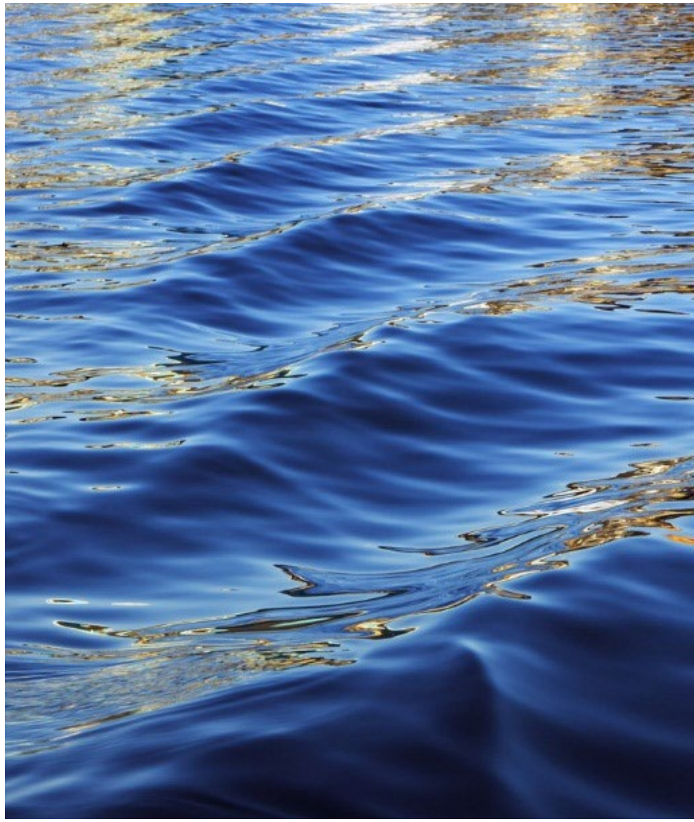
Do ESG Scores Matter?

Evidence from NZX 50 Companies and the Moderating Role of Firm Size

Research By :
Suraj Thissera
Walaa Ghazy
Unitec Institute of Technology



Introduction

- ESG factors are increasingly important in corporate strategy and investment.
- NZ ESG reporting is evolving: 57% of top 100 companies reported ESG data in 2024.
- Mandatory climate disclosures introduced in 2023.
- ESG Framework evaluates how organizations manage sustainability through three dimensions:
  - Environmental
  - Social
  - Governance

Purpose of the study

Investigating how Environmental, Social, and Governance (ESG) scores impact the share prices of New Zealand-listed companies and whether firm size impact the association between ESG scores and share prices.



