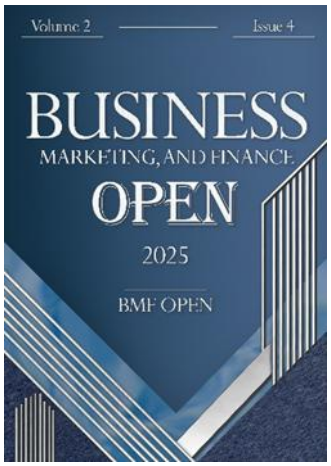
Social Performance and Financial Efficiency of Companies: Considering the Moderating Role of Corporate Governance in the Capital Market



Mohsen Mohtashamian[1], Hassan Ghodrati[2,*], Seyed Abdul-Jaber. Ghodratian[3] and Hossein Jabbari[4]

[1] PhD Student, Department of Industrial Financial Management, Kashan Branch, Islamic Azad University, Kashan, Iran;
[2] Assistant Professor in Industrial Management, Department of Industrial Management, Kashan Branch, Islamic Azad University, Kashan, Iran;
[3] Assistant Professor in Business Administration, Department of Business Administration, Kashan Branch, Islamic Azad University, Kashan, Iran;
[4] Assistant Professor in Accounting, Accounting Department, Kashan Branch, Islamic Azad University, Kashan, Iran;

* Correspondence: drghodrati@iau.ac.ir

Citation: Mohtashamian, M., Ghodrati, H., Ghodratian, S. A.-J., & Jabbari, H. (2025). Social Performance and Financial Efficiency of Companies: Considering the Moderating Role of Corporate Governance in the Capital Market. *Business, Marketing, and Finance Open*, 2(4), 1-13.

Received: 15 March 2025
Revised: 06 April 2025
Accepted: 20 April 2025
Published: 01 July 2025

Abstract: In recent years, corporate social performance has attracted significant attention from academics and business professionals. Corporate social performance has been recognized as a new strategic choice for enhancing corporate image, gaining competitive advantage, and ultimately increasing firm value. The present study aimed to examine the moderating role of corporate governance in the relationship between social performance and financial efficiency of companies. This study is classified as applied research in terms of purpose and as a descriptive study in terms of methodology. Among descriptive studies, it falls within the category of correlation research. The statistical population of this study consisted of all companies listed on the Tehran Stock Exchange from 2019 to 2022, with a sample size of 130 firms selected using the systematic elimination method. The research hypotheses were tested using multiple linear regression with a panel data model. The results indicated that social performance has a positive and significant impact on financial efficiency, and the internal and organizational mechanisms of corporate governance strengthen the positive relationship between social performance and financial efficiency. Based on these findings, it is recommended that legislators, policymakers, and standard-setters in accounting consider incorporating sustainability reporting formats into new reporting standards in Iran. Additionally, regulatory bodies, policymakers, and the Securities and Exchange Commission should adopt appropriate measures and legal requirements to mandate corporate disclosure of sustainability performance information.

Keywords: Social performance, financial efficiency, corporate governance, social responsibility.

1. Introduction

In recent years, corporate social performance has attracted significant attention from academics and business professionals. Corporate social responsibility has been recognized as a new strategic choice for enhancing

corporate image, gaining a competitive advantage, and ultimately increasing firm value. Generally, much of corporate social performance research focuses on the relationship between corporate social responsibility and firm performance. Previous studies [1, 2] and more recent studies [3] confirm the positive relationship between corporate governance, social, and environmental disclosures and firm performance. However, this relationship appears to be stronger in developed economies. Due to the inconsistencies in results, researchers have shifted their focus from overall firm performance to specific aspects that contribute to firm performance, as these aspects may not be influenced by corporate social responsibility in the same manner. Prior research has yielded varying and even contradictory results regarding the relationship between corporate social responsibility and financial performance. The controversial and inconsistent findings on the intensity and nature of the relationship between corporate social performance and financial performance are largely due to significant differences in the measurement of corporate social performance [4].

Many researchers have examined suitable criteria for measuring corporate social performance. Findings from these studies suggest that only observable outcomes of an organization's actions and behaviors can be used as appropriate criteria for measuring corporate social performance [5, 6]. Corporate social performance has been defined as the configuration of a business organization's principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes related to corporate social relations. Discussions in academic circles and even in the standard practices and analyses of prior research indicate that the terms corporate social performance and corporate social responsibility are often used interchangeably, despite some distinctions in their meanings. Generally, corporate social responsibility refers to the level of commitment and accountability a company has toward society, whereas corporate social performance refers to the outcomes and consequences of activities related to corporate social responsibility [7].

