prob(J-statistic)	0.240372			

Islamic label has a negative and significant effect with a p-value is 0.0092, indicating that companies with an Islamic label tend to have a lower dependent variable possibly due to factors like additional regulation in the market.

Leverage has a positive and significant effect indicating that financial leverage has a positive and significant impact on dependent variables. FS has a positive and highly significant effect on firm performance. SG has a negative and significant effect, suggesting higher sales growth reduces the dependent variables, possibly due to challenges or inefficiencies associated with rapid growth. The interaction term between BS*ISL is positive and significant (p-value = 0.0001).

This suggests that the combined effect of board size and Islamic label positively influences the dependent variable. When both board size and Islamic label are present, the dependent variable increases by 1.6511 units.

The j-statistic value is 62.01242 and its p-value=0.240372 which is insignificant, the p-value confirms the instruments used are appropriate and do not over-identify the model.

4.2.4 Impact of Board Characteristics on Tobin's Q: Moderating Role of Sharia Compliance between CEO Duality and Sharia Compliance.

Table 4.5 uses a generalized method of moments for analysis. The lagged value of Tobin's Q coefficient is negative and its p-value significantly represents past performance has a negative and significant impact on current performance. CEO duality, where the CEO also performs as board chair, has a negative coefficient. This relationship is not statistically significant, indicating CEO duality has no effect, indicating CEO duality variable does not meaningfully impact the dependent variable. FRB has a positive coefficient and statistically, it's not significant. BI measures the effect of independent members. The coefficient of BI is negative, indicating a negative and significant impact on dependent variables. BS coefficient suggests a negative and significant relationship between board size and Tobin's Q. However this effect is statistically significant.

Table 4.5: Impact of Board Characteristics on Tobin's Q: the Moderating Role of Sharia Compliance between Board Independence and Sharia Compliance.

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
TQ(-1)	-0.084269	0.013231	-6.369308	0
BI	-1.629155	0.122559	-13.29279	0
BS	-2.552887	0.18146	-14.0686	0
CEOD	-0.188331	0.156614	-1.202516	0.2294
FRB	0.249971	0.460173	0.543212	0.5871
FS	0.322937	0.013096	24.65889	0
SG	-1.372427	0.041029	-33.45016	0
LEV	0.345825	0.02342	14.76618	0
ISL	1.159928	0.059157	19.60757	0
CEOD*ISL	-1.522957	0.451117	-3.375969	0.0008
	Effects			
	Specification			
Cross-section fixed				
(first differences)				
J-statistic	58.18288			
Prob(J-statistic)	0.359001			
	m-Statistic	rho	SE(rho)	Prob.
Test order				
AR(1)	-5.748196	-330.945331	57.573774	0
AR(2)	-3.077676	-193.895694	63.000683	0.0021

The Islamic label has a positive coefficient, indicating a positive relationship with the dependent variable and the p-value is statistically significant.

The interaction term CEOD*ISL coefficient is negative and statistically significant, representing a strong combined effect of CEO duality and Islamic label. The coefficient of leverage is 0.345825, suggesting a negligible positive relationship with the dependent variable.

This relationship is statistically significant, indicating leverage plays a positive and significant role in this analysis. FS coefficient is positive indicating a strong and statistically significant positive relationship with Tobin's Q has a negative coefficient and statically significant negative relationship between SG and the dependent variable.

The j-statistic is 58.18288, with a probability of 0.3590. The high p-value suggests the instruments are valid and the model is well-specified.

4.2.5 Impact of Board Characteristics on Tobin's Q :Moderating Role of Sharia Compliance between Female Representation in Board and Sharia Compliance

Table 4.6 displays the result of the GMM estimation technique, showing the several independent variables on the dependent variable. The Tobin's Q (-1) coefficient is negative and its p-value is statistically significant.

CEO duality happens when the CEO also performs as the board chair. The coefficient suggests a negative influence on the dependent variable, while the p-value is statistically significant. FRB represents a positive and insignificant relationship with the dependent variable and the p-value is 0.1131 statistically insignificant.

The BI result shows a negative relationship with the dependent variable, it is statistically significant. BS measures the total number of directors on the board. While the coefficient indicates a negative relationship, suggesting larger boards may create a delay in decision making the weak the firm performance, the result is statistically significant.

