

The Influence of ESG Performance on Firm Valuation in Capital Markets.

A Comparative Analysis of Asian and European Capital Markets

This research evaluates how Environmental, Social and Governance (ESG) performance determines firm valuation across Asian and European stock markets, analyzing 7,520 firm-years from 1,789 companies during 2020-2024.



Research Overview

01

Research Question

Does ESG performance significantly impact firm valuation in capital markets, and how does this relationship vary across institutional contexts?

03

Methodology

Panel data analysis using Tobin's Q as valuation measure, controlling for firm size, leverage, and profitability.

02

Geographic Scope

Five major stock exchanges: Tokyo, Shanghai, NSE India, London, and Paris, representing diverse regulatory environments.

04

Key Finding

Significant regional heterogeneity: positive ESG-valuation relationship in Asia, null effect in Europe.



The ESG Revolution in Capital Markets

ESG integration has accelerated dramatically over the past decade. According to the Global Sustainable Investment Alliance (2022), professionally managed assets considering ESG factors now exceed \$35 trillion—over one-third of global markets.

Major institutional investors like BlackRock and Vanguard have made public commitments to incorporate ESG factors, viewing sustainability as key to long-term value creation. This shift reflects both regulatory mandates and changing investor preferences.

\$35T

Sustainable Assets

Global professionally managed assets considering ESG factors

\$500B

Capital Inflows

Net inflows to sustainable funds in recent years

Contrasting ESG Ecosystems

European Markets

- *Mandatory ESG disclosure via CSRD and SFDR directives*
- *Comprehensive regulatory frameworks*
- *High institutional investor ESG integration*
- *Mean ESG score: 61.6*

Asian Markets

- *Diverse regulatory approaches across countries*
- *Emerging ESG frameworks*
- *Varying levels of disclosure requirements*
- *Mean ESG score: 46.7*

These institutional differences create a natural experiment for testing whether ESG-valuation relationships depend on regulatory stringency and investor sophistication.

Theoretical Perspectives



Stakeholder Theory

Companies managing stakeholder relationships effectively create long-term value through improved reputation, customer loyalty, employee productivity, and reduced regulatory risk.



Agency Theory

ESG investments may reflect managerial empire-building rather than shareholder value maximization, potentially representing agency costs that reduce firm value.



Equilibrium Models

Investors with heterogeneous ESG preferences create taste-based demand, increasing current valuations of high-ESG stocks while reducing expected future returns.

