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с доклади от кръгла маса

ИНДУСТРИАЛНИЯТ БИЗНЕС И ПРЕДПРИЕМАЧЕСТВОТО В УСЛОВИЯТА НА ГЛОБАЛНИ ТРАНСФОРМАЦИИ

16 октомври 2026 г.



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Сборник с доклади от кръгла маса:

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ESG ЕФЕКТИВНОСТ И СТОЙНОСТ НА ФИРМАТА ПРИ ПАЗАРНО ПОГРЕШНО ОЦЕНЯВАНЕ: ДАННИ ОТ ИНДУСТРИАЛНИЯ СЕКТОР НА КИТАЙ

Ян Фу[1]

Резюме: *Докладът изследва връзката между ESG ефективността и стойността на фирмата в индустриалния сектор на Китай, както и дали тази връзка се променя при условията на пазарно погрешно оценяване. Анализът използва панел от китайски производствени дружества, листвани в сегмента за А-акции, за периода от 2017 до 2024 г. Тъй като ESG ефективността, пазарното погрешно оценяване и контролните променливи влизат в регресиите с едногодишен лаг, основната оценъчна извадка обхваща периода 2018–2024 г. Стойността на фирмата се измерва чрез коефициента на Тобин (Tobin's Q), докато ESG ефективността се измерва чрез изместения във времето ESG резултат. Емпиричните модели включват фиксирани ефекти по фирма и по година, контролни променливи на ниво фирма, и стандартни грешки, клъстеризирани на ниво фирма. Базовите резултати показват, че ESG ефективността не получава обикновена оценъчна премия. Коефициентът пред изместения във времето ESG показател е отрицателен и слабо значим, което подсказва, че инвеститорите не третират автоматично ESG ангажираността като повишаваща стойността в индустриалния сектор. Основният резултат е, че взаимодействието между ESG ефективността и пазарното погрешно оценяване е положително и статистически значимо. Това доказателство показва, че ESG става по-благоприятен фактор за оценката на фирмата, когато пазарните цени са по-слабо закотвени във фундаменталните показатели. Констатациите подкрепят тълкуване чрез условна сигнализация: ESG информацията е по-полезна, когато инвеститорите се нуждаят от допълнителни сигнали относно качеството на корпоративното управление, управлението на заинтересованите страни и дългосрочната стратегическа дисциплина. Изследването допринася към научната литература за ESG оценяването, като показва, че значимостта на ESG за капиталовия пазар зависи от средата на ценообразуване, а не само от самата ESG ефективност.*

Ключови думи: *ESG ефективност; стойност на фирмата; пазарно погрешно оценяване; коефициент на Тобин; Китай.*

JEL: G14; G32; M14; Q56.

ESG PERFORMANCE AND FIRM VALUE UNDER MARKET MISVALUATION: EVIDENCE FROM CHINA'S INDUSTRIAL SECTOR

Yan Fu

Abstract: *This study examines whether ESG performance is associated with firm value in China's industrial sector and whether this relationship changes under market*

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misvaluation. The analysis uses an annual panel of Chinese A-share listed manufacturing firms from 2017 to 2024. Because ESG performance, market misvaluation, and the control variables enter the regressions with a one-year lag, the main estimation sample covers 2018-2024. Firm value is measured by Tobin's Q, while ESG performance is measured by the lagged ESG score. The empirical models include firm and year fixed effects, firm-level controls, and standard errors clustered at the firm level. The baseline results show that ESG performance does not receive a simple valuation premium. The coefficient on lagged ESG is negative and weakly significant, suggesting that investors may not automatically treat ESG engagement as value enhancing in the industrial sector. The main result is that the interaction between ESG performance and market misvaluation is positive and statistically significant. This evidence indicates that ESG becomes more favorable for firm valuation when market prices are less firmly anchored in fundamentals. The findings support a conditional signaling interpretation: ESG information is more useful when investors need additional cues about governance quality, stakeholder management, and long-term strategic discipline. The study contributes to ESG valuation research by showing that the capital-market relevance of ESG depends on the pricing environment rather than on ESG performance alone.

