The Impact of ESG Information in Analyst Reports on Companies' Market Value

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Abstract. Environmental, Social, and Governance (ESG) factors are increasingly significant in investment decision-making. This study investigates the impact of ESG information in analyst reports on company market value. By analyzing the relationship between ESG information in analyst reports and firm value, this study seeks to provide insights for investors and companies on the potential impact of incorporating ESG considerations into financial analysis. And the research proposal's contribution lies in providing insights into the relationship between ESG information in analyst reports and firm value, addressing contradictory findings, evaluating disclosure quality, examining investor perception and manipulation concerns, and highlighting the need for improved ESG disclosures. These contributions collectively advance our understanding of the role of ESG information in financial analysis and its implications for firm value.

Keywords: ESG; CSR; analyst reports; firm value.

1 INTRODUCTION

Environmental, Social, and Governance (ESG) factors play a crucial role in investment decisions, with firms disclosing ESG information experiencing various economic effects. A substantial level of ESG disclosure correlates with a reduced cost of equity capital and fewer capital constraints [1], as well as with precise analyst earnings forecasts [2], improved signaling for future financial performance [3], and a lower incidence of corporate misconduct [4]. There is a burgeoning demand for nonfinancial information concerning ESG activities, owing to the escalating interest in sustainable investments [5]. While numerous studies affirm a positive correlation between Corporate Social Responsibility (CSR) disclosure and market value [6], some research diverges, indicating a negative or neutral relationship [7].

Early studies commonly presumed that environmental investments or engagement in social responsibility activities beyond legally mandated standards would incur additional expenses, ultimately diminishing the firm's value [8]. However, recent research suggests that ESG activities can potentially augment firm value [9]. Within the resource-based view of the firm, environmentally or socially motivated activities can bolster the firm's reputation and enhance interactions with stakeholders [10]. Additionally,

R. Magdalena et al. (eds.), *Proceedings of the 2024 9th International Conference on Social Sciences and Economic Development (ICSSED 2024)*, Advances in Economics, Business and Management Research 289,
https://doi.org/10.2991/978-94-6463-459-4_24

studies linking CSR and firm performance identify several mechanisms through which CSR generates value for firms, such as improved access to finance [11], reduced cost of capital [12], heightened customer and employee satisfaction [13], increased institutional ownership [14], and augmented social capital [15] in firms with robust CSR performance.

The lack of a definitive association between disclosure and firm outcomes in some studies may stem from deficiencies in disclosure quality [16]. Alternatively, it's plausible that investors do not view such disclosures as pertinent to their investment decision-making frameworks. Moreover, some firms may exploit CSR disclosure to manipulate investors' perceptions, raising concerns about its reliability [17]. Many firms inadequately disclose their ESG risks, as evidenced by a survey conducted by Ernst & Young, which revealed that over 60% of investors consider firms' ESG disclosures insufficient. While numerous firms have adopted the Global Reporting Initiative (GRI) guidelines and, more recently, the framework suggested by the International Integrated Reporting Council [18], the extent and quality of ESG disclosure remain heterogeneous [19].

One gap in the existing research is the limited focus on the role of analyst reports in incorporating ESG information into financial analysis. Previous studies have primarily focused on the relationship between a company's own ESG disclosures and firm value, without considering the role of third-party analysts in synthesizing and disseminating ESG information to investors. This proposed research aims to address this gap by examining the impact of ESG information contained in analyst reports on firm value.

Based on the above consideration, the main research question for this project is: What is the relationship between the ESG information in analyst reports and firm value? To answer this question, this proposal will explore this relationship with a quantitative analysis of a sample of publicly listed international firms from a database of financial and ESG data.

Answering these research questions will contribute to the original argument by providing insights into the role of analyst reports in incorporating ESG information into financial analysis and the impact of this information on firm value. It will also help to understand the limitations and areas of disagreement in the existing literature and contribute to the development of further research in the field.

2 THEORETICAL FRAMEWORK AND METHODS

2.1 Hypothesis development

When ESG information is disclosed to the public, it may reduce the information asymmetry between investors and companies, thereby reducing the company's cost of capital and ultimately having a positive impact on the company's market value. However, excessive disclosure of ESG information in analyst reports beyond optimal levels can expose potential issues to investors, leading to reduced investor interest and reluctance to invest in the company. Additionally, if ESG information disclosed by analysts is excessively exposed, it may benefit the company's competitors, which can be detrimental to the company and ultimately lead to a decline in firm value. Additionally, the impact of the disclosure of a company's ESG information on its market value is also influenced by the company's ESG strength or concern.

