

The Role of Gender Diversity in Moderating the Effect of Profitability, Firm Size, and Solvency on the Stock Price of Islamic Banks Listed on IDX

Budhi Pamungkas Gautama^{*}, Davu Raissa Elazar, Eka Surachman, Yoga Perdana, Asep Miftahuddin, Iqbal Luthfi

Faculty of Economics and Business Education, Universitas Pendidikan Indonesia
budhipamungkas@upi.edu

Abstract

This study examines the relationship between gender diversity and the stock prices of Islamic banks in Indonesia, as well as the effects of profitability, business size, and solvency. The study is motivated by the importance of fundamental performance in establishing the market value of Islamic banks, which is especially relevant given the growing emphasis on inclusive governance. Using panel data regression and Moderated Regression Analysis (MRA), this study employs a quantitative technique to analyze four Islamic banks listed on the Indonesia Stock Exchange from 2020 to 2024. The findings show that all three variables have a significant effect on stock prices. Finding that gender diversity moderates these associations albeit negatively suggests that a greater proportion of female directors tends to mitigate the effect of fundamental variables on stock prices. These results suggest that in order to achieve the goal of increasing the capital market value of Islamic banks, it is essential to strategically manage the leadership roles of women.

Keywords: Profitability; Firm Size; Solvency; Stock Price; Islamic Bank.

INTRODUCTION

Since Bank Muamalat was founded in 1991, Islamic banking in Indonesia has grown significantly. The Financial Services Authority's (OJK) laws, which continue to encourage the creation of new products and services and raise public understanding of sharia financial principles, have supported this expansion and helped drive the industry ahead (Utama, 2020).

As of the end of 2024, total assets in the Islamic banking sector reached IDR 980.30 trillion, reflecting an annual growth of 9.88%. Its market share also increased to 7.72% of the total national banking industry (OJK, 2025). This positive growth is supported by an increase in financing distribution, which grew by 9.92% (IDR 643.55 trillion), and Third-Party Funds (DPK), which rose by around 10% (IDR 753.60 trillion), far exceeding the average growth of the conventional banking industry (OJK, 2025).

In the context of the capital market, a bank's fundamental performance including profitability, firm size, and solvency directly affects its stock price, which reflects investor perceptions of the institution's prospects and risks. Earlier, by the end of 2023, total assets in the Islamic banking industry had exceeded IDR 600 trillion, with a five-year compound annual growth rate (CAGR) of around 15% (Taufiqurrahman, 2023). As the scale of Islamic banks increases, market perceptions of their financial performance become more critical, as seen in stock prices and market valuations (Abedifar et al., 2020).

Previous studies have frequently examined fundamental factors such as profitability, firm size, and solvency as key determinants of stock price. For example, a study of 70 constituents of the Jakarta Islamic Index (JII70) found that firm size has a significant positive effect on stock price, along with other financial ratios such as PER and ROE (Sungkar et al., 2025). Similarly, solvency has also been shown to influence perceived risk and the market value of banks in a positive way (Lestari et al., 2025).

However, research on Islamic banks in Indonesia that simultaneously combines these three fundamental variables is still limited, indicating a need for more comprehensive studies. Beyond financial fundamentals, sharia governance and its implications are becoming increasingly important—especially in Indonesia, which has the world's largest Muslim population (Pessiwarisa & Kasri, 2025).

One governance statistic that investors are increasingly paying attention to is gender diversity, particularly the number of women on boards of directors or sharia supervisory boards. When gender diversity interacts with firm size, it improves the financial performance of Islamic banks in Indonesia and Malaysia (Jabari & Muhamad, 2021). International research, such as Campbell & Minguez-Vera (2008), have shown that financial performance and market reaction may be positively impacted by the inclusion of women in corporate leadership roles, since this can lead to better internal monitoring and decision-making (Lasmana, 2025). In fact, research by Low et al. (2015) demonstrated that gender diversity in the workplace strengthens the correlation between company strategy and stock performance for companies in Australia.