The literature on corporate social and environmental performance suggests a significant interplay between sustainability disclosure, financial outcomes, and governance mechanisms. Shakil et al. (2024) examined the role of board gender diversity as a moderator in the relationship between social and financial performance in the transport and logistics sector, revealing that environmental performance negatively impacts financial outcomes, though gender diversity on boards mitigates this effect [4]. Miao et al. (2021) found a direct relationship between the quality of environmental performance disclosure and financial performance, highlighting that improved disclosure enhances firms' innovation capacity [6]. Similarly, Wang and Zhang (2020) explored media coverage of corporate pollution disclosure in high-polluting Chinese firms, showing that positive coverage increases transparency but greenwashing investments often serve as symbolic rather than substantive environmental commitments [7]. Fengyuan and Ying (2020) demonstrated that higher-quality financial disclosure reduces the cost of debt financing, emphasizing that creditors rely on transparent accounting data for investment decisions [8]. Luo et al. (2019) further investigated media attention and environmental disclosure, showing that negative media reports weaken the effect of environmental disclosure on lowering debt financing costs [9]. In domestic studies, Namazi et al. (2022) analyzed the impact of green innovation (product and process innovation) on financial, environmental, and economic performance, highlighting the mediating role of environmental management accounting across multiple industries [10]. Rezaei Pitenoei et al. (2021) examined the moderating effect of family ownership on the relationship between environmental performance and tax avoidance, confirming a negative relationship influenced by lower agency costs in family-controlled firms [11]. Naghshbandi and Gholichi Moghadam (2020) studied the moderating role of auditor reputation in the link between corporate social responsibility (CSR) and auditor selection, affirming a significant relationship [12]. Faraji et al. (2020)

investigated the CSR-value nexus, demonstrating that CSR activities enhance market value, though earnings management does not significantly mediate this relationship [13]. The findings suggest that sustainability practices and governance mechanisms shape financial and reputational outcomes, reinforcing the necessity of transparent corporate disclosures and effective environmental strategies in capital markets.

Today, corporate social performance is widely recognized among academics and professionals (e.g., institutions ranking corporate social responsibility levels) as a multidimensional construct that fundamentally covers three aspects: (1) environmental issues, (2) social issues, and (3) corporate governance mechanisms, collectively represented by the abbreviation ESG. This multidimensional structure indicates that a comprehensive and integrated quantitative index is required to simultaneously assess various aspects of organizational performance in evaluating corporate social performance [14]. Woodak (2003) demonstrated that previous empirical studies have often used the Kinder, Lydenberg, and Domini (KLD) rating checklist as the standard metric for measuring corporate social performance in academic research. However, some researchers argue that the KLD measurement system and other similar corporate social responsibility rating systems, such as Innovest, Vigeo Eiris, and SAM, suffer from validity weaknesses and reliance on subjective judgments and cognitive biases when aggregating corporate social performance dimensions into a unified measurement criterion [15].

On the other hand, corporate governance is considered a potential moderator of the link between social performance and financial efficiency. Since managers actively participate in developing social performance strategies, a growing body of research suggests that social performance decisions reflect the homogeneity of corporate leaders' intentions. According to this theory, corporate background characteristics may influence strategic decisions. The values and cognitive foundations of decision-makers are often reflected in strategic decisions, and corporate sustainability is a strategic issue. The corporate governance system of a company, as its most influential factor, makes strategic decisions based on its own interpretation, shaped by experiences, values, and personality traits. The bounded rationality theory posits that individuals' decisions are not always based on rational motivations, as they cannot acquire and evaluate all environmental data. Consequently, they tend to make decisions based on psychological and behavioral aspects. Since CEOs' principles influence their leadership styles, the perspectives and value systems of key decision-makers affect how businesses respond to various stakeholder demands. Therefore, it is reasonable to assume that CEOs have a significant impact on corporate social performance as a strategic direction for their firms [3].

Accordingly, the present study examines the moderating role of corporate governance in the relationship between corporate social performance and financial efficiency of companies.

2. Methodology

Since the findings of this study can be utilized in the decision-making process, this research is classified as applied research. In terms of research process, it is a quantitative study as it relies on quantitative data. Statistically, it is categorized as a correlational study because multiple linear regression is used to test the research hypotheses. The statistical population of this study consists of all companies listed on the Tehran Stock Exchange from 2019 to 2022. The sample size was determined using the systematic elimination method.

To select the companies, eight criteria were considered:

1. The company must have been listed on the Tehran Stock Exchange before 2019.
2. To ensure comparability of financial information, the fiscal year-end must be March 19.
3. The company's stock must not have had a trading suspension of more than six months.