Keywords: *ESG performance; firm value; market misvaluation; Tobin's Q; China.*

JEL: G14; G32; M14; Q56

1. Introduction

Environmental, social, and governance (ESG) performance has become an important indicator in capital-market evaluation. Investors increasingly use ESG information to assess governance quality, stakeholder management, regulatory exposure, and long-term corporate resilience. For industrial firms, this issue is especially relevant because production activities are often associated with environmental pressure, capital intensity, supply-chain exposure, and policy transition. In China, listed manufacturing firms operate in a setting where ESG disclosure is becoming more visible, while investors still face uncertainty about whether ESG activities create measurable market value.

Existing studies offer different views on the value relevance of ESG. One view suggests that ESG performance can enhance firm value by reducing information asymmetry, improving stakeholder relations, and lowering risk (Fatemi et al., 2018; Friede et al., 2015; Yu et al., 2018). Another view emphasizes that ESG investment may impose costs, generate delayed returns, or be difficult for investors to evaluate in the short run (Krueger, 2015; Servaes & Tamayo, 2013). These mixed findings imply that the ESG-value relationship should not be treated as mechanically positive. A more useful question is under what market conditions ESG information becomes more relevant for valuation.

This paper focuses on market misvaluation as one such condition. Market prices may deviate from firm fundamentals because of sentiment, information frictions, disagreement, and limits to arbitrage (Baker & Wurgler, 2006; Shleifer & Vishny, 1997). When misvaluation is higher, investors may face greater difficulty judging whether a firm's market value is supported by underlying

quality. Under these conditions, non-financial information may become more useful. ESG performance may serve as a signal of governance discipline, stakeholder credibility, and long-term strategic orientation, consistent with signaling theory (Connelly et al., 2011; Spence, 1973).

The study therefore examines whether ESG performance is associated with firm value in China's industrial sector and whether market misvaluation moderates this relationship. The empirical analysis uses a cleaned annual panel of Chinese A-share listed manufacturing firms from 2017 to 2024. The main regression sample covers 2018 to 2024 because ESG performance, market misvaluation, and control variables enter the model with a one-year lag. Firm value is measured by Tobin's Q. The models include firm and year fixed effects, and standard errors are clustered at the firm level.

The results show that ESG performance alone does not generate a simple valuation premium. The baseline ESG coefficient is negative and weakly significant. However, the interaction between ESG performance and market misvaluation is positive and statistically significant. This evidence indicates that the valuation relevance of ESG becomes more favorable when market misvaluation is higher. ESG is therefore better understood as a conditional market signal than as a universally positive value driver.

The paper contributes to the literature in three ways. First, it adds to ESG valuation research by showing that ESG performance has context-dependent value relevance in China's industrial sector. Second, it links ESG research with the misvaluation literature, showing that pricing conditions affect how investors interpret ESG information. Third, it provides evidence from Chinese manufacturing firms, a sector where environmental pressure, governance transition, and market uncertainty make ESG information particularly salient. The remainder of the paper reviews the relevant literature and develops the hypotheses, describes the data and methodology, reports the empirical results, discusses the findings, and concludes with implications and limitations.

2. Literature Review and Hypothesis Development

The relationship between environmental, social, and governance (ESG) performance and firm value has become a central issue in corporate finance and sustainability research. A large body of evidence suggests that better ESG performance may improve firm value by strengthening stakeholder relations, reducing risk, improving reputation, and lowering information asymmetry. The stakeholder view argues that firms can create value by managing relationships with investors, employees, customers, suppliers, regulators, and communities rather than treating shareholder value as separate from wider social relations (Freeman, 1984). From this perspective, ESG performance may represent a set of organizational capabilities that support long-term resilience. Empirical research also provides support for this view. Friede et al. (2015), based on a large review of empirical studies, report that the majority of research finds a

non-negative relationship between ESG and financial performance. Fatemi et al. (2018) show that ESG strengths can be value enhancing, while ESG concerns may reduce firm value. Albuquerque et al. (2019) further connect corporate social responsibility with firm risk, which is important because risk reduction is one channel through which responsible behavior may affect valuation. Yu et al. (2018) argue that ESG transparency can increase firm value by reducing information asymmetry.

At the same time, the ESG-value relationship is not necessarily positive in every setting. ESG investment can be costly, difficult for outside investors to evaluate, and slow to translate into cash-flow gains. Industrial firms face this problem especially clearly because environmental compliance, governance reform, stakeholder engagement, and cleaner production often require large up-front expenditure. Servaes and Tamayo (2013) show that the value effect of corporate social responsibility depends on customer awareness, which implies that responsible behavior is not automatically priced unless the market can observe and interpret it. Krueger (2015) also finds that shareholders respond differently to positive and negative corporate social responsibility news, suggesting that capital markets do not treat all sustainability information in a uniform way. Therefore, the effect of ESG on firm value should be treated as a context-dependent empirical question rather than as a fixed positive relationship.

Signaling theory provides a useful framework for understanding when ESG information may become more value-relevant. Spence (1973) shows that observable signals can reduce information asymmetry when outsiders cannot directly observe underlying quality. Connelly et al. (2011) emphasize that signals matter because receivers interpret observable actions as evidence about otherwise hidden attributes. In capital markets, ESG performance can serve as such a signal. It may communicate governance discipline, stakeholder management capacity, regulatory awareness, and long-term strategic orientation. However, a signal becomes more useful when investors face greater uncertainty about firm fundamentals. If the market already has a clear view of a firm's quality, ESG information may add little new valuation content. If firm value is harder to assess, ESG may become a more relevant non-financial signal.

Market misvaluation offers a suitable condition for testing this logic. In financial markets, prices may deviate from fundamentals because of investor sentiment, limits to arbitrage, information frictions, and disagreement about future prospects. Shleifer and Vishny (1997) explain why arbitrage limits may allow mispricing to persist. Baker and Wurgler (2006) show that investor sentiment affects the cross-section of stock returns, especially for firms that are difficult to value. Rhodes-Kropf et al. (2005) also demonstrate that market-to-book values can contain both fundamental and misvaluation components. These studies suggest that market prices are not always clean reflections of firm fundamentals. When misvaluation is higher, investors may rely more heavily on additional information to interpret firm quality.

This paper connects the ESG literature with the misvaluation literature by asking whether the market valuation effect of ESG depends on pricing conditions. The argument is not that misvaluation directly increases firm value, nor that ESG is always rewarded. Rather, the argument is that ESG may become more informative when the market price is less firmly anchored in fundamentals. Under higher misvaluation, investors may look for signals that help distinguish firms with credible long-term capabilities from firms whose valuation is driven mainly by temporary pricing noise. ESG performance may therefore become more relevant because it offers information about governance, stakeholder relations, and sustainability-oriented management that is not fully captured by short-term financial indicators.

Based on this reasoning, the paper proposes the following hypotheses:

H1: ESG performance is associated with firm value in China's industrial sector.

H2: Market misvaluation positively moderates the relationship between ESG performance and firm value, such that the valuation relevance of ESG becomes more favorable when market misvaluation is higher.

3. Data and Methodology

The empirical analysis uses a cleaned annual panel dataset of Chinese A-share listed manufacturing firms from 2017 to 2024. The manufacturing sector is used as the industrial-sector setting because all observations in the cleaned file belong to CSRC industry section C. The cleaned panel contains 3,624 firm-year observations from 453 listed firms. Because ESG performance, market misvaluation, and the control variables are lagged by one year, the main regression sample covers 2018 to 2024 and contains 3,121 firm-year observations from 448 firms.

The use of lagged explanatory variables is important for the research design. It reduces simultaneity between current market valuation and current ESG disclosure, and it also fits the logic that investors may incorporate previously available ESG information into later valuation decisions. The panel structure allows the model to compare changes within the same firm over time rather than only comparing different firms with different permanent characteristics.

The dependent variable is Tobin's Q, which captures market valuation relative to the firm's asset base. Tobin's Q is appropriate for this study because ESG performance is expected to affect investor expectations, reputation, governance credibility, and long-term growth prospects rather than only current accounting profitability. A market-based outcome is therefore better aligned with the paper's question of whether ESG information is priced by investors.

The main explanatory variable is the firm's ESG score lagged by one year. A higher score indicates stronger environmental, social, and governance performance. The moderating variable is market misvaluation, measured by the

MISV index in the dataset. Conceptually, market misvaluation captures the extent to which market pricing departs from firm fundamentals. The paper uses this variable to test whether ESG information becomes more or less value-relevant when the pricing environment is less straightforward.

Table 1. Variable definitions

Variable	Symbol	Measurement	Role
Firm value	TobinQ	Tobin's Q reported in the dataset; winsorized at the 1st and 99th percentiles.	Dependent variable
ESG performance	ESG	One-year lag of the firm's ESG score; winsorized and standardized in the regressions.	Main explanatory variable
Market misvaluation	MISV	One-year lag of the market misvaluation index; winsorized and standardized in the regressions.	Moderating variable
ESG x market misvaluation	ESG x MISV	Product of standardized lagged ESG and standardized lagged market misvaluation.	Key interaction term
Leverage	Lev	Leverage ratio reported in the dataset, lagged by one year.	Control variable
Firm size	Size	Natural logarithm of total assets, lagged by one year.	Control variable
Board size	Board	Number of board directors, lagged by one year.	Control variable
Independent directors	Indep	Percentage of independent directors on the board, lagged by one year.	Control variable
CEO duality	Dual	Indicator equal to one when the chairperson and general manager positions are held by the same person.	Control variable
Female directors	Female	Percentage of female directors on the board, lagged by one year.	Control variable
Revenue growth	Growth	Change in operating revenue relative to prior-year operating revenue, lagged by one year.	Control variable

Source: Author's compilation based on the cleaned annual panel dataset.
Notes: Continuous variables are winsorized at the 1st and 99th percentiles. Explanatory variables and controls enter the regressions with a one-year lag.

The model includes several firm-level control variables that may influence market valuation. Leverage controls for capital structure and financial risk. Firm size controls for scale, visibility, and resource capacity. Board size, independent-director ratio, CEO duality, and female-director ratio control for governance characteristics that may affect both ESG performance and investor valuation. Revenue growth controls for operating expansion and market expectations about business momentum. All continuous variables are winsorized at the 1st and 99th percentiles to limit the influence of extreme observations.

The baseline model estimates the average association between lagged ESG performance and firm value. The specification is as follows:

$$TobinQ_{it} = \alpha + \beta_1 ESG_{i,t-1} + \gamma Controls_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{it} \quad 1)$$

In this equation, TobinQ denotes firm value for firm i in year t. ESG denotes lagged ESG performance. Controls represents the vector of lagged firm-level control variables. Firm fixed effects control for time-invariant firm characteristics, while year fixed effects control for common shocks affecting all

firms in the same year. Standard errors are clustered at the firm level to account for serial correlation within firms over time.

To test the moderating role of market misvaluation, the study adds lagged market misvaluation and the interaction between lagged ESG performance and lagged market misvaluation. The interaction model is written as follows:

$$TobinQ_{it} = \alpha + \beta_1 ESG_{i,t-1} + \beta_2 MISV_{i,t-1} + \beta_3(ESG_{i,t-1} \times MISV_{i,t-1}) + \gamma Controls_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{it} \quad 2)$$

The coefficient of interest is the interaction coefficient. A positive interaction coefficient indicates that the ESG-valuation relationship becomes more favorable as market misvaluation increases. A negative interaction coefficient would suggest that market misvaluation weakens the valuation relevance of ESG performance. Because ESG performance and market misvaluation are standardized before forming the interaction, the coefficient can be interpreted in terms of standard-deviation changes.

The marginal effect of ESG performance on firm value is derived from the interaction model as follows:

$$\frac{\partial TobinQ_{it}}{\partial ESG_{i,t-1}} = \beta_1 + \beta_3 MISV_{i,t-1} \quad 3)$$

This expression is used to interpret the interaction term and to construct the marginal-effect figure reported in the empirical results section. The approach keeps the conference paper focused: it tests one market-based outcome, one ESG measure, one theoretically motivated moderator, and a consistent set of control variables under firm and year fixed effects.

4. Empirical Results

This section reports the empirical results on the relationship between ESG performance and firm value under market misvaluation. The regression sample contains 3,121 firm-year observations from 448 Chinese industrial listed firms over 2018-2024. Tobin's Q is used as the market-based measure of firm value, while ESG performance and market misvaluation enter the model with a one-year lag. This lag structure reduces simultaneity concerns and makes the interpretation closer to whether prior ESG information is reflected in subsequent market valuation.

The analysis uses firm and year fixed effects to control for time-invariant firm characteristics and common macro-market shocks. Standard errors are clustered at the firm level. The empirical focus is not only the average ESG coefficient, but also whether market misvaluation changes the pricing of ESG performance. This is important because ESG information may be interpreted

differently when market prices deviate from fundamentals and investors rely more heavily on non-financial signals.

Table 2. Descriptive statistics

Variable	N	Mean	Std. dev.	Min	Median	Max
Tobin's Q	3,624	2.166	1.401	0.846	1.723	9.139
Lagged ESG score	3,156	74.736	4.476	61.402	74.624	89.080
Lagged market misvaluation	3,136	-0.005	0.504	-1.041	-0.053	1.416
Leverage	3,171	0.341	0.157	0.065	0.337	0.684
Firm size	3,171	22.293	1.138	20.268	22.216	25.517
Board size	3,171	8.366	1.357	5.000	9.000	12.000
Independent directors (%)	3,171	37.226	5.278	33.330	33.330	57.140
Revenue growth	3,171	0.158	0.227	-0.351	0.127	1.017

Source: Author's calculation based on the cleaned annual panel dataset.
Notes: Continuous variables are winsorized at the 1st and 99th percentiles. Lagged variables refer to one-year lagged values used in the regression specification.

Table 2 shows that the sample has meaningful variation in firm valuation, ESG performance, and market misvaluation. The average Tobin's Q is above one, indicating that the market generally values the sample firms above the book value of their assets, but the range of Tobin's Q also suggests substantial heterogeneity in market valuation. ESG scores vary across firms, which supports the empirical identification of ESG-related differences. The market misvaluation variable is also dispersed, allowing the moderation model to test whether the ESG-valuation relationship changes across different pricing environments.

Table 3. ESG performance, market misvaluation, and firm value

Variable	(1) Tobin's Q	(2) Tobin's Q	(3) Tobin's Q
Lagged ESG score	-0.0433*	-0.0448*	-0.0440*
	(0.0244)	(0.0246)	(0.0246)
Market misvaluation		-0.0174	-0.0198
		(0.0175)	(0.0174)
ESG x market misvaluation			0.0360**
			(0.0164)
Controls	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Clustered standard errors	Firm	Firm	Firm
Observations	3,156	3,121	3,121
Firms	453	448	448
Within R-squared	0.059	0.061	0.063

Source: Author's calculation based on the cleaned annual panel dataset.
*Notes: Standard errors clustered by firm are reported in parentheses. ESG performance and market misvaluation are standardized before forming the interaction term. Controls include leverage, firm size, board size, independent-director ratio, CEO duality, female-director ratio, and revenue growth. ***, **, and * denote significance at the 1%, 5%, and 10% levels.*

Column (1) reports the baseline fixed-effects estimate. The coefficient on lagged ESG performance is negative and weakly significant. This result suggests that, on average, ESG performance is not mechanically rewarded with a higher

Tobin's Q in the sample. For industrial firms, ESG engagement may involve compliance costs, environmental investment, and governance adjustments whose financial benefits are not immediately visible to investors. The baseline result therefore cautions against a simple positive-value interpretation of ESG performance.

Column (2) adds market misvaluation as a separate explanatory variable. The ESG coefficient remains negative and weakly significant, while market misvaluation itself is not statistically significant. This indicates that the direct valuation effect of misvaluation is not the main empirical channel in this specification. Instead, the more relevant question is whether misvaluation changes how ESG information is priced by the market.

Column (3) introduces the interaction between lagged ESG performance and market misvaluation. The interaction term is positive and statistically significant at the 5% level. This is the central empirical finding of the paper. It indicates that the relationship between ESG performance and Tobin's Q becomes more favorable as market misvaluation increases. In other words, ESG performance does not carry the same valuation implication under all pricing conditions; its market relevance is conditional on the extent to which the firm's market price departs from fundamentals.

The economic interpretation is consistent with a conditional signaling mechanism. When market valuation is closer to fundamentals, ESG may be treated as a routine non-financial attribute or as a cost whose payoff is uncertain. Under higher misvaluation, however, investors face a noisier pricing environment and may place greater weight on ESG as a signal of governance quality, stakeholder management, and long-term strategic discipline. The positive interaction therefore suggests that ESG becomes more informative when valuation uncertainty is higher.

Figure 1 presents the conditional effect implied by the interaction model as an interval profile. At low levels of market misvaluation, the marginal effect of ESG on Tobin's Q is negative. As misvaluation rises, the estimated marginal effect moves upward and eventually becomes less negative or positive. The confidence intervals also show that the direction of the ESG effect is not fixed across the full range of misvaluation. This pattern supports the regression evidence that ESG is better understood as a conditional market signal than as a universally positive valuation driver.

Overall, the empirical evidence supports the paper's main argument. ESG performance alone does not generate a simple valuation premium in China's industrial sector, but market misvaluation changes the way ESG is priced. The results imply that the capital-market value of ESG depends on the information environment surrounding the firm. For managers, the findings suggest that ESG activities are more likely to be valued when they help investors interpret firm quality under pricing uncertainty. For investors, the evidence suggests that ESG

information should be evaluated together with market valuation conditions rather than treated as an isolated score.

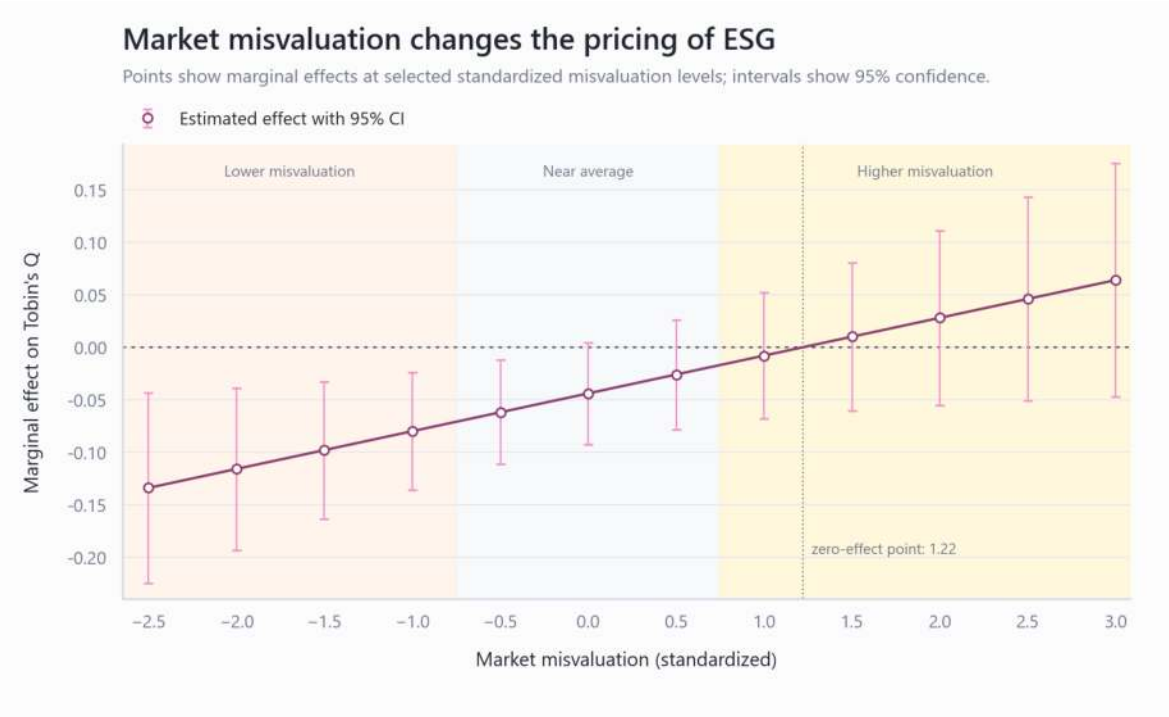

Figure 1. Marginal effect of ESG on Tobin's Q across market misvaluation
Source: Author's calculation. Points report the estimated marginal effect of standardized lagged ESG on Tobin's Q from Model (3); vertical intervals report the 95% confidence interval.

5. Discussion

The empirical results provide a conditional interpretation of ESG value relevance in China's industrial sector. The baseline coefficient on lagged ESG performance is negative and weakly significant, while the interaction between ESG performance and market misvaluation is positive and significant. This pattern is important because it shows that ESG performance is not priced in a simple or uniform way. The average market response to ESG may be limited or even negative when investors view ESG activities as costly, difficult to monetize, or slow to generate financial benefits. This is plausible in industrial firms, where environmental upgrading and governance improvement may require visible expenditure before their strategic benefits become clear.

The positive interaction term changes the interpretation. It suggests that market misvaluation strengthens the valuation relevance of ESG. When misvaluation is low, market prices may already reflect firm fundamentals relatively well, and ESG information may add limited incremental information. When misvaluation is higher, pricing becomes noisier and investors may face greater difficulty judging whether market value is supported by underlying quality. In this setting, ESG performance can become a more useful signal. It may help investors evaluate whether a firm has stronger governance discipline,

better stakeholder relations, and a more credible long-term orientation. The evidence is therefore consistent with signaling theory: the usefulness of ESG information increases when investors need additional signals to interpret firm quality.

This finding helps explain why previous ESG studies often report mixed results. Some studies find a positive ESG-value relationship, while others suggest that ESG benefits depend on visibility, market awareness, disclosure quality, risk exposure, or firm characteristics. The present evidence supports the second view. ESG should not be treated as a universally positive valuation factor. Its value relevance depends on the information environment in which investors interpret it. By focusing on market misvaluation, the paper identifies one specific condition under which ESG becomes more favorable in market valuation.

The result also has practical implications. For managers, ESG investment should be connected to credible communication about long-term strategy, governance quality, and operational resilience. ESG scores alone may not be sufficient to produce a valuation premium. Investors need to understand why ESG performance is financially meaningful for the firm. This is especially important when market valuation is unstable or difficult to interpret. For investors, the findings suggest that ESG information should be evaluated jointly with valuation conditions. A high ESG score may be more informative when the market price contains greater uncertainty about fundamentals. For regulators and exchanges, the results point to the value of improving ESG disclosure quality, because clearer disclosure can help investors distinguish symbolic ESG activity from substantive firm capability.

The paper also has limitations. First, the analysis uses observational panel data, so the fixed-effects models reduce but do not eliminate all endogeneity concerns. Second, ESG scores may contain measurement error because rating systems differ in coverage, weighting, and disclosure dependence. Third, Tobin's Q captures market valuation, but it does not reveal all channels through which ESG may affect performance. Fourth, the sample focuses on Chinese listed manufacturing firms, so the findings may not generalize fully to service industries, financial firms, or other institutional environments. Future research could examine alternative ESG rating sources, separate environmental, social, and governance dimensions, and test whether the moderating role of misvaluation differs across ownership types, regulatory environments, or stages of industrial upgrading.

Overall, the discussion reinforces the paper's central argument. ESG performance in China's industrial sector is best understood as a conditional market signal. It is not automatically rewarded by investors, but it becomes more value-relevant when market misvaluation is higher. The contribution of the paper is therefore to shift the question from whether ESG increases firm value on average to when ESG information becomes useful for market valuation.

6. Conclusion

This paper examines the relationship between ESG performance and firm value in China's industrial sector, with particular attention to the moderating role of market misvaluation. Using panel data on Chinese A-share listed manufacturing firms from 2017 to 2024, the study estimates firm and year fixed-effects models with Tobin's Q as the market-based measure of firm value. ESG performance and market misvaluation are lagged by one year, and the main variables are standardized before constructing the interaction term.

The empirical results show that ESG performance is not uniformly rewarded by the capital market. The baseline ESG coefficient is negative and weakly significant, which suggests that investors may not automatically treat ESG activities as value enhancing in the industrial sector. This finding is consistent with the view that ESG activities can involve costs, delayed benefits, and uncertain financial interpretation. However, the interaction between ESG performance and market misvaluation is positive and statistically significant. The marginal-effect analysis further shows that the ESG effect becomes more favorable as market misvaluation rises.

The main conclusion is that ESG performance functions as a conditional market signal. Its value relevance depends on the pricing environment in which investors interpret it. When misvaluation is higher, ESG information appears to help investors evaluate firm quality, governance discipline, and long-term orientation. For managers, this means that ESG activities should be communicated as part of a credible strategy rather than presented only as compliance or reputation management. For investors, the findings suggest that ESG scores should be assessed together with valuation conditions. For regulators, the evidence supports continued efforts to improve the quality and comparability of ESG disclosure.

The study also has limitations. The empirical design uses observational data, so causal interpretation should remain cautious. ESG scores may contain rating and disclosure bias, and Tobin's Q captures market valuation rather than all dimensions of corporate performance. The sample focuses on listed manufacturing firms in China, so future research could compare other industries, separate environmental, social, and governance components, and examine whether ownership, financing constraints, or risk exposure further shape the ESG-valuation relationship. Despite these limitations, the evidence supports a clear conclusion: ESG performance matters for firm value most strongly when market prices are less firmly anchored in fundamentals.

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