

Can ESG Ratings impact Accounting Performance: Evidence from Chinese Companies

Yi Fang

Carlson School of Management, University of Minnesota, Twin City, Minneapolis, United State
fang0427@umn.edu

Abstract. ESG (Environmental, Social, and Governance) considerations play a pivotal role as they epitomize a company's commitment to responsible practices and ethical conduct. The significance of ESG scores extends to their impact on accounting performance, serving as barometers of a company's adeptness in risk management, operational efficiency, and the cultivation of stakeholder trust. This research undertakes a comprehensive exploration into the influence of heightened ESG scores on the enhancement of accounting performance. The primary focus of this study revolves around the inquiry into whether elevated ESG scores yield tangible improvements in financial outcomes. By meticulously scrutinizing the dataset of A-share companies in China, the research aims to elucidate the correlation between elevated ESG scores and favorable financial results. The outcomes of this investigation firmly establish a positive nexus between elevated ESG scores and the attainment of superior accounting performance. It is evident that ESG practices wield a transformative influence on a company's operational landscape. By fostering enhanced efficiency, mitigating risks, and bolstering stakeholder confidence, these practices synergistically augment a company's overall operational framework. Moreover, this paper underscores the existing research gap in understanding the intricate relationship between ESG scores and accounting performance, underscoring the urgency for further exploration in this domain. The implications of these findings are profound, particularly for enterprises striving to optimize their financial success while upholding conscientious and ethical standards. As businesses navigate an increasingly complex global landscape, the integration of robust ESG practices emerges not only as a moral imperative but also as a strategic pathway to enduring financial prosperity.

Keywords: Accounting performance, ESG, Corporate sustainability.

1. Introduction

In today's business landscape, it's widely acknowledged that how companies handle their environmental impact, social responsibilities, and corporate governance matters significantly. Collectively referred to as ESG (Environmental, Social, and Governance) factors, they've gained prominence because they affect more than just profits; they impact a company's long-term sustainability and reputation. Investment decisions by institutional investors are now significantly influenced by the ESG factor. As demonstrated by Bolton and Kacperczyk (2021), these investors are adopting exclusionary screening methodologies based on direct emission intensity criteria within specific industries [1].

This study is about the connection between ESG and a company's financial performance. I'm delving into the relationship between a company's ESG practices and its financial performance from an accounting perspective. By integrating the data from all A-share companies in China, the investigation identifies a relationship that higher ESG scores correspond to improved accounting performance.

Our study contributes to the existing body of research on factors affecting analysts' financial performance, showcasing how ESG ratings impact accounting performance. Although limited studies have explored the economic outcomes linked to ESG (Alazzani et al., 2021; Zhao et al., 2018) [2], the significant matter of how ESG information affects financial performance has largely been overlooked. And from the research of Otley (2014) [3], there are three main roles associated with accounting performance measurement: accounting numbers function as tools for financial management, contribute to overarching business objectives, and serve as mechanisms for motivation

and control. Our research focus on the crucial role of ESG in influencing the accounting performance of the company.

As we discussed, higher ESG scores have been observed to correspond with enhanced accounting performance within various organizations. This linkage between strong environmental, social, and governance practices and improved financial outcomes. The significance of this finding extends to both ESG initiatives and the broader business landscape. For ESG efforts, the positive correlation validates the notion that ethical and responsible practices can contribute tangibly to a company's bottom line, motivating further investment in sustainable strategies. Moreover, this discovery inspires businesses to recognize the potential for aligning environmental and social considerations with financial objectives, fostering a paradigm shift towards more holistic and conscientious business practices.

2. Literature Review and Hypothesis Development

2.1. Literature Review

Amir and George (2018) investigate why and how investors use ESG report information related to its investment behavior. Drawing a correlation to investment performance is the most common motivation, with client needs, product strategy, etc. coming in a close second. Sufficient engagement and integration of ESG is considered to be most beneficial to investing and has a certain relative driver of investment performance. In the same way, negative ESG ratings are the most unfavorable for investment due to product and moral considerations [4].

Friede (2015) reviewed the previous studies to analysis the relation between the environmental, social, and governance (ESG) criteria and corporate financial performance (CFP). About 90% of research shows that there's a good connection between ESG factors and financial performance. They also noticed that the positive effect of ESG on financial performance remains consistent over time [5]. In addition, Aydoğmuş et al. (2022) concluded that positive and significant connections exist between the ESG combined score and a company's profitability, encompassing Environment, Social, and Governance ratings. This implies that placing emphasis on robust ESG performance not only boosts a firm's value but also ensures promising financial returns and improved profitability [6].

