ARTICLES

Submitted 09-24-2024. Approved 06-23-2025

Evaluated through a double-anonymized peer review. Associate Editor: Rodrigo Leite

Reviewers: Rogiene Batista dos Santos, Fundação Getulio Vargas, Escola de Administração de Empresas de São Paulo, São Paulo, SP, Brazil. Lucas Ayres Barreira de Campos Barros, Universidade de São Paulo, Faculdade de Economia, Administração, Contabilidade e Atuária, São Paulo, SP, Brazil, but he did not authorize disclosure of peer review report.

The Peer Review Report is available at this link

Translated version | DOI: http://dx.doi.org/10.1590/S0034-759020250606x

ESG IN PORTFOLIO CONSTRUCTION: WHAT DOES THE SCIENTIFIC LITERATURE REVEAL?

ESG na formação de carteiras: O que revela a literatura científica?

ESG en la construcción de carteras: ¿Qué revela la literatura científica?

Mariane Bezerra Nóbrega[1] | mariane.nobrega@igarassu.ifpe.edu.br | ORCID: 0000-0003-3331-6426

Israel José dos Santos Felipe[*2] | israel.jose@ufrn.br | ORCID: 0000-0001-8608-0029

Rodrigo Leite Farias de Araújo[1] | rodrigo.araujo@igarassu.ifpe.edu.br | ORCID: 0000-0002-7497-6212

[*] Corresponding author

[1]Instituto Federal de Pernambuco, Departamento de Administração, Igarassu, PE, Brazil

[2]Universidade Federal do Rio Grande do Norte, Programa de Pós-Graduação em Administração, Natal, RN, Brazil

ABSTRACT

This paper presents a Systematic Literature Review (SLR) on the relationship between ESG (Environmental, Social, and Governance) criteria and portfolio diversification strategies. Following the PRISMA protocol and Williams et al. (2021) checklist, the review examines 87 peer-reviewed articles published between 2014 and 2023. Results show that ESG has a generally positive effect on portfolio performance and diversification, although the impact varies across sectors, regions, company sizes, and investor profiles. The study's core contribution is the development of an integrative conceptual framework that classifies the literature into four analytical lenses: ESG as a risk factor, investor preference, investment style, and quality signal. The review enhances understanding of how ESG dimensions influence portfolio decisions and suggests avenues for future research.

Keywords: ESG, portfolio diversification, systematic literature review, sustainable investing, portfolio performance.

RESUMO

Este artigo realiza uma Revisão Sistemática da Literatura (RSL) sobre a relação entre critérios ESG (Environmental, Social and Governance) e estratégias de diversificação de carteiras. Com base no protocolo Prisma e no checklist de Williams et al. (2021), foram analisados 87 artigos publicados entre 2014 e 2023. Os resultados indicam que o impacto do ESG sobre o desempenho e a diversificação de carteiras é amplamente positivo, embora dependa de fatores como setor, localização geográfica, porte das empresas e perfil dos investidores. A principal contribuição do estudo é a proposição de uma estrutura conceitual integradora que organiza a literatura em quatro abordagens: ESG como fator de risco, preferência dos investidores, estilo de investimento e sinal de qualidade. A síntese oferecida amplia a compreensão dos mecanismos pelos quais os fatores ESG influenciam decisões de portfólio e propõe direções para pesquisas futuras.

Palavras-chave: *ESG, diversificação de carteiras, revisão sistemática, investimento sustentável, desempenho de portfólios.*

RESUMEN

Este artículo presenta una revisión sistemática de la literatura (RSL) sobre la relación entre los criterios ESG (ambientales, sociales y de gobernanza) y las estrategias de diversificación de carteras. Utilizando el protocolo PRISMA y la checklist de Williams et al. (2021), se analizaron 87 artículos publicados entre 2014 y 2023. Los resultados sugieren que el ESG influye positivamente en la diversificación y el rendimiento de las carteras, aunque este impacto varía según el sector, la región, el tamaño de la empresa y el perfil del inversor. La principal contribución del estudio es la propuesta de un marco conceptual integrador que organiza la literatura en cuatro enfoques: ESG como factor de riesgo, preferencia del inversor, estilo de inversión y señal de calidad. Esta síntesis mejora la comprensión de los mecanismos mediante los cuales el ESG influye en las decisiones de inversión y plantea direcciones para futuras investigaciones.

Palabras clave: *ESG, diversificación de carteras, revisión sistemática, inversión sostenible, rendimiento de portafolios.*

INTRODUCTION

The significant growth of Socially Responsible Investment (SRI) in recent decades has driven companies to adopt sustainable strategies and disclose ESG (Environmental, Social, and Governance) information, leading to transformations in business models and management theories (Xie et al., 2019). Increased awareness among governments, regulators, and consumers has reshaped the economic environment and capital markets (Hübel & Scholz, 2020). Within this context, fund managers have begun incorporating ESG factors into portfolio construction (Andersson et al., 2022). For ESG advocates, such investments strengthen social capital and deepen relationships with stakeholders (Demers et al., 2021).