Table 4.6: Impact of Board Characteristics On Tobin's Q: Moderating Role of Sharia Compliance Between Female Representation In Board and Sharia Compliance

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
TQ(-1)	-0.040926	0.01656	-2.471436	0.0153
BI	-1.361311	0.120464	-11.30053	0
BS	-2.839587	0.224153	-12.66808	0
CEOD	-0.686584	0.108684	-6.317268	0
FRB	3.27868	2.049146	1.600023	0.1131
FS	0.318681	0.014858	21.44806	0
SG	-1.281393	0.046619	-27.48625	0
LEV	0.269513	0.028658	9.404525	0
ISL	1.880575	0.426208	4.412339	0
FRB*ISL	-7.104425	2.132563	-3.331402	0.0013
	Effects Specification			
Cross-section fixed (first differences)				
J-statistic	58.53723			
Prob(J-statistic)	0.346946			
Test order	m-Statistic	rho	SE(rho)	Prob.
AR(1)	-5.629687	-338.462106	60.120941	0

Islamic label coefficient 1.880575 suggests a positive relationship, the high significance implies a notable impact in this model. The interaction term FRB*ISL captures the combined effect of female representation and Islamic compliance. The coefficient suggests a negative interaction, but the result is marginally significant. Lev representing the firm's debt shows a positive effect. This significance suggests that leverage has a substantial impact on the dependent variable in this analysis. FS is positively and strongly associated with the dependent variable.

SG is a negatively and significantly related dependent variable this suggests that higher sales growth could negatively influence the dependent variable. The j-statistics is 58.53723, with a probability of 0.3469. This indicates the instruments are appropriate, with no significant over-identification issues.

4.2.6 Impact of Board Characteristics on Tobin's Q: Moderating Role of Sharia Compliance between Board Characteristics and Sharia Compliance.

Table 4.7 uses the Generalized Method of Moment (GMM) for analysis and examines the effect of board characteristics on Tobin's Q, which is a measure of firm performance, and evaluates how Sharia compliance moderates this relationship. The analysis includes various board characteristics and interaction terms with Sharia compliance. The Ceo duality shows a negative and significant impact on Tobin's Q. FRB measures the proportion of female directors. An FRB coefficient is positive and insignificant impact on Tobin's Q. BI measures the proportion of independent directors on the board. Its coefficient is positive but statistically insignificant, implying no clear relationship between board independence and Tobin's Q in this model. BS represents the total number of directors on the board. Its coefficient is negative and significant.

Table 4.7: Impact of board characteristics on Tobin's Q; moderating role of sharia compliance between Board Characteristics and sharia compliance

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
TQ(-1)	0.097318	0.012121	8.028688	0
BI	0.263938	0.383177	0.688815	0.4927
BS	-3.717765	0.367489	-10.11666	0
CEOD	-2.219765	0.203608	-10.90214	0
FRB	0.877616	1.659448	0.528861	0.5982
ISL	1.808622	1.261806	1.43336	0.1552
LEVE	0.454372	0.027847	16.31652	0
SG	-1.07097	0.039179	-27.33503	0
SIZE	0.375539	0.012502	30.0394	0
BI*ISL	-3.345824	0.499052	-6.704359	0
BS*ISL	1.409301	0.476643	2.956725	0.004
CEOD*ISL	0.083105	0.410254	0.20257	0.8399
FRB*ISL	-10.18189	1.735432	-5.867063	0
	Effects Specification			
Cross-section fixed (first differences)				
J-statistic	66.24693			
Prob(J-statistic)	0.332656			

The interaction term of CEOD*ISL has a positive and insignificant coefficient indicating no moderating effect. The interaction of the FBR*ISL coefficient is negative and significant (p=0.0000). Lev has a positive coefficient and statistically significant impact on Tobin's Q.

The interaction of the BI*ISL coefficient is negative and significant, indicating Sharia compliance does not significantly moderate the impact of board independence on Tobin's Q. The interaction of BS*ISL the positive and significant coefficient suggests a significant moderating effect.

The interaction of Firm size (FS) has direct relations with Tobin's Q. SG negative and significantly affects Tobin's Q. The j-statistics is 66.24693, with a probability of 0.33327. The results confirm the instruments' validity and the model's reliability.

4.3 Impact of Board Characteristics and Sharia Compliance on Firm Performance

This section covers the impact of board characteristics and sharia compliance on firm performance using book-based measures. The book base measure is ROCE. Moreover, ROCE (-1) represents the lag value of performance in t-l.

BI represents board independence which is computed by independent directors divided by a total number of directors. Board Size is represented by BS and a natural logarithm is used to calculate the board size.