4. The company must not be an investment holding company, a financial intermediary (leasing or banking), or an insurance company.
5. The company must not have changed its fiscal year during the study period.
6. The required data for the selected variables must be available.
7. The company must not have changed its business operations during the study period.

After applying these criteria, a total of 130 companies met the conditions and were selected as the final sample.

Regression Model and Measurement of Research Variables

The proposed model examines the relationship between social performance and financial efficiency. For this purpose, the relationship was estimated using multiple linear regression based on panel data analysis.

Equation (1):

$$CFE_{it} = \beta_0 + \beta_1 SR_{it} + \beta_2 FS_{it} + \beta_3 FL_{it} + \beta_4 DO_{it} + \beta_5 AL_{it} + \beta_6 CF_{it} + \beta_7 FP_{it} + \beta_8 GO_{it} + \varepsilon_{it}$$

Equation (2):

$$CFE_{it} = \beta_0 + \beta_1 SR_{it} + \beta_2 GI_{it} + \beta_3 (SR_{it} \times GI_{it}) + \beta_4 FS_{it} + \beta_5 FL_{it} + \beta_6 DO_{it} + \beta_7 AL_{it} + \beta_8 CF_{it} + \beta_9 FP_{it} + \beta_{10} GO_{it} + \varepsilon_{it}$$

Where:

Dependent Variable:

CFE_{it} = Corporate Financial Efficiency

Other Variables:

SR_{it} = Social Performance Level (Score related to the social component)

GI_{it} = Comprehensive Corporate Governance Index

FS_{it} = Firm Size

FL_{it} = Financial Leverage (Risk Structure)

DO_{it} = Ownership Dispersion or Concentration

AL_{it} = Asset Liquidity

CF_{it} = Free Cash Flow

FP_{it} = Profitability

GO_{it} = Growth Opportunities

ε_{it} = Residual (Estimation Error in the Regression Model)

To measure social performance, the checklist developed by Zimon et al. (2022) was used. This checklist consists of several components, each containing multiple indicators in the areas of corporate social responsibility, environmental responsibility, and economic responsibility. Each indicator is assigned a score of one.

The social performance score for each company was calculated using the following formula:

Equation (3):

SR = (Number of disclosed items) / (Total number of disclosable items)

The Zimon et al. (2022) checklist is defined in Table 1. For companies that have adopted ISO 14001, the checklist items can be extracted from corporate documentation. In other cases, verification and scoring require collaboration with relevant experts.

Table 1. Social Performance Evaluation Checklist

Component	Indicators (Actions in the Field of Social Responsibility)
Social	Social investment, support for community activities, charitable donations and services, legal actions/litigation,

	religious/cultural activities
Environmental	Pollution control, prevention of environmental damage, waste recycling or reduction, natural resource conservation, research and development, environmental policies
Economic	Product development/market share, product quality, product discontinuation and other services, number of employees, salaries/bonuses and benefits, employee stock ownership, retirement and severance benefits, workplace health and safety, employee training and development programs, sports and recreational activities, employee loans or insurance, employee morale and communication, customer health and safety, customer complaints/satisfaction, deferred payment policies for specific customers, post-sale services, responsiveness to customer needs

Various methods and criteria exist for evaluating corporate financial efficiency. Among these, financial ratio-based performance indicators such as Tobin's Q ratio, return on assets (ROA), and return on equity (ROE) are commonly used. However, due to the multiplicity of these ratios and their different value implications, multidimensional composite non-judgmental indicators based on the better information theory are preferable. In this study, various metrics have been identified, and data envelopment analysis (DEA) has been adopted as a quantitative and multidimensional approach for measuring corporate financial performance through financial efficiency indicators.

As previously mentioned, DEA is an advanced non-parametric technique widely used for evaluating efficiency and performance in decision-making units across various industries, including financial services, investment and insurance, energy, transportation, and public sectors. In defining the cost efficiency evaluation model for companies, this study follows the model proposed by Altanbas et al. (2007) and the modified variables from Ding et al. (2018). A logarithmic cost frontier function (nonlinear) based on two inputs and three outputs has been applied, as represented in the following equation:

Equation (4):

$$\ln(TC) = \beta_0 + \gamma t + 0.5\,\gamma t^2 + \sum_{h=1}^{3} (\alpha_h + \theta_h t) \ln(w_h) + \sum_{h=1}^{2} (\beta_j + c_h t) \ln(y_j) + 0.5 \left(\sum_{j=1}^{2} \sum_{k=1}^{2} \beta_{jk} \ln(y_j) \ln(y_k) + \sum_{h=1}^{3} \sum_{m=1}^{3} \lambda_{hm} \ln(w_h) \ln(w_m)\right) + \sum_{i=1}^{2} \sum_{m=1}^{3} \varrho_{im} \ln(y_i) \ln(w_m) - u + v$$

In this equation:

- TC represents total efficiency.
- y_j denotes the output level of type j.
- w_h indicates the input value of type h.
- t is a time trend variable accounting for technological changes, considered in both linear and squared forms.
- v represents the level of random error, covering both measurement errors and stochastic estimation errors.
- u denotes the deviation or inefficiency of the evaluated company based on its actual efficiency relative to the efficiency frontier (optimal efficiency level).