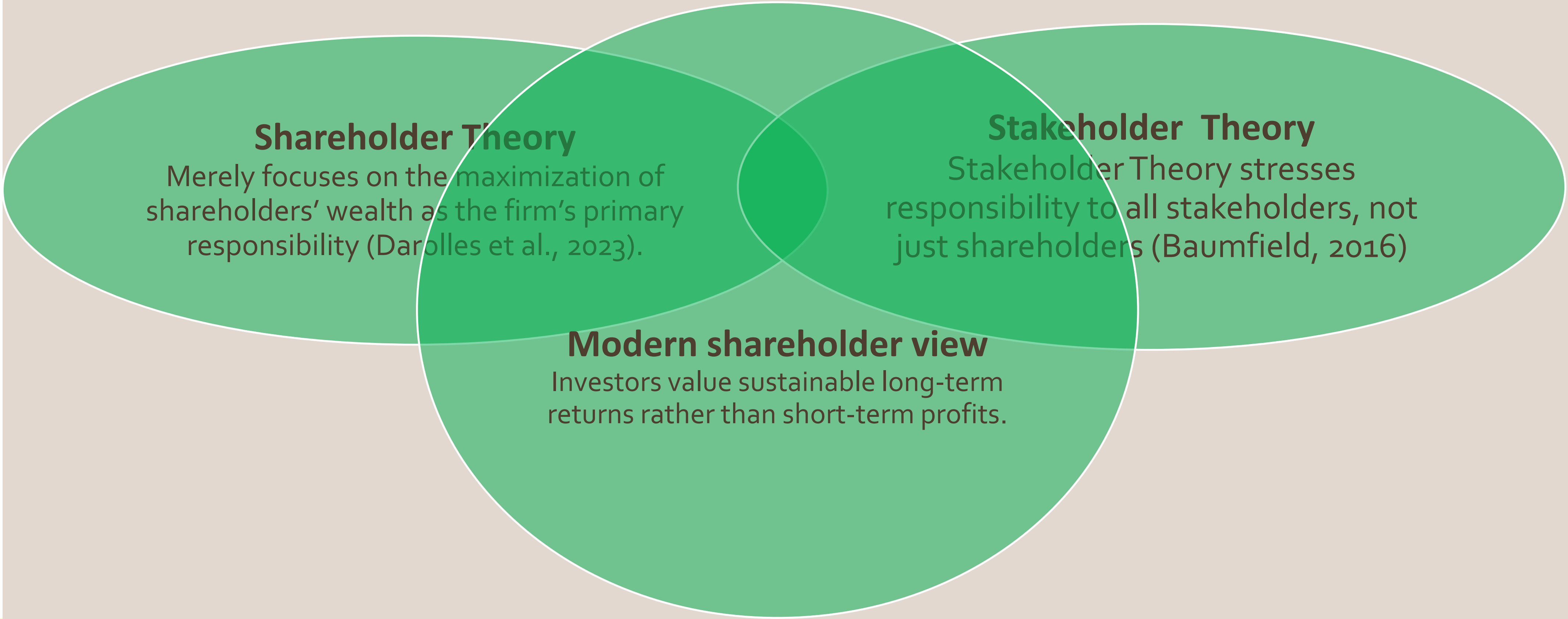

Research Questions

RQ1: Is there an association between ESG score and share prices of NZ listed companies?

RQ2: Does firm size moderate the association between ESG scores and share prices?

Theoretical Motivation

ESG can bridge the gap between the suggested theories by delivering stakeholder expectations via sustainability investment and delivering shareholder expectations



Literature Review

- Mixed findings on ESG's impact on share price
  - ❖Positive : ESG score positively affects the share price because ESG activities enhance the firm's image, which essentially increases the firm’s share price (Qureshi et al., 2020; Thrikawala et al., 2024).
  - ❖Negative : Bifulco et al. (2023) study 600 European firms (2020–2024) and found ESG scores negatively affect share prices, aligning with the traditional shareholder view that ESG has limited value relevance.
  - ❖None : Shanaev & Ghimire (2022), ESG rating improvements in the US firms (2016–2021) showed only marginal effects on stock returns, indicating no significant relationship between ESG scores and share prices.




Literature Review

- Mixed findings on moderating role of firm size
  - ❖Positive : Thrikawala et al. (2024) found that size of Australian firms significantly moderates the ESG–share price relationship; larger firms with more resources to improve ESG scores tend to see potential share price increases.
  - ❖Negative/None :Shakil (2022) used a global sample of 44 firms and found firm size did not significantly moderate the ESG–share price relationship, suggesting that larger firms may face inefficiencies or stakeholder conflicts that reduce ESG benefits.




Hypotheses

- H1 : ESG scores have no association with the company's share price.

- H2: Firm size does not significantly moderate the association between the ESG score and share price.

Methodology

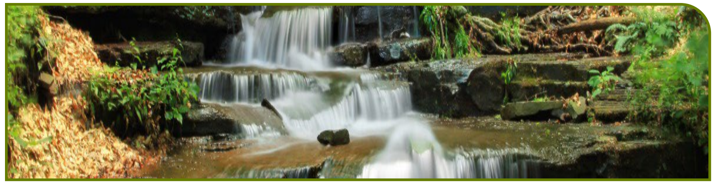
- **Approach** :Deductive - starts with a theory and develops relevant hypotheses to test whether the results support the expected outcome
- **Testing method** : Quantitative research methods
- **Data Sample** : NZX 50 companies - Period 2021- 2024
- **Data source** : LSEG Database
- **Variables** : Dependent: Share Price