Furthermore, there are cases where companies engage in greenwashing. Greenwashing aims to manipulate the public perception of a company or organization to gain market share, enhance reputation, or avoid criticism. However, it often conceals the lack of substantial action, making it difficult for investors to make informed and wise choices. Therefore, third-party assessments of a company's ESG information play a role in addressing greenwashing and promoting genuine environmental and social sustainability.

Thus, I obtain the following hypothesis:

Hypothesis 0: There is an ambiguous relationship between ESG information from analyst reports and firm value.

2.2 Model Description

Based on previous research, this proposal anticipates a positive correlation between a company's ESG disclosure and its value. However, this proposal does not have any directional expectations concerning the primary relationship between ESG information in analyst reports and firm value or the interaction term(s) between ESG score and ESG information from analyst reports. Rather, the aim is to test the null hypotheses of no relationships. The introductory model can be expressed as follows:

$TOBINQ_{i,t}= \beta0 + \beta1$ *ESG $disclosure_{i,t-1} + \beta2$ *ESG information from analyst $report_{i,t-1} + \beta3$ *ESG score*ESG information from analyst $report_{i,t-1}+ \beta4$ ESG score + $\beta5$ *$ROA_{i,t}+\beta6$*$LNSALES_{i,t}+\beta7$ *$ASSETSSALES_{i,t}+\beta8$*$LEV_{i,t}+\beta9$*$ADVERT_{i,t}+\beta10$*$R\&D_{i,t}+\beta11$*$NETGROSSPPE_{i,t}+\beta12$*$INDUSTRY_{i,t}+\beta13$ *$YEAR_{i,t}+ \varepsilon_{i,t}$

The t−1 subscripts denote that the right-hand side variables (except control variables) are measured prior to the firm value. Control variables encompass proxies for firm profitability (return on assets, ROA) and growth of return on assets (ROAGROWTH), firm size (natural logarithm of sales, LNSALES), asset intensity (ratio of assets to sales, ASSETSSALES), leverage (ratio of debt to equity, LEV), advertising intensity (advertising expenditures scaled by sales, ADVERT), research and development intensity (R&D expenditures scaled by sales, R&D), and asset age (ratio of net property, plant, and equipment to gross property, plant, and equipment, NETGROSSPPE). Additionally, this proposal integrates two dummy variables that assume a value of 1 if figures for advertising expenditures or research and development expenditures are unavailable (ADVERTISING, R&DMISSING).

This proposal uses ordinary least squares (OLS) regression to estimate the coefficients, and I will also conduct various tests to check the validity of the model. To identify the specific variables that contribute to multicollinearity, I will calculate the Pearson correlation matrix to measure the correlation among these continuous variables. In addition, the variance inflation factor test will be applied to double-check the multicollinearity problem.

2.3 Robustness test

Sample selection is a crucial step in any empirical research to ensure the validity and generalizability of the results. In this study, the paper will use a sample of publicly listed international firms from a database of financial and ESG data. To select the sample, I will first apply some initial filters to exclude firms with missing values of interest. I will exclude firms without complete financial and ESG data, firms in the financial or utility industry (SIC codes 4000-4999 and 6000-6999), or firms whose market capitalizations are below a certain threshold.

Next, I will construct variables for ESG disclosure and ESG information from analyst reports using data from reputable sources such as Bloomberg's ESG disclosure score (DISC) and the third-party assessment from the market data firm MSCI Inc. MSCI's ESG ratings are widely recognized and utilized in the field of ESG investments. While there are more than 150 firms that produce and sell ESG ratings, MSCI, along with Sustainalytics and ISS, dominate the market, accounting for 60% of the market share. According to Bloomberg Intelligence, MSCI has the largest subscriber base, and approximately 60% of assets managed with an ESG or "sustainable" mandate rely on MSCI ESG ratings globally. MSCI has a dedicated team of over 200 analysts who analyze media, corporate disclosures, regulatory filings, and other public data sources to assess companies' ESG performance. Given their prominence and influence, I consider MSCI a proxy for the third party's evaluation of a company's ESG information. This proposal will also collect data on the control variables mentioned earlier from financial databases such as Thomson Reuters.