The financial efficiency score of the evaluated company is calculated by dividing this deviation by actual efficiency, resulting in a value between zero and one, which is then multiplied by 100 to express efficiency as a percentage.

Following the methodologies of Al-Khazali et al. (2023), Fathi (2021), and Haqshenas (2018), the Comprehensive Corporate Governance Index (GI) is constructed using the following variables:

1. Board Size (BS)

- If the number of board members in a company is equal to or greater than the average of the sample, it is assigned a value of 1; otherwise, it is 0.

2. Board Composition (B-COM)
   - If the proportion of independent directors to total board members is equal to or greater than the sample average, it is assigned 1; otherwise, 0.
3. Institutional Ownership (INST)
   - If the percentage of institutional shareholders' ownership in a company is equal to or greater than the sample average, it is assigned 1; otherwise, 0.
4. Managerial Ownership (MANG)
   - If the CEO's ownership percentage in a company is equal to or greater than the sample average, it is assigned 1; otherwise, 0.
5. CEO Duality (DUALITY)
   - If the CEO also serves as the board chairman, it is assigned 1; otherwise, 0.

Once the variables are defined, corporate governance (GI) is calculated as the sum of these five mechanisms. If the total score falls between three and five, the corporate governance system is classified as strong. Otherwise, it is considered weak (scores of 1 and 2 indicate weak governance, while scores of 3, 4, and 5 indicate strong governance).

Control Variables

Following insights from influential studies on the relationship between social and financial performance in companies, this study incorporates several variables that affect financial efficiency, some of which are also used as control variables in prior research. These factors are identified based on domain knowledge analysis and refined through Delphi expert surveys and fuzzy network analysis.

One of the key factors affecting financial efficiency is corporate risk metrics, which include:

- Market risk (beta) as a measure of systematic risk.
- Financial leverage (total debt to total assets ratio) as a measure of bankruptcy risk and capital structure.

Previous studies indicate that firms facing higher risk levels incur additional agency costs and are exposed to greater financial risk, leading to weaker financial performance (Fengyan & Ying, 2020).

Following Fengyan and Ying (2020), additional control variables include:

1. Firm Size
   - Measured based on market performance and Tobin's Q ratio (market value of assets to book value of equity).
   - Used to control investors' preferences for larger firms.
   - Previous studies suggest that firm size plays a critical role in the social-financial performance relationship, as larger firms tend to invest more in corporate social responsibility (CSR) programs and place greater emphasis on stakeholder interests.
2. Growth Opportunities
   - Measured using sales growth, which represents the percentage change in net sales compared to the previous year.
   - Sales growth reflects changes in corporate growth opportunities.

- Empirical evidence suggests that firms experiencing higher growth opportunities relative to their peers should allocate additional working capital for investment in CSR projects, which may positively impact their long-term financial market performance.

3. Findings and Results

The summary of descriptive statistics for the research variables, after data screening and replacement of outliers, is presented in Table 2, obtained using EViews 9 software.

Table 2. Descriptive Statistics of the Findings

Variable	Symbol	Observations	Mean	Median	Maximum	Minimum	Standard Deviation
Market Risk Beta	BETA	650	0.743	0.563	36.842	-7.391	1.753
Firm Value	QTOB	650	1.508	1.315	7.709	0.489	0.662
Social Performance	SR	650	0.306	0.400	0.800	0.000	0.281
Corporate Governance	SR2	650	3.688	3.833	5.000	1.000	0.317
Firm Size	SIZE	650	14.051	13.993	19.774	10.166	1.398
Financial Structure	LEV	650	0.115	0.076	0.666	0.000	0.113
Ownership Concentration	DO	650	0.251	0.210	0.972	0.005	0.182
Asset Liquidity	AL	650	0.070	0.038	0.822	0.000	0.089
Free Cash Flow	CF	650	0.154	0.126	5.386	-2.668	0.266
Profitability	FP	650	0.117	0.095	0.622	-0.298	0.128
Growth Opportunities	SGTH	650	2.956	2.231	87.070	0.283	4.129

The market risk beta has a mean of 0.743, indicating the level of systematic risk among the sample companies. However, this variable fluctuates between -7.391 and 36.842 for the examined sample. Asset liquidity, with a standard deviation of 0.089, exhibits the least dispersion among the control variables, suggesting that nearly all examined companies have similar liquidity levels in their assets.

The mean profitability, measured by return on assets (ROA), is 0.117, indicating the extent to which companies utilize their assets to generate profit. The mean growth opportunities is 2.956, signifying that the market value per share has grown to nearly three times its book value, reflecting favorable market stock pricing.

The mean financial leverage, measured as the ratio of long-term debt to the book value of equity, is 0.115. The mean ownership concentration is 0.210, suggesting that the firms in the sample exhibit relatively high ownership concentration.

Table 3. Hypotheses for Normality of Residuals

Hypothesis	Description	Null Hypothesis Acceptance Criterion
Null (H_0)	The residuals follow a normal distribution.	The significance level is greater than 5%.
Alternative (H_1)	The residuals do not follow a normal distribution.	The significance level is ≤ 5%.

Based on the statistical software output and corresponding calculations, the K-S statistic and its significance level are summarized in Table 4:

Table 4. Summary of K-S Test Results for Standardized Residuals

Model	K-S Statistic	p-value	Result
Financial Efficiency and Its Determinants	0.630	0.762	Normal Distribution

The results of the normality test for the residuals of the estimated model, shown in Table 4, indicate that the K-S test statistic for the estimated model is 0.630, with a p-value of 0.762. Since the p-value is greater than 5%, the null hypothesis is not rejected, and at a 95% confidence level, the assumption of normality in the residuals is accepted for the determination of the relationship between variables.

As shown in Table 5, there is some correlation among certain control variables, but it is not perfect, meaning that multicollinearity is not a concern, and all variables can be included in the model simultaneously. Furthermore, the Variance Inflation Factor (VIF) test was conducted to assess multicollinearity, with results presented in Table 5.

Table 5. VIF Test for Multicollinearity Among Explanatory Variables

Model	Variable	VIF
First Model	Social Performance	2.46
	Firm Size	1.23
	Financial Structure	1.14
	Ownership Concentration	1.11
	Asset Liquidity	1.10
	Free Cash Flow	1.01
	Profitability	1.07
	Growth Opportunities	1.28
Second Model	Social Performance	2.11
	Corporate Governance	1.42
	Firm Size	1.12
	Financial Structure	1.25
	Ownership Concentration	1.15
	Asset Liquidity	1.47
	Free Cash Flow	1.12
	Profitability	1.11
	Growth Opportunities	1.22

According to the results in Table 5, the VIF coefficients for all variables are less than 10, and in most cases, less than 5. Therefore, multicollinearity is not a concern among the variables.

In this study, the modified Wald test was used to examine heteroscedasticity. Given the significance level of the test (0.000), which is less than 0.05, the null hypothesis of homoscedasticity is rejected, indicating that the model suffers from heteroscedasticity. To address this issue, the generalized least squares (GLS) estimation method was applied.

To test for autocorrelation, the Wooldridge test was used. If the significance level in the Wooldridge test is less than 0.05, autocorrelation is present. Based on the test results, autocorrelation was not detected, confirming that the assumption of no autocorrelation holds. A summary of these results is presented in Table 6.

Table 6. Results of the Modified Wald and Wooldridge Autocorrelation Tests

Test Description	Model	Statistic	p-value	Result
Heteroscedasticity (Modified Wald Test)	First	15.7	0.000	Heteroscedasticity present
	Second	17.8	0.000	Heteroscedasticity present
Wooldridge Autocorrelation Test	First	0.204	0.652	No autocorrelation

	Second	0.302	0.415	No autocorrelation

To determine whether to use panel data or pooled OLS, the Lagrange Multiplier (LM) test (F-Limer test) was conducted. If the p-value of the F-Limer test is greater than 0.05, the pooled OLS model is preferred. If it is less than 0.05, the panel data model is selected.

Table 7. F-Limer Test for Model Selection

Estimated Relationship	Test	Model	Statistic	Value	p-value
Financial efficiency and its determinants	F-Limer	First	F	2.099	0.000
		Second	F	2.103	0.000
	Hausman	First	x^2	30.752	0.000
		Second	x^2	30.784	0.000

Based on Table 7, the F-Limer test results and its p-value (0.000) reject the null hypothesis (H_0) of using the pooled model at a 5% significance level. Thus, the present study employs panel data analysis.

Panel data can be estimated using either random effects or fixed effects models. To determine which model is appropriate, the Hausman test was conducted. If the p-value of the chi-square statistic is less than 0.05, the fixed effects model is chosen; otherwise, the random effects model is used. Since the Hausman test result showed a p-value less than 0.05, the fixed effects model was applied.

The following regression equation was estimated to examine the effect of social performance on financial efficiency:

Equation: $CFE\_it = \beta\_0 + \beta\_1\ SR\_it + \beta\_2\ FS\_it + \beta\_3\ FL\_it + \beta\_4\ DO\_it + \beta\_5\ AL\_it + \beta\_6\ CF\_it + \beta\_7\ FP\_it + \beta\_8\ GO\_it + \varepsilon\_it$

Table 8. Estimation Results of Social Performance and Financial Efficiency Model

Explanatory Variable	Coefficient	t-Statistic	p-value	Relationship Significance
Intercept	0.155	2.778	0.0056	Significant at 99% level
Social Performance	0.109	2.344	0.0193	Significant at 95% level
Firm Size	0.125	2.519	0.0119	Significant at 95% level
Financial Structure	-0.070	-3.452	0.0006	Significant at 99% level
Ownership Concentration	-0.002	-5.001	0.0000	Significant at 99% level
Asset Liquidity	0.065	2.408	0.0163	Significant at 95% level
Free Cash Flow	-0.088	-2.529	0.0116	Significant at 95% level
Profitability	0.002	1.889	0.0591	Significant at 90% level
Growth Opportunities	0.003	5.591	0.0000	Significant at 99% level
Fisher's Test (ANOVA)	F-statistic = 4.185	p-value = 0.000		
Validation	$R^2 = 0.493$	Adjusted $R^2 = 0.399$		

The coefficient of determination (R^2) indicates that 39.88% to 49.26% of the variations in financial efficiency are explained by social performance, firm size, financial structure, ownership concentration, asset liquidity, free cash flow, profitability, and growth opportunities. The Fisher test results confirm the linear relationship among the variables.

The following regression model was estimated to test the moderating effect of corporate governance:

Equation: $CFE\_it = \beta\_0 + \beta\_1\ SR\_it + \beta\_2\ GI\_it + \beta\_3\ (SR\_it \times GI\_it) + \beta\_4\ FS\_it + \beta\_5\ FL\_it + \beta\_6\ DO\_it + \beta\_7\ AL\_it + \beta\_8\ CF\_it + \beta\_9\ FP\_it + \beta\_{10}\ GO\_it + \varepsilon\_it$

Table 9. Estimation Results of the Moderating Role of Corporate Governance

Explanatory Variable	Coefficient	t-Statistic	p-value	Relationship Significance

Intercept	0.142	2.854	0.0045	Significant at 99% level
Social Performance	0.112	2.425	0.0156	Significant at 95% level
Corporate Governance	0.462	2.349	0.0191	Significant at 95% level
Interaction (Social Performance × Corporate Governance)	0.275	4.632	0.0000	Significant at 99% level
Firm Size	0.124	2.517	0.0119	Significant at 95% level
Financial Structure	-0.071	-3.452	0.0006	Significant at 99% level
Ownership Concentration	-0.002	-5.002	0.0000	Significant at 99% level
Asset Liquidity	0.065	2.406	0.0163	Significant at 95% level
Free Cash Flow	-0.088	-2.521	0.0119	Significant at 95% level
Profitability	0.003	1.887	0.0596	Significant at 90% level
Growth Opportunities	0.004	5.589	0.0000	Significant at 99% level
Fisher's Test (ANOVA)	F-statistic = 4.197	p-value = 0.000		
Validation	$R^2 = 0.496$	Adjusted $R^2 = 0.406$		

The coefficient of the interaction term ($\beta_3 = 0.275$, $p < 0.01$) indicates that corporate governance strengthens the positive relationship between social performance and financial efficiency. This confirms that internal and organizational corporate governance mechanisms enhance the impact of social performance on financial efficiency.

4. Discussion and Conclusion

In today's competitive environment, companies not only need to maintain their financial strength but must also consider their social and environmental impacts on a broader range of stakeholders, including society. This is particularly important given that organizational values extend beyond the scope of financial accounting. The present study was conducted to examine the moderating role of corporate governance in the relationship between social performance and financial efficiency of companies.

The research is applied in nature due to its reliance on existing models and theories. Since it utilizes historical performance data, it follows an ex-post facto research design, and due to its sampling approach, it employs inductive inference. The statistical population consisted of comparable publicly listed companies, from which 130 firms were selected using the systematic elimination method. The study analyzed performance data over a five-year period ending on March 19, 2023, yielding a total of 650 firm-year observations.

After testing the research assumptions, panel data analysis with random effects regression was employed to examine the relationships between variables. The results indicate that voluntary sustainability disclosure reduces information asymmetry, which arises from the differential access to information among stakeholders.