CEOD represents the CEO duality meaning that the CEO also holds the position of the Chairperson of the board. FRB represents the female representation on the board which is calculated based on the number of female directors concerning total directors. ISL represents the sharia compliance firm. Lev represents the leverage of the firm and is measured by the debt-to-equity ratio.

Firm size is measured through the market capitalization of the firm and the value of the size of a firm is captured by multiplying the number of outstanding shares by the market price of the share. SG represents sales growth i.e., measured through comparing the current period's sales with the previous period's sales.

4.3.1 Impact of Board Characteristics and Sharia Compliance on ROCE using GMM

Table 4.8 presents the results of the GMM (Generalized Method of Moment) estimation model to analyze the impact of board characteristics, firm-specific variables, and Sharia compliance on firm performance, measured by ROCE. The table displays the results of a regression analysis, likely employing a Generalized Method of Moments (GMM) or a comparable dynamic panel data model. This analysis examines the influence of various independent variables on a dependent variable while accounting for individual heterogeneity using fixed effects. ROCE (-1) the lagged dependent variable indicates dynamic relationships. It's positive and significant (0.167723, P=0.0000) suggesting that past performance strongly influences current performance. CEOD is negative and insignificant meaning this factor has no clear effect. FRB has a negative and insignificant (-6.646750, P=0.4064) impact on ROCE. BI a significant and negative coefficient (-23.77129, p=0.0000) suggests that higher board independence is associated with a decline in the dependent variable. BS is similarly negative and significant (-40.39332, p=0.0000), indicating that larger boards may negative and significant impact on ROCE.

Table 4.8: Impact of Board Characteristics and Sharia Compliance on ROCE using GMM

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ROCE(-1)	0.167723	0.006883	24.3684	0
BI	-23.77129	2.771213	-8.577936	0
BS	-40.39332	6.874069	-5.876188	0
CEOD	-2.611652	3.891066	-0.671192	0.5038
FRB	-6.64675	7.967596	-0.834223	0.4064
ISL	8.956209	1.520003	5.892229	0
LEV	4.634631	0.87821	5.277364	0
SG	-0.013252	0.683502	-0.019388	0.9846
FS	-2.504264	0.193878	-12.91672	0
	Effects Specification			
Cross-section fixed (first differences)				
J-statistic	66.7057			
Prob(J-statistic)	0.154913			
Test order	m-Statistic	rho	SE(rho)	Prob.
AR(1)	-1.98887	-57571.32503	28946.74629	0.0467
AR(2)	-0.855657	-15243.3603	17814.7931	0.3922

ISL has an (8.956209, P=0.0000), positive, and significant coefficient suggesting that firms identified as Islamic or adhering to Islamic principles enjoy a performance advantage.

Firms with an Islamic label perform better, possibly due to ethical practices or greater investor confidence in Sharia-compliant firms.

LEV a positive and significant relationship indicates that higher leverage (use of debt) is associated with improved performance. Firms may be effectively utilizing debt to invest in profitable opportunities.

FS has (-2.504264, P=0.0000) a negative and significant coefficient suggests that larger firms tend to underperform relative to smaller ones. SG has a negative and insignificant impact on ROCE.

The j-statistics is 66.70570, with a probability of 0.1549. The p-value above 0.05 confirms the instruments are suitable, and the model is correct.

4.3.2 Impact of Board Characteristics on ROCE: Moderating Role of Sharia Compliance between Board Independence and Sharia Compliance.

Table 4.9 applies Panel GMM for the estimation of results. ROCE (-1) coefficient is 0.166286 the lagged dependent variable is positive and highly significant (P-value = 0.0000).

This suggests that past performance influences current performance. CEOD coefficient -3.116524 and p=value 0.4099 indicating insignificant no clear relationship between CEO duality and performance in this context.

FRB coefficient -12.88651 and p-value = 0.1557 negative and insignificant, showing the female representation on boards shows no impact on ROCE in this context.

BI coefficient -41.9737, P-value= 0.0000. Board independence has and negative and significant impact on ROCE. The coefficient of BS is -41.77452 and the p-value = 0.0000. A negative and significant effect, suggests that larger boards may weaker firm performance.