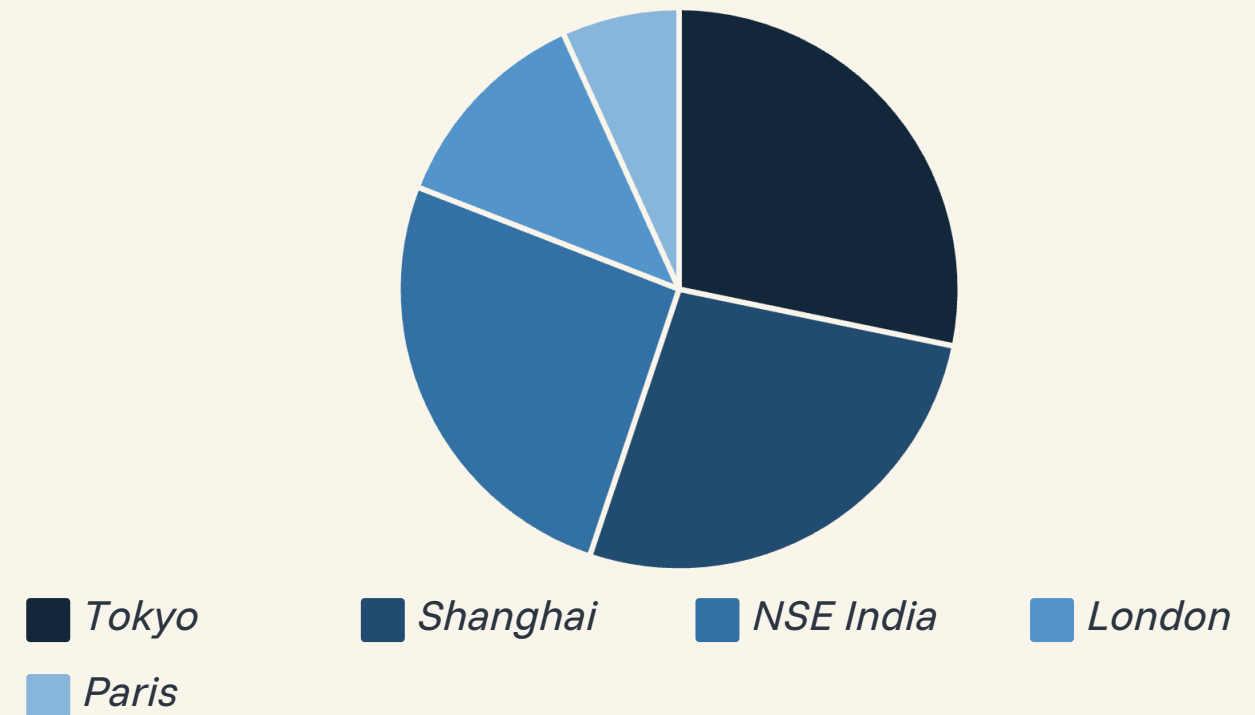
Research Sample and Data

Sample Composition

- *7,742 firm-year observations*
- *1,813 distinct firms*
- *Five-year period: 2020-2024*
- *Data source: Refinitiv Eikon*

Exchange Distribution

- *Tokyo Stock Exchange: 512 firms*
- *Shanghai Stock Exchange: 488 firms*
- *NSE India: 467 firms*
- *London Stock Exchange: 223 firms*
- *Paris Stock Exchange: 123 firms*



Key Variables and Measurement



Dependent Variable

Tobin's Q: *(Market Capitalization + Total Debt) / Total Assets. Measures market value relative to book value, reflecting investor expectations about future profitability and growth.*



Independent Variable

ESG Scores (0-100): *Refinitiv composite scores combining Environmental, Social, and Governance performance with industry-adjusted materiality weighting. Lagged one year to address reverse causality.*



Control Variables

Firm Size: *Natural log of total assets*
Leverage: *Total Debt/Total Equity*
ROA: *Net Income/Total Assets*

Descriptive Statistics Reveal Key Patterns

The sample exhibits substantial variation across key metrics. Mean Tobin's Q of 2.17 (median 1.57) indicates market values exceed book asset values by 145%, with right-skewed distribution.

ESG Combined Scores show good variation (mean 49.90, SD 20.59) ranging from 1.14 to 96.42. Pillar scores are similar in mean (Environmental: 48.75, Social: 48.58, Governance: 63.52), but governance scores are higher and less dispersed, suggesting more mature and standardized governance practices.

Firms demonstrate moderate size (mean log assets 21.78, equivalent to USD 2.9 billion) and varied leverage (SD 3.85). Average ROA of 7.2% reflects profitable, established companies with diverse performance.