  Independent: ESG Score

  Moderator: Firm Size (log assets)

  Controls : EPS / Debt to Equity(DBE)
- **Analysis** : Descriptive Statstics / Correlation / Panel Regression





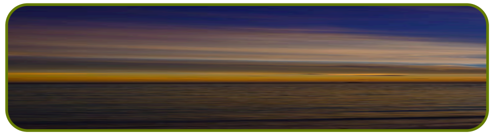

Research Output

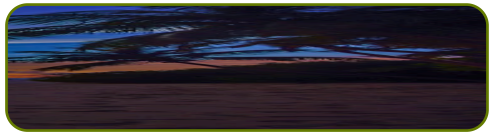
- Descriptive statistic output table

Table 1 - Descriptive statistics output

	Mean	Median	Maximum	Minimum	Std.Dev.	Jarque-Bera	Observations
PRICE	7.49	3.96	84.98	0.63	11.76	3036.30	200
LOG_PRICE	1.40	1.38	4.44	-0.46	1.03	9.88	200
ESG	44.77	43.51	86.96	6.42	17.78	6.17	200
LOG_ESG	3.71	3.77	4.47	1.86	0.44	27.40	200

- ESG Scores for the samples range from 6.42 (poor relative ESG performance) to 86.96 (excellent relative ESG performance).
- The mean ESG score for the samples is 44.77, indicating moderate ESG performance and suggesting that many NZX 50 companies do not tend to provide substantial ESG information.



Research Output

- Correlation analysis output table

	LOG_PRICE	LOG_ESG	LOG_SIZE	LOG_DBE	EPS
LOG_PRICE	1.0000				
LOG_ESG	0.0994	1.0000			
LOG_SIZE	0.4116***	0.4259***	1.0000		
LOG_DBE	0.0906	0.0713	0.4607***	1.0000	
EPS	0.6454***	0.0983	0.5114***	0.2902***	1.0000

- Correlation results confirmed that there is no direct relationship exists between the share price and ESG score in the New Zealand-listed companies based on the tested data sample




Research Output

- **Panel regression analysis**

- ***Model 01-Regression to investigate the impact of ESG score on share price***

$$PRICE_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 SIZE_{it} + \beta_3 DBE_{it} + \beta_4 EPS_{it} + u_{it} \qquad (1)$$

According to FEM regression output, ESG is not statistically significant at 5%, indicate that ESG score has no significant association with the company's share price – Support H1

Table 3- Model 01-Regression output
Dependent Variable: LOG(PRICE)
Method: Panel Regression Analysis

Variable	**Model 1**
LOG(ESG)	-0.0118 (-0.0874)
LOG(SIZE)	0.2271* (1.7855)
EPS	0.1453* (1.9111)
LOG(DBE)	-0.1541** (-2.0578)
C	-3.6244 (-1.2950)

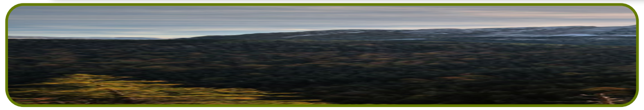
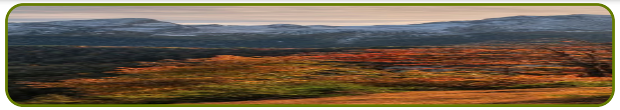
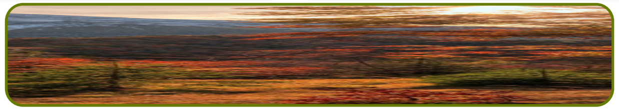
Effects specification	
Adjusted R-squared	0.9548
F-statistic	80.2506***
No.of observations	200

Note: Data sourced from LSEG workspace 2025. Sample period 2021-2024

LOG(PRICE) it = α + β1 LOG(ESG)it + β2 LOG(SIZE)it+ β3EPSit + β4 LOG(DBE)it + uit

The t-statistics shown in the parentheses below each coefficient

Asterisks indicate significance at 10% (*), 5% (**), 1% (***)