Table 4.9: Impact of Board Characteristics on ROCE: Moderating Role of Sharia Compliance between Board Independence and Sharia Compliance

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ROCE(-1)	0.166286	0.009707	17.13122	0
BI	-41.97378	7.829955	-5.360667	0
BS	-41.77452	5.905399	-7.073954	0
CEOD	-3.116524	3.764176	-0.827943	0.4099
FRB	-12.88651	9.000655	-1.43173	0.1557
ISL	-7.663768	7.075198	-1.083188	0.2816
LEV	6.094341	1.048422	5.812869	0
SG	0.315425	0.766701	0.411406	0.6818
FS	-2.470592	0.195055	-12.66613	0
BI*ISL	20.69554	8.745323	2.366469	0.0201
	Effects			
	Specification			
Cross-section fixed				
(first differences)				
J-statistic	65.40419	Instrument rank		65
Prob(J-statistic)	0.159083			
Test order	m-Statistic	rho	SE(rho)	Prob.
AR(2)	-0.873604	-13325.9525	15253.99044	0.3823

ISL coefficient -7.663768 and p-value =0.2816 showing no impact. BI*ISL coefficient 20.69554 and p-value = 0.0201. The interaction term shows a positive and significant impact on ROCE. This indicates that the combined effect of board independence and Islamic label enhances ROCE, suggesting efficiencies when these two factors interact.

LEV coefficient 6.094341 and p-value = 0.0000. Positive and significant, suggesting that debt (leverage) positively contributes to ROCE, potentially due to efficient capital utilization. FS coefficient -2.470592, P-value=0.0000. Negative and significant, indicating larger firm tends to have lower ROCE. SG coefficient 0.315425, p-value = 0.6919.

Positive and insignificant, suggesting that firms with higher sales growth do not impact ROCE in this context. The J-statistics is 65.40419, with a probability of 0.1591. The high p-value supports the validity of the mechanisms and the model's specification.

4.3.3 Impact of Board Characteristics on ROCE: Moderating Role of Sharia Compliance between Board Size and Sharia Compliance.

In Table 4.10 the Lagged ROCE coefficient of 0.163282 is positive and highly significant (p=0.0000). This suggests that past performance has a persistent and positive impact on current performance. CEO duality (CEOD) the coefficient is negative (-2.548466) but statistically insignificant (p = 0.5602), suggesting that whether the CEO also performed as the board chair does not significantly affect firm performance in this model. Female Representation on Board (FRB) a highly negative and insignificant coefficient (-14.65333, p = 0.2491) underscores the beneficial impact of gender diversity in boardrooms. This reflects improved decision-making and a broader perspective brought by female directors. Board Independence (BI) a negative and significant coefficient (-23.07080, p = 0.0000) suggests that higher board independence may not always benefit firm performance. This could be due to extensive monitoring or conflict between independent directors and management, which might slow decision-making. The board size (BS) coefficient is strongly negative and significant (-35.33498, p= 0.0009), implying that larger boards are associated with poorer performance. This aligns with studies suggesting that larger boards can face coordination and communication issues, leading to inefficiencies.

Table 4.10: Impact of Board Characteristics on ROCE: Moderating Role of Sharia Compliance between Board Size and Sharia Compliance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROCE(-1)	0.163282	0.013828	11.80796	0
BI	-23.0708	3.129161	-7.372838	0
BS	-35.33498	10.24659	-3.448462	0.0009
CEOD	-2.548466	4.35854	-0.584706	0.5602
FRB	-14.65333	12.63078	-1.160129	0.2491
ISL	47.01893	15.42873	3.047492	0.003
LEV	6.165974	1.438083	4.287634	0
SG	-0.106094	0.897727	-0.118181	0.9062
FS	-2.519525	0.23474	-10.73326	0
BS*ISL	-16.94845	7.067135	-2.398207	0.0185
	Effects			
	Specification			
Cross-section fixed				
(first differences)				
J-statistic	66.20499			
Prob(J-statistic)	0.123203			
Test order	m-Statistic	rho	SE(rho)	Prob.
AR(1)	-4.582976	-59659.09095	13017.54273	0
AR(2)	-1.882224	-13880.29634	7374.410742	0.0598

Islamic label (ISL) a positive and significant coefficient (47.01893, p = 0.0030) indicates that firms with an Islamic label may perform better due to stricter ethical and financial regulation. The interaction term (BS*ISL) the interaction of board size and the Islamic label has a negative and significant coefficient (-16.94845, p = 0.0185).

This suggests that while larger boards generally harm performance, in firms with an Islamic label, the negative effect of board size. Firm Size The coefficient is negative and highly significant -2.519525, p = 0.0000), suggesting that larger firms have a negative and significant impact on firm performance.