Over the years, academic research and financial and accounting studies have widely recognized the conflict of interest and information asymmetry between corporate managers, shareholders, and other external stakeholders. The assumption is that if corporate performance in various dimensions, such as financial, environmental, and social responsibility, is not publicly disclosed by management, the risk perceived by investors increases significantly.

Corporate disclosure reduces information asymmetry as an organizational cost, ultimately enhancing financial efficiency. Further analysis revealed that internal and organizational mechanisms intensify the positive relationship between social performance and financial efficiency.

Reports on social performance provide different insights than financial reports, as they enhance long-term corporate value by addressing economic, social, and environmental impacts. According to agency theory, companies that increase the level of information disclosure regarding their status and performance improve the

reliability of market participants' decision-making by providing access to more accurate and comprehensive information. This, in turn, aids investors in selecting optimal investment options and enhances capital market efficiency.

Companies that consistently improve the level and quality of their information disclosure provide better access to desirable information, making them more attractive to investors. As a result, investors prefer to rely on the information provided by these companies, reducing the risk of share price depreciation in the capital market [4, 6, 10, 16].

Some studies argue that corporate disclosure reduces information asymmetry as an organizational cost. Voluntary sustainability disclosure enhances information accuracy, reduces analyst forecast dispersion, and decreases information asymmetry among stakeholders with varying levels of access to information.

On the other hand, earnings forecast deviations by analysts serve as an indicator of investor uncertainty regarding a company's future financial performance, which can result from information asymmetry among different stakeholders. Greater disclosure of non-financial information through social performance reporting improves forecast accuracy and reduces earnings estimation risk, thereby mitigating information asymmetry.

Numerous studies provide evidence that corporate social performance reduces information asymmetry between managers and investors, leading to higher corporate value [17, 18] and improving a company's capital market performance [3, 11, 12].

Social performance enhances corporate accountability and transparency, enabling investors to better evaluate investment options [5, 8, 9, 19]. Additionally, social performance reporting offers benefits such as increased organizational credibility, stronger community relations, and enhanced legitimacy of corporate activities.

Based on the findings, the study recommends that corporate management and policymakers work toward reducing agency costs arising from conflicts of interest between corporate managers and external stakeholders, including shareholders, creditors, and regulatory bodies. This can be achieved by improving sustainability reporting to reduce information asymmetry among stakeholders.

Furthermore, potential investors and investment firms should consider social performance metrics in their investment decisions. The stock exchange commission should introduce standardized environmental sustainability disclosure requirements, not only to help companies enhance the quality of their environmental reporting but also to improve comparability across firms.

Investors and stock market participants are encouraged to consider environmental concerns in various industries when making investment decisions, particularly in sectors that are highly sensitive to environmental impacts. These include industries and companies involved in activities that may contribute to chemical emissions, greenhouse gas production, airborne pollutants, carbon generation, noise pollution, groundwater contamination, and similar environmental concerns.

As industries, factories, and business units grow and evolve alongside social institutions, the role of information, government structures, and ethical norms, they take on responsibilities that were previously unregulated. One of the key consequences of industrial growth and development is the interconnection of economics, ethics, and politics, resulting in mutual influence between economic and ethical issues and social values.

As a result, corporate managers must go beyond profit maximization and product manufacturing, addressing concerns such as fair wages for workers, product quality and pricing, environmental pollution, and other ethical,

political, and social issues. These changes have led to greater stakeholder, shareholder, and customer interest in environmental and social issues, thereby necessitating corporate engagement in sustainability initiatives.

Thus, publicly listed companies on the Tehran Stock Exchange should take corporate social performance seriously.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

Acknowledgments

Authors thank all participants who participate in this study.

Conflict of Interest

The authors report no conflict of interest.

Funding/Financial Support

According to the authors, this article has no financial support.

References

[1] J. Margolis, H. Elfenbein, and J. Walsh, "Does it pay to Be Good...And does it matter? A meta-analysis of the relationship between corporate social and financial performance," *SSRN Electronic Journal,* vol. 10, no. 2, pp. 108-119, 2009. [Online]. Available: https://doi.org/10.2139/ssrn.1866371.

[2] M. Orlitzky, F. Schmidt, and S. Rynes, "Corporate social and financial performance: a meta-analysis," *Organization Studies,* vol. 24, no. 3, pp. 403-441, 2003. [Online]. Available: https://doi.org/10.1177/0170840603024003910.

[3] W. Ghardallou, "Corporate Sustainability and Firm Performance: The Moderating Role of CEO Education and Tenure," *Sustainability,* vol. 14, no. 2, pp. 113-126, 2022. [Online]. Available: https://doi.org/10.3390/su14063513.