In recent years, literature reviews on ESG have gained prominence, addressing emerging topics and their relationship with corporate performance. For example, Daugaard (2020) and Nagai (2023) examine key themes in ESG research. In Brazil, Silva and Carvalho (2024) explore the influence of ESG practices on financial performance. Gangi et al. (2022) identified thematic gaps and a tendency to prioritize the financial paradigm over ethical considerations.

Despite the increasing relevance of Systematic Literature Reviews (SLRs), research output in this area remains limited when compared to the field of health sciences, where the method originated. Estimates suggest approximately 6,000 SLRs in the last five years indexed in the Scopus database and 4,000 in Web of Science within the fields of Business, Economics, and Finance. Tranfield et al. (2003) had already highlighted the value of SLRs in Management due to the thematic fragmentation of the field and its interdisciplinary nature.

Nagai (2023) warns of a growing disconnect between research topics in SRI and ESG, which moves away from the original aim of making companies more ethical and sustainable. Gangi et al. (2022) observed that the literature still tends to focus on isolated ESG dimensions and specific contexts, lacking a comprehensive mapping of theoretical diversity and a full understanding of metric relevance.

There is, therefore, a limited number of SLRs that systematically address the intersection of ESG and portfolio diversification. Despite recent progress, integration between these two areas remains underexplored, underscoring the need for further research.

Against this backdrop, the central research question of this article is: What is the relevance of ESG scores in the risk-return relationship of equity portfolio diversification? The objective is to investigate the intersection of ESG and diversification through a systematic literature review combined with bibliometric analysis, based on 87 articles published between 2014 and 2023.

By critically organizing the studies and introducing conceptual distinctions such as ESG beta, ESG signal, and ESG style, this paper proposes a more precise framework for understanding when, how, and why ESG should (or should not) be considered in portfolio construction. The main methodological contribution lies in the development of analytical tools, including eligibility criteria, methodological quality and validity parameters, and a Data Extraction Form (DEF). The methodology combines SLR and bibliometric analysis supported by visual tools, enabling the mapping of trends and offering guidance for researchers, investors, and portfolio managers.

The theoretical contributions include the identification of recurring themes, connections among approaches, and opportunities for future research. The empirical contributions consist of mapping patterns, comparing findings across contexts, and highlighting methodological limitations in the available evidence.

METHODOLOGY

The search protocol followed the PRISMA 2020 guidelines, using the flow diagram and the checklist proposed by Williams et al. (2021), which outlines the key stages for conducting systematic reviews in the field of management. The international databases Web of Science® (WoS) and Scopus were used, accessed through the CAPES Periodicals Portal. The search strategy is presented in Table 1.

Table 1. Query Strings in the Databases

Web of Science
TS=((((portfolio$ OR asset$ OR equit* OR stock$) AND (allocation OR choice OR combination OR construction OR diversif* OR evaluation OR formation OR integration OR invest* OR issue$ OR management OR measurement OR optim* OR performance OR pricing OR return$ OR selection OR strateg*)) OR ((mean variance OR (return$ AND risk) OR portfolio) AND (theory OR approaches OR framework)) OR Markowitz OR (efficien* frontier) OR Sharpe) AND ("environmental, social and governance" OR "environmental, social and corporate governance" OR "ESG"))
Scopus
TITLE-ABS-KEY((((portfolio$ OR asset$ OR equit* OR stock$) AND (allocation OR choice OR combination OR construction OR diversif* OR evaluation OR formation OR integration OR invest* OR issue$ OR management OR measurement OR optim* OR performance OR pricing OR return$ OR selection OR strateg*)) OR ((mean variance OR (return$ AND risk) OR portfolio) AND (theory OR approaches OR framework)) OR Markowitz OR (efficien* frontier) OR Sharpe) AND ("environmental, social and governance" OR "environmental, social and corporate governance" OR "ESG"))

The inclusion criteria considered: articles published within the last 10 years and classified under relevant thematic categories in the selected databases. Metadata were exported in BibTeX® format and processed using R software, with duplicates removed. A screening process was then conducted through the reading of titles, abstracts, and keywords. Articles not aligned with the review's objective were excluded.

A full-text reading of the remaining articles was performed to assess compliance with eligibility, quality, and methodological validity criteria, as shown in Table 2. Methodological quality was classified using an ordinal scale: Low (0–2), Moderate (3–4), and High (5). Articles that did not include empirical data, ESG scores, benchmark comparisons, or return analyses were excluded.