Sales Growth has a coefficient with negative insignificant (-0.106094, p = 0.9062). The J-statistic is 66.20499, with a probability of 0.1232. The p-value confirms no issues with the instruments or model specification.

4.3.4 Impact of Board Characteristics on ROCE: Moderating Role of Sharia Compliance between CEO Duality and Sharia Compliance

Table 4.11 shows the findings of the generalized method of moments (GMM). ROCE (-1) positive and significant impact on firm performance indicating past performance has a significant positive impact on current performance, suggesting persistence in firm performance over time. CEOD (CEO Duality) coefficient 14.30782 CEO duality (when the CEO is also the board chairperson) positively impacts performance.

FRB (Female Representation on Board) coefficient 2.868537 and P-value=0.7111, indicating FRB has no significant impact on ROCE in this context. BI (Board Independence) coefficient -23.57381 increases in board independence are negatively associated with firm performance. While independent directors are expected to improve monitoring (agency theory), excessive independence might lead to conflicts or inefficiencies in decision-making. BS (Board size) coefficient negative -28.14918 and statistically significant indicating larger board size negatively impacts performance. This is consistent with the view that bigger boards may face coordination problems and slower decision-making.

TABLE 4.11: Impact of Board Characteristics on ROCE: Moderating Role of Sharia Compliance between CEO Duality and Sharia Compliance

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ROCE(-1)	0.161815	0.007722	20.95465	0
BI	-23.57381	2.916257	-8.083582	0
BS	-28.14918	6.009575	-4.684055	0
CEOD	14.30782	4.415883	3.240082	0.0017
FRB	2.868537	7.721013	0.371523	0.7111
ISL	9.563216	1.687081	5.668498	0
LEV	4.552568	0.956227	4.760972	0
SG	-0.796223	0.683022	-1.165735	0.2468
FS	-2.716411	0.219152	-12.39508	0
CEOD*ISL	-24.6224	7.21864	-3.410947	0.001
	Effects			
	Specification			
Cross-section fixed				
(first differences)				
J-statistic	63.02295			
Prob(J-statistic)	0.213737			
Test order	m-Statistic	rho	SE(rho)	Prob.
AR(1)	-2.809499	-55958.35931	19917.5569	0.005
AR(2)	-1.377505	-16143.61713	11719.46592	0.1684

ISL (Islamic Label) coefficient, 9.563216 firms following Islamic principles perform better. Compliance with Islamic financial and operational principles may enhance stakeholder trust and align with ethical business practices. (CEO*ISL) coefficient -24.62240 CEO Duality negatively impacts the performance of Islamic compliance firms. A negative coefficient suggests that CEO duality harms performance in Islamic firms, possibly due to conflicts with governance and ethical standards.

LEV (Leverage) coefficient 4.552568 and P-value= 0.0000 indicating higher leverage is positively associated with firm performance. Firms effectively utilize debt to finance growth and investment opportunities. SG (Sales Growth) has a negative and insignificant impact on ROCE. FS (Firm size) coefficient -2.716411 and P-value 0.0000 indicating larger firms experience lower performance. The J-statistic is 63.02295, with a probability of 0.2137. The results validate the instruments and confirm no over-identification issues.

4.3.5 Impact of Board Characteristics on ROCE: Moderating Role of Sharia Compliance between Female Representation in Board and Sharia Compliance

Table 4.12 represents the results of the Generalized Method of Moment, aimed at studying the impact of board characteristics and firm performance variables on a dependent variable (possibly ROCE, based on ROCE (-1)). ROCE (-1) The lagged value of ROCE has a positive and significant effect, suggesting that past performance positively influences current performance.

CEOD (CEO Duality) coefficient is negative and insignificant (p-value= 0.9650). The role of CEO Duality (when the CEO is also the board chairperson) is not statistically important in this context. FRB (Female Representation on Board) coefficient is negative and statistically significant. BI (Board Independence) has a negative and significant impact indicating higher board independence reduces the dependent boards. BS (Board Size) coefficient is negative and significant where larger boards are associated with lower performance. This aligns with the argument that larger boards may lead to coordination challenges or slower decision-making.

