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"Exploring Sustainable Investment Frontiers: A Bibliometric Analysis on current trends and hurdles in incorporating ESG into Investment decision-making"

Kanika Mangla

(Research Scholar, Manav Rachna International Institute of Research and Studies)

Dr. Neha Yadav

(Assistant Professor, Manav Rachna International Institute of Research and Studies)

Correspondence:

Kanika Mangla

Email: kanikajindal1989@gmail.com

ABSTRACT

Integrating environmental, social, and governance (ESG) factors into investment decision-making has emerged as a critical area of interest in both academic and industry circles. This literature review aims to comprehensively explore and synthesize existing research on this topic by providing valuable insights into current trends, challenges, and prospects in sustainable investing. Articles, reports, and case studies published in relevant databases from 2019 to 2023 are reviewed for this research. A comprehensive search strategy encompassing keywords related to ESG integration in investment decisions has been used in the review process. The integration of ESG factors in investment decisions has evolved significantly in recent years. However, the knowledge landscape is scattered, and it is imperative to consolidate this body of research to gain a holistic understanding thus this bibliometric analysis addresses the research agenda on the impact of the integration of ESG factors on investment decision-making and the challenges and opportunities associated with this evolving paradigm. Our review highlighted that ESG integration has been shown to mitigate risk and enhance long-term returns, supporting the argument that sustainability considerations are not only ethical but also financially prudent. As per the analysis, hurdles range from the lack of awareness regarding standardized ESG metrics and reporting to concerns about greenwashing. The complexity of ESG factors and the need for robust data and analytics pose significant hurdles to investors and practitioners. The synthesis of findings from the study highlights the need for standardized ESG reporting, enhanced data quality, and increased stakeholder engagement. Future research should explore the integration of ESG factors in specific asset classes and regions, as well as investigate the effectiveness of various ESG integration strategies.

Keywords: ESG; bibliometric analysis; challenges; opportunities; sustainable investment; literature review

INTRODUCTION

In recent times, there has been a widespread adoption of "socially conscious" investing, with an increasing number of investors expressing a desire for their funds to align with both efficiency and ethical values. This trend is reflected in three notable investment approaches: Environmental, Social, and Governance (ESG), Socially Responsible Investment (SRI), and the integration of socially responsible criteria with traditional financial controls.(Et.al, 2021). Rating agencies use firm disclosures, media reports, news items, surveys, and interviews to collect data to formulate an environmental, social, and governance (ESG) score that represents the ESG actions and activities of a firm(Juddoo et al., 2023). Sustainable investment encompasses a range of asset classes carefully chosen with consideration for environmental, social, and governance (ESG) factors. This investment strategy aims to integrate social and/or environmental benefits with financial returns, thereby aligning investors' concerns related to social, ethical, ecological, and economic aspects.(Jain et al., 2019). The goals of sustainable development are set out in a United Nations document (United Nations, 2015). Many international organizations and states, guided by these goals, are developing plans for the transition to the new model. In India, the Securities and Exchange Board of India (SEBI) has introduced BRSR i.e. Business Responsibility and Sustainability Report to improve the disclosure of ESG data by businesses. The main purpose of BRSR is to provide quality data regarding the Environmental, Social, and Governance parameters of the companies to the investors. However, in recent years, the private sector has been more dynamically striving for sustainable development, largely under the influence of the activity of private

investors, who voluntarily impose restrictions on the placement of investments. This type of investment is called responsible investment.(Danilov, 2022). This systematic literature review (SLR) aims to comprehensively explore and synthesize existing research on this topic by providing valuable insights into current trends, challenges, and prospects in sustainable investing. Specifically, this research will address the following research objectives:

1. To address the recent trends, challenges, and prospects in ESG investment decisions.
2. To explore the research gap in the existing literature and future research prospects in this area.

