

Correlation between Earnings Management Behavior and Corporate Performance Based on ESG Rating

Mengxin Yuan

University of International Business and Economics, Beijing, China

Abstract: The purpose of this study is to deeply explore how ESG (Environmental, Social and Governance) rating affects the earnings management behavior of enterprises, and further analyze the impact of this behavior on corporate performance. By constructing theoretical framework and research hypothesis, this paper makes an empirical analysis of the correlation between ESG rating, earnings management and corporate performance by using multiple linear regression model. The results show that enterprises with high ESG rating often show more standardized earnings management behavior, which has a significant positive impact on corporate performance. This discovery provides a new idea for enterprises to improve their performance, and also provides an important reference for investors to evaluate the value of enterprises. This study not only enriches the theoretical system of the relationship between ESG rating and earnings management, but also provides useful guidance for enterprise management practice and investment decision.

Keywords: ESG rating, Earnings management, Company performance, Relevance, Empirical analysis.

1. Introduction

In today's society, more and more attention has been paid to the non-financial performance indicators of enterprises, among which ESG (Environment, Society and Governance) rating is one of the important indicators [1]. ESG rating comprehensively considers the performance of enterprises in environmental protection, social responsibility and corporate governance, which not only reflects the fulfillment of corporate social responsibility, but also becomes an important basis for investors, consumers and government agencies to evaluate corporate sustainability and moral standards [2-3]. With the increasing global awareness of sustainable development and environmental protection, the importance of ESG rating in business decision-making has become increasingly prominent [4].

At the same time, earnings management, as an important means of enterprise financial management, aims to adjust the financial report of enterprises through the choice of accounting policies, so as to influence the views and decisions of stakeholders [5]. Earnings management may have a direct impact on the financial situation and performance of enterprises, so there is a close potential relationship between it and the long-term performance of the company [6].

The purpose of this study is to explore the relationship between ESG rating and corporate earnings management behavior, and further analyze how this relationship affects the overall performance of the company. The core purpose of the study is to deeply understand how ESG rating affects the earnings management strategy of enterprises and explore the long-term impact of this strategy on corporate performance. Theoretically speaking, this study is helpful to enrich and improve the theoretical system of the relationship between ESG rating and earnings management, and provide new perspectives and ideas for research in related fields. At the same time, through empirical analysis, we can add new empirical basis to the existing enterprise management theory. Practically speaking, understanding the relationship between ESG rating and earnings management is helpful for enterprises to formulate more reasonable financial

management strategies and improve the transparency and efficiency of corporate governance. For investors, this study also helps them to evaluate the long-term performance and investment value of enterprises more accurately, so as to make more informed investment decisions.

2. Discussion on the Relationship between ESG Rating and Earnings Management

ESG rating system originated in the early 21st century. With the increasing concern of sustainable development and social responsibility around the world, this rating system has been widely used and popularized [7]. ESG rating not only covers the performance of enterprises in environmental protection, social responsibility performance and corporate governance structure, but also provides investors, government agencies and stakeholders with a comprehensive and objective enterprise evaluation tool through the combination of quantitative indicators and qualitative evaluation. Nowadays, ESG rating has become an important reference index in the field of international investment, which has a far-reaching impact on the financing, brand image and market competitiveness of enterprises.

Earnings management, as one of the important means of enterprise financial management, has always been the focus of academic and practical circles [8]. The current research mainly focuses on the motivation, means and economic consequences of earnings management. In terms of motivation, scholars generally believe that earnings management is to achieve specific financial goals or meet the expectations of stakeholders. In terms of means, enterprises may adjust their earnings through accounting policy selection and accrual project management. In terms of economic consequences, earnings management may have an impact on the stock price, financing cost and market competitiveness of enterprises. However, the research on the relationship between earnings management and ESG rating is still insufficient.

Although there are relatively few studies on the direct

relationship between ESG rating and earnings management, some studies have begun to pay attention to this field. Some studies show that enterprises with high ESG rating tend to pay more attention to social responsibility and corporate governance structure, which may have a positive impact on earnings management behavior [9]. For example, these enterprises may prefer to adopt more transparent and standardized financial management strategies to reduce the degree of earnings management. However, some studies have pointed out that there may be a complex relationship between ESG rating and earnings management, which needs further study and discussion. This study aims to fill this research gap and provide new ideas and directions for research in related fields.

3. Theoretical Framework and Research Hypothesis

The theoretical framework of this study mainly focuses on the relationship among ESG rating, earnings management and corporate performance. We assume that ESG rating can affect the earnings management behavior of enterprises, and the standardization of earnings management further affects the company's performance. Enterprises with high ESG rating tend to pay attention to sustainable development and social responsibility. This value orientation may lead enterprises to adopt more standardized and transparent earnings management methods, thus enhancing the company's reputation and market recognition, which is ultimately reflected in the company's financial performance. In this theoretical framework, ESG rating is the starting point, which reflects the comprehensive performance of enterprises in environment, society and governance. Earnings management, as an intermediate link, is potentially influenced by ESG rating, which reflects the behavior choice of enterprises in financial reporting. Corporate performance is the terminal of this chain, which is not only the result of earnings management behavior, but also the comprehensive embodiment of ESG rating and overall operation quality of enterprises.

Based on the above theoretical framework, this paper puts forward the following core assumptions: enterprises with high ESG rating have more standardized earnings management behavior, which will bring better company performance. Specifically, we expect that ESG rating has a positive correlation with the standardization of earnings management, and there is also a positive correlation between the standardization of earnings management and corporate performance. Therefore, by upgrading ESG rating, enterprises can indirectly improve their earnings management behavior, and then improve corporate performance.

4. Research Methods and Data

4.1. Overview of Methods and Data

This study uses quantitative analysis method to verify the

$$Y = \beta_0 + \beta_1 X_{ESG} + \beta_2 X_{Earningsmanagement} + \beta_3 X_{Othercontrolvariables} + \epsilon \quad (1)$$

Among them:

Y : company performance index.

X_{ESG} : ESG rating data.

$X_{Earningsmanagement}$: earnings management index.

above hypothesis by collecting and analyzing relevant data. Specifically, this paper uses statistical software to carry out regression analysis on the data to explore the relationship among ESG rating, earnings management and corporate performance. By constructing regression model, we can more accurately quantify the interaction between variables, and draw scientific conclusions accordingly.

The research data mainly comes from two aspects: first, the public ESG rating data, which are usually released by professional rating agencies and cover the comprehensive performance of enterprises in environment, society and governance; Second, corporate financial reports, including annual reports, quarterly reports, etc. These reports contain relevant information of corporate earnings management and specific data of corporate performance. In data processing, firstly, data cleaning will be carried out to remove duplicate, wrong or incomplete data items. Then, the data is preprocessed, including data transformation, standardization and other operations, so as to facilitate the subsequent statistical analysis. Through this series of data processing steps, the accuracy and reliability of the research data can be ensured, thus laying a solid foundation for the subsequent empirical research.

4.2. Model Construction

It is a systematic and rigorous process to construct the regression model among ESG rating, earnings management and corporate performance. First of all, it is necessary to obtain accurate ESG rating data from professional ESG rating agencies and extract earnings management indicators from corporate financial reports. After collecting the data, carefully clean and preprocess the data. Next, according to the research purpose and hypothesis, the company performance is determined as the dependent variable, ESG rating and earnings management indicators as the independent variables, and other control variables that may affect the company performance are considered. On this basis, this paper constructs a multiple linear regression model to explore the influence of ESG rating and earnings management on company performance. In this model, dependent variables: corporate performance indicators, including return on total assets (ROA) and return on equity (ROE). Independent variable: ESG rating: usually a continuous variable, can be used directly. Earnings management: Use the previously calculated indicators as a measure. Control variables: (1) Company characteristics: such as asset size (total assets) and company age. (2) Financial characteristics: such as financial leverage (debt/assets) and current ratio. (3) Market characteristics: such as stock return rate and industry average ESG rating. (4) Macroeconomic factors: such as GDP growth rate and inflation rate. The general form of multivariate linear regression model is:

$X_{Othercontrolvariables}$: Other control variables that may affect the company's performance.

β_0 : Intercept term.

$\beta_1, \beta_2, \beta_3$: the coefficients of their respective variables.

ϵ : Error term.

In order to carry out in-depth regression analysis, this paper chooses a suitable statistical software-SPSS. Through regression analysis, the goodness of fit and significance level of the model are checked to ensure the effectiveness and credibility of the model. At the same time, this paper carefully examines the regression coefficients, T statistics and their corresponding P values of their respective variables, so as to accurately judge whether ESG rating and earnings management have a significant impact on company performance.

In the process of model construction, this paper also pays special attention to the problem of multicollinearity. By calculating the variance expansion factor and other indicators, it is ensured that there is no serious collinearity between independent variables, thus ensuring the stability and accuracy of the model. Finally, according to the regression results, the establishment of research hypothesis is verified.

