

Does Ownership Structure Matter?

The Moderating Role of Ownership Structure in the ESG–Firm Value Relationship: Evidence from Taiwanese Financial Holding Companies

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Abstract

This study investigates the relationship between environmental, social, and governance (ESG) performance, ownership structure, and firm value using a sample of 13 Taiwanese financial holding companies. ESG performance is measured by the Taiwan ESG (TESG) score, while Tobin's Q serves as a proxy for firm value. Institutional ownership, blockholder ownership, and board ownership are incorporated as moderating variables. The empirical results indicate that ESG performance is positively associated with firm value. Institutional ownership strengthens the positive relationship between ESG performance and firm value, whereas blockholder ownership weakens this relationship. In contrast, board ownership does not exhibit a significant moderating effect. These findings suggest that the value-creating effect of ESG performance depends not only on firms' sustainability initiatives but also on their ownership structure, highlighting the critical role of corporate governance in translating ESG performance into firm value.

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1. Introduction

The financial sector plays a pivotal role in promoting economic growth and maintaining financial stability. As financial intermediaries, financial institutions facilitate capital allocation, investment, financing, risk management, and asset management, thereby making substantial contributions to economic development and social welfare. Given their central role in the economy, financial institutions are expected not only to achieve superior financial performance but also to fulfill broader responsibilities toward sustainable development. Consequently, environmental, social, and governance (ESG) issues have become increasingly important for the financial services industry, attracting growing attention from regulators, investors, and other stakeholders (Friede et al., 2015; Gillan et al., 2021; Velte, 2022).

The growing importance of ESG has become particularly evident following a series of global financial crises and increasing awareness of climate change and sustainable development. The global financial crisis of 2007–2009 exposed significant weaknesses in corporate governance, risk management, and ethical standards within financial institutions, highlighting the need for more responsible and sustainable business practices (Acharya & Richardson, 2009; Kirkpatrick, 2009). In recent years, growing awareness of climate change, environmental protection, and social responsibility has prompted governments and regulatory authorities worldwide to promote sustainable finance initiatives, as reflected in the frameworks developed by the United Nations Environment Programme Finance Initiative (UNEP FI, 2023) and the International Sustainability Standards Board (ISSB, 2023). As a result, ESG has gradually evolved from a voluntary corporate initiative into an important criterion for evaluating corporate sustainability, investment decisions, and long-term competitiveness (Fatemi et al., 2018; Broadstock et al., 2021).

In Taiwan, the Financial Supervisory Commission (FSC) has actively promoted sustainable finance through a series of policy initiatives, including the Sustainable Finance Action Plans and enhanced ESG disclosure requirements for listed companies (Financial Supervisory Commission, 2022; Taiwan Stock Exchange, 2023). Financial holding companies, as key participants in Taiwan's financial system, are expected to incorporate ESG principles into their corporate governance, investment decisions, and risk management practices. Consequently, ESG performance has become an important indicator of the competitiveness and long-term value creation of financial institutions.

From the perspective of corporate governance, the successful implementation of ESG strategies requires effective governance mechanisms capable of reducing agency conflicts and promoting long-term value creation. According to *Agency Theory* (Jensen & Meckling, 1976), conflicts of interest may arise because managers do not always act in the best interests of shareholders. Appropriate corporate governance mechanisms therefore play an important role in aligning managerial incentives with shareholders' objectives and improving corporate performance

(Fama & Jensen, 1983; Shleifer & Vishny, 1997). Among these governance mechanisms, ownership structure has long been regarded as one of the most influential factors affecting managerial behavior and corporate decision-making (Morck et al., 1988; Elyasiani & Jia, 2010).

Ownership structure reflects the distribution of corporate ownership among different shareholder groups, each possessing distinct monitoring capabilities, investment objectives, and governance incentives (Shleifer & Vishny, 1986). Institutional investors generally possess professional expertise and stronger monitoring capabilities, enabling them to reduce information asymmetry and improve corporate governance (Elyasiani & Jia, 2010; Dyck et al., 2019). In contrast, concentrated ownership by large shareholders may either strengthen corporate monitoring or create agency conflicts between controlling and minority shareholders (Shleifer & Vishny, 1997). Similarly, board ownership may align managerial interests with those of shareholders through equity ownership, while excessive managerial ownership may also result in managerial entrenchment (Jensen & Meckling, 1976; Morck et al., 1988).

