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Does ESG Matter? A Study on A-share Listed Companies' ESG Score

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Abstract. This investigation examines the influence of Environmental, Social, and Governance (ESG) performance on the financial outcomes of A-share listed firms in China. Utilizing empirical methodologies, including descriptive statistics, correlation analysis, and regression analysis, the research delves into the interplay between ESG scores and corporate characteristics, particularly focusing on firm size and net profit. The results reveal a significant positive correlation between firm size and ESG scores, indicating that larger companies are more likely to attain elevated ESG ratings. Although a robust correlation between ESG performance and financial success was observed, the analysis did not establish a direct causal relationship. Moreover, the evaluation of ESG trends from 2018 to 2023 illustrates a growing integration of ESG criteria among A-share companies, with governance exhibiting the highest scores while environmental performance remains the least developed. These findings offer critical insights for investors and policymakers aiming to comprehend the role of ESG factors in influencing corporate performance.

Keywords: ESG, A-share companies, financial performance

1. Introduction

Over the past decade, sweeping expressions of global commitment to the goals of 'sustainable development' have put Environmental, Social, and Governance (ESG) outcomes – most notably, a company's ratings in these areas – center stage as a metric for ranking corporate performance [1]. Investors and regulatory bodies around the world are taking a growing interest in ESG outcomes, often regarding them as indicators of corporate social responsibility and as synonymous with corporate economic viability in the long term. Specifically, in China, the implementation of an ESG rating system in 2018 has resulted in a gradual expansion of its application, alongside the increasing standardization of information disclosure protocols for companies listed on the A-share market.

This research aims to investigate the factors influencing ESG scores among A-share listed companies in China, with a particular emphasis on the relationship between ESG performance and financial outcomes, specifically using net profit as a primary indicator. Through an empirical analysis encompassing A-share listed companies from 2018 to 2023, the study evaluates both the static and dynamic characteristics of ESG scores, as well as their correlation with net profit. Moreover, it also horizontally splits the ESG scores into their three component – environmental, social and governance, to examine the relational position between their single factors and firm

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financial (returns). The findings help us understand the state of the ESG ratings and their effect on corporate financial performance under China's capital market and provide empirical data and evidence that could be indicative for policymakers and investors.

2. Literature review

First, the development of ESG ratings reflects that from single-dimension to multidimensional. Significantly, early ESG ratings mainly focussed on one single dimension, only environmental factors. With more attention paid to issues of other factors, like social concern or corporate governance, the current aspects are environmental, social, and governance. The research underscores a company's legal framework's pivotal role in its social responsibility performance. Liang and Renneboog observed that firms operating within common law jurisdictions generally exhibit superior ESG ratings compared to those in civil law countries, a finding linked to the pronounced shareholder-centric approach characteristic of common law systems [2].

Furthermore, there are big inconsistencies between the various ratings that ESG rating agencies provide. Empirical evidence suggests that the main drivers of variation in ESG scores are differences in rating scopes, measurement methodologies and weight distribution across criteria [3]. Berg et al. explained that these discrepancies arise due to a number of factors [4]. The first reason is the breadth of the ratings; many agencies rate firms on different characteristics. Second, methodological differences exist because various agencies may employ different indicators for assessing the same ESG aspects. Finally, agency-specific attribute importance ratings differ in terms of weighting distributions. For example, some agencies may give more prominence to labour practices, while others may focus on environmental policy. These inconsistencies make it difficult for companies to pinpoint and prioritize areas where improvements in ESG should be made, based on the reports of various agencies.

Moreover, pertaining to the relationship between ESG ratings and corporate financial performance, there is substantial empirical evidence showing that good ESG companies tend to perform better financially. In a meta-analysis of over 2,000 empirical studies looking at the relationship between ESG and company performance, Friede et al found that 90 per cent showed that there was a non-negative relationship between ESG and performance, with most reporting positive relationships between ESG and company performance [5]. Friede et al also found that companies with stronger ESG records tend to be more resilient financially, particularly during times of economic downturns [3]. Evidence of this prompted Engelhardt et al to observe that, during the COVID-19 pandemic, 'companies with higher ESG scores tended to outperform those with lower ESG scores in terms of stock returns and volatility' [6]. The implication here is that ESG might be used as a protective hedge against adverse markets.

Although the beneficial influence of ESG ratings on financial performance is well-documented, this effect varies considerably across different dimensions of ESG. Research suggests that environmental and governance scores exert a more pronounced impact on corporate financial performance, whereas the influence of social scores appears to be comparatively limited [7]. Thus, it is advisable for investors to concentrate on specific dimensions when utilizing ESG ratings for investment decision-making rather than relying solely on overall composite scores.

Future research needs to focus on improving the consistency and visibility of ESG ratings. With ESG factors being increasingly integrated into investment decision-making processes, this raises fundamental questions of data quality and relativism. Dorfleitner et al. argued that the existing methods for ESG ratings show high levels of divergence regarding risk assessment and propagation, making it harder for investors to compare scores seriously [8]. Second, ESG assessments certainly

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need to be adjusted for industry-specific traits and company size in order to enhance the relevance and accuracy of these ratings.

To recap, despite the growing importance that ESG ratings have on investor behaviour and corporate strategy alike, the differences in scoring approaches employed by different rating agencies and the lack of quality data remain two contributing factors that hinder a comprehensive response to these challenges. With ESG reporting frameworks moving closer to such standardisation and scoring methodologies becoming more mature, ESG ratings are likely to become an ever more important factor in corporate sustainability assessments and the financial materiality of these issues.

3. Design

3.1. Data source

The dataset utilized in this research is derived from the Wind Terminal, which offers comprehensive financial information across a broad spectrum of financial instruments, encompassing equities, fixed-income securities, investment funds, derivatives, and foreign currency exchanges.

3.2. Data sample

The data set utilized in this research comprises a collection of 5,350 firms listed on the A-share market, which demonstrate considerable diversity in scale. The mean total assets of entities registered on the Chinese A-share market was calculated to be 78.70 billion RMB, with a corresponding standard deviation of 16.06 billion RMB. Descriptive statistics regarding the total assets of the selected sample companies are illustrated in Table 1 below.

Table 1. Descriptive statistics of total assets of A-share listed companies

Total Assets	
Mean	78.70
Standard Error	16.06
Standard Deviation	1174.43
Minimum	0.00
Maximum	44697.08
Sum	421051.78
Count	5350.00

3.3. Method

This research predominantly employs an empirical analytical framework, incorporating methodologies such as descriptive statistics, correlation analysis, and regression techniques to evaluate the sample data and derive conclusions.

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4. Results

4.1. Descriptive analysis of ESG scores and ranks

Wind evaluates and assigns an Environmental, Social, and Governance (ESG) rating, along with corresponding scores, for each publicly listed company. Specifically, Wind allocates distinct scores for each of the three dimensions—Environment, Social, and Governance—wherein each dimension can attain a maximum score of 10. Furthermore, an overall score is generated, which reflects both management practices and instances of controversy. Figure 1 illustrates the average and median scores of A-share listed companies across the three dimensions.

Analysis reveals that, on average, A-share-listed companies exhibit the lowest performance in the Environmental dimension, recording an average score of 2.48. Conversely, the Social dimension shows moderate performance, with an average score of 3.83, while the Governance dimension achieves the highest average score, reaching 4.92.

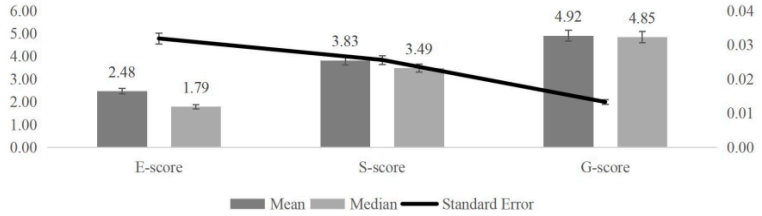


Figure 1. Average and median ESG scores of A-share listed companies

According to Wind's rating classification, seven distinct tiers exist, categorized from AAA to CCC. As illustrated in Figure 2, the allocation of firms among these rating levels reveals a distribution that approximates a normal curve. Approximately 40% of the evaluated companies have attained a BB (moderate) rating. Furthermore, around 90% of firms are assigned ratings that fall within the BBB to B range, while both the highest tier (AAA) and the lowest tier (CCC) comprise less than 0.1% of the total company ratings.

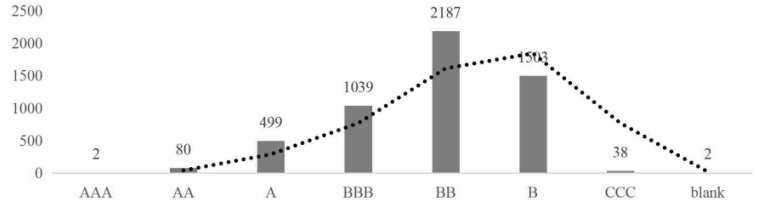


Figure 2. Distribution of A-share listed companies across different ESG rating tiers

4.2. Discrepancies and consistencies in ESG ratings

A number of organizations presently offer ESG ratings in China, although their level of coverage is not uniform. SynTao Green Finance ESG Rating, Huazheng ESG Rating, and Wind ESG Rating are prominent among those with extensive reach. Following the conversion of their ratings into a standardized scoring system, the analysis revealed a notable degree of correlation among the scores assigned by various institutions, aligning with the results reported by Berg et al. [4].

Presented in Table 2 are the correlation coefficients of ESG scores for A-share listed companies across SynTao Green Finance, Huazheng, and Wind. The findings indicate a correlation of 66.12% between SynTao Green Finance and Huazheng, 72.07% between SynTao Green Finance and Wind,

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and 59.85% between Huazheng and Wind. These results imply that significant discrepancies remain while some correlation exists among the ratings issued by different organizations.

Table 2. Correlation of ESG scores among SynTao Green Finance, Huazheng, and Wind

Correlation Analysis	
SynTao Green Finance vs. Huazheng	66.12%
SynTao Green Finance vs. Wind	72.07%
Huazheng vs. Wind	59.85%

4.3. Impact of company size on ESG scores

Within the study of corporate size effect on ESG, the samples were selected from A-share listed enterprises, including 3,992 companies with total assets less than 10 billion RMB, accounting for about 75 per cent of the total population of A-share enterprises. This greatly improves the representativeness of the sample.

Figure 3 points out the integral correlation between company size and ESG scores. The Horizontal axis describes the size of the company, and the vertical axis describes the mean on the ESG score. On the graph, we can see two variables that are positively linked to each other. In the regression equation, the results present that y=0.082x + 5.1486, indicating that when the total assets increase with fornought of 1 billion RMB, it implicates in the whole mean of ESG's scores with 0.082 points in addition. Thus, the conclusions are consistent with the points raised by Drempetic et al., stating that bigger companies have more chances to get better scores on ESG [9]. Furthermore, the adjusted R squared from the regression model is 68.27 per cent, which proves that total assets represent 68 per cent of the variation in the overall ESG score. Besides that, the P value from the regression equation is less than 0.05, strengthening the claim that total assets have statistical meaning in ESG score.

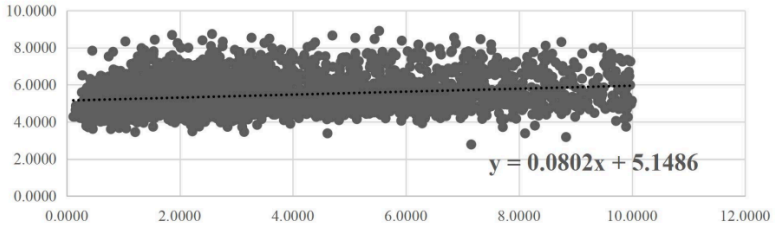


Figure 3. Relationship between company size and ESG scores

4.4. Trends in ESG ratings

The ESG rating mechanism in China is far from being mature. The first round of ratings was issued in 2018, but Figure 4 shows a significant increase in the number of A-share listed companies receiving an ESG rating from 2018 to 2024.

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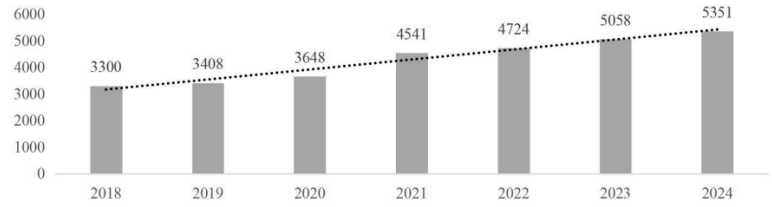


Figure 4. Number of A-share listed companies with ESG ratings from 2018 to 2024

Figure 5 illustrates the total number of listed companies, the accumulated amount of rated companies and the percentage of rated companies in China's capital market from 2018 to 2022. Overall, in 2018-2022, a new bull market occurred in China's capital market. The number of listed companies rose remarkably. The reason for the rising rated companies could be self-evident. Further analysis from the above illustration can be depicted and displayed as a more sophisticated and involved chart calculation method, which ejaculates the annual percentage of listed firms that had ratings and scores calculated. Figure 5 shows the total number of listed companies and rated companies and the percentage of rated companies in China's capital market since 2018. Evidently, the percentage of rated companies has had a continuous rise since 2019, reaching a recent plateau of 95%. More and more transparency within China's listed companies is required to disclose company information to the public.

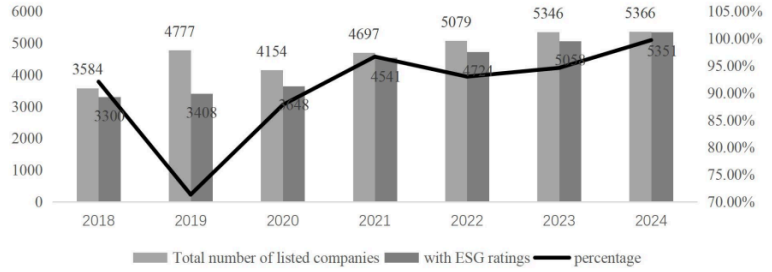


Figure 5. Proportion of A-share listed companies with ESG ratings from 2018 to 2024

With respect to the overall performance in ESG ratings, the cumulative ESG score for A-share listed companies experienced an upward trend from 2018 through 2021, followed by a gradual decline from 2021 onward, as depicted in Figure 6.

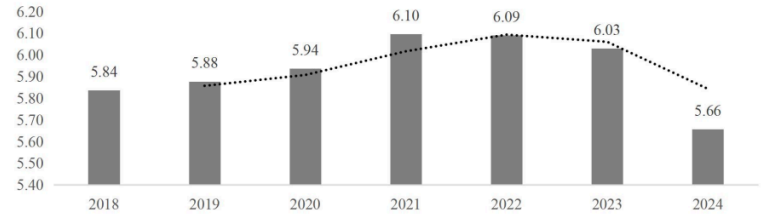


Figure 6. Overall ESG score trends of A-share listed companies from 2018 to 2024

Figure 7 shows a detailed comparison concerning scores across the interactive dimensions. It is obvious that the Environmental score is the lowest in all three groups. However, this category registers a year-wise positive trend. The social category retains a relatively stable performance. In contrast, the Governance score has dropped substantially from 2021, recording a worrying downward trend that can impact the Overall Score drastically.