In a recent research endeavor, Van Duure et al. (2015) delved into the practices of regular investment managers regarding some important factors. These factors revolve around environmental impact, social responsibilities, and the way companies are managed, known as ESG factors. The researchers did this by asking a bunch of investment managers from different parts of the world about their approaches. It turns out that a lot of these traditional investment managers are starting to think about responsible investing when they make decisions about where to invest money. This means they're not just looking at financial returns anymore; they're also considering how companies impact the environment, how they treat their employees, and how well they're managed. Additionally, the researchers noticed that these managers are using ESG information to help them figure out if there are any potential problems with a company or if there are risks they need to be careful about [7].

Alareeni et al. (2020) researched if the way companies share information about their environmental, social, and governance (ESG) practices has any connection to how well the companies are doing. They conclude that the more a company shared about their ESG, environmental, CSR, and corporate governance stuff, the better their money-making (ROA) and financial strength (ROE) tended to be. They looked at how companies are performing in terms of making money (ROA), their financial strength (ROE), and their overall market value (Tobin's Q). When companies are open about their ESG practices, it tends to be good for their overall performance. When companies shared more about how they're governed (corporate governance), it was good for their money-making (ROA) and market value (Tobin's Q), but not so great for their financial strength (ROE). Also, they noticed that companies with a lot of assets and big financial responsibilities tended to be more open about their ESG, CSR, environmental practices, and corporate governance [8].

Yu et al. (2018) found out that the level of transparency in ESG (Environmental, Social, and Governance) aspects affects a company's value. Improved ESG transparency can potentially enhance firm value by reducing information asymmetry for investors and lowering agency costs [9]. Moreover, Zhang et al. (2020) focused on examining how Corporate Social Responsibility (CSR), when segmented into the dimensions of environment, society, and governance (ESG), interacts with green innovation to influence firm value. Their findings revealed that solely disclosing environmental and social information leads to a positive effect on firm value [10].

Giese et al. (2019) did a research about how ESG affects firm's financial performance by using MSCI ESG Ratings data and financial indicators. The analysis demonstrated that a company's ESG information influences its valuation and performance through two avenues: its systematic risk profile, resulting in reduced capital costs and increased valuations, and its idiosyncratic risk profile, leading to heightened profitability and reduced exposure to extreme risks. These findings propose that alterations in a company's ESG attributes could serve as valuable financial indicators. Furthermore, ESG ratings could be seamlessly incorporated into policy benchmarks and financial assessments [11].

2.2. Hypothesis development

ESG (Environmental, Social, and Governance) ratings exert a substantial influence on the comprehensive evaluation of a company's financial performance (Luo and Wu, 2022) [12]. Notably, an optimistic ESG rating has the potential to catalyze positive repercussions across various dimensions of a business. Companies that emphasize their commitment to ESG ratings demonstrate that they understand the many aspects that contribute to their overall success (Gillan et al., 2021) [13].

The concept of a positive ESG rating enhancing financial performance operates on several interconnected levels. Companies that actively strive for positive ESG ratings tend to align their strategies with sustainable practices and ethical considerations (Gillan et al., 2021) [13]. This alignment can lead to an array of favorable outcomes. For instance, a heightened emphasis on environmentally friendly practices could result in cost savings through energy efficiency measures, waste reduction, resource optimization and risk management which therefore has a positive impact on the financial accounting performance of the company.

As important as it is, ESG evaluation is not a one-dimensional process. Rather, it encompasses a profound assessment of a company's adherence to environmentally sustainable practices, social responsibility, and effective governance (Luo and Wu, 2022) [12]. Through this comprehensive analysis, elements such as carbon footprint reduction, workforce diversity, and the effectiveness of the board structure are taken into consideration.

Similarly, a robust commitment to social aspects, such as fostering employee well-being and engagement, can potentially translate into enhanced productivity and a positive brand reputation (Zhao et al., 2018) [14]. The accounting performance of a company is influenced by the ability or productivity and employees' engagement. Besides, the positive brand reputation can also attract discerning consumers who prioritize ethically-conscious companies, thus contributing to revenue growth and market expansion.

Moreover, the governance aspect of ESG evaluation underscores a company's dedication to transparent decision-making processes, board independence, and accountability. Such governance practices tend to minimize operational risks, enhance regulatory compliance, and maintain stakeholders' trust.