2.17

Mean Tobin's Q

145% market premium over book value

49.90

Mean ESG Score

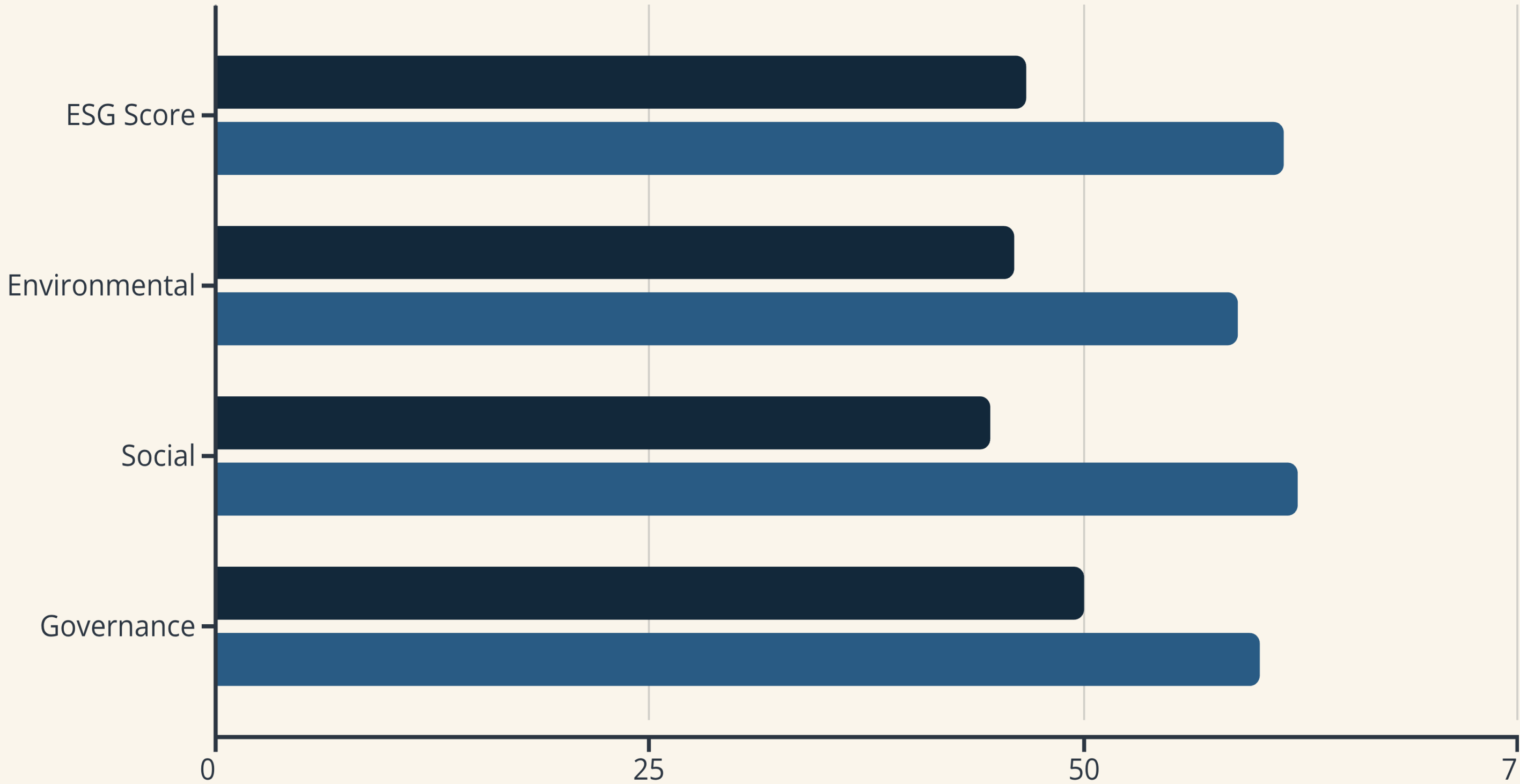
Substantial variation across sample

7.2%

Average ROA

Profitable firm sample

The ESG Gap: Asia vs. Europe



Research Hypotheses

1

H1: Baseline ESG-Valuation Relationship

ESG performance is positively related to firm valuation, controlling for fundamental determinants.

2

H2: ESG Pillar Differentiation

The governance pillar demonstrates stronger relationships with firm valuation compared to environmental or social pillars.

3

H3: Regional Heterogeneity

ESG-valuation relationships are stronger in European markets compared to Asian markets due to institutional differences.

4

H4: Dynamic ESG Improvement

Companies with sustained ESG score improvements experience corresponding valuation gains over time.