Finally, I will randomly select a sample of firms from the remaining population to be included in the analysis. For the robustness test, I will also conduct various tests and sensitivity analyses to ensure that the sample is representative of the population of interest and that the results are robust to changes in the sample selection criteria, alternative proxies, and estimation methods. For example, for the alternative proxies, despite the proxies of the ESG score, I can test the ESG concern data from the Reprisk database or data from Datastream. As to the estimation methods, I can test the individual impacts of the three factors in ESG on company market value. Moreover, there is an issue of endogeneity between ESG disclosure and firm value. I will seek some instrumental variables to address the endogeneity problem.

3 RESEARCH PLAN AND TIMELINE

The proposed research project is expected to take approximately four steps to complete, with the following preliminary project plan:

Step 1: Literature review: This will involve a comprehensive examination of existing academic literature on the relationship between ESG information in analyst reports and firm value. This will include studies on the impact of ESG disclosure, stock returns, and controversies on firm value. The literature review will be conducted using academic databases such as JSTOR, ProQuest, and EBSCOhost.

Step 2: Data collection and analysis: This will involve collecting a sample of analyst reports and corresponding firm value data. The sample will be collected from leading providers of analyst research, such as Bloomberg, Datastream, Reprisk, MSCI, and Thomson Reuters. The sample will include analyst reports of companies from different sectors and regions. The data will be analyzed using statistical techniques such as regression analysis and correlation analysis to examine the relationship between the inclusion of ESG information in analyst reports and firm value.

Step 3: Data interpretation, conclusion, and recommendations: This will involve interpreting the data and drawing conclusions about the relationship between the inclusion of ESG information in analyst reports and firm value. The research will also provide recommendations for future research in this field.

It's important to note that the project plan is preliminary and may be subject to change based on the availability of resources, unforeseen challenges, and the progress of the research. In the event of any significant changes to the project plan, the project will be re-evaluated and adjusted accordingly.

4 CONCLUSION

Addressing contradictory findings: The proposal acknowledges that previous studies have reported mixed findings regarding the relationship between CSR disclosure and market value. By investigating the impact of ESG information in analyst reports on firm value, the proposed research aims to contribute to the existing literature by providing further insights into this relationship. This contributes to resolving the contradictory findings and advancing our understanding of how ESG information influences firm value.

Exploring the role of disclosure quality: The proposal highlights the possibility that the lack of a clear association between disclosure and firm outcomes in some studies may be due to deficiencies in disclosure quality. By examining the inclusion of ESG information in analyst reports, the research can shed light on the quality and reliability of such disclosures. This contribution helps to evaluate the effectiveness and relevance of ESG information for investors and stakeholders.

Investigating investor perception and manipulation concerns: The proposal acknowledges the potential that investors may not perceive ESG disclosures as relevant to their investment decision-making models. Additionally, concerns about firms exploiting CSR disclosure to manipulate investors' perceptions are raised. By studying the impact of ESG information in analyst reports on firm value, the research can provide insights into how investors interpret and respond to such information. This contribution enhances our understanding of investor perception and potential manipulation issues and informs efforts to address these concerns.

Highlighting inadequate ESG disclosures: The proposal mentions evidence that many firms fall short of adequately disclosing their ESG risks, as highlighted by the Ernst & Young survey. By examining the role of analyst reports in incorporating ESG information, the research can contribute to understanding the quality and comprehensiveness of ESG disclosures. This contribution raises awareness of the need for improved ESG disclosures and informs companies and regulators about the areas that require attention and enhancement.

However, the proposal still has some limitations. Firstly, there is a possibility of result inconsistency if different databases are used. Secondly, there are endogeneity issues between ESG disclosure and firm value, and I need to do some further research to identify suitable instrumental variables to address this problem.

Overall, the research proposal's contribution lies in providing insights into the relationship between ESG information in analyst reports and firm value, addressing contradictory findings, evaluating disclosure quality, examining investor perception and manipulation concerns, and highlighting the need for improved ESG disclosures. These contributions collectively advance our understanding of the role of ESG information in financial analysis and its implications for firm value.

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