Table 4.12: Impact of Board Characteristics on ROCE: Moderating Role of Sharia Compliance between Female Representation in Board and Sharia Compliance

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ROCE(-1)	0.173854	0.008997	19.32449	0
BI	-23.52499	3.435924	-6.846771	0
BS	-29.96259	9.012872	-3.324422	0.0013
FRB	-52.97777	18.46207	-2.869546	0.0051
CEOD	-0.172425	3.915656	-0.044035	0.965
ISL	0.721038	2.94224	0.245064	0.807
LEV	5.334436	1.043205	5.113509	0
SG	-0.286479	0.695435	-0.411941	0.6814
FS	-2.794448	0.236041	-11.83884	0
FRB*ISL	106.2655	22.80166	4.660427	0
	Effects			
	Specification			
Cross-section fixed				
(first differences)				
J-statistic	63.60137			
Prob(J-statistic)	0.17425			
Test order	m-Statistic	rho	SE(rho)	Prob.
AR(1)	-4.229569	-57132.5369	13507.88604	0
AR(2)	-1.686914	-14680.05628	8702.316836	0.0916

ISL (Islamic Label) Coefficient 0.721038, insignificant (P-value=0.8070). Islamic label shows no impact in this context. FRB*ISL (Interaction Term) coefficient is positive and significant (P-value = 0.0000). The combined effect of female representation on board and sharia compliance is strongly positive and significant, suggesting a synergistic impact of these factors on firm performance. LEV (Leverage) coefficient 5.334436, highly significant (P – value = 0.0000). Increasing leverage (debt level) has positive and significant impacts on the dependent variable, possibly reflecting the efficient use of debt in the capital structure. SG (Sales Growth) coefficient -0.286479, insignificant (P-value = 0.6814). FS (Firm Size) has a negative coefficient of -2.794448 and is highly significant (p-value = 0.0000) showing a larger firms have a negative relationship with performance, possibly due to bureaucracy, inefficiency, or diseconomies of scale. The J-statistic is 63.60137, with a probability of 0.1743. The p-value confirms the instruments' validity and the appropriateness of the model.

4.3.6 Impact of Board Characteristics on ROCE: the Moderating Role of Sharia Compliance between Board Characteristics and Sharia Compliance

Table 4.13 represents the findings of a Generalized Method of Moments. It explores the associations between various Board characteristics and sharia compliance. ROCE, as suggested by the inclusion of ROCE (-1) The lagged value of ROCE is included as an independent variable its Coefficient is positive 0.166034 and highly significant (p-value = 0.0000) suggesting a positive and significant coefficient suggests that prior performance strongly influences current performance, indicating persistence in profitability.

CEOD (CEO Duality) positive coefficient and significant (p-value = 0.0005). CEO duality positively impacts firm performance, suggesting benefits when the CEO also performs as the board chairperson. FRB (Female Representation on Board) Coefficient is negative (-46.31925) and not significant (p-value = 0.0380) Female representation is negative and has a significant impact in this model.

BI (Board Independence) coefficient is negative -58.46591 and p-value =0.000 statistically significant board independence has a statistically significant effect on firm performance. BI does influence performance in this context. BS (Board Size) has a negative coefficient of -0.856998 and is statistically insignificant (p-value = 0.9353). Larger board size has no impact on firm performance.

Table 4.13: Impact of Board Characteristics on ROCE: The Moderating Role of Sharia Compliance between Board Characteristics and Sharia Compliance

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ROCE(-1)	0.166034	0.016573	10.01821	0
BI	-58.46591	12.74326	-4.587985	0
BS	-0.856998	10.52884	-0.081395	0.9353
CEOD	18.0188	5.026072	3.585066	0.0005
FRB	-46.31925	21.99367	-2.106026	0.038
ISL	25.19652	21.64794	1.163922	0.2475
LEV	7.886312	1.949704	4.044875	0.0001
FS	-2.55898	0.27986	-9.143787	0
SG	-1.339253	1.133172	-1.181861	0.2404
BI*ISL	40.9476	12.49974	3.275876	0.0015
BS*ISL	-24.17847	8.364161	-2.890723	0.0048
CEOD*ISL	-28.53422	9.544542	-2.989585	0.0036
FRB*ISL	67.85927	32.05604	2.116895	0.037
	Effects Specification			
Cross-section fixed (first differences)				
J-statistic	60.54303			
Prob(J-statistic)	0.194793			
Test order	m-Statistic	rho	SE(rho)	Prob.
AR(1)	-1.465678	-65679.27196	44811.53042	0.1427
AR(2)	-0.396896	-12692.07587	31978.33572	0.6914

ISL (Islamic Label) Coefficient is negative 25.19652 and highly insignificant (p-value = 0.2475). Firms with an Islamic label have no impact on performance in this model.

BI*ISL (Interaction between Board Independence and Islamic Label) has a positive coefficient and its p-value is highly significant. The combination of board independence and Islamic label positively impacts performance. When a firm is labeled as Islamic, the positive influence of having independent directors on the board increases or becomes positive.

BS*ISL (Interaction between Board Size and Islamic Label) has a negative and statistically significant. The interaction suggests that larger boards in Islamic-labeled firms have a negative and significant impact. CEOD*ISL (Interaction between CEO Duality and Islamic Label) Coefficient-28.53422 and highly significant (p-value = 0.0036).

The combination of CEO duality and an Islamic label negatively impacts performance, potentially due to conflicts of interest or governance challenges. Islamic firms value fairness and transparency.

Concentrating too much power on one person might go against these principles, leading to weaker trust and oversight. FRB*ISL (Interaction between Female Representation and Islamic Label) interaction suggests a strong positive effect on performance when female representation is combined with an Islamic label, highlighting the potential benefits of diversity and ethical alignment.

LEV (Leverage) leverage has a positive and significant impact, suggesting that effective use of debt improves firm performance. FS (Firm Size) has a negative coefficient and is highly significant (p-value = 0.0000). Larger firms are associated with lower performance, possibly due to bureaucracy or inefficiencies.

SG (Sales Growth) Coefficient -1.339253, Significant (p-value = 0.2404) suggesting sales growth positively affects performance, highlighting the importance of revenue expansion. The J-statistics is 60.54303, with a probability of 0.1948. This indicates the validity of the instruments and confirms the reliability of the model.

4.4 Summary of a Tables

Table 4.14: Summary of a Tables

Variables	TQ	ROCE
CEO Duality	Negative and significant	insignificant
FRB	insignificant	insignificant
BS	Negative and significant	Negative and significant
BI	Negative and significant	Negative and significant
ISL	Positive and significant	Positive and significant
Lev	Positive and significant	Positive and significant
SG	Negative and significant	insignificant
FS	Positive and significant	Negative and significant
CEO duality*ISL	Negative and significant	Negative and significant
FRB*ISL	Negative and significant	Positive and significant
BS*ISL	Positive significant	Negative and significant
BI*ISL	Negative and significant	Positive and significant

The Table 4.14 investigates the impact of Board Characteristics and Sharia compliance on firm performance using Tobin's Q and ROCE measures. The results highlight the CEO Duality, Board Size, Board independence, and sales growth has a negative impact on firm performance, while Sharia compliance, leverage and firm size improve firm performance. Additionally, Sharia compliance moderates the relationships have mix results, strengthening in some aspects while weakening others. Tobin's Q is found to be a more relevant performance measure than ROCE, because it reflects the current market conditions, immediately reflect market condition, while ROCE with its denominator based on historical equity, so ROCE is less effective in capturing real time performance. It does not immediately capture the current changes in market prices.

Chapter 5

Conclusion and Recommendation

5.1 Discussion of findings

This study investigates the effect of board characteristics and Sharia compliance on firm performance, the analysis employs Tobin's Q and Return on capital employed(ROCE) as performance indicators, using dynamic panel data models based on GMM estimation technique. The findings provide valuable insights into the governance mechanisms influencing firm outcomes, particularly in contexts where ethical and religious principles like Sharia compliance play a role. The results demonstrate the intricate relationships between governance variables, firm-specific factors, and performance metrics.

CEO duality the situation where the CEO also performs as board chair has mixed effects. It mostly shows a negative effect on Tobin's Q, showing weaker governance due to the concentration of power and reduced oversight. CEO duality may lead to lower firm performance in some aspects, as it increases agency costs. In line with agency theory guidelines, separating leadership roles is recommended to minimize agency costs and enhance performance. In certain cases examining ROCE, CEOD has a no impact on firm performance.

Female representation on boards FRB presents mixed findings. While some findings show a positive but minor impact, female directors bring diverse perspectives and valuable resources to the boardroom, contributing to improved governance and decision-making. Other results indicate a negative and significant effect, possibly due to organizational challenges that hinder the full advantages of gender diversity in decision-making roles.

Board independence generally exhibits a negative and significant impact on firm performance across all models. This suggests that while independent directors are expected to improve monitoring and reduce agency problems, excessive independence may hinder efficiency, causing delays in decision-making or conflicts with management. Larger boards consistently show a negative and significant connection with performance, aligning with the notion that larger boards face coordination and communication challenges. These challenges can slow decision-making, leading to inefficiencies and negatively affecting firm outcomes.

Sharia compliance proves as a key factor that positively influences firm performance. Across all models, sharia compliance shows a strong positive relation with both ROCE and TQ. This study reveals the benefits of following Islamic principles, such as enhanced trust among stakeholders, and mitigates exposure to risky activities. Firms identified as a Sharia-compliant trend to benefit from their ethical and transparent business practices, which are highly valued by investors and the broader market. This reputation helps enhance investor confidence and attracts long-term capital.

The moderating effects of sharia compliance on board characteristics highlight complex relationships. While Sharia compliance generally improves performance, its influence on other governance variables varies. For example, Sharia compliance minimizes the positive impact that having board independence on performance. This means that Sharia compliance companies may benefit from ethical practices. Possibly due to ethical and governance implications imposed by Sharia principles, which may limit the decision-making freedom of independent directors. On the other hand, the error term among board size and Sharia compliance shows a positive and significant influence on firm performance, suggesting that ethical principles of Sharia may help to mitigate some of the inefficiency that is commonly found with larger boards by promoting collaboration and promoting discipline.

The interaction term between CEO duality and Sharia compliance shows a negative and significant impact on performance. This recommends that combining the role of CEO and chairperson of the board with Islamic principles can lead to governance challenges. Concentrating decision-making power in one person or single individual may conflict with Sharia principles, which focus on fairness, transparency, and inclusivity of all stakeholders. Additionally, the relationship between female representations on boards interacts with Sharia compliance also presents some interesting findings. While Female Representation on Board alone has mixed effects, while the interaction term of sharia compliance and female representation on board reveals a strong positive impact on firm performance, highlighting the potential advantages of diversity within ethically and religiously guided governance frameworks.

Firm-specific factors, including firm size, sales growth and leverage have a significant influencing on firm performance. Leverage consistently demonstrates a positive and significant effect, indicating that firms are effectively utilizing debt to support investment opportunities and growth of a firm. On the other hand, firm size often has a negative impact on performance, possibly due to slower decision-making processes, bureaucratic inefficiencies, coordination challenges, increased agency costs, or operational complexities that arise in larger firms. Similarly, sales growth typically shows a negative effect on firm performance, which may be related with the challenges of rapid expansion, such as increased operational costs, quality control issues or short-term focus over long-term strategies.

5.2 Policy Implications and Recommendations

In conclusion, this study highlights the effects of a balanced board framework and ethical control framework on firm performance. A well-structured board and ethical governance structure improve the firm performance. Results show a larger board size and CEO duality hurt firm performance, whereas gender female representation on the board and sharia compliance play a significant role in maximizing the firm's performance. The findings suggest that board characteristics and sharia compliance combine effect enhancing the firm performance. Business leaders and policymakers are encouraged to adopt frameworks that combine both board attributes with ethical principles to achieve better organizational results. Future studies could provide deeper insights into governance practices and their global influence on firm value by expanding the research scope and addressing the current limitations. Additionally, promoting a culture of responsibility and transparency can help to strengthen the trust with stakeholders and support long-term success. Firms should also prioritize continuous improvements in governance to adapt to changing market dynamics and regulatory requirements. Furthermore, aligning corporate strategies closely with ethical values can help to mitigate risks and significantly increase stakeholder confidence. The research highlights promoting corporate governance that prioritizes, diversity integrity, and strong oversight can significantly strengthen a firm's overall stability and long-term success.

5.2.1 Direction for Future Recommendations of Study

Future research should include both non-financial and financial firms to estimate how board characteristics and sharia compliance impact both non-financial and financial institutions. Studies that follow firms over a longer period would help reveal how governance practices affect performance over time. It should also consider companies from various countries to better understand how regional and cultural factors influence governance and firm performance.

Additionally, Research should also examine how Sharia compliance works aligns with global trends such as social, cultural, environmental, and governance practices. Finally, future studies should include the views of participants, like financiers, employees, and customers, to evaluate the broader effects of governance decisions. Examining these factors across different industries and regions and how leadership styles and regulations impact companies will help enhance our understanding and knowledge about effective and ethical corporate governance, particularly in Sharia-compliant practices.

5.3 Limitations of Research

This research offers valuable insights into how board characteristics and Sharia compliance impact firm performance, though it has several limitations. First, it only includes non-financial companies in Pakistan, so the findings may not apply to financial institutions, other industries, or countries. Second, data spans from 2010 to 2023. The study's short timeframe may not fully capture long-term governance trends.

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