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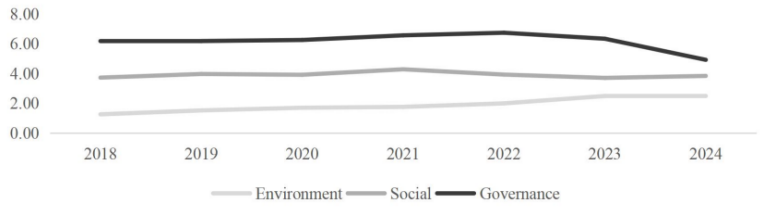


Figure 7. Trends in ESG scores for three separate dimensions

4.5. Relationship between ESG scores and financial performance

The corporation's net profit is the primary evaluation of financial results, which provides the basis for empirical exploration of whether there is consistency between the ESG performance and the net profit. Table 3 shows that the average net profit and the overall ESG score of A-share listed companies from 2018 to 2023 are presented together with the three ESG score dimensions, environmental, social, and governance, respectively. The above statistics show that there is a total correlation of 79.60% between the average net profit and the overall ESG score and the three dimensions of ESG performance in environmental, social and governance, respectively. The correlation is 85%, 77% and 96%. Therefore, we can infer a strong association between the ESG performance and the financial results.

Table 3. Correlation between net profit and ESG scores of A-share listed companies

	2018	2019	2020	2021	2022	2023	Correl
Net income	15.16	17.52	17.72	19.67	19.85	20.10	
Overall	5.92	5.79	5.84	6.24	6.29	6.45	79.60%
Environment	2.36	2.45	3.03	3.07	3.66	3.25	84.95%
Social	3.58	3.74	3.39	4.37	3.96	4.35	77.22%
Governance	6.39	6.55	6.66	7.07	7.01	7.21	95.62%

Further analysis delves into the causal relationship between these variables. A regression analysis was initially performed with net profit as the dependent variable and the Overall ESG score as the independent variable, yielding the following regression equation:

$$Netincome = 5.560 * OverallESG–15.516$$

The analysis resulted in a p-value of 0.059, an Adjusted R^2 of 53.8%, and an F-statistic of 6.823, suggesting that the ESG score does not exert a statistically significant effect on net profit. Subsequently, the ESG score was disaggregated, treating the Environmental, Social, and Governance scores as distinct independent variables. The revised regression equation was:

$$Netincome = 0.572 * Environmentalscore–0.325 * Socialscore + 5.426 * Governancescore–17.848$$

This model produced a p-value of 0.104, an Adjusted R^2 of 82.4%, and an F-value of 8.802. While neither model demonstrated statistical significance, the elevated R-squared value in the latter model implies substantial explanatory capability.

In the regression analyses that followed, net profit was used as the independent variable, and the Overall ESG score and the scores for the E and S components were the dependent variables. The

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results show that net profit is not a statistically significant predictor of the Overall ESG score. It is, however, a significant predictor of the Environmental score and the Governance score.

5. Conclusion

As more emphasis has been placed on ESG ratings from financial markets, more investors are aware of a potential investee's ESG performance. This paper discusses the ESG performance as well as trends among the A-share listed companies by both qualitative and quantitative research. The focus is on the current level of ESG scores, as well as the factors that determine these ratings, such as company size, and how ESG ratings correlate with important financial indicators, especially net profit.

Using Wind ESG ratings as a benchmark, the results show that the ESG ratings of listed companies generally follow a normal distribution. Although the average ESG scores are relatively low—each category scoring under five on a 10-point scale—the number of listed companies with ESG ratings has steadily grown since they were first published in 2018. Furthermore, nearly all listed companies now have an ESG rating (which is about 95 per cent of the total), indicating that the attention on ESG factors continues to be emphasized in China's financial market, and China's ESG framework continues to be developed further in the future. Figure 2 shows a clearly decisive correlation between company size (measured by total assets) and ESG scores. Although there is a correlation between net profit and ESG ratings, no obvious causal relationship is identified, suggesting that ESG scores (at least not significantly) do not affect net profit, nor does net profit substantially influence ESG scores.

In future research, whether there are meaningful ESG score differences in different industries can be further explored, and why or whether there are standards for company operations across different industries, such as industry-specific rules and regulations, and whether industry-specific behaviours and investor concerns influence ESG ratings.

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