Additionally, additional research has shown that gender diversity reduces the impact of solvency on company value and moderates the impact of profitability (Rahmawati & Biduri, 2024). Similarly, gender diversity may also mitigate the impact of capital structure on corporate value (Rindorindo & Soewignyo, 2022).

Given the increasing focus on corporate governance and the implementation of sharia principles that emphasise justice and transparency, it is essential to study how gender diversity reduces the effect of fundamental variables on the stock prices of Islamic banks in Indonesia. In response to ongoing global and domestic macroeconomic concerns, the proportion of female board members may have an impact on how much weight profitability, company size, and solvency carry in determining stock prices (Sumira & Prihandini, 2022).

To date, very few studies have explicitly tested a Moderated Regression Analysis (MRA) model using gender diversity as a moderator in the context of stock price performance. This research therefore offers a significant academic and practical contribution.

Based on the identified literature gap, this study aims to (1) analyse how the stock prices of Islamic banks listed on the Indonesia Stock Exchange were affected by profitability, business size, and solvency between 2020 and 2024; then (2) examine how gender diversity functions as a moderating factor, particularly how much the percentage of women on boards influences the correlation between stock price, profitability, business size, and solvency.

The theoretical framework of this research is based on Signaling Theory, which explains how management communicates key information or disclosures to external stakeholders (Elazar et al., 2025). Managerial decisions, including those related to inclusive governance, send positive signals to the market. It is also grounded in Stakeholder Theory, which emphasizes that the presence of women represents a company's concern for stakeholder diversity (Sahu et al., 2025).

It is anticipated that the results of this study will have useful ramifications for the management of Islamic banks and financial regulators (OJK) in order to increase investor trust by implementing more inclusive governance practices. By providing practical insights for bank management and regulators to improve transparency and investor trust, the study hopes to add a fresh empirical perspective to the body of knowledge on Islamic finance and corporate governance.

LITERATURE REVIEW

Theoretical Framework

Companies use Signalling Theory to disseminate information to the market in order to level the playing field between management and investors. Profitability, company size, and solvency are all financial performance indicators that send signals to investors and can affect stock

prices. A well-performing Islamic bank can use these signals to enhance market confidence. The inclusion of governance-related variables like gender diversity can also be interpreted as a non-financial signal, reflecting the bank's commitment to inclusivity and transparency. Stakeholder Theory emphasizes that a company's responsibilities extend beyond shareholders to include all stakeholders. Gender diversity in leadership positions reflects responsiveness to diverse stakeholder expectations and a broader commitment to fairness and equality—values that are also embedded in sharia principles. In this framework, gender diversity is not just a compliance matter but a governance choice that can influence strategic decisions and market valuation. These two theories together explain both the direct relationship between fundamentals (profitability, firm size, solvency) and stock prices, and the moderating role of gender diversity in shaping those relationships (Sumira & Prihandini, 2022).

Previous research has repeatedly demonstrated that solvency, business size, and profitability are important factors influencing stock prices. Firm size has a considerable impact on stock prices among Jakarta Islamic Index 70 participants, according to Sungkar et al. (2025). Because solvency represents risk tolerance and financial stability, Lestari et al. (2025) also confirmed that solvency has a beneficial impact on bank values. Jabari & Muhamad (2021) demonstrated that gender diversity (as it relates to company size) may boost Islamic banking's bottom line. Campbell and Mínguez-Vera (2008) conducted research on a global scale and found that boards with women members had better supervision and decision-making, leading to positive market reactions. The correlation between corporate strategy and stock performance can also be strengthened by gender diversity (Low et al., 2015).

On the other hand, other research indicates the opposite outcome. Gender diversity can reduce the correlation between profitability and business value, according to Rahmawati & Biduri (2024). Similarly, gender diversity may mitigate the impact of capital structure on business value, as demonstrated by Rindorindo & Soewignyo (2022). Despite these results, little is known about how profitability, company size, and solvency all affect stock prices in Islamic banks, especially when gender diversity is taken into account. Most existing studies analyze these variables separately or in conventional banking contexts. This study addresses that gap by applying a Moderated Regression Analysis (MRA) model specifically to Islamic banks listed on the Indonesia Stock Exchange, with gender diversity as a moderator, as shown in Figure 1 below.

