The Role of ESG Advisory as an Innovative Tool for Sustainable Financial Development: the Evidence of the Food Companies

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Abstract

The financial industry is transforming sustainability through new technologies and advisory services. Investors are now more interested in financing sustainable projects, and sustainability frameworks and disclosures are being strengthened to meet the growing demand for transparency from stakeholders. Today, there is a growing recognition of the importance of environmental, social, and governance (ESG) issues, aligned with the increasing demand for corporate sustainability. ESG assessments facilitate the comparison of companies based on their sustainable practices. This research aims to examine the influence of ESG ratings on the financial performance of food companies. The paper examined the relationship between ESG ratings and financial performance using ordinary least squares regression. The results show that higher ESG ratings are associated with more positive financial performance and higher financial results. In this context, an important driver for accelerating the 'mainstreaming' of sustainable finance is the advisory process.

Keywords: Financial ratio analysis, sustainable development, advisory process, food companies

1. Introduction

Investors have developed a new investment trend based on stakeholder information demands. Transparency and valuable information are expected from companies by their stakeholders. Investing sustainably involves selecting asset classes that consider environmental, social, and governance (ESG) factors. Combined social and/or environmental benefits with financial returns is an investment strategy designed to address an investor's social, ethical, ecological, and economic concerns [1]. In today's business world, corporate sustainability has become an essential component. Due to sustainable practices, companies have begun realizing business benefits, and as sustainability becomes more important to the public, financial value is created [2]. A key objective of the 2030 Agenda is to encourage businesses, to adopt sustainable practices and integrate sustainability information into their reporting cycles. Several ESG practices are voluntary and driven by external factors or internal factors. Economic success can be impacted by these practices, providing long-term benefits for the firm [3]. Additionally, assessing these practices can provide information to stakeholders about companies' ethics [4].

In recent years, there has been an increasing number of independent advisory firms that assess firms' ESG performance for public consultation, demonstrating the importance of considering such factors. Although these rating systems have primarily been designed to support investment decisions [5], other stakeholders such as consumers, governments, or non-governmental organizations also use them [6]. Academia has also revealed a growing interest in corporate ESG assessment [7].

For packaged food companies that heavily rely on the agriculture sector for their sourcing and operations, agriculture ESG reporting is particularly important. Global greenhouse gas emissions are attributed to the land sector as a whole at approximately 23 percent, and it requires both natural resources and human capital [8]. Businesses are being challenged and able to take advantage of being more aware of ESG reporting. As a result of accurate ESG reporting, organizations can identify risks and develop solutions to mitigate climate change, reduce carbon footprints, and handle smaller, sector-wide challenges that require accurate data collection and the use of advanced technology, as well. The application of ESG reporting in the food industry supply chain can, therefore, provide investors and stakeholders with an opportunity to take action, understand financial risks and costs, and accurately calculate the costs of inaction. Further, it allows identifying ESG gaps and risks in business models and the finding of appropriate solutions. Nevertheless, despite receiving theoretical backing, the correlation between ESG disclosure and the expense of equity capital remains largely uncharted territory within the existing body of literature.

The objective of this study is to examine how ESG disclosure influences the financial index results. Moreover, this study studies a particular sector like the food sector to consider the unique characteristics and peculiarities of the industry when evaluating non-financial disclosure.

The article is structured as follows: Section 2 provides a summary of the literature, section 3 outlines the chosen research methodology, section 4 showcases the empirical results, and section 5 presents discussions and conclusions.

2. Literature review

Until now, there has been a significant amount of research conducted on the correlation between ESG performance and financial performance. One aspect of research delves into this topic by examining if the disclosure of ESG data results in improved financial performance. Many authors highlight the favorable aspects of ESG investments instead of adopting a more objective scientific approach.

As most independent advisory firms focus on evaluating the ESG performance of companies for public consultation, the importance of considering ESG factors has increased. These rating systems were primarily created to help make financial decisions [5]. ESG scores are also used by additional stakeholders, such as consumers, governments, or non-governmental organizations (NGOs) [6]. A growing interest in corporate ESG assessment has also been noticed by the wider research community, as evidenced by new ideas for indicators measuring corporate ESG performance [9,7].

Several ESG practices are optional and motivated by internal (managerial attitudes toward sustainability) as well as external (market demands, societal desires, or regulatory requirements) factors [10]. These actions can have a positive long-term effect on a company's financial performance [3]. Furthermore, evaluating these practices can be used to track the moral conduct of businesses [4], providing pertinent data to stakeholders [5,11]. Because of this, stakeholders such as consumers and investors are becoming more interested in corporate ESG [12].