Although previous studies have extensively examined the relationship between ESG performance and firm value, the empirical evidence remains inconclusive (Friede et al., 2015; Fatemi et al., 2018; Gillan et al., 2021; Velte, 2022). While many studies report that superior ESG performance enhances firm value through improved corporate governance, stronger stakeholder relationships, and reduced corporate risk, other studies suggest that ESG initiatives may increase operating costs or produce inconsistent outcomes across different industries and institutional environments (Cavaco & Crifo, 2014). Furthermore, relatively few studies have investigated whether different ownership structures moderate the relationship between ESG performance and firm value, particularly within the Taiwanese financial services industry.

This study makes three contributions to the existing literature. First, unlike previous studies that mainly focus on manufacturing firms or cross-industry samples, this study provides updated evidence from Taiwanese financial holding companies, a highly regulated industry where ESG has become increasingly important. Second, this study extends the ESG literature by examining ownership structure as a moderating mechanism rather than merely an explanatory variable. Third, this study demonstrates that ownership structure plays a critical role in determining whether ESG performance is translated into firm value. The empirical findings reveal that different ownership structures exert heterogeneous moderating effects on the ESG–firm value relationship, providing new insights into how corporate governance mechanisms influence the value relevance of ESG performance.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature and develops the research hypotheses. Section 3 describes the research methodology. Section 4 presents the empirical results. Section 5 concludes the study.

2. Literature Review and Hypothesis Development

2.1 ESG Performance and Firm Value

Environmental, social, and governance (ESG) performance has become an increasingly important framework for evaluating corporate sustainability and long-term competitiveness. As investors, regulators, and other stakeholders place greater emphasis on sustainable development, ESG performance has evolved into an important consideration in investment decisions, corporate governance assessments, and risk management. Firms with superior ESG performance are generally perceived as having stronger governance mechanisms, greater transparency, lower operational risk, and better long-term growth prospects (Friede et al., 2015; Gillan et al., 2021). Consequently, ESG has attracted considerable attention in both academic research and business practice because of its potential influence on firm value.

From a theoretical perspective, the relationship between ESG performance and firm value can be explained by *Stakeholder Theory* (Freeman, 1984) and the *Resource-Based View* (Barney, 1991). *Stakeholder Theory* argues that firms should create value not only for shareholders but also for a broad range of stakeholders, including employees, customers, suppliers, governments, and local communities. Firms that effectively address stakeholder expectations are more likely to strengthen stakeholder relationships, enhance corporate reputation, and improve long-term organizational performance. Similarly, the *Resource-Based View* suggests that ESG-related capabilities, such as sound corporate governance, effective environmental management, and a strong corporate reputation, constitute valuable intangible resources that are difficult for competitors to imitate. These strategic resources may enhance operational efficiency, reduce financing costs, strengthen competitive advantages, and ultimately increase firm value.

Empirical evidence generally supports a positive relationship between ESG performance and firm value. Based on a meta-analysis of more than 2,000 empirical studies, Friede et al. (2015) found that the vast majority of studies reported a non-negative relationship between ESG and corporate financial performance, with most documenting positive results. Fatemi et al. (2018) similarly found that firms with superior ESG performance tend to receive higher market valuations because ESG activities may reduce information asymmetry and enhance investor confidence. Broadstock et al. (2021) further demonstrated that firms with stronger ESG performance exhibited greater resilience during periods of financial uncertainty, suggesting that ESG may serve as an effective risk-management mechanism. Nevertheless, the empirical findings are not entirely consistent. Research on corporate social responsibility has suggested that sustainability-related activities may require substantial investment and reduce short-term profitability because of their implementation costs (Cavaco & Crifo, 2014). Velte (2022) also indicated that the relationship between ESG performance and firm value may vary across institutional environments, industry characteristics, and corporate governance mechanisms.

Although prior studies have extensively examined the relationship between ESG performance and firm value, the empirical evidence remains inconclusive, particularly in the financial services industry. Compared with non-financial firms, financial holding companies operate under stricter regulatory requirements, face substantial information asymmetry, and encounter greater public expectations regarding corporate governance and sustainability. These distinctive characteristics may influence the extent to which ESG performance is reflected in firm value. Therefore, this study examines the relationship between ESG performance and firm value using Taiwanese financial holding companies as the research sample. Accordingly, the following hypothesis is proposed:

H1: ESG performance is positively associated with firm value.