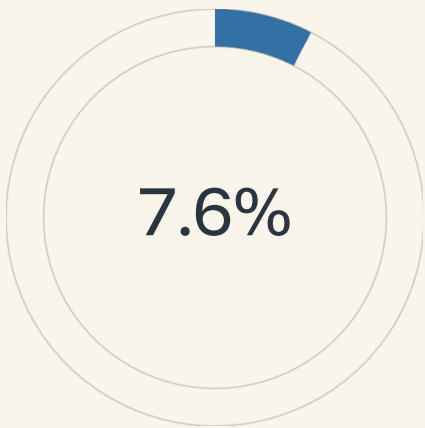
Baseline Finding: ESG Positively Impacts Valuation

Regression Results

The baseline model reveals a **positive and statistically significant** relationship between ESG performance and firm valuation.

- **ESG Coefficient:** 0.0083 ($t = 4.03, p < 0.001$)
- **Interpretation:** One-unit increase in ESG score associated with 0.0083-unit increase in Tobin's Q
- **R-squared:** 38.3%
- **Observations:** 5,731 firm-years

Control variables behave as expected: firm size shows negative coefficient (mature firms), ROA demonstrates strong positive correlation (0.1418), and leverage shows weak positive effect.



Valuation Premium

Per one standard deviation increase in ESG score



Economic Impact

For \$10B company improving ESG by 1 SD

📌 **Key Insight:** This preliminary evidence supports Hypothesis 1, suggesting ESG performance creates measurable shareholder value.



The Social Pillar Dominates

Disaggregating ESG into its three pillars reveals significant heterogeneity in their relationships with firm valuation:

Social Pillar

Coefficient: 0.0097 ($t = 4.33, p < 0.001$)

Strongest and most significant relationship. Employee relations, diversity, and community engagement drive valuation impact.

Environmental Pillar

Coefficient: -0.0038 ($t = -1.74, p = 0.082$)

No significant impact. Long payback periods or measurement challenges may explain null effect.

Governance Pillar

Coefficient: 0.0018 ($t = 1.09, p = 0.276$)

Null effect contrary to prior literature. May reflect threshold effects rather than linear value creation.

Implication: *This partially supports Hypothesis 2 but refutes the assumption that governance would dominate. Investors appear most responsive to stakeholder engagement dimensions.*

The Regional Paradox

ESG Matters More Where Institutions Are Weaker

Asian Markets

- *ESG Coefficient: 0.0136 ($t = 5.53$, $p < 0.001$)*
- *Valuation Premium: 12.4% per SD increase*
- *Sample: 4,464 observations*

Strong positive relationship despite less developed ESG ecosystems and lower disclosure requirements.

European Markets

- *ESG Coefficient: 0.0018 ($t = 0.41$, $p = 0.682$)*
- *Valuation Premium: Statistically zero*
- *Sample: 1,267 observations*

No significant relationship despite mandatory disclosure frameworks and sophisticated ESG integration.

The interaction term ($ESG \times Asia$) is highly significant at -0.0181 ($t = -4.56$, $p < 0.001$), confirming substantial regional heterogeneity. This paradoxical finding strongly supports Hypothesis 3.

Explaining the Regional Paradox



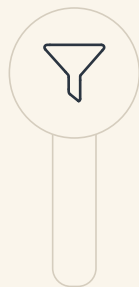
Signaling Value Hypothesis

In Asian markets with less standardized disclosure, high ESG scores signal superior management quality. In Europe, mandatory disclosure reduces incremental information content.



Diminishing Returns

European firms already internalized ESG practices, exhausting marginal benefits. Asian firms experience higher gains from improving low baselines.



Selection Effects

High-ESG Asian firms represent elite subset when institutional pressures are weaker, creating stronger observed relationships.



The Dynamic Puzzle: Cross-Section vs. Within-Firm

Cross-Sectional Analysis

Pooled OLS Results:

- ESG Coefficient: **+0.0083**
- Interpretation: High-ESG firms valued at premium
- Question: Are high-ESG firms better valued?

Positive relationship suggests ESG selection strategies create value.