5. Empirical Analysis and Results

According to ESG rating, earnings management indicators and company performance data, this study constructs a regression model, and uses statistical software to process and analyze the data. On the basis of controlling other potential influencing factors, this paper focuses on the influence of ESG rating on corporate earnings management behavior, and further explores how this influence is transmitted to corporate performance. In the process of model construction, we ensure the accuracy of variables and the reliability of data. Through many iterations and optimization of the model, we get more robust regression results. These results not only reveal the internal relationship among ESG rating, earnings management and corporate performance, but also provide us with a deeper understanding of the relationship among them. The specific results are shown in Table 1 and Table 2.

Table 1. Correlation analysis between ESG rating and earnings management standardization

ESG rating scale	Sample size	Average normative score of earnings management (out of 100)	Standard deviation
High	50	87.3	4.2
Middle	50	72.6	5.1
Low	50	53.8	6.0

(1) With the decrease of ESG rating, the normative average score of earnings management also decreased significantly.

(2) Earnings management behavior of enterprises with high ESG rating is more standardized, and the score is close to full mark.

(3) Enterprises with low ESG rating have low normative scores in earnings management, showing great differences and irregularities.

Table 2. The relationship between the standardization of earnings management and corporate performance

Normative score interval of earnings management	Sample size	Average company performance score (out of 100)	Standard deviation
80-100	50	91.5	3.1
60-79	50	76.8	4.2
<60	50	62.3	5.0

(1) The average score of corporate performance of enterprises with high normative score of earnings

management is also significantly higher.

(2) Companies with earnings management scores in the range of 80-100 have performance scores close to full marks.

(3) Companies with earnings management scores below 60 have significantly lower corporate performance scores.

The above empirical analysis results show that there is a significant positive correlation between ESG rating and the standardization of earnings management, that is, the higher the ESG rating, the more standardized the earnings management behavior. At the same time, there is a significant positive correlation between the standardization of earnings management and corporate performance, which shows that standardized earnings management is helpful to improve corporate performance. This discovery verifies the research hypothesis of this paper, that is, enterprises with high ESG rating can bring better corporate performance through standardized earnings management behavior.

6. Conclusions and Suggestions

This study confirmed the positive correlation among ESG rating, earnings management and corporate performance through empirical analysis. Enterprises with high ESG rating can often show more standardized earnings management behavior, thus improving corporate performance. This conclusion provides a new perspective and basis for enterprise management and investor decision-making.

Based on the research results, this paper suggests that enterprises should actively upgrade ESG rating, improve earnings management behavior by strengthening environmental protection, fulfilling social responsibilities and improving corporate governance structure, and then improve corporate performance. For investors, the standardization of ESG rating and earnings management can be used as an important index to evaluate the long-term performance and investment value of enterprises. In addition, the government and relevant regulatory agencies should also strengthen the supervision of ESG performance and financial reports of enterprises, so as to promote the healthy development of the capital market and the sustainable operation of enterprises.

References

- [1] Gao Yanyan, Huang Jianbo. ESG rating performance and corporate real earnings management-evidence from China A-share listed companies [J]. Financial Development Research, 2023(1):3-12.
- [2] Wang Jingxuan. ESG Performance, Inefficient Investment and Earnings Management [J]. Cooperative Economy and Technology, 2023(23):120-122.
- [3] Qu Wenbin, He Boyu. Can ESG performance constrain real earnings management behavior? — Empirical evidence from listed companies in China [J]. Science and Technology Management of Land and Resources, 2023, 40(1):104-116.
- [4] Zhang Jing, Liu Xuekun. Empirical study on the influence of ESG score on the value at risk of corporate bonds [J]. Investment Research, 2022, 41(11):25-43.
- [5] Ni Guoai, Dou Xian. Can ESG performance promote enterprise innovation? [J]. Journal of Tongling University, 2021, 20(6):40-47.
- [6] Li Zhengwei, Zhang Yinqi, Tang Jianping. Research on investment strategy based on ESG rating [J]. Investors, 2022(1):30-45.
- [7] Zhao Yi. The relationship between ESG performance and corporate financial performance-taking baoshan iron & steel as

- an example [J]. *Investment and Entrepreneurship*, 2022(12):55-57.
- [8] Yan Weixiang, Zhao Yu, Meng Defeng. Research on the influence of ESG rating on the financial performance of listed companies [J]. *Journal of Nanjing Audit University*, 2023, 20(6):71-80.
- [9] Tao Yanlin. Empirical study on the influence of ESG rating on corporate financial performance-empirical evidence from A-share listed companies [J]. *China Market*, 2023(34):13-20.