ESG ratings play a critical role in enhancing transparency and communication among various stakeholders, including shareholders, investors, suppliers, and employees. For instance, Luo and Wu (2022) find that ESG can reduce information asymmetry between firms and analyst, contributing to an increase in analyst forecast accuracy [12].

This, in turn, helps alleviate the adverse impacts of information asymmetry. By offering a comprehensive view of a company's environmental, social, and governance practices, ESG ratings contribute to a more balanced dissemination of information. The benefits of transparent ESG ratings extend to a multitude of stakeholders, including investors, creditors, and business partners Luo and

Wu (2022) [12]. This enhanced transparency enables a more informed decision-making process, fostering greater trust and confidence in a company's operations. In essence, the transparency provided by ESG ratings fosters an environment where all parties have access to pertinent information, aligning interests, enhancing trust, and ultimately contributing to the betterment of a company's financial performance and overall stakeholder relationships. Shareholders and investors can therefore more accurately assess the risks and potential rewards associated with their investments. By acknowledging the potential risk and rewards, shareholders and investors are more willing to invest or cooperate with the company with lower cost and more efficient which leading to better-aligned strategies and expectations.

Gillan et al. (2021) researched that ESG/CSR factors possess the ability to influence the risks confronted by companies, consequently affecting the cost of capital for these firms. Creditors and lenders find themselves in a more favorable position to evaluate the creditworthiness of a company when armed with reliable ESG information [13]. This increased level of trust can lead to a more favorable lending environment. When the company win the trust from lenders and creditors, it is more possible for the company to get a investment with lower financing costs. Furthermore, the lower cost of finance can enhance a company's ability to growth well and ultimately improved financial performance of the company.

The complex interplay between optimistic ESG ratings and a company's financial performance is a testament to the profound influence of sustainability and responsible business practices. The researches of Alsayegh et al. (2020) reveal a positive association between ESG disclosure and EES sustainability performance. This suggests that showcasing the execution of environmental and social strategies alongside a well-functioning corporate governance system can reinforce the organization's overall sustainability performance [15]. As companies deal with a more complicated world, connecting ESG goals with financial targets becomes a key strategy for long-term success. First of all, Companies that sincerely seek favorable ESG ratings frequently demonstrate a strategic alignment with sustainable practices and ethical considerations. In addition, as trust and confidence grow among stakeholders, companies stand to benefit from increased investment inflows and partnerships.

In conclusion, by attending to these ESG criteria, a company showcases its holistic approach to value creation and long-term viability. The company signals that it is not solely driven by short-term gains but is committed to building a sustainable business model that thrives in the face of evolving challenges. This focus on stability and adaptability bolsters the company's financial performance by instilling confidence in investors, facilitating access to capital, and fostering enduring customer loyalty.

Hypothesis 1. Higher ESG ratings exert a constructive influence on a company's financial accounting statement performance and earnings projections.

3. Research Design

3.1. Sample and Data Sources

The initial sample for this study consists of Chinese A-share listed firms spanning the period from 2007 to 2020. The A-share market represents a substantial portion of China's equity market, encompassing a diverse range of companies from various sectors, thus providing ample data for comprehensive analysis.

To ensure the relevance and integrity of the research findings, specific exclusion criteria have been applied to the initial sample. The following categories have been excluded from firms primarily engaged in financing activities have been excluded. This exclusion aims to maintain a focused exploration of operational and business-related aspects, excluding financial intermediaries. Firms categorized as "ST" (Special Treatment) and "*ST" have been excluded from the sample. These categories often encompass companies facing financial distress or other exceptional circumstances.

The data utilized for this study encompasses a comprehensive collection of observations drawn from Chinese A-share listed firms throughout the 2007-2020 time frame. This data enables an in-

depth analysis of changes, trends, and patterns within the sample over time, facilitating insights into the evolution of the financial and operational characteristics of these firms.

The study relies upon the China Stock Market & Accounting Research (CSMAR) database as the primary source of data. The CSMAR database provides a wealth of financial and market-related information for Chinese A-share listed firms, making it an ideal choice for conducting rigorous empirical analysis.

3.2. Empirical Model

To investigate the causal effects of ESG on accounting performance, this study implements the following OLS model.

$$ROA_{i,t+1} = \alpha_0 + \beta_1 ESG_{i,t} + \gamma X_{i,t} + \delta + \varphi + \varepsilon_{i,t} \tag{1}$$

The dependent variable $ROA_{i,t}$ represents ROA granted by firm i in year t . Return on Assets (ROA) is a financial ratio that signifies a company's profitability relative to its overall assets. A high Value Return on Assets (ROA) suggests that the company can generate significant profits from its valuable assets (Heikal, 2014) [18]. The coefficients " α_0 ", " β_1 " and " γ " determine the impact of the respective variables on the dependent variable, ROA. The constants " δ ", " φ " and " $\varepsilon_{i,t}$ " are additional terms in the equation. The control variables (Firm Size, Gen PPE, Gen Cfo, Gen Lev, Gen Indep, Gen Board) help control for potential influences on the relationship between ESG and ROA.

Table 1: Variable Definition

Variable Type	Variable Name	Variable Value Description
Independent Variables	ESG rating score	Bloomberg ESG ratings as the proxy for firms' ESG fulfillment.
Control Variables: - $X_{i,t}$ denotes a matrix of control variables	Firm Size	Natural Logarithm of the total assets of the company [16].
	PPE	Property, plant, and equipment are also called fixed assets [17]. Generated from fixed assets / total assets
	Cfo	Generated from operating cash flow / total assets
	Lev	Leverage: Total debts/ Total assets
	Indep	Generated from independent director number / total director number
	Board	Director Number
Dependent variables	$ROA_{i,t+1}$	Return on asset= Net profit/ Total assets

4. Empirical Results

4.1. Descriptive statistics

Table 2. Descriptive statistics

Variable	N	Mean	SD	p25	p50	p75
ROA	31514	0.037	0.070	0.012	0.036	0.069
esg	31514	6.468	1.139	6.000	6.000	7.000
Size	31514	22.192	1.441	21.198	21.982	22.935
PPE	31514	0.213	0.167	0.082	0.179	0.308
Cfo	31514	0.044	0.074	0.005	0.044	0.086
Lev	31514	0.449	0.221	0.274	0.439	0.610
Indep	31514	0.380	0.071	0.333	0.364	0.429
Board	31514	2.294	0.258	2.197	2.303	2.485

In Table 2. The number, 0.037 (with a middle value of 0.036), represents the average (middle value) of a measure called ROA that shows how well companies are doing financially. ESG scores, which rate how environmentally and socially responsible companies are, range between 6.000 and 7.000,

with a typical score of 6.468 (6.000). The mean of size number 22.192, gives an idea of how big the companies are on average. Another number, 0.213 (0.179), tells us about the value of physical assets like equipment owned by the companies. Cfo, at 0.044 (0.044), indicates something about the way companies manage their money. And Lev, with a score of 0.449 (0.439), is related to how much debt companies have compared to their worth. On the governance side, Indep's number is 0.380 (0.364), and Board's average is 2.294 (2.303).

4.2. Main result

Table 3 presented with the coefficients and associated statistics for two distinct models, labeled as (1) and (2), each aimed at predicting 'ROA' (Return on Assets). In Model (1), 'esg' showcases a significant positive coefficient of 0.012 with *** significance ($p < 0.001$), suggesting that higher ESG scores are linked to higher 'ROA.' Notably, 'Size' demonstrates a positive coefficient of 0.012 with *** significance, implying that larger firms tend to have higher 'ROA.' Conversely, 'PPE' displays a negative coefficient of -0.043 with *** significance, indicating that greater physical assets might be associated with lower 'ROA.' 'Lev' exhibits a negative coefficient of -0.145 with *** significance, suggesting that higher levels of debt may be connected to lower 'ROA.' 'Indep' demonstrates a small positive coefficient of 0.007, though it's not statistically significant. 'Board,' on the other hand, has a negative coefficient of -0.012 with *** significance, implying that a larger board might relate to lower 'ROA.' The constant term '_cons' is negative in both models. 'Industry' and 'Year' factors are considered in both models. The 'N' value indicates the number of observations, which is 31514. The 'r2_a' values represent the adjusted R-squared, suggesting how well the models explain the variability in 'ROA.'

The analysis proves a significant relationship between Environmental, Social, and Governance (ESG) factors and Return on Assets (ROA). The higher ESG scores are associated with higher ROA.

Table 3. Coefficients & associated statistics

	(1)	(2)
	ROA	ROA
esg	0.012***	0.007***
	(34.15)	(20.73)
Size		0.012***
		(35.58)
PPE		-0.043***
		(-17.25)
Lev		-0.145***
		(-75.39)
Indep		0.007
		(1.48)
Board		-0.012***
		(-8.25)
_cons	-0.041***	-0.171***
	(-17.72)	(-24.21)
Industry	YES	YES
Year	YES	YES
N	31514	31514
r2_a	0.057	0.220

5. Conclusion

In conclusion, the study find out that higher ESG scores are associated with better accounting performance. This finding distinctly underscores the strong correlation between elevated levels of environmental, social, and governance factors and enhanced accounting performance. Through a exploration of the relationship between ESG and accounting performance, we emphasize the significance of sustainability practices in achieving financial success. This discovery provides

valuable insights for business decision-makers, guiding them to more actively embrace ESG principles to drive improvements in financial performance.

However, the limitation of the research is that the analysis is limited to the companies in the developing country. The cultural dynamics, and economic contexts that can influence how ESG practices impact financial performance. In future research, a broader scope of multinational data will be incorporated, including data from international corporations.

References

- [1] Bolton, P., & Kacperczyk, M. (2021). Do investors care about carbon risk? *Journal of Financial Economics*, 142(2), 517–549.
- [2] Alazzani, A., Wan-Hussin, W. N., Jones, M., & Al-hadi, A. (2021). ESG reporting and analysts' recommendations in GCC: The moderation role of royal family directors. *Journal of Risk and Financial Management*, 14(2), 1– 20.
- [3] Otley, D. (2001). Accounting performance measurement: a review of its purposes and practices. *International Journal of Business Performance Management*, 3(2-4), 245-260.
- [4] Amel-Zadeh, A., & Serafeim, G. (2018). Why and how investors use ESG information: Evidence from a global survey. *Financial Analysts Journal*, 74(3), 87-103.
- [5] Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of sustainable finance & investment*, 5(4), 210-233.
- [6] Aydoğmuş, M., GÜLAY, G., & ERGUN, K. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*.
- [7] Van Duuren, E., Plantinga, A., & Scholtens, B. (2016). ESG integration and the investment management process: Fundamental investing reinvented. *Journal of Business Ethics*, 138, 525-533.
- [8] Alareeni, B. A., & Hamdan, A. (2020). ESG impact on performance of US S&P 500-listed firms. *Corporate Governance: The International Journal of Business in Society*, 20(7), 1409-1428.
- [9] Yu, E. P. Y., Guo, C. Q., & Luu, B. V. (2018). Environmental, social and governance transparency and firm value. *Business Strategy and the Environment*, 27(7), 987-1004.
- [10] Zhang, F., Qin, X., & Liu, L. (2020). The interaction effect between ESG and green innovation and its impact on firm value from the perspective of information disclosure. *Sustainability*, 12(5), 1866.
- [11] Giese, G., Lee, L. E., Melas, D., Nagy, Z., & Nishikawa, L. (2019). Foundations of ESG investing: How ESG affects equity valuation, risk, and performance. *The Journal of Portfolio Management*, 45(5), 69-83.
- [12] Luo, K., & Wu, S. (2022). Corporate sustainability and analysts' earnings forecast accuracy: Evidence from environmental, social and governance ratings. *Corporate Social Responsibility and Environmental Management*, 29(5), 1465-1481.
- [13] Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, 66, 101889.
- [14] Zhao, C., Guo, Y., Yuan, J., Wu, M., Li, D., Zhou, Y., & Kang, J. (2018). ESG and corporate financial performance: Empirical evidence from China's listed power generation companies. *Sustainability*, 10(8), 2607. [https:// doi.org/10.3390/su10082607](https://doi.org/10.3390/su10082607)
- [15] Alsayegh, M. F., Abdul Rahman, R., & Homayoun, S. (2020). Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure. *Sustainability*, 12(9), 3910.
- [16] Size of business unit: Definition, measures, factors, concepts, optimum size of business. iEduNote. (2023, June 17).
- [17] Murphy, C. B. (2023, May 23). Property, plant, and Equipment (PP&E) definition in accounting. Investopedia. <https://www.investopedia.com/terms/p/ppe.asp>
- [18] Heikal, M., Khaddafi, M., & Ummah, A. (2014). Influence analysis of return on assets (ROA), return on equity (ROE), net profit margin (NPM), debt to equity ratio (DER), and current ratio (CR), against corporate profit growth in automotive in Indonesia Stock Exchange. *International Journal of Academic Research in Business and Social Sciences*, 4(12), 101.