METHODOLOGY

i: Data collection process:

A literature Review is a survey of previous research work done on a specific topic which helps in identifying the research gap in the existing research to facilitate the future scope of research. Different researchers use different techniques of literature review but in this study systematic literature review is done to comprehensively study the concept of ESG and its integration into investment decision-making. This systematic literature review is based on the analysis of 68 studies out of a total of 273 research articles which were retrieved from the dimensions database. Boolean search with keywords ESG and Investment OR sustainable investment OR ESG and finance. The keywords were adapted from Eccles and Viviers (2011) and Höchstädter and Scheck (2015) as the most frequently used terms for ESG. The search was conducted on 12th July 2023. The search included all the articles in the English language from 2019 to 2023. In this study, a bibliometric analysis has been conducted by using VOS viewer software. Bibliometric analysis is an approach used to systematically analyze the existing literature related to a specific field. This bibliometric analysis aims to explore the trends and challenges in the field of ESG investment decisions and to investigate the insights of existing literature to highlight how environmental, social, and governance factors are integrated with investment decisions.

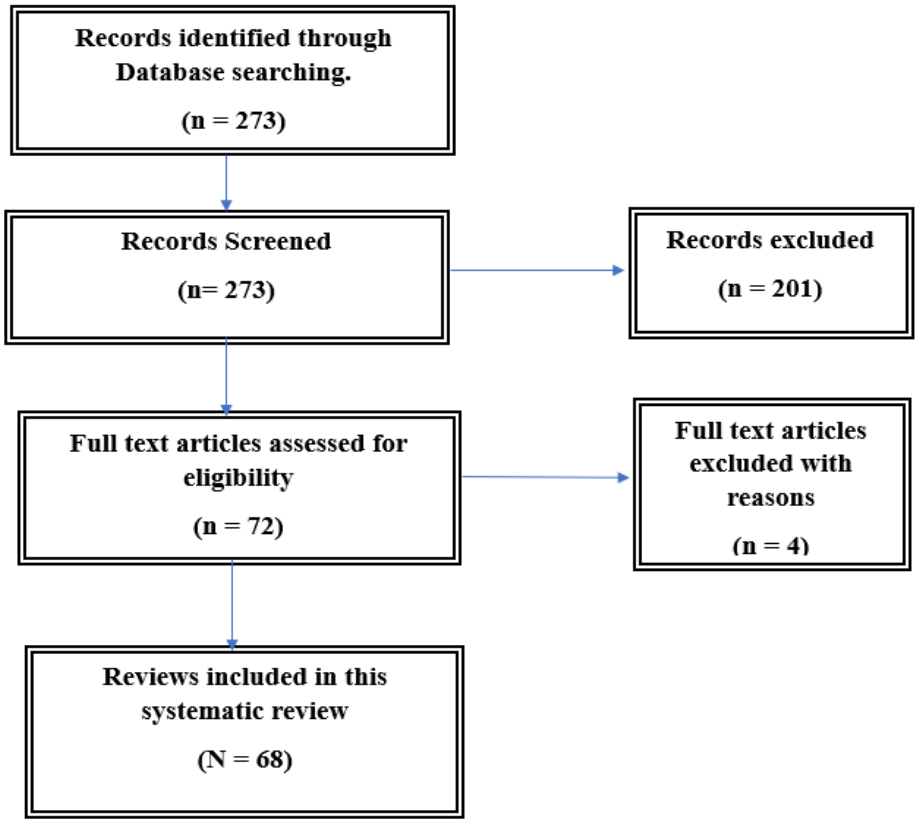

FIGURE 1: SELECTION OF STUDY DATA THROUGH PRISMA FLOW DIAGRAM

SOURCE: RESEARCHER

ii: Trend of publications in the field of ESG investing decisions

figure 2 shows the trend of publication in the field of ESG investing decisions. Due to certain limitations, we have limited the data collection period to five years only starting from 2019 to 2023 till now. The trend shows a rise in the number of publications over the years but there is a massive rise in the number of publications after 2021 as most of the researchers are now focussing on sustainability goals and thus the topic of ESG investment decisions is gaining the attention of various researchers. The number of publications started to pick up momentum over the years and continues because of the impact of the United Nations's Sustainable Development Goals (SDG) and the increasing awareness and consideration towards sustainability in all the sectors including finance and investment.

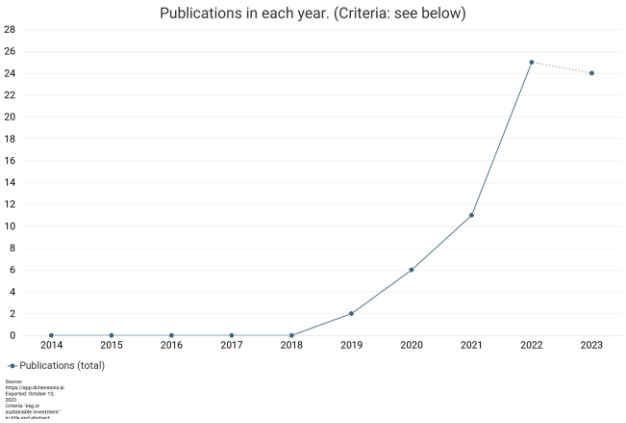

Figure 2: publication trend over the years

ANALYSIS

Co-authorship Analysis:

Co-authorship analysis was performed using the dimensions database and VOS viewer software and while fixing the threshold limit, researchers must have coauthored at least 1 document and cited at least 10 times between 2019 and 2023 and must have Co-authored at least 1 research paper was chosen. The analysis resulted in a total of 100 authors grouped under 39 clusters, each cluster being represented by different colors. Keliuotytė-Staniulėnienė, Greta and Kartašova, Jekaterina make up the strongest co-authorship network with 5 co-authored documents. In addition to, Thakur, Ayusha, and Aich, Satyabrata has co-authored 4 documents. Figure 4 presents the coauthor ship network of authors.

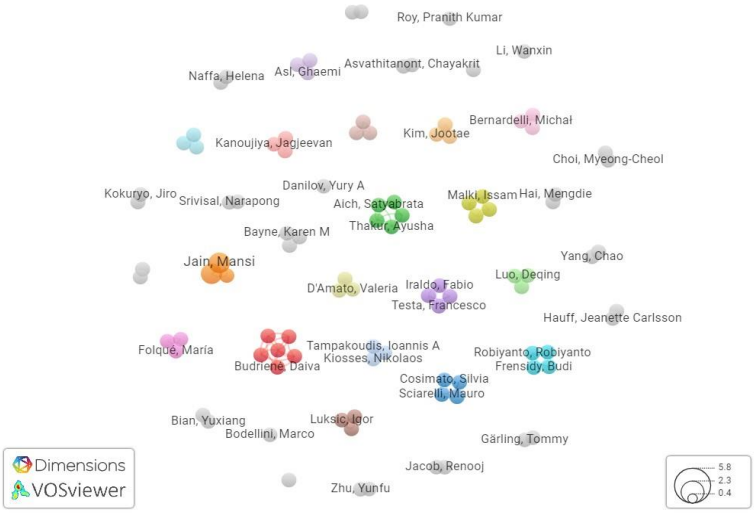

Figure 4: Co-authorship analysis

Bibliographic coupling analysis:

When two articles refer to one common third work in their reference then they are known as bibliographically coupled. Bibliographic coupling strength increases when there is an increase in the number of references to which two articles commonly refer in their reference list. In VOS viewer, thematically similar documents are merged into clusters. In the analysis, the minimum number of citations of a document was selected at least once while using the software which reduced the number of articles to 38 which were distributed in 6 clusters. Cluster 1 is the largest in red color which includes 9 articles cited 132 times. The articles in this cluster focus on the integration of ESG in business models. The article by (Consolandi et al., 2020) has maximum citations followed by an article written by (Aldowaish et al., 2022). Cluster 2 in green color includes 6 articles cited 190 times. The articles in this cluster focus on Integrating ESG risks through sustainable investment strategies. The article by (Jain et al., 2019) has maximum citations followed by an article written by (Sciarelli et al., 2021). Cluster 3 in blue color includes 6 articles cited 63 times. The articles in this cluster focus on Socially Responsible Investing as a Competitive Strategy. The article by (Palma-Ruiz et al., 2020) has maximum citations. Cluster 4 in yellow color includes 6 articles cited 120 times. The articles in this cluster focus on Corporate ESG reporting quantity, quality, and performance. The article (Arvidsson & Dumay, 2022) has maximum citations. Cluster 5 in purple color includes 6 articles cited 42 times. The articles in this cluster focus on conventional and green finance spillover in the post-COVID world. The article by (Sharma et al., 2022) has maximum citation. Cluster 6 in aqua color includes 5 articles cited 35 times. The articles in this cluster focus on Environmental regulation and ESG investing. The article by (Chen et al., 2022) has maximum citation.