[4] M. H. Shakil, Z. H. Munim, S. Zamore, and M. Tasnia, "Sustainability and financial performance of transport and logistics firms: Does board gender diversity matter?," *Journal of Sustainable Finance & Investment,* vol. 14, no. 1, pp. 100-115, 2024. [Online]. Available: https://doi.org/10.1080/20430795.2022.2039998.

[5] X. Hou, Liao, Y. Liu, and N. Xiong, "Signing Auditors' Foreign Experience and Debt Financing Costs: Evidence for Sustainability of Chinese Listed Companies," *Sustainability,* vol. 11, no. 4, pp. 116-129, 2019. [Online]. Available: https://doi.org/10.3390/su11236615.

[6] Y. Miao, X. Zhou, and X. Dai, "Corporate Social Responsibility Disclosure, Debt Financing Costs, and Innovation Capacity," *Discrete Dynamics in Nature and Society,* vol. 14, no. 8, pp. 1-15, 2021. [Online]. Available: https://doi.org/10.1155/2021/4692383.

[7] K. Wang and X. Zhang, "The Effect of Media Coverage in Disciplining Firms' Pollution Behaviors: Evidence from Chinese heavy polluting listed companies," *Journal of Cleaner Production,* vol. 280, pp. 123-136, 2020. [Online]. Available: https://doi.org/10.1016/j.jclepro.2020.123035.

[8] W. Fangyuan and L. Ying, "Quality of Accounting Information Disclosure and Debt Financing Cost: Literature Review," *International Journal of Accounting, Finance and Risk Management,* vol. 5, no. 1, pp. 119-132, 2020. [Online]. Available: https://doi.org/10.11648/j.ijafrm.20200504.13.

[9] W. Luo, X. Guo, S. Zhong, and J. Wang, "Environmental Information Disclosure Quality, Media Attention and Debt Financing Costs: Evidence from Chinese heavy polluting listed companies," *Journal of Cleaner Production,* vol. 12, no. 4, pp. 124-141, 2019. [Online]. Available: https://doi.org/10.1016/j.jclepro.2019.05.237.

[10] M. Namazi and Z. Khorramdil Masuleh, "The impact of green innovation and environmental management accounting on financial, environmental, and economic performance of the company," *Empirical Studies in Financial Accounting,* vol. 19, no. 74, pp. 1-40, 2022.
[11] Y. Rezaei Piteh Noei, M. Gholamzadeh Pour, S. P. Kazemi, and N. Amirnia, "Examining the moderating role of family ownership on the relationship between social responsibility and tax avoidance: Testing the theory of social-emotional wealth and agency," *Financial Accounting Research,* 2021.
[12] N. Naghshbandi and H. Gholichi Moghadam, "Investigating the moderating role of auditor reputation on the relationship between corporate social responsibility and auditor selection in companies listed on the stock exchange," *Contemporary Research in Management and Accounting,* vol. 2, no. 6, pp. 22-38, 2020.
[13] O. Faraji, F. Jannati Daryakenari, K. Mansouri, and F. Younesi Mati, "Social responsibility and firm value: The moderating role of earnings management," *Scientific Journal of Social Capital Management,* vol. 7, no. 1, pp. 25-58, 2020.
[14] P. Bonetti, C. Cho, G. Michelon, and Y. Tanaka, "Environmental disclosure and the cost of capital: evidence from the Fukushima nuclear accident," 2014. [Online]. Available: https://doi.org/10.2139/ssrn.2373877.
[15] M. L. Barnett, J. M. Jermier, and B. A. Lafferty, "Corporate Reputation: The Definitional Landscape," *Corporate Reputation Review,* vol. 9, no. 1, pp. 26-38, 2017. [Online]. Available: https://doi.org/10.1057/palgrave.crr.1550012.
[16] G. Zimon, A. Arianpoor, and M. Salehi, "Sustainability Reporting and Corporate Reputation: The Moderating Effect of CEO Opportunistic Behavior," *Sustainability,* vol. 14, no. 2, pp. 136-149, 2022. [Online]. Available: https://doi.org/10.3390/su14031257.
[17] A. Trotta, A. Iannuzzi, G. Cavallaro, and S. Dell'Atti, "Banking reputation and CSR: a stakeholder value approach," 2017.
[18] S. Dadash Aghchekand, "Managerial overconfidence and social responsibility," Islamic Azad University, Qom Unit, 2017.
[19] P. W. Roberts and G. R. Dowling, "Corporate Reputation and Sustained Superior Financial Performance," *Strategic Management Journal,* vol. 23, no. 12, pp. 1077-1093, 2019. [Online]. Available: https://doi.org/10.1002/smj.274.