According to the ESG investment approach [13], investors should evaluate companies not only on their financial performance but also on their social and environmental governance performance. As a result, it is recommended to use numerical scores to assess an organization's ESG performance. Additionally, issues related to investing in ways to eliminate social injustice and global warming are gaining public attention [14]. This validates several research papers that strongly support the concept of ESG investing.

While there is growing support and awareness for ESG investing, there has also been strong criticism of these approaches in recent years. The growing number of scientific publications devoting their attention to examining various ESG investment issues also shows that hyper-positivism, greenwashing, and data fraud are encouraged [15,16,17]. One of the

main issues from an ESG financial perspective, as claimed by Hvidkjær [18], is that many studies are based on very short time periods over which returns are measured. Some studies use time intervals of less than ten years. Moreover, the results are sensitive to particular macroeconomic conditions within a short time frame. Consequently, it is not always possible for statistical techniques to fully understand such circumstances.

Regrettably, ESG has been heavily criticized on three issues. First, even though ESG compiles an ambitious list of tips, it doesn't offer businesses and investors a clear guideline for navigating the trade-offs that are a necessary part of every society. Second, even though ethical business practices are commendable, it is frequently very profitable for the company to shift costs—like pollution—to society rather than directly covering them. This means that entrepreneurs frequently lack objective motivation in real life. Thirdly, ESG investments involve extent issues. This is because different valuation systems are complex, contradictory to each other, and open to different interpretations [19,14,20,21].

Still, authors like Silva et. al. [22], has indicated that there is "dissatisfaction of stakeholders" with current assessment approaches, even despite the emergence of initiatives aimed at evaluating and measuring firms' ESG performance. Stakeholders are not typically involved in the process of creating and implementing these ESG scores, so their views on what constitutes (or does not constitute) "substance" data are disregarded [23,24]. Therefore, concerning stakeholders, the ESG index does not fully satisfy the principle of materiality, and it typically falls short of providing sufficient support to stakeholders seeking a deeper understanding of organizations' performance [25]. For this reason, it is necessary to take into account the concerns of various stakeholders when evaluating the ESG performance of a company [20].

Consequently, there is mixed evidence that food companies report more than other companies. Nonetheless, recognizing industry-specific factors and issues is important when examining ESG disclosures.

The purpose of this paper is to support the advancement of ESG performance measurement and monitoring so that food firms can contribute to financial development. Food firms can use the results of this study to better tailor their strategies to meet financial expectations, by integrating their management strategies.

3. Materials and methods

3.1 Study area

To examine our primary areas of focus, we utilize a dataset at the company level that has been acquired. Thus, a survey method was used for research purposes. A questionnaire containing 17 variables was prepared regarding economic criteria. Eight food companies from Central Macedonia, Greece were included in the study. Simple random sampling was used for the sampling.

3.2 Methodology

For our study, we computed the financial ratios of profitability (P), leverage (L), valuation (V), and coverage (C). The profitability ratios are comprised of the Net profit margin indicator, ROA, and ROE. Leverage ratios consist of the debt ratio and debt-to-equity ratio. The valuation ratio involves price to earnings ratio Lastly, the coverage ratio encompasses the interest coverage ratio. Financial ratios were calculated for each food company based on one year of data to evaluate the firm's economic performance. Descriptive statistics were used to analyze the mean and standard deviation of these ratios. To ensure comparability, a normalization process was implemented to scale all ratios between 0 and 1. Since the ranges of the ratios varied significantly, a specific scale of 0 to 1 was developed. The original values were then linearly normalized while preserving their relative distances. Using these transformed and normalized financial ratios, a correlation analysis was conducted. The non-parametric Spearman approach was employed for the correlation analysis. To simplify

analysis and interpretation, all normalized, transformed, and partially inverted ratios were aggregated at the indicator level. The analysis was performed using SPSS V. 28.

The standard deviation, which is measured by the difference between each value in a data set and the arithmetic mean, is a way of quantifying the dispersion of data. It shows how far from the mean each data sample is. Data is more dispersed and indicates greater variability when the standard deviation is higher. The context and type of data examined determine how the standard deviation is interpreted. Generally, a low standard deviation suggests that the data are very close to the mean, which means there is less variation and more consistency in the findings. Conversely, a high standard deviation means that the data deviate more from the mean, suggesting that the findings are less consistent and more variable.