Research Output

- **Panel regression analysis**

- ***Model 02-Regression to investigate the moderating effect of firm size on the relationship between ESG score and share price***

$$PRICE_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 SIZE_{it} + \beta_3 ESG*SIZE_{it} + \beta_4 DBE_{it} + \beta_5 EPS_{it} + u_{it} \qquad (2)$$

- ***According to FEM regression output, ESG is not statistically significant at 5%, indicates that firm size statistically does not moderate the relationship between ESG score and share price***

Table 4- Model 02-Regression output
Dependent Variable: LOG(PRICE)
Method: Panel Regression Analysis

Variable	Model 2
LOG(ESG)	-0.5585 (-0.3121)
LOG(SIZE)	0.1313 (0.3887)
LOG(ESG)*LOG(SIZE)	0.0267 (0.3063)
EPS	0.1481* (1.9282)
LOG(DBE)	-0.1574** (-2.0741)
C	-1.6753 (-0.2409)

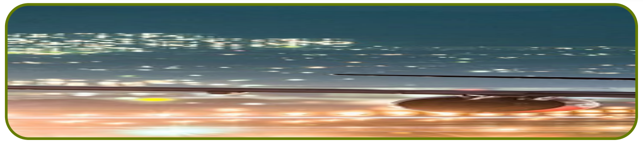
Effects specification	
Adjusted R-squared	0.9544
F-statistic	78.2774***
No.of observations	200

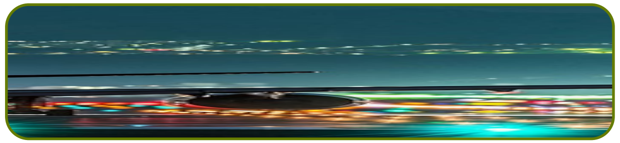
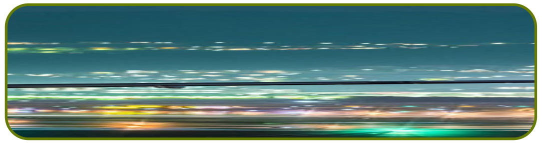
Note: Data sourced from LSEG workspace 2025. Sample period 2021-2024

$LOG(PRICE)_{it} = \alpha + \beta1\ LOG(ESG)_{it} + \beta2\ LOG(SIZE)_{it} + \beta3\ LOG(SIZE)*LOG(ESG) + \beta4 EPS_{it} + \beta5\ LOG(DBE)_{it} + u_{it}$

The t-statistics shown in the parentheses below each coefficient

Asterisks indicate significance at 10% (*), 5% (**), 1% (***)

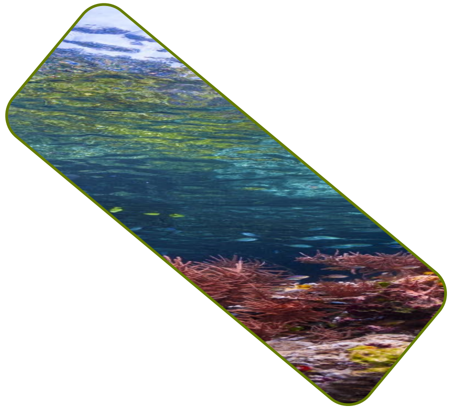
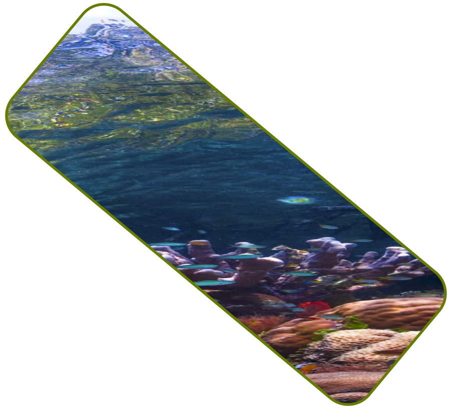
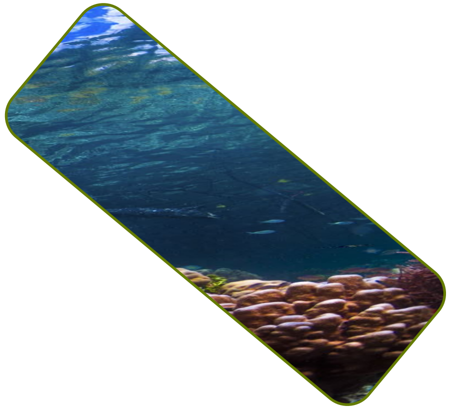