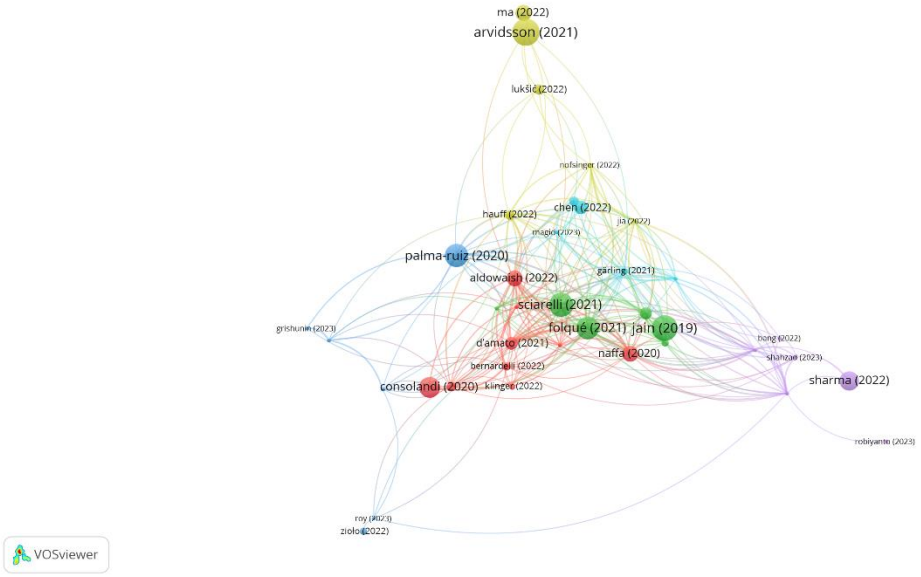

Figure 4: Bibliometric coupling

Keyword co-occurrence analysis:

Keyword co-occurrence analysis is done to investigate the emerging trends around ESG investment decisions. VOS viewer version 1.6.15 is used to create a keyword co-occurrence network. Initially, a total of 2716 keywords were extracted from titles and abstracts of 68 articles. Then a filter was applied to limit the minimum number of occurrences of a term to at least 5 times for which only 152 keywords meet the threshold. After the analysis, 7 clusters are created. Figure 5 below shows the network visualization of the analysis. As per the analysis, the terms that have been used the most include terms like values, effects, and portfolios followed by keywords like ESG, sustainable investing, and responsible investing. So, this shows that there is a level of knowledge among the researchers about ESG investing and sustainable investing but there is still a lot of scope for research in this field, especially in developing economies.

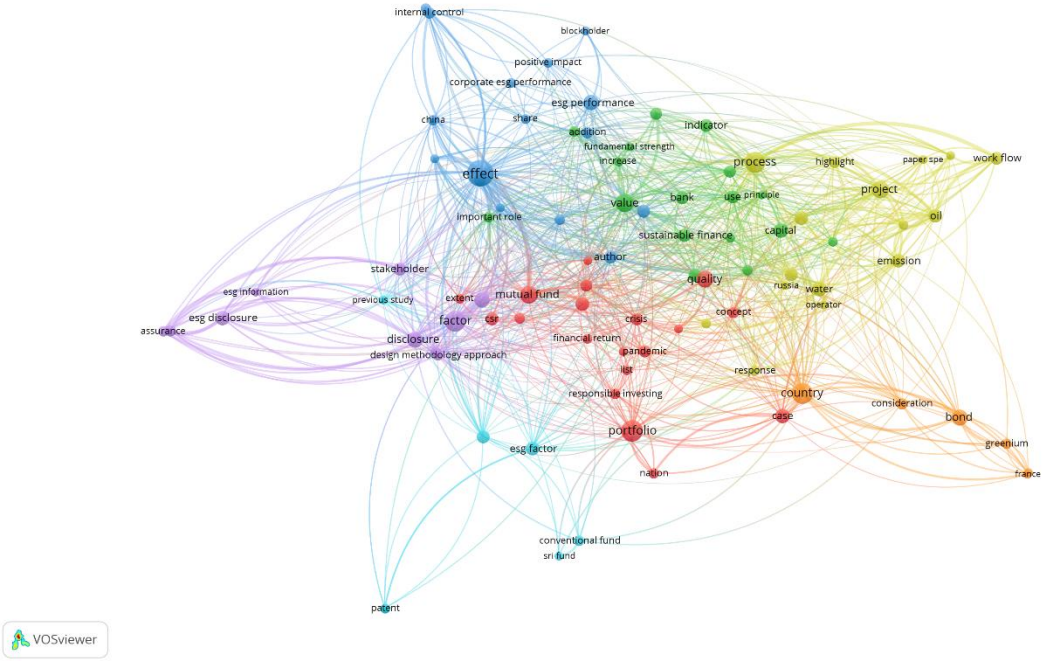

Figure 5: Keyword occurrence analysis

FINDINGS

The analysis reveals a growing body of literature, reflecting the increasing importance of sustainability considerations in investment practices. Researchers have explored various aspects, including ESG data sources, performance measurement frameworks, and investor motivations. Numerous studies indicate a positive correlation between high ESG scores and improved financial performance. ESG integration has been shown to mitigate risk and enhance long-term returns, supporting the argument that sustainability considerations are ethical and financially prudent. The analysis also shows the increasing demand from investors to include ESG aspects while forming investment portfolios. Thus there is an increasing demand for methods to integrate ESG into investment decisions. Challenges range from the lack of standardized ESG metrics and reporting to concerns about greenwashing. The complexity of ESG factors with robust data and analytics poses significant hurdles to investors and practitioners. Also, the developed Nations have already adopted the process of integrating SDGs in investment and finance decisions but in the case of developing nations like India, it is still in process. The research themes as per the findings are as follows:

1. ESG integration: many research studies examined strategies for ESG integration in investment decision-making.
2. ESG-based performance: many research studies have compared the financial performance of ESG investments and non-ESG investments and the results have shown better financial performance of ESG investments in terms of risk.
3. Behavioural aspect of investment: many researchers have focussed on the psychological and other demographic factors influencing the choice of investors to consider ESG factors while investing.

RECOMMENDATIONS AND FUTURE DIRECTIONS

The synthesis of findings from the SLR highlights the need for standardized ESG reporting, enhanced data quality, and increased stakeholder engagement. Future research should explore the integration of ESG factors in specific asset classes and regions, and also investigate the efficacy of various ESG integration strategies to ensure consistency and comparability. Future directions include the use of artificial intelligence to analyze the vast data of different aspects of ESG in predicting

ESG performance and forecasting behavioral insights of ESG investment decisions. Also, different sections of industries face different ESG challenges so there is a scope to frame sector-specific strategies regarding ESG integration.

LIMITATIONS

While this SLR strives for comprehensiveness, it acknowledges certain limitations. The inclusion of articles listed in the UGC Care I and II list and literature may exclude valuable insights from industry reports. Additionally, the rapidly evolving nature of sustainable finance may result in some studies becoming outdated. ESG is a conceptual framework that includes many disciplines which may result in contradictions and duplication.

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