4. Results

In Figure 1. Financial indicators are reported as untransformed raw data. Descriptive data includes some statistical measures such as mean and standard deviation.
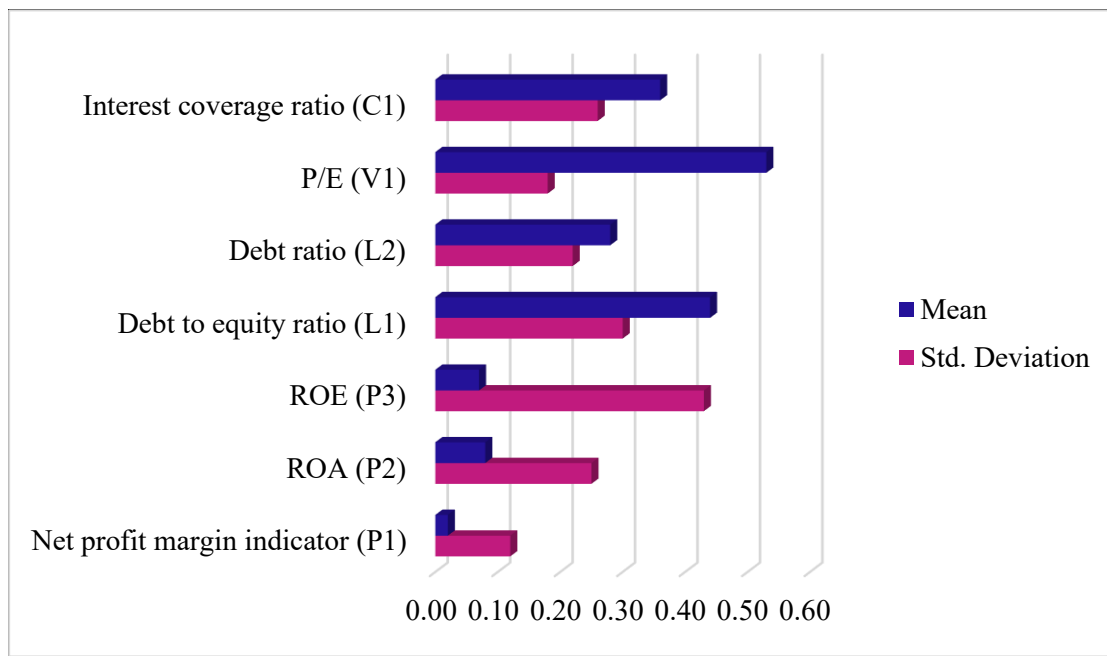

Figure 1. Descriptive statistics of financial index results

In terms of profitability, the results showed insignificant performance of the companies. The net profit margin ratio (P1) was calculated at 0.02 suggesting that companies on average had 2 percent net profit at a relatively low rate compared to their invested capital (ROE). Further, the return on assets (P2) was measured at 0.08 indicating low returns from assets. In addition, the return on equity (P3) is 0.07, indicating that the firms also produced a low return on equity. However, both ROE and ROA scores are higher than the net profit margin, indicating that there is potential for profitability. Concerning the standard deviation of the performance indicators, there are no large deviations, namely the net profit margin ratio of 0.12, at (ROA) 0.25 and (ROE) 0.43. These measurements indicate that on the one hand on average the standard deviation

takes low values and on the other hand the data are very close to the mean, which means that there is less variation and more consistency in the findings.

Then, debt ratios appear to be relatively high compared to the profitability discussed above. This is a worrying sign for firms implementing ESG standards. Specifically, the debt-to-equity ratio (L1) was calculated at 0.44, meaning that on average 44 percent of investors withdraw from investing capital in companies. Taking into account the total equity of the company rather than total assets, the debt-to-equity ratio provides the same information as the debt ratio. Thus, calculating debt as a function of assets provides the debt-to-assets ratio (L2), which was measured at approximately 0.28 the hatred compared to the debt-to-equity ratio. This difference is due to good management of capital assets. The standard deviation is calculated as follows 0.30 on the debt-to-equity ratio and 0.22 on the debt ratio. These measurements show that on average the standard deviation takes low values, and the data are very close to the mean. Thus, there is less variation and more reliability in the results.

The P/E (V1), which is called the earnings multiple or price-to-earnings per-share ratio was calculated at 0.53. It is a positive result as it points to the high valuation of financial entities adopting ESG criteria. In addition, the average standard deviation in this category of ratios is also low 0.18 indicating minimal dispersion of values and strong precision of the findings.

Lastly, the interest coverage ratio (C1) contributes to the ability of companies to repay annual interest or outstanding financial charges. It was calculated at 0.36, a positive result indicating that the rate at which fixed assets are liquidated to repay interest is satisfactory as the interest coverage ratio is low.

To obtain useful information on the interactions between the financial ratios of companies adopting ESG criteria, the correlations between the financial ratios were transformed, normalized, and inverted according to the Spearman ranking (Figure 2). Inter-indicator correlation coefficients are shown by the values outside of the main diagonal. A positive correlation is indicated by positive values, and a negative correlation is indicated by negative values. The possible values are -1 to +1. Values that are near +1 denote a positive correlation, those that are near -1 denote a negative correlation, and those that are near 0 denote no correlation at all.
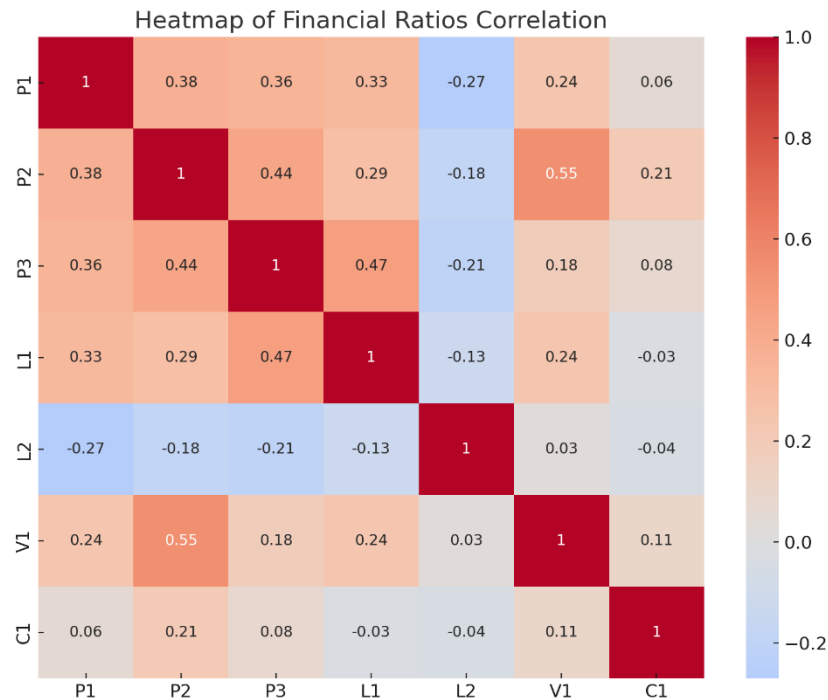
Figure 2. Heat map of financial ratios correlation

Figure 2 contains the correlations between various financial ratios. The colors of each cell show the correlation strength and direction. Each cell represents the correlation between two indicators. High negative correlations are associated with dark blue colors and high positive correlations are related to dark red colors. More specifically, the net profit margin ratio and the return on assets ratio, respectively P1 and P2, have a correlation coefficient of 0.38 (positive value). Also, the correlation between the net profit margin ratio (P1) and the return on equity ratio (P3) is 0.36 (positive value), and the correlation between P2 and P3 is 0. 44 (positive value). We observe that all the correlations between P1, P2, and P3 are positive which proves that companies that have high net margin ratio tend to have increases in both return on assets and return on equity.

Regarding the leverage ratios, the correlation between the debt-to-equity ratio and the debt ratio, respectively L1 and L2, is -0.13 (negative value). The negative value indicates the inverse ratio of the ratios. That is, as the debt-to-equity ratio increases, the debt ratio will decrease, and the reverse is also true.

Comparing the correlations between all profitability indicators (P1, P2, P3) and leverage indicators (L1 and L2), we observe the following results. The debt-to-equity ratio (L1) seems to have a positive correlation with all profitability ratios net profit margin ratio (P1) at 0.33, return on assets ratio (P2) at 0.29, and return on equity ratio (P3) at 0.47. As debt-to-equity ratios increase, net profit return on assets and return on equity tend to increase. However, the debt-to-equity ratio (L2) appears to have a significant negative relationship with all profitability ratios net profit margin ratio (P1) at -0.27, return on assets ratio (P2) at -0.18 and return on equity ratio (P3) at -0.21. Thus, as debt increases, net profit return on

assets and return on equity tend to decrease as it is a normal variation. In conclusion, debt ratios and return ratios are highly correlated which deserves special attention.

The correlation between the debt-to-equity ratio (L1) and the earnings multiplier (V1) is 0.24 (positive value). Furthermore, the correlation between the debt ratio (L2) and the earnings multiplier (V1) is 0.03 (close to zero). The correlations between these ratios show that firms' profits are not affected by their debts.

In addition, the correlation between the earnings multiplier (V1) and the interest coverage ratio (C1) is 0.11 (positive). Indicating a normal relationship, meaning that as the profits of the firms increase, they can repay the financial interest incurred in the current year.

5. Discussions and Conclusions

To acquire a summary of the most recent scientific research, a methodical examination of financial ratios can be beneficial. Having a thorough overview of a wide range of diverse research areas is one of the main benefits of financial ratio analysis. By evaluating accounting data to produce ratios that help evaluate the risk and long-term viability of food companies, certain studies in the food industry have demonstrated the value of financial ratio analysis.

The results of the analysis of the financial indicators show that the profitability of companies adopting ESG criteria is relatively stagnant and not very profitable. In terms of profitability, the indicators show neutral results. The net profit margin indicator shows that companies have a low-profit margin. The low profitability is likely to be due to capital expenditure on installation and special systems (e.g., environmental pollution measuring stations), quality management systems, and operating costs. Compared to the net profit margin indicator, the return on assets (ROA) and return on equity (ROE) indicators show almost negligible growth that is not affected by the sustainability criteria. Nevertheless, financial leverage has a significant correlation with ESG standards deserving special attention. Furthermore, the debt ratio may be relatively high due to costly investments but correlating it with net profit shows that it seems to cover debts in the long run due to its positive correlation. The valuation of entities applying ESG criteria is high and does not seem to be negatively affected by debt and interest coverage.

In conclusion, it appears that the role of ESG standards in Greek food businesses is positive, increasing the valuation of businesses due to the principles they espouse. Assumingly, industries and businesses with significant annual turnover can address ESG influences. In line with Petkou et al. [26], food industries with over $500 million in annual revenue by 2024 will prioritize environmental criteria and make investments in ESG. Regardless of the size of an organization, it should always be prepared for unforeseen situations and have systems in place to manage both adequate and sustainable risks. Considering that this will be a completely new scenario for Greek companies, they ignore the risk.

Appendix A

Calculation of the ratios

Profitability indexes

P1_Net capital ratio = net profits + financial expenses/total capital employed

P2_ROA = Net profit / Total assets

P3_ROE = ROA x Leverage = (Net profit / Total assets) x (Total assets / equity)

Leverage indexes

L1_Debt to equity ratio = Total Debt / Shareholders' Equity

L2_Debt ratio= Total Debt / Total Assets

 Valuation indexes

V1_P/E= Stock Price / Earnings Per Share

Coverage indexes

C1_Interest coverage ratio = Earnings Before Interest and Taxes / Interest Expense

References

[1] Brzeszczynski, Janusz, and Graham McIntosh. (2014). Performance of Portfolios Composed of British SRI Stocks. Journal of Business Ethics 120, 335–62.

[2] Schoenmaker, D., & Schramade, W. (2019). Investing for long-term value creation. Journal of Sustainable Finance & Investment, 9(4), 356‑377.

[3] Senadheera, S. S., Withana, P. A., Dissanayake, P. D., Sarkar, B., Chopra, S. S., Rhee, J. H., & Ok, Y. S. (2021). Scoring environment pillar in environmental, social, and governance (ESG) assessment. Sustainable Environment, 7(1), 1960097. https://doi.org/10.1080/27658511.2021.196009

[4] Freeman, R. E. (2010). *Strategic management: A Stakeholder approach*. Cambridge (UK): Cambridge University Press. https://doi.org/10.1017/CBO9781139192675

[5] Raimo, N., de Nuccio, E., Giakoumelou, A., Petruzzella, F., & Vitolla, F. (2021). Non-financial information and cost of equity capital: An empirical analysis in the food and beverage industry. British Food Journal, 123(1), 49–65. https://doi.org/10.1108/BFJ-03-2020-0278

[6] Berg, F., Fabisik, K., & Sautner, Z. (2020). Is history repeating itself? The (un)predictable past of ESG ratings. European Corporate Governance Institute Working Paper Series in Finance, 2020(708), 1–51.

[7] Larcker, D. F., Pomorski, L., Tayan, B., & Watts, E. M. (2022). ESG Ratings: A Compass without Direction. Stanford Closer Look Series. Corporate Governance Research Initiative, August, 1–16.