Table 2. Eligibility, Quality, and Methodological Validity Criteria

Eligibility Criteria	
i) What performance measure was used?	Articles that did not assess the returns of equity portfolios were excluded.
ii) How was ESG implemented?	Articles that did not apply ESG scores or ratings in the portfolio analysis were excluded.
iii) What were the performance evaluation strategies?	Articles were excluded if they did not: Use ESG as a risk premium factor in multifactor portfolio models; compare ESG portfolios to benchmarks or conventional portfolios; compare high-ESG to low-ESG portfolios.
iv) What outcomes were expected?	Articles that did not present empirical results or failed to address the research question were excluded.
Quality Criteria	
Title:	Does it clearly state the research problem, objective, and methodology?
Abstract:	Does it clearly present the research problem, objective, and key findings?
Objectives / Research Question:	Are they clearly defined?
Methodology:	Is it appropriate for addressing the research objective?
Results	Are the results aligned with the stated objectives?
	Does the analysis directly answer the research question?
	Is the analysis clear and methodologically rigorous?
Conclusion:	Is the conclusion clearly and objectively stated?
	Are the study's limitations acceptable?
	Does the study provide value to research or practice?
Methodological Validity Criteria	
i) Is the research design replicable and objective?	Articles were excluded if the methodological procedures were not clearly defined, preventing replication.

To enhance the robustness of the research, a backward reference search was conducted using the initial corpus. Additional articles were selected through title screening, followed by full-text reading of preselected papers, and inclusion in the final corpus. Lastly, the selected studies were reviewed to ensure that no relevant works were unintentionally excluded from the pool.

Mendes-Da-Silva (2019) discusses potential limitations of SLRs, such as the likely heterogeneity of selected studies, individual and publication biases, and the continuous need for updates. In this regard, one of the challenges in establishing standards in the field was the limited standardization among studies within the corpus. To address this, the development of query strings in the databases, the definition of eligibility, quality, and methodological validity criteria, and the construction of a data extraction form (DEF) helped manage structural differences across studies.

Moreover, the use of a classification system based on the average of quality and methodological validity scores, combined with the Ordinatio method, allowed the analysis to focus on the most relevant articles within the sample. Equation 1 presents the InOrdinatio formula.

$$InOrdinatio = \left(\frac{IF}{1000}\right) + \alpha[10 - (ReserarchYear - PublishYear)] + \sum C_1 \quad (1)$$

Where: *IF* is the journal impact factor, α is a weighting factor ranging from 1 to 10, defined at the researcher's discretion; *ResearchYear* refers to the year in which the research was conducted; *PublishYear* is the year the article was published; and ΣC_i represents the total number of citations the article has received. A weighting factor of 9 was chosen due to the relevance of the "year" criterion, considering the growing volume of new publications on the ESG topic, which remains relatively recent.

With the final sample, a complete reading was conducted again, this time systematically, with in-depth article analysis. In this stage, the Data Extraction Form (DEF) was used, as shown in Table 3, to organize information aimed at answering the research question through classification and grouping, enabling the identification of patterns and key emerging themes.

Table 3. Fields of the Developed Data Extraction Form

1. Objective	13. Portfolio rebalancing method
2. Research gap	14. Portfolio construction / Asset allocation method
3. Research questions and motivations	15. Financial performance measure
4. Main databases used	16. ESG quality measure (individual or aggregate score)
5. Start year of the sample	17. Benchmark used
6. End year of the sample	18. Portfolio constraints
7. Total number of years analyzed	19. Analysis of different time periods
8. Geographic scope / Market coverage	20. Industry effects
9. Data frequency	21. Results / Conclusions: Statistically significant financial differences?
10. Analyzed assets / Sample description	22. Contributions and relevance of the findings to the academic debate
11. Theories analyzed or cited	23. Suggestions for future research
12. Pricing models / Return measurement models	24. Reported problems or limitations

In the analysis stage, the biblioshiny interface from the Bibliometrix package (R) was used to conduct science mapping (bibliometric analysis). A theoretical and thematic synthesis of the ESG literature was also carried out, with a focus on the conceptual foundations and practical implications of sustainable investments. The aim was to propose an integrative framework that reinterprets the field in light of both empirical findings and theoretical insights. Finally, a future research agenda is presented.

RESULTS

Bibliometric Analysis

In defining the sample, searches were conducted using titles, abstracts, and keywords. Before applying filters, 1,701 results were obtained from Web of Science (WoS) and 2,101 from Scopus. The inclusion criteria were applied directly within the databases, using the following filters:

a. Document type – Only peer-reviewed journal articles were included, focusing on *white literature*. This reduced the sample to 1,605 articles in WoS (96 excluded) and 1,708 in Scopus (393 excluded). In WoS, "early access" documents were excluded, and in Scopus, "articles in press" were removed.

b. Time frame: Last 10 years (2014–2023) – This filter reduced the sample to 1,366 articles in WoS (239 excluded) and 1,294 in Scopus (414 excluded). For publications prior to 2014, few articles specifically addressed ESG; the earliest dates were 2009 in WoS and 2007 in Scopus, and most studies focused on funds or indices.

c1. Web of Science – Excluded categories – The sample was further reduced to 1,273 articles (93 excluded).

c2. Scopus – Excluded subject areas – The sample was reduced to 1,264 articles (30 excluded).