Within-Firm Analysis

Fixed Effects Results:

- ESG Coefficient: **-0.0096** ($p = 0.006$)
- Interpretation: ESG improvements reduce valuation
- Question: Do ESG improvements increase value?

Negative relationship indicates short-term costs before long-term benefits materialize.

 **Critical Insight:** This sign reversal reveals that ESG selection strategies differ fundamentally from ESG improvement strategies. Hypothesis 4 is rejected—within-firm ESG improvements show negative short-term effects, possibly reflecting investment costs or insufficient time horizon.



Robustness: Results Hold Across Specifications

Alternative Valuation Measures

Price-to-Book ratio confirms positive ESG coefficient (0.0177, $t = 4.82$), demonstrating results not dependent on specific valuation metric.

Winsorization Treatment

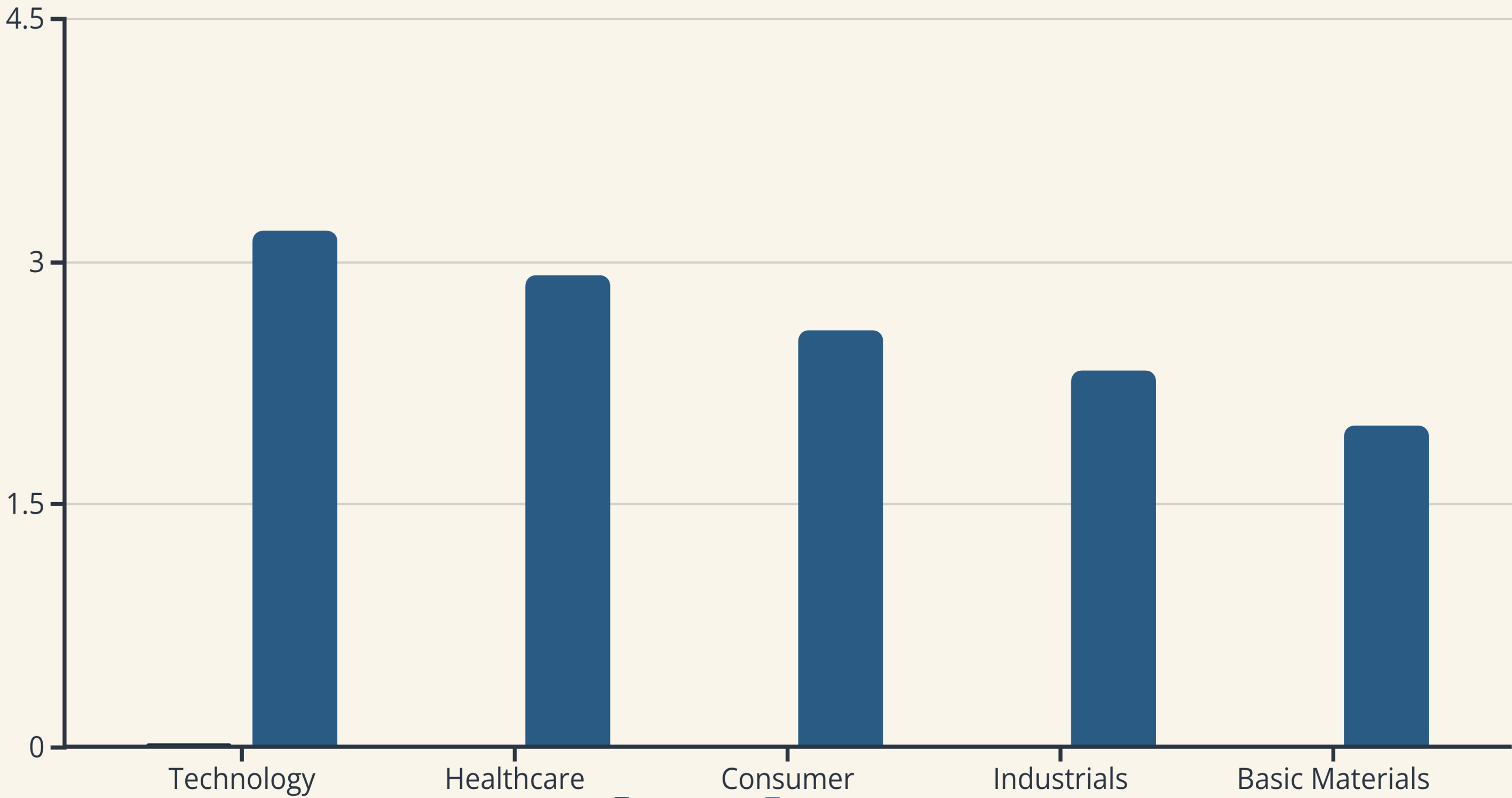
After winsorizing Tobin's Q at 1st/99th percentiles, ESG coefficient remains 0.0078 ($t = 4.06$)—virtually identical to baseline.

Industry Heterogeneity

Technology and Healthcare sectors show stronger ESG-valuation relationships. Basic Materials and traditional Industrials demonstrate weaker associations.

Comprehensive robustness checks confirm the baseline findings are not artifacts of methodological choices or outliers, strengthening confidence in the core results.

Industry Patterns: Where ESG Matters Most



Implications for Practice

Corporate Managers

Results validate ESG investments as strategic value-creation initiatives, particularly in Asian markets and social dimensions. However, communicate ESG as long-term strategy requiring patient capital despite short-term costs.

Investors

Evidence supports ESG integration in Asian portfolios where financial materiality is demonstrated. Regional heterogeneity demands customized strategies rather than universal ESG mandates. Exercise patience with firms actively improving ESG.

Policymakers

Paradox of stronger ESG relevance in less-regulated Asia challenges assumptions about mandatory disclosure benefits. Global standards may reduce informational value by eliminating useful variation. Consider whether regulation crowds out signaling value.

Limitations and Future Research

Key Limitations

- **Time Horizon:** Five-year panel insufficient for long-term ESG impacts, especially environmental investments with decade-long payback periods
- **Measurement:** Refinitiv scores reflect performance and disclosure quality; rating divergence across providers creates uncertainty
- **Endogeneity:** Cannot fully eliminate reverse causality or omitted variable bias despite mitigation strategies
- **Sample Selection:** Large listed firms only; results may not generalize to smaller or private companies
- **Geographic Scope:** Asia-Europe dichotomy obscures within-region heterogeneity

Future Research Directions

- Longer panels to capture full lifecycle of ESG investments
- Multi-provider ESG rating comparisons to address measurement issues
- Quasi-experimental designs using regulatory shocks for causal inference
- Country-level or exchange-level granular analysis
- Investigation of mechanisms behind regional differences through investor surveys
- Testing whether ESG signaling value declines as Asian disclosure improves
- Exploration of non-linear ESG effects and threshold levels

Conclusion: Context Is Everything

*This research demonstrates that the financial materiality of ESG performance is **highly contingent on institutional context, stakeholder dimensions, and time horizons**. While ESG creates shareholder value cross-sectionally—particularly through social performance in Asian markets—the journey from ESG investment to value realization involves short-term costs and long-term uncertainties.*

Key Finding #1 <i>ESG positively impacts valuation with 7.6% premium per standard deviation increase</i>	Key Finding #2 <i>Social pillar dominates; environmental and governance show null effects</i>
Key Finding #3 <i>Strong positive relationship in Asia (12.4% premium); no effect in Europe</i>	Key Finding #4 <i>Within-firm ESG improvements show negative short-term effects</i>

As global capital markets increasingly integrate ESG considerations, understanding these contextual dependencies becomes critical for effective corporate strategy, investment decisions, and regulatory design. The findings challenge one-size-fits-all approaches and advocate for nuanced, context-specific ESG frameworks recognizing that practices effective in one institutional setting may not translate to another.

THANK YOU