[8] Engida, T. G., Rao, X., Berentsen, P. B. M., & Oude Lansink, A. G. J. M. (2018). Measuring corporate sustainability performance– The case of European food and beverage companies. Journal of Cleaner Production, 195, 734–743. https://doi.org/10.1016/j.jclepro.2018.05.095

[9] Levin, K., & Parsons, S. (2019). 7 things to know about the IPCC's special report on Climate change and land. World Resources Institute. Retrieved March 2022, from https://www.wri.org/insights/7-things-know-about-ipccs-special-report-climate-change-and-land.

[10] Dočekalová, M. P., & Kocmanová, A. (2016). Composite indicator for measuring corporate sustainability. *Ecological Indicators*, **61**, 612–623. https://doi.org/10.1016/j.ecolind.2015.10.012

[11] Whitehead, J. (2017). Prioritizing sustainability indicators: Using materiality analysis to guide sustainability assessment and strategy. *Business Strategy and the Environment*, **26**(3), 399–412. https://doi.org/10.1002/bse.1928

[12] Searcy, C. (2012). Corporate sustainability performance measurement systems: A review and research agenda. *Journal of Business Ethics*, **107**(3), 239–253. https://doi.org/10.1007/s10551-011-1038-z

[13] Arvidsson, S., & Dumay, J. (2022). Corporate ESG reporting quantity, quality and performance: Where to now for environmental policy and practice? *Business Strategy and the Environment*, **31**(3), 1091–1110. https://doi.org/10.1002/bse.2937

[14] ESG Investing. 2022. The Economist: Special Reports, July 23. Available online: **https://www.economist.com/special-report/2022-07-23**

[15] Pástor, Ľuboš, Robert F. Stambaugh, and Lucian A. Taylor. 2021. Sustainable investing in equilibrium. Journal of Financial Economics 142: 550–71. [Google Scholar]

[16] Hughes, Arthur, Michael A. Urban, and Dariusz Wójcik. 2021. Alternative ESG Ratings: How Technological Innovation Is Reshaping Sustainable Investment. Sustainability 13: 3551. [Google Scholar]

[17] Schmidt, Anatoly B. 2021. The ESG Conundrum: An Outsider's View. Available online: **https://ssrn.com/abstract=3942572**

[18] Burke, Jenna J. 2022. Do boards take environmental, social, and governance issues seriously? Evidence from Media Coverage and CEO Dismissals. *Journal of Business Ethics* 176: 647–71. [**Google Scholar**]

[19] Hvidkjær, Søren. 2017. *ESG Investing: A Literature Review*. Frederiksberg: Dansif, Copenhagen Business School. [**Google Scholar**]

[20] Merker, Christopher K., and Sarah W. Peck. 2019. *ESG Challenges. The Trustee Governance Guide*. Cham: Palgrave Macmillan, pp. 123–28. [**Google Scholar**]

[21] Serafeim, George. 2021. *ESG: Hyperboles and Reality*. Harvard Business School Research Paper Series Working Paper: 22-031. Rochester: SSRN. [**Google Scholar**]

[22] Silva, S., Nuzum, A.-K., & Schaltegger, S. (2019). Stakeholder expectations on sustainability performance measurement and assessment. A systematic literature review. *Journal of Cleaner Production*, **217**, 204–215. https://doi.org/10.1016/j.jclepro.2019.01.203

[23] Ngu, S. B., & Amran, A. (2018). Materiality disclosure in sustainability reporting: Fostering stakeholder engagement. *Strategic Direction*, **34**(5), 1–4. https://doi.org/10.1108/SD-01-2018-0002

[24] Velte, P. (2022). Does sustainable corporate governance have an impact on materiality disclosure quality in integrated reporting? International evidence. *Sustainable Development*, **30**, 1655–1670. https://doi.org/10.1002/sd.2333

[25] Puroila, J., & Mäkelä, H. (2019). Matter of opinion. *Accounting, Auditing & Accountability Journal*, **32**(4), 1043–1072. https://doi.org/10.1108/AAAJ-11-2016-2788

[26] Petkou, D., Kyriakidou, A., Tsiouni, M., (2024). Environmental, social and governance standards as a pillar of sustainable financial development-the case of the Greek food industry. IPRPD International Journal of Arts, Humanities and Social Sciences ISSN 2693-2547 (Print), 2693-2555 (Online) Volume 05; Issue no 03: March, 2024 10.56734/ijahss.v5n3a3