Combining both databases, the total number of articles after applying the inclusion criteria was 2,537. The screening stage involved a rigorous data preparation process for the bibliometric analysis. After exportation, exclusion criteria were applied as follows:

a. Removal of duplicate articles – The sample was reduced to 1,575 articles (962 excluded).

b. Selection criteria – Reduced the sample to 154 articles (1,421 excluded).

c. Eligibility criteria – Further reduced the sample to 103 articles (51 excluded).

d. Quality and methodological validity criteria – Final reduction to 86 articles (17 excluded).

e. Exclusion of inaccessible articles - obstructs the sample for 79 articles (7 excluded).

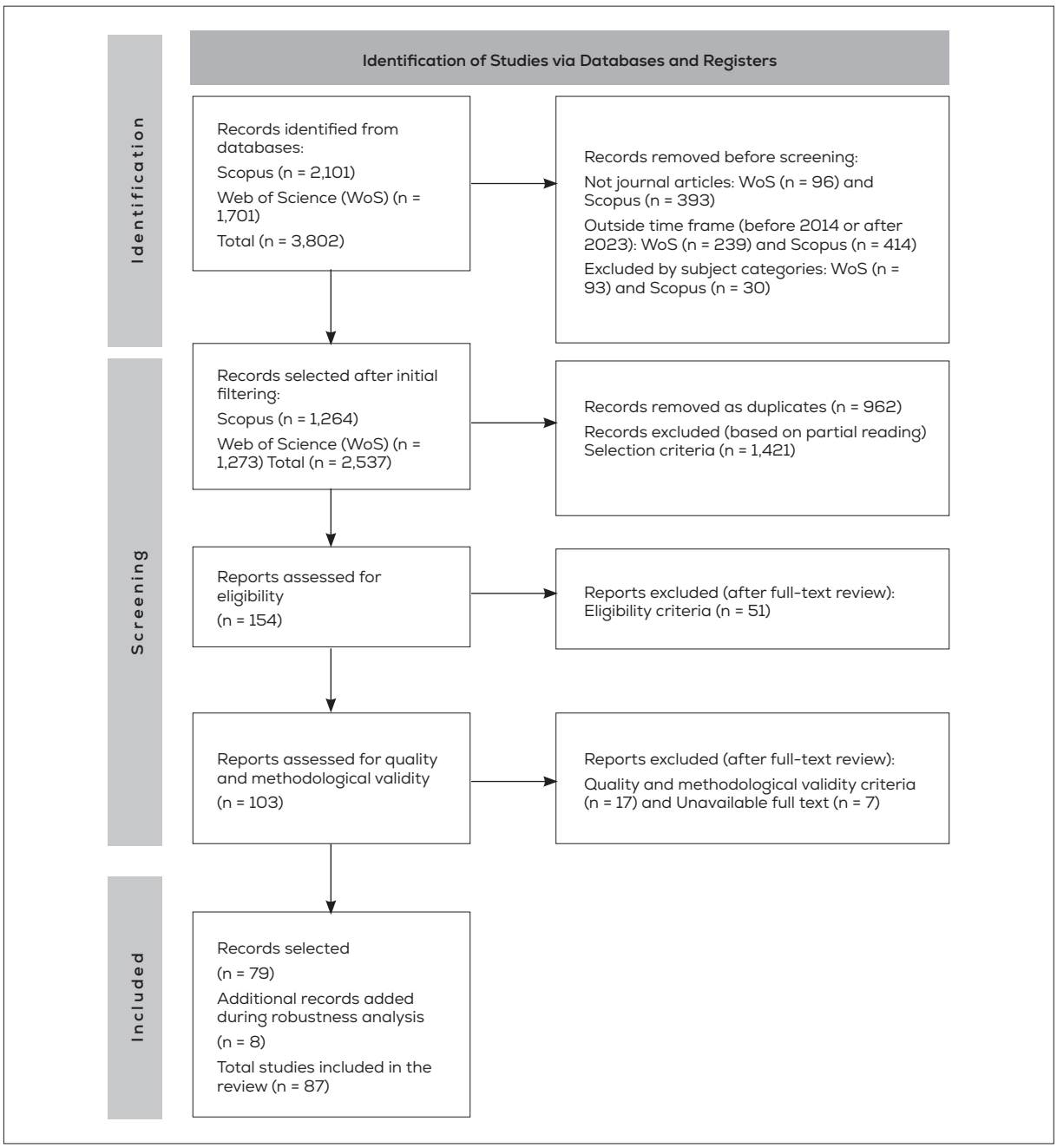
In step b, a second round of article selection was carried out through a qualitative analysis based on the reading of titles and abstracts, as proposed by Williams et al. (2021), as well as keywords. Articles were retained only if they were related to Management/Finance and explicitly addressed stock portfolio diversification or management using some form of ESG metric or rating. Generally, articles were excluded if keywords such as "diversification" and "ESG" were used merely for contextual framing or to highlight the importance of the topic.