2.2 Ownership Structure as a Moderator

Ownership structure has long been recognized as one of the most important corporate governance mechanisms influencing managerial behavior and corporate decision-making. According to *Agency Theory* (Jensen & Meckling, 1976), the separation of ownership and management gives rise to agency conflicts because managers may pursue personal interests rather than maximizing shareholder wealth. Consequently, effective corporate governance mechanisms are essential for mitigating agency costs and aligning managerial decisions with shareholders' interests.

Among various corporate governance mechanisms, ownership structure is particularly important because different shareholder groups possess distinct monitoring capabilities, investment horizons, and governance incentives. Large shareholders generally have stronger incentives and greater ability to monitor managerial behavior than dispersed shareholders, thereby reducing agency conflicts and improving corporate governance quality (Shleifer & Vishny, 1986). However, ownership concentration may also intensify conflicts between controlling shareholders and minority shareholders when controlling shareholders pursue private benefits at the expense of overall firm value (Shleifer & Vishny, 1997). Consequently, the effect of ownership structure on firm performance remains theoretically ambiguous.

From the perspective of ESG, ownership structure may play an even more important role because ESG initiatives generally require long-term investment, substantial financial resources, and sustained managerial commitment. Whether ESG investments ultimately enhance firm value depends not only on ESG performance itself but also on the effectiveness of shareholder monitoring and corporate governance mechanisms. Different ownership structures may therefore influence managerial decisions regarding ESG implementation, sustainability disclosure, and long-term strategic planning.

Accordingly, this study proposes that ownership structure moderates the relationship between ESG performance and firm value. Specifically, institutional

ownership, blockholder ownership, and board ownership represent three distinct governance mechanisms that may influence the extent to which ESG performance is translated into firm value. The following sections discuss each ownership structure in turn and develop the corresponding research hypotheses.

2.2.1 Institutional Ownership

Institutional ownership has long been regarded as an important external corporate governance mechanism because institutional investors generally possess greater professional expertise, abundant information resources, and stronger monitoring capabilities than individual investors. According to the *Monitoring Hypothesis*, institutional investors have both the incentive and the ability to actively monitor managerial behavior, thereby reducing agency conflicts and improving corporate governance quality (Shleifer & Vishny, 1986). Furthermore, institutional investors can reduce information asymmetry and encourage managers to make decisions that maximize long-term shareholder value (Elyasiani & Jia, 2010).

From the perspective of ESG, institutional investors are generally considered to be long-term investors who place greater emphasis on sustainable corporate development. As ESG has become an increasingly important consideration in investment decisions, institutional investors have actively encouraged firms to improve ESG performance through shareholder engagement, voting rights, and corporate governance oversight. Dyck et al. (2019) found that institutional investors significantly promote corporate social responsibility by encouraging firms to adopt more responsible business practices. Similarly, Gillan et al. (2021) suggested that institutional investors play an important role in promoting ESG-related activities because they recognize that sustainable corporate practices contribute to long-term firm value.

Accordingly, firms with higher institutional ownership are expected to implement ESG strategies more effectively and translate superior ESG performance into higher firm value. Therefore, institutional ownership is expected to strengthen the positive relationship between ESG performance and firm value.

H2: Institutional ownership positively moderates the relationship between ESG performance and firm value.

2.2.2 Blockholder Ownership

Blockholder ownership refers to ownership concentration in which a relatively small number of shareholders hold a substantial proportion of a firm's equity. Large shareholders generally possess stronger voting rights and greater influence over corporate decisions than dispersed shareholders. According to the *Monitoring Hypothesis*, blockholders have greater incentives to monitor managerial behavior because they bear a larger proportion of the costs and benefits associated with corporate performance (Shleifer & Vishny, 1986). Through active monitoring, blockholders may reduce agency conflicts and improve corporate governance.

However, the governance effect of blockholder ownership remains controversial. *The Entrenchment Hypothesis* argues that highly concentrated ownership may create agency conflicts between controlling shareholders and minority shareholders (Shleifer & Vishny, 1997). Controlling shareholders may pursue private benefits, influence corporate decisions for their own interests, or prioritize short-term financial returns over long-term corporate sustainability. Consequently, ownership concentration may weaken the effectiveness of corporate governance and reduce firm value.