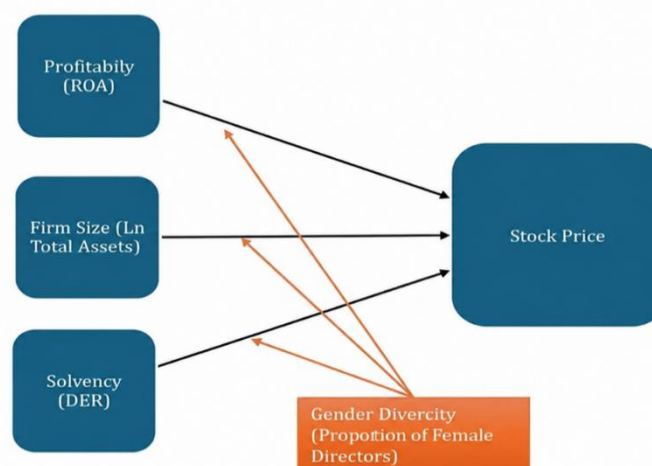


Figure 1. Conceptual Framework

Source: Research, 2025.

Here's the conceptual diagram for your theoretical framework. It visually shows profitability, firm size, and solvency as independent variables affecting stock price, with gender diversity moderating those relationships.

METHODS

This study examines the impact of profitability, business size, and solvency on stock prices and evaluates the moderating function of gender diversity using a quantitative approach using descriptive and verification methodologies. In the context of panel data regression, the analysis is carried out using Moderated Regression Analysis (MRA), which include interaction terms between the moderator and the independent variables. The study is based on secondary data that was gathered through paperwork from the Indonesia Stock Exchange (IDX) and LSEG Refinitiv.

Every Islamic bank that is part of the Indonesia Sharia Stock Index (ISSI) will have a population of their own by the end of 2024. There are four of them: PT Bank Aladin Syariah Tbk (BANK), PT Bank Panin Dubai Syariah Tbk (PNBS), PT Bank BTPN Syariah Tbk (BTPS), and PT Bank Syariah Indonesia Tbk (BRIS). The study follows all four banks for five years, from 2020 to 2024, using a rigorous sample approach, as shown in Table 1 below.

Table 1
Operational Variables

Variable	Indicator	Source
Stock Price (Y)	Year-end closing price)	LSEG Refinitiv
Profitability (X ₁)	Return on Assets (ROA) = Pre-Tax Profit/ Total Asset × 100 %	LSEG Refinitiv
Firm Size (X ₂)	Firm Size = Ln (Total Aset)	LSEG Refinitiv
Solvency (X ₃)	Debt to Equity Ratio (DER) = Total Debt/ Total Equity	LSEG Refinitiv
Gender Diversity (Z)	The Proportion of female members on the Board of Directors = Number of Female Directors / Total Number of Directors x 100%	LSEG Refinitiv

Source: LSEG Refinitiv, 2025.

Descriptive and verificative tests were among the data analysis methods employed in this investigation. Using example data from metrics like ROE, Total Assets, DER, Close Price, and Gender Diversity, the descriptive technique describes the study object. In order to investigate the impact of profitability, business size, and solvency on stock price as well as how gender diversity influences these connections, the verification approach entails hypothesis testing.

The application of conventional assumption testing ensures that the regression model consistently produces trustworthy, unbiased results. Among the conventional assumption tests used in this inquiry are the Normality Test, Multicollinearity Test, Autocorrelation Test, and Heteroscedasticity Test.

According to Basuki (2023), the Panel Data Regression Test integrates both time series and cross-sectional data. An analysis of panel data can be conducted using one of three models: the Common Effect Model, the Fixed Effect Model, or the Random Effect Model. For example, the Lagrange Multiplier Test, the Chow Test, and the Hausman Test are all utilised in the process of selecting the optimal model.