Conclusion

- Association between ESG score and share price
  - ❖ESG scores do not significantly influence NZX 50 share prices (2021–2024), suggesting other factors like macroeconomics and financial metrics are more impactful, despite New Zealand’s mandatory ESG reporting

- Firm size on the ESG score and share price relationship
  - ❖Prior studies show mixed results on whether firm size moderates the ESG–share price relationship. However, our study confirms no significant moderating effect in NZX 50 firms (2021–2024), meaning ESG scores don’t impact share prices regardless of firm size.

Limitation and Recommendation

- Limitations
  - ❖Sample limited to 50 NZX-listed companies (2021–2024) → results not fully generalizable
  - ❖Reliance on one ESG database (LSEG Workspace) → potential measurement bias
  - ❖Missing 2024 ESG data handled via carry-forward → may not reflect actual results

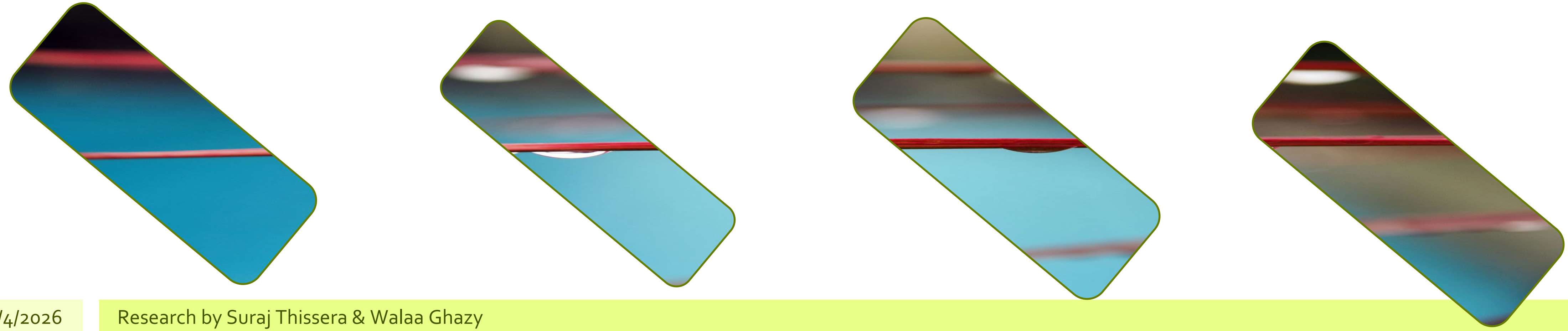
- Recommendations
  - ❖Expand sample size across more years and companies for broader generalization.
  - ❖Use multiple ESG data sources to reduce bias and improve reliability.
  - ❖Address missing data issues with more robust methods.
  - ❖Explore the effect of individual ESG dimensions (E, S, G) on share prices.

References

- Bifulco, G. M., Savio, R., Paolone, F., & Tiscini, R. (2023). The CSR committee as moderator for the ESG score and market value. *Corporate Social Responsibility & Environmental Management*, 30(6), 3231–3241. *https://doi.org/10.1002/csr.2549*

- Shakil, M.H. (2022).Environmental, social and governance performance and stock price volatility: A moderating role of firm size. *Journal of Public Affairs* (14723891), 22(3), 1–11. https://doi.org/10.1002/pa.2574

- Thrikawala, S., Perera, A., & Bandara, S. (2024). ESG Disclosures and Market Price: The Moderating Role of Firm Size and Industry Sensitivity. In A. I. Hunjra & J. W. Goodell (Eds.), The Palgrave Handbook of Green Finance for Sustainable Development (pp. 357–382). Springer International Publishing.



THANK YOU