From the title and keyword screening, 1,165 articles were excluded, and an additional 256 were excluded after abstract review, totaling 1,421 exclusions. Several articles lacked clear titles

and abstracts; therefore, for steps c and d, full-text reading was required. Based on the eligibility, quality, and methodological validity criteria, 68 articles were excluded, and access could not be obtained for 7 others, leaving a sample of 79 articles.

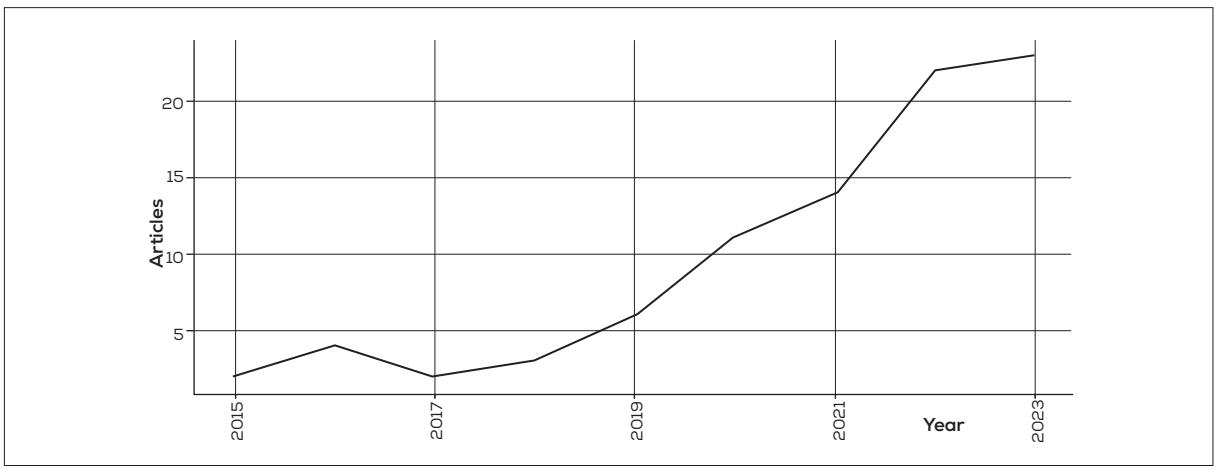
A robustness analysis added 160 articles for further review, from which 8 were selected. The final corpus for the SLR comprised 87 articles. The results after each filtering step are presented in Figure 1.

Figure 1. PRISMA 2020 Flow Diagram



According to Fisch and Block (2018), the use of figures and tables is preferable to lengthy textual descriptions. Figure 2 presents the annual distribution of the selected articles. The peak occurred in 2023, accounting for 26% of the total, reflecting a significant increase in recent years. No articles were selected for 2014, indicating that this is an emerging field of research.

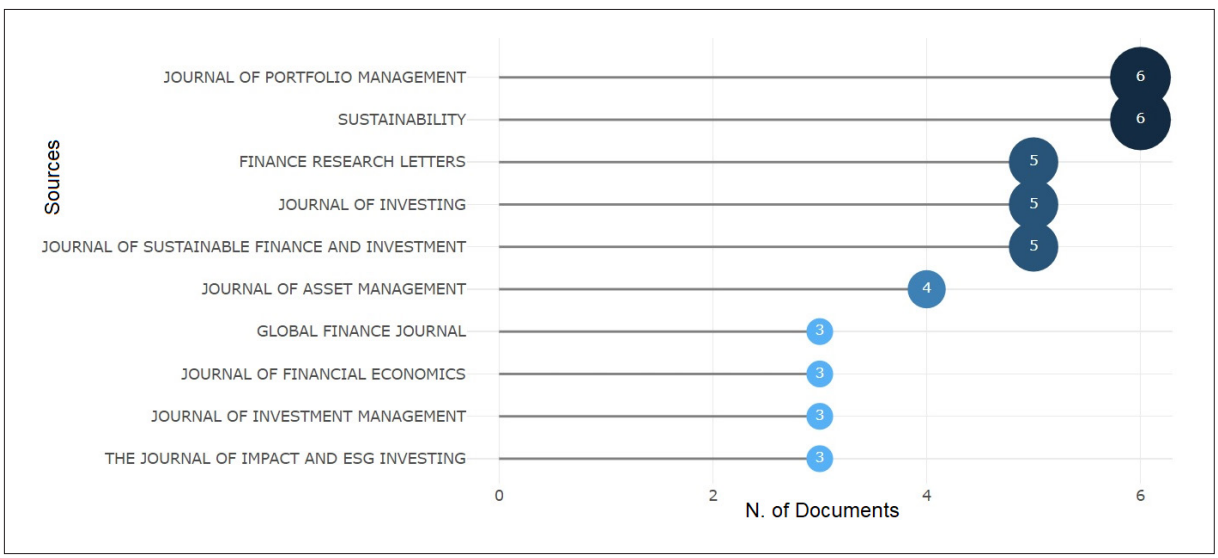
Figure 2. Annual Scientific Production



Year	2015	2016	2017	2018	2019	2020	2021	2022	2023
No. of Articles	2	4	2	3	6	11	14	22	23
%	2%	5%	2%	3%	7%	13%	16%	25%	26%