By applying Moderated Regression Analysis (MRA), one may assess the impact of a moderating variable's interaction with the regression equation. One variable, stock price, is reliant on the other three variables, profitability, company size, and solvency; gender diversity is a moderating variable. It is the objective of this study to determine if gender diversity mitigates the effect of profitability, company size, and solvency on stock price. Moderating factors can be classified into four types: pure, quasi, homologizer, and predictor, according to Sharma et al. (1981).

A technique for determining whether to accept or reject predetermined hypotheses based on statistical data analysis is hypothesis testing (Sugiyono, 2022). The F-Test (Significance of the Regression Model), Adjusted R-Square (Coefficient of Determination), and T-Test (Significance of Individual Regression Coefficients) are the hypothesis tests that were employed in this investigation.

RESULT AND DISCUSSION

Through the use of descriptive statistics, we were able to compile a rundown of each variable's average, median, minimum, and standard deviation, as shown in Table 2 below.

Table 2
Descriptive Statistics

Variable	Mean	Median	Max	Min	Std Dev	Observations
Close Price (Y)	1648	1402	3750	540	967	20
ROE (X1)	0.10	0.16	0.29	0.30	0.16	20
SIZE (X2)	30.79	30.47	33.64	27.30	1.73	20
DER (X3)	1.53	0.16	8.38	0.50	2.70	20
Gender Diversity (Z)	0.32	0.29	0.50	0.25	0.09	20

Source: Data Research, 2025.

On average, the stock closed at 1,648 with a median of 1,402. The number varied between 5,400 and 3,750, with a standard deviation of 967. The average Return on Equity (ROE) was 0.10 with a range of values: 0.16 for the median, 0.29 for the highest, -0.30 for the minimum, and 0.16 for the standard deviation. The average, median, and maximum firm size (SIZE) values were 30.79, 30.47, 33.64, 27.30, and 1.73, respectively. The standard deviation was 1.73. We found an average Debt-to-Equity Ratio (DER) of 1.53 and a standard deviation of 2.70; the DER values varied from 0.50 to 8.38. Gender diversity had a mean value of 0.32, a median of 0.29, a range of 0.50 to 0.25, and a standard deviation of 0.09.

Regression analysis of panel data was employed in this investigation. Classical assumption tests were carried out before to the regression analysis to make sure the model was trustworthy and free of infractions such autocorrelation, heteroscedasticity, multicollinearity, and non-normality. All traditional hypotheses were satisfied by the evidence. The Common Effect Model was used to create the subsequent regression model, as shown in Table 3 below.

Table 3
Panel Data Regression & Moderated Regression Analysis (MRA)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9744.610	960.2073	10.14844	0.0000
X ₁	-504.9374	240.7074	-2.097723	0.0446
X ₂	-261.4789	28.10965	-9.302107	0.0000
X ₃	-245.9689	22.62821	-10.87001	0.0000
Z	-3211.361	390.6913	-8.219688	0.0000
XZ	-57.96072	17.05944	-3.397574	0.0043
R-squared	0.921311	Mean dependent var		256.3918
Adjusted R-squared	0.893207	S.D. dependent var		369.3873
S.E of regression	120.7126	Akaike info criterion		12.66803
Sum squared resid	204001.5	Schwarz criterion		12.96675
Log likelihood	-120.6803	Hannan-Quinn Criterion		12.72634
F-statistic	32.78297	Durbin-Watson stat		1.817496
Prob(F-Statistic)	0.000000			

Source: EViews Output

The interaction variable (X*Z) has a significance value of 0.0043 (< 0.05) according to the Moderated Regression Analysis (MRA) results. This suggests that the impact of ROE, firm size (SIZE), and DER on stock price is mitigated by gender diversity. Gender diversity acts as a quasi-moderator variable, according to the significant coefficient value. Put differently, gender diversity can function as both a moderating and an independent variable.

The negative regression coefficient of -3.397574 indicates that the impact of the independent variables on stock price is reduced by -3.397574 as gender diversity increases. This indicates that a company's ability to raise its stock price is negatively correlated with the degree to which it incorporates gender diversity.

The F-test (Significance of the Regression Model) is used to determine if the dependent variable can be explained by all of the independent variables in the model. An F-test compares the calculated F-value with the F-table value at a predefined significance level, commonly $\alpha = 0.05$. We will talk about this more later on, but if the significance value is smaller than the confidence level, then the regression is considered statistically significant, as shown in Table 3.

There is a statistically significant relationship between stock price and each of the independent variables (F-test results).

Next, we use the Adjusted R-Square (Adjusted R^2) test to see how well the model can explain the dependent variable's variation. Detailed below is an explanation of why a falling adjusted R^2 value indicates that the independent variables are becoming less capable of explaining the dependent variable, as shown in Table 3.

A modified R^2 value of 0.893207 in the table indicates that the model, which incorporates the following variables: gender diversity, company size, solvency, and profitability, can explain about 89.32% of the variation in stock price.

After that, the t-test is used to quantify the individual effect of each independent variable on the dependent variable. As seen below, the t-test uses a typical confidence level of $\alpha = 0.05$, as shown in Table 3.

The t-test findings show that ROE (X1) has a substantial impact on stock price (Y), with a significance value of 0.0446 (< 0.05). Similarly, the company size (SIZE/X2) significance value on stock price is 0.0000 (< 0.05), indicating that SIZE has a significant effect on stock price as well. Similarly, the significance value for DER (X3) on stock price is 0.0000 (< 0.05), indicating that DER has a substantial impact on stock price. These results are consistent with those of Sungkar et al. (2025) and Lestari (2025), who stress the importance of basic financial elements like profitability and solvency in determining how the market views the performance of Islamic banks.

In addition, the results of the Moderated Regression Analysis (MRA) show that there is a statistically significant interaction variable ($p = 0.0043$) between gender diversity and the three fundamental components (XZ). As a result, gender diversity is not only an independent variable but also a quasi-moderator, reducing the impact of profitability, firm size, and solvency on stock price.

Having more women on the board of directors seems to mitigate the effect of fundamental difficulties on stock price, according to the negative direction of the interaction coefficient. Rahmawati and Biduri's (2024) research shows that gender diversity may reduce the effect of solvency on company value, therefore their findings are consistent with that. Also, as Rindorindo and Soewignyo (2022) point out, gender diversity may make capital structure have less of an effect on stock value.

These results highlight how crucial it is to take gender-based governance factors into account when making key business decisions. However, they also show that the link between financial success and market perception is not necessarily strengthened by gender diversity. According to Jabari and Muhamad (2021) and Campbell and Mínguez-Vera (2008), gender diversity can enhance decision-making and supervision quality. However, the study's findings indicate that in order to successfully assist the attainment of optimal market performance, the inclusion of women on boards in Indonesian Islamic banks must be strategically integrated.

Thus, the practical implication of this research highlights the need for a more adaptive approach to designing gender diversity policies in the Islamic financial sector.

CONCLUSION

The study's findings, which are in line with those of Sungkar et al. (2025) and Lestari (2025), demonstrate that profitability, firm size, and solvency have a substantial impact on Indonesian Islamic banks' stock values. These results demonstrate that basic factors continue to be a crucial point of reference for investors evaluating Islamic banks' prospects. However, gender diversity has been shown to be a quasi-moderating variable that can moderate the link between the three basic characteristics and stock price, although in a negative way. This implies that the market does not yet completely view a higher percentage of women on boards of directors as an indicator of strong financial performance. In contrast, research by Jabari and Muhamad (2021) and Campbell and Mínguez-Vera (2008) indicates that gender diversity improves business success. Therefore, in order to produce a noticeable effect on market perception and firm value in the context of Indonesian Islamic banks, gender diversity policies must be more carefully crafted and combined with better governance standards.

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