From the perspective of ESG, firms with highly concentrated ownership may face greater challenges in implementing long-term sustainability strategies. Because ESG investments often require substantial financial resources and generate benefits over an extended period, controlling shareholders may be less willing to support ESG initiatives if they prioritize short-term economic benefits. As a result, ownership concentration may reduce the extent to which superior ESG performance is translated into firm value.

Accordingly, this study expects that blockholder ownership weakens the positive relationship between ESG performance and firm value. Therefore, the following hypothesis is proposed:

H3: Blockholder ownership negatively moderates the relationship between ESG performance and firm value.

2.2.3 Board Ownership

Board ownership refers to the proportion of a firm's shares held by members of the board of directors and supervisors. According to *Agency Theory*, equity ownership by directors and supervisors helps align the interests of managers with those of shareholders because managers who own equity directly share in the firm's gains and losses (Jensen & Meckling, 1976). As board ownership increases, managers are expected to make decisions that maximize shareholder wealth, thereby reducing agency conflicts and improving firm performance.

The governance effect of board ownership, however, remains controversial. *The Convergence-of-Interest Hypothesis* suggests that managerial ownership strengthens the alignment between managers and shareholders, leading to better corporate governance and improved firm performance (Jensen & Meckling, 1976). In contrast, *The Managerial Entrenchment Hypothesis* argues that excessive managerial ownership may reduce external monitoring and increase managerial discretion, allowing managers to pursue personal interests rather than shareholder value (Morck et al., 1988). Consequently, the overall governance effect of board ownership remains theoretically ambiguous.

From the perspective of ESG, board ownership may influence the implementation of corporate sustainability strategies because managers with equity ownership have greater incentives to enhance the firm's long-term value. Managers who hold company shares may therefore be more willing to invest in ESG initiatives that

improve corporate reputation, strengthen stakeholder relationships, and promote sustainable development. However, if board ownership becomes excessively concentrated, the entrenchment effect may offset the governance benefits associated with incentive alignment, thereby reducing the effectiveness of ESG implementation.

Accordingly, this study expects that board ownership moderates the relationship between ESG performance and firm value. Therefore, the following hypothesis is proposed:

H4: Board ownership positively moderates the relationship between ESG performance and firm value.

3. Methodology

3.1 Sample and Data Sources

This study investigates the relationship between ESG performance, ownership structure, and firm value using 13 Taiwanese financial holding companies listed on the Taiwan Stock Exchange (TWSE) as the research sample. Quarterly data covering the period from the first quarter of 2016 to the fourth quarter of 2025 are collected from the Taiwan Economic Journal (TEJ), resulting in 520 firm-quarter observations. ESG performance is measured using the Taiwan ESG (TESG) score provided by TEJ, while financial and ownership structure data are also obtained from the TEJ database. A summary of the sample characteristics is presented in Table 1.

Table 1: Sample Description

Item	Description
Sample	13 Taiwanese financial holding companies
Market	Taiwan Stock Exchange (TWSE)
Sample period	2016Q1–2025Q4
Frequency	Quarterly
Total observations	520 firm-quarter observations
ESG data	Taiwan ESG (TESG), TEJ
Financial data	Taiwan Economic Journal (TEJ)

3.2 Variable Definitions

This study employs Tobin's Q as the proxy for firm value. ESG performance is measured using the Taiwan ESG (TESG) score provided by the Taiwan Economic Journal (TEJ). Institutional ownership (INS), blockholder ownership (BHD), and board ownership (BOH) are included as the moderating variables. Firm size (SIZE) and debt ratio (DR) are incorporated as the control variables. The definitions and measurements of all variables are presented in Table 2.

Table 2: Variable Definitions

Variable	Definition	Measurement
Tobin's Q	Firm value	Market value of equity plus total liabilities divided by total assets.
TESG	ESG performance	Taiwan ESG (TESG) score provided by the Taiwan Economic Journal (TEJ).
INS (%)	Institutional ownership	Percentage of shares held by institutional investors.
BHD (%)	Blockholder ownership	Percentage of shares held by blockholders owning 10% or more of the outstanding shares.
BOH (%)	Board ownership	Percentage of shares held by directors and supervisors.
SIZE	Firm size	Natural logarithm of total assets.
DR (%)	Debt ratio	Total liabilities divided by total assets.

3.3 Empirical Models

To examine the relationship between ESG performance, ownership structure, and firm value, this study employs hierarchical regression analysis. The empirical analysis is conducted sequentially to evaluate the direct effect of ESG performance, the direct effect of ownership structure, and the moderating effect of ownership structure on the ESG–firm value relationship. Four regression models are estimated to test the proposed hypotheses.

Baseline Model (Model 1)

Model (1) serves as the baseline specification and includes only the control variables, namely firm size (SIZE) and debt ratio (DR). This model establishes the benchmark relationship between the control variables and firm value

$$Tobin's\ Q_{i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 DR_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where $Tobin's\ Q_{i,t}$ represents firm value, $SIZE_{i,t}$ denotes firm size, $DR_{i,t}$ represents debt ratio, and $\varepsilon_{i,t}$ is the error term.

ESG Performance (Model 2)

Model (2) extends the baseline model by incorporating ESG performance (TESG). This model examines whether firms with superior ESG performance exhibit higher firm value after controlling for firm characteristics, thereby testing **Hypothesis 1**.

$$Tobin's\ Q_{i,t} = \beta_0 + \beta_1 TESG_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 DR_{i,t} + \varepsilon_{i,t} \quad (2)$$

Ownership Model (Model 3)

Model (3) further incorporates ownership structure to examine whether ownership is directly associated with firm value. Ownership structure is alternatively measured by institutional ownership (INS), blockholder ownership (BHD), and board ownership (BOH). Separate regression models are estimated for each ownership variable because these ownership structures represent different governance mechanisms and may influence the ESG–firm value relationship in different ways.

$$\text{Tobin's } Q_{i,t} = \beta_0 + \beta_1 \text{TESG}_{i,t} + \beta_2 \text{Ownership}_{i,t} + \beta_3 \text{SIZE}_{i,t} + \beta_4 \text{DR}_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where $\text{Ownership}_{i,t}$ alternatively represents institutional ownership ($\text{INS}_{i,t}$), blockholder ownership ($\text{BHD}_{i,t}$), and board ownership ($\text{BOH}_{i,t}$).

Moderation Model (Model 4)

Model (4) introduces the interaction term between ESG performance and ownership structure to examine whether ownership structure moderates the relationship between ESG performance and firm value. A statistically significant interaction coefficient indicates that the effect of ESG performance on firm value differs across ownership structures. This model is used to test Hypotheses 2–4.

$$\begin{aligned} \text{Tobin's } Q_{i,t} = & \beta_0 + \beta_1 \text{TESG}_{i,t} + \beta_2 \text{Ownership}_{i,t} \\ & + \beta_3 (\text{TESG}_{i,t} \times \text{Ownership}_{i,t}) + \beta_4 \text{SIZE}_{i,t} + \beta_5 \text{DR}_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (4)$$

To reduce potential multicollinearity between the interaction terms and their corresponding variables, TESSG and each ownership variable are mean-centered before constructing the interaction terms. Variance inflation factors (VIFs) and tolerance values are subsequently examined to assess the presence of multicollinearity.

4. Empirical Results

4.1 Descriptive Statistics

Table 3 presents the descriptive statistics of the variables used in this study. The mean value of Tobin's Q is 1.006, indicating that the market value of Taiwanese financial holding companies is, on average, slightly higher than the replacement value of their assets. The average TESSG score is 63.872, ranging from 45.890 to 76.940, suggesting substantial variation in ESG performance across firms. Regarding ownership structure, institutional ownership (INS) has the highest average shareholding (68.155%), followed by blockholder ownership (BHD) (19.496%) and board ownership (BOH) (11.063%). These results indicate that institutional investors play a dominant role in the ownership structure of Taiwanese financial holding companies.

The mean debt ratio (DR) is 92.319%, which is considerably higher than that typically observed in non-financial firms. This result reflects the operational characteristics of financial holding companies, whose primary funding sources consist of deposits, insurance reserves, and other financial liabilities. Therefore, a relatively high debt ratio is a common characteristic of financial institutions.

Table 3: Descriptive Statistics of Research Variables

Variable	N	Mean	SD	Min	Max
Firm value					
Tobin Q	520	1.006	0.024	0.943	1.074
Environmental, Social, and Governance (ESG)					
TESG	520	63.872	7.115	45.890	76.940
Ownership Structure					
INS (%)	520	68.155	9.293	41.570	86.880
BHD (%)	520	19.496	8.579	9.830	46.990
BOH (%)	520	11.063	10.133	0.990	27.770
Control Variable					
SIZE	520	21.896	0.864	19.318	23.386
DR (%)	520	92.319	2.397	80.820	97.420

Note: Tobin's Q = Firm value; TESG = Taiwan ESG score; INS = Institutional ownership; BHD = Blockholder ownership; BOH = Board ownership; SIZE = Firm size; DR = Debt ratio.

4.2 Multicollinearity Diagnostics

Prior to conducting the hierarchical regression analysis, multicollinearity among the explanatory variables was assessed using variance inflation factors (VIF) and tolerance values. Table 4 reports the multicollinearity diagnostics for the three moderation models. The VIF values range from 1.103 to 2.857, while the corresponding tolerance values range from 0.350 to 0.906. According to Hair et al. (2019), VIF values below 5 and tolerance values above 0.10 indicate that multicollinearity is not a serious concern. These results suggest that multicollinearity is unlikely to affect the reliability of the regression estimates.

Table 4: Multicollinearity Diagnostics

Variable	INS Model		BHD Model		BOH Model	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
TESG	0.679	1.472	0.611	1.637	0.658	1.520
INS	0.796	1.256				
BHD			0.811	1.233		
BOH					0.855	1.170
TESG $\times$ INS	0.806	1.241				
TESG $\times$ BHD			0.906	1.103		
TESG $\times$ BOH					0.892	1.122
SIZE	0.376	2.657	0.350	2.857	0.431	2.319
DR	0.384	2.607	0.402	2.489	0.410	2.442

Note: Tolerance values are calculated as the reciprocal of the variance inflation factor (Tolerance = $1/\text{VIF}$). Institutional ownership (INS), blockholder ownership (BHD), and board ownership (BOH) were estimated in separate hierarchical regression models. All interaction terms were constructed after mean-centering the corresponding variables.

4.3 Hierarchical Regression Results

This section presents the results of the hierarchical regression analyses examining the relationship between ESG performance, ownership structure, and firm value. Three separate regression models are estimated to evaluate the moderating effects of institutional ownership (INS), blockholder ownership (BHD), and board ownership (BOH). The regression results are reported in Tables 5–7.

4.3.1 Institutional Ownership

Table 5 presents the hierarchical regression results using institutional ownership (INS) as the moderating variable. Model 1 includes the control variables and serves as the baseline model. Firm size (SIZE) is negatively and significantly associated with Tobin's Q, whereas the debt ratio (DR) is positively and significantly associated with firm value. The adjusted R^2 of Model 1 is 0.355, indicating that the control variables explain 35.5% of the variation in firm value.

Model 2 introduces TESG to examine the direct relationship between ESG performance and firm value. The coefficient of TESG is positive and statistically significant ($\beta = 0.001$, $p < 0.01$), indicating that financial holding companies with superior ESG performance tend to exhibit higher firm value. The adjusted R^2 increases substantially from 0.355 in Model 1 to 0.450 in Model 2, suggesting that ESG performance provides considerable additional explanatory power. Accordingly, **Hypothesis 1 is supported**. Model 3 further incorporates institutional ownership. The coefficient of INS is positive and statistically significant ($\beta = 0.0005$, $p < 0.01$), indicating that a higher level of institutional ownership is associated with greater firm value. The adjusted R^2 increases from 0.450 to 0.477, suggesting that institutional ownership contributes additional explanatory power beyond ESG performance and the control variables.

Finally, Model 4 includes the interaction term between TESH and institutional ownership. The coefficient of TESH remains positive and statistically significant ($\beta = 0.0012$, $p < .01$). More importantly, the interaction term $TESH \times INS$ is positive and statistically significant ($\beta = 0.00006$, $p < .01$), indicating that institutional ownership strengthens the positive relationship between ESG performance and firm value. The adjusted R^2 further increases from 0.477 to 0.492, with the interaction term contributing an additional ΔR^2 of 0.016. Therefore, **Hypothesis 2 is supported.**

Table 5: Hierarchical Regression Results for the Moderating Effect of Institutional Ownership

Variable	Model 1	Model 2	Model 3	Model 4
Constant	0.449** (0.033)	0.622** (0.036)	0.647** (0.035)	0.589** (0.038)
TESG		0.001** (0.0001)	0.001** (0.0001)	0.0012** (0.0001)
INS			0.0005** (0.00009)	0.0005** (0.0001)
TESG $\times$ INS				0.00006** (0.00001)
SIZE	-0.006** (0.001)	-0.0097** (0.001)	-0.0125** (0.001)	-0.013** (0.001)
DR	0.008** (0.0005)	0.006** (0.0005)	0.007** (0.0005)	0.008** (0.0005)
Adjusted R^2	0.355	0.450	0.477	0.492
Δ Adjusted R^2		0.096	0.028	0.016
N	520	520	520	520

Note: Unstandardized coefficients are reported; associated standard errors are in parentheses. TESH and ownership variables are mean-centered before constructing the interaction term.

* $p < .05$, ** $p < .01$

4.3.2 Blockholder Ownership

Table 6 presents the hierarchical regression results using blockholder ownership (BHD) as the moderating variable. Model 1 includes only the control variables, Model 2 introduces ESG performance (TESG), Model 3 further incorporates blockholder ownership (BHD), and Model 4 includes the interaction term between TESH and BHD.

Consistent with the results reported in Table 5, TESH remains positively and significantly associated with firm value in Models 2, 3, and 4, indicating that firms with superior ESG performance tend to receive higher market valuations. The adjusted R^2 increases from 0.355 in Model 1 to 0.450 in Model 2 and further to 0.451 in Model 3, suggesting that the inclusion of blockholder ownership provides only a marginal improvement in the explanatory power of the model. However, the coefficient of BHD is negative but statistically insignificant, indicating that

blockholder ownership alone does not have a significant direct effect on firm value. Model 4 examines the moderating effect of blockholder ownership by including the interaction term between TESH and BHD. The interaction term (TESG $\times$ BHD) is negative and statistically significant ($\beta = -0.00006$, $p < .01$), indicating that blockholder ownership weakens the positive relationship between ESG performance and firm value. The adjusted R^2 increases from 0.451 in Model 3 to 0.459 in Model 4, indicating that the inclusion of the interaction term further improves the explanatory power of the regression model. Therefore, **Hypothesis 3 is supported.**

Table 6: Hierarchical Regression Results for the Moderating Effect of Blockholder Ownership

Variable	Model 1	Model 2	Model 3	Model 4
Constant	0.449** (0.033)	0.622** (0.036)	0.623** (0.036)	0.598** (0.036)
TESG		0.001** (0.0001)	0.001** (0.0001)	0.001** (0.0001)
BHD			-0.0001 (0.0001)	-0.0001 (0.0001)
TESG $\times$ BHD				-0.00006** (0.00002)
SIZE	-0.006** (0.001)	-0.0097** (0.001)	-0.009** (0.0015)	-0.008** (0.002)
DR	0.008** (0.0005)	0.006** (0.0005)	0.006** (0.0005)	0.006** (0.001)
Adjusted R^2	0.355	0.450	0.451	0.459
Δ Adjusted R^2		0.096	0.001	0.008
N	520	520	520	520

Notes: Unstandardized coefficients are reported; associated standard errors are in parentheses. TESH and ownership variables are mean-centered before constructing the interaction term.

* $p < .05$, ** $p < .01$.

4.3.3 Board Ownership

Table 7 presents the hierarchical regression results using board ownership (BOH) as the moderating variable. Model 1 includes only the control variables, Model 2 introduces ESG performance (TESG), Model 3 further incorporates board ownership (BOH), and Model 4 includes the interaction term between TESH and BOH.

Consistent with the results reported in Tables 5 and 6, TESH remains positively and significantly associated with firm value in Models 2, 3, and 4, indicating that firms with superior ESG performance tend to receive higher market valuations. The adjusted R^2 increases from 0.355 in Model 1 to 0.450 in Model 2 and further to 0.453 in Model 3, suggesting that the inclusion of board ownership provides only a

marginal improvement in the explanatory power of the model. However, the coefficient of BOH is not statistically significant, indicating that board ownership alone does not have a significant direct effect on firm value.

Model 4 examines the moderating effect of board ownership by including the interaction term between TESH and BOH. The coefficient of the interaction term (TESG $\times$ BOH) is not statistically significant, indicating that board ownership does not significantly moderate the relationship between ESG performance and firm value. The adjusted R^2 remains largely unchanged after the interaction term is introduced (0.453 in Model 3 and 0.452 in Model 4), suggesting that the interaction term does not provide additional explanatory power. Therefore, **Hypothesis 4 is not supported.**

Table 7: Hierarchical Regression Results for the Moderating Effect of Board Ownership

Variable	Model 1	Model 2	Model 3	Model 4
Constant	0.449** (0.033)	0.622** (0.036)	0.629** (0.036)	0.630* (0.037)
TESG		0.001** (0.0001)	0.001** (0.0001)	0.001** (0.0001)
BOH			0.0002 (0.0001)	0.0002 (0.0001)
TESG $\times$ BOH				-0.0000002 (0.00001)
SIZE	-0.006** (0.001)	-0.0097** (0.001)	-0.0097** (0.001)	-0.0096** (0.001)
DR	0.008** (0.0005)	0.006** (0.0005)	0.006** (0.0005)	0.006** (0.0005)
Adjusted R^2	0.355	0.450	0.453	0.452
Δ Adjusted R^2		0.096	0.003	0
N	520	520	520	520

Notes: Unstandardized coefficients are reported; associated standard errors are in parentheses. TESH and ownership variables are mean-centered before constructing the interaction term.

* $p < .05$, ** $p < .01$.

5. Discussion and Conclusion

This study investigates the relationship between ESG performance, ownership structure, and firm value using Taiwanese financial holding companies as the research sample. The empirical results provide several important findings regarding the moderating role of ownership structure in the relationship between ESG performance and firm value.

First, the results indicate that ESG performance is positively associated with firm value, supporting Hypothesis 1. This finding suggests that firms with superior ESG performance tend to receive higher market valuations. The result is consistent with

Stakeholder Theory (Freeman, 1984), which argues that firms creating value for a broad range of stakeholders are more likely to strengthen stakeholder relationships, improve corporate reputation, and enhance long-term organizational performance. It is also supported by *the Resource-Based View* (Barney, 1991), which suggests that ESG-related capabilities represent valuable intangible resources that contribute to sustainable competitive advantages. Therefore, superior ESG performance enhances investor confidence and ultimately increases firm value.

Second, institutional ownership positively moderates the relationship between ESG performance and firm value, supporting Hypothesis 2. This finding can be explained from the perspectives of *Agency Theory* and the *Monitoring Hypothesis*. *Agency Theory* (Jensen & Meckling, 1976) argues that the separation of ownership and control creates agency conflicts and information asymmetry between managers and shareholders. Building upon this perspective, the *Monitoring Hypothesis* suggests that institutional investors possess both the incentives and the capabilities to monitor managerial behavior effectively, thereby reducing agency costs and improving managerial accountability. Owing to their professional expertise, abundant information resources, and substantial ownership stakes, institutional investors are better positioned to encourage firms to adopt long-term ESG strategies and ensure their effective implementation. Consequently, firms with higher institutional ownership are more likely to translate superior ESG performance into enhanced market valuation.

Third, blockholder ownership negatively moderates the relationship between ESG performance and firm value, supporting Hypothesis 3. This finding supports *the Entrenchment Hypothesis* (Shleifer & Vishny, 1997), which argues that highly concentrated ownership may increase conflicts between controlling shareholders and minority shareholders. Under such circumstances, controlling shareholders may prioritize private benefits over long-term corporate sustainability, thereby weakening the positive impact of ESG performance on firm value. This result suggests that ownership concentration may reduce the effectiveness of ESG initiatives in creating shareholder value.

In contrast, board ownership does not significantly moderate the relationship between ESG performance and firm value. Therefore, Hypothesis 4 is not supported. One possible explanation is that the governance effects of board ownership are twofold, reflecting both incentive alignment and managerial entrenchment. While board ownership may help align managers' interests with those of shareholders, excessive board ownership may weaken external monitoring and increase managerial discretion. Consequently, these two opposing governance effects may offset each other, resulting in an insignificant moderating effect.

From a financial regulatory perspective, the findings of this study provide important implications for the development of sustainable finance in Taiwan. As financial holding companies play a pivotal role in capital allocation, financial stability, and sustainable economic development, promoting ESG performance alone may not be sufficient to enhance firm value. Instead, effective corporate governance mechanisms should accompany ESG initiatives to ensure their successful

implementation. Specifically, regulators should continue strengthening sustainable finance policies while encouraging institutional investors to actively engage in corporate governance through stewardship and shareholder engagement. Furthermore, enhancing corporate governance standards and strengthening minority shareholder protection may help mitigate the adverse effects of concentrated ownership on ESG implementation. Collectively, these measures can enhance the resilience, competitiveness, and long-term sustainability of Taiwan's financial system.

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