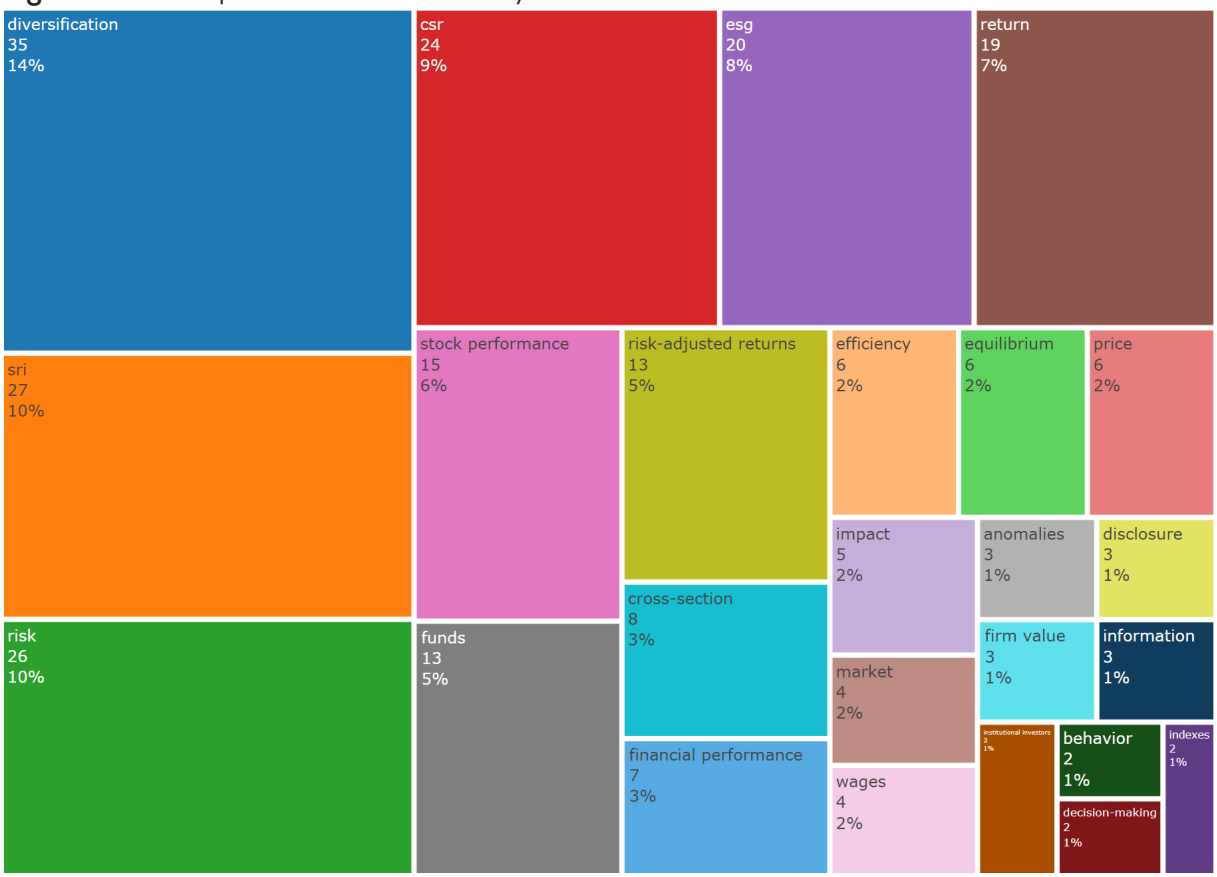
Figure 3 displays the 10 most relevant journals. The Journal of Investing was a pioneer in this field, but more recent journals have started publishing on ESG and portfolios, reflecting the expansion and diversification of the research domain. Restricted access to certain journals, such as The Journal of Portfolio Management, limits their representation in the Brazilian sample.

Figure 3. Most Relevant Journals



The most cited articles reference Fama and French (1993, 2015), Carhart (1997), and Hong and Kacperczyk (2009), with a focus on asset pricing and "sin stocks". The Journal of Financial Economics and The Journal of Finance were the most frequently cited journals. Figure 4 presents a TreeMap of the 25 most frequent keywords, following synonym treatment and normalization (e.g., "risk" and "risks").

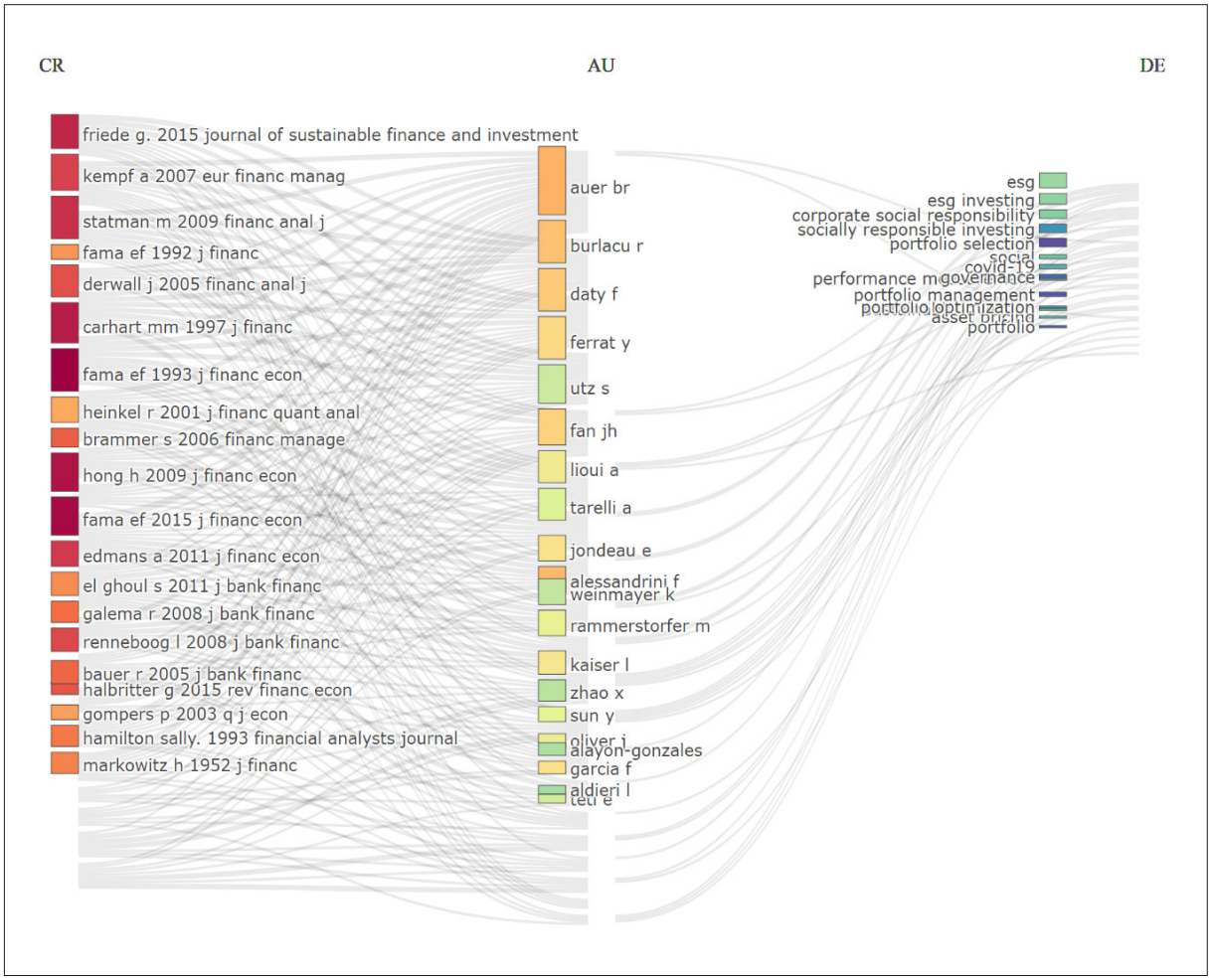
Figure 4. TreeMap of Author-Defined Keywords



"Diversification" and "Risk" dominated the keywords, highlighting a strong emphasis on risk mitigation strategies. Terms such as "ESG," "SRI," and "CSR" reflect the growing prominence of the theme. The trend analysis revealed a steady increase in the use of these terms, with stability observed only for "funds" and "risk-adjusted returns," indicating a consolidation of global interest in the topic.

Figure 5 presents the co-citation network, highlighting central authors and studies, such as Friede et al. (2015) and Auer and Schuhmacher (2016). Intense collaboration was observed among researchers within the same group, with limited interaction between clusters. Studies such as Kempf and Osthoff (2007) and Statman and Glushkov (2009) also stand out for their focus on the performance of portfolios applying ESG criteria.

Figure 5. Sources, Authors and keywords Network



The network reveals a set of highly connected references, that is, frequently cited and influential in the field, such as Friede et al. (2015), Journal of Sustainable Finance and Investment. The variety of descriptors suggests that ESG-related studies address multiple dimensions. The author network demonstrates active and ongoing collaboration in ESG research. The dense web of connections among cited references and descriptors indicates that many of the cited works are interrelated and contribute to a cohesive body of knowledge on ESG.

The network analysis also highlighted authors with several high-impact citations, including Auer and Schuhmacher (2016) and Ferrat et al. (2022, 2023), who frequently cite foundational studies, especially the seminal works of Fama and French (1992, 1993, 2015), Carhart (1997), and the comprehensive ESG-performance review by Friede et al. (2015). Notable contributions also include Kempf and Osthoff (2007) and Statman and Glushkov (2009), which examined the effects of socially responsible investment within portfolio contexts, now considered reference works in the field.

The presence of multiple, distinct clusters further reveals the existence of different research groups with strong internal collaboration but limited interaction across groups.

Analyzing the most cited countries across the sample, China stands out with 684 citations, followed by the United States with 551, suggesting a significant concentration of references from these two nations. The growing academic focus on China may be attributed to its rapid economic development and increasing integration into global financial markets. When assessing publication output over time, countries such as France, Italy, and the United Kingdom also begin to emerge alongside the U.S. and China.

Among the most notable citations, the most cited article within the sample itself was Pedersen et al. (2021), while the globally most cited was Broadstock et al. (2021). Articles that scored over 100 points according to the established classification system (eight out of the 87 articles, or approximately 10%) included: Broadstock et al. (2021), Pedersen et al. (2021), Pástor et al. (2021), Avramov et al. (2022), Auer and Schuhmacher (2016), Nagy et al. (2016), Díaz et al. (2021), and Limkriangkrai et al. (2017). In summary, the main objectives of these standout studies involved: analyzing the role of ESG performance during the COVID-19 crisis, empirical testing of models incorporating ESG into portfolio construction and asset pricing and evaluating the implications of ESG integration for portfolio management.

The primary motivations for adopting ESG include its potential to serve as a hedge during crises, its ability to predict returns, its influence on investor preferences, and its applicability across regional, global, and sectoral strategies. Methodologies range from the classical mean-variance optimization model by Markowitz (1952) to proprietary models that empirically test ESG's impact on portfolio performance. The most used metrics focus on return-based measures, with particular emphasis on the Sharpe and Sortino ratios. Most studies report a positive perspective on ESG, though its effects are shown to depend on multiple interacting factors.

Theoretical and Thematic Synthesis of the Literature

The literature was organized into thematic axes based on the conceptual frameworks that underpin the relationship between ESG and portfolio performance. This categorization enables an understanding of the theoretical evolution, empirical developments, and emerging gaps, thereby providing a foundation for organizational decision-making and future research.

ESG as a Risk Factor and Asset Pricing Mechanism

Asset pricing models such as the CAPM and multifactor models by Fama and French (1993, 2015, 2018), Carhart (1997), and Hou et al. (2015) are widely applied. Studies like Pástor et al. (2021) and Díaz et al. (2021) suggest that ESG may function as an additional systematic factor, referred to as "ESG beta", influencing the risk premium, volatility, and expected return of sustainable assets. Within this framework, assets with high ESG scores tend to offer lower equilibrium returns but higher performance during positive sustainability shocks. ESG, in this thematic axis, reinterprets the CAPM by incorporating non-financial preferences and market segmentation into traditional pricing models.

ESG as a Non-Financial Investor Preference

This perspective treats ESG as an expression of non-financial utility. Conscious investors are presumed to be willing to accept lower returns in exchange for holding sustainable assets. Equilibrium models with heterogeneous preferences (Pedersen et al., 2021; Shi et al., 2024; Tang et al., 2024) demonstrate that the utility derived from ESG exposure influences asset prices, leads to market segmentation, and redefines the efficient frontier (ESG-SR Frontier). The literature distinguishes between investor profiles, unaware, aware, and motivated, and draws on behavioral theories to explain value-driven investment decisions.

ESG as a Signal of Organizational Quality and Resilience

Some studies (Broadstock et al., 2021; Cardillo et al., 2022; Walker et al., 2024) suggest that high ESG scores indicate lower idiosyncratic risk, strong governance, and operational resilience. In times of crisis, such as the COVID-19 pandemic, ESG-oriented firms tend to stand out for their stability and their ability to maintain investor confidence, positioning ESG as a proxy for mitigating reputational and operational risks.

ESG as an Investment Style and Portfolio Strategy

Empirical evidence (Nagy et al., 2016; Aydoğmuş et al., 2022) indicates that ESG-based approaches, such as tilt, momentum, or smart beta, can deliver competitive risk-adjusted performance. In this context, ESG functions as an investment style, comparable to traditional factors like value or quality. This reinforces its adoption by portfolio managers seeking efficiency without compromising sustainability.

Uncertainty and Divergence in ESG Ratings

Databases such as Refinitiv, Bloomberg, MSCI ESG, and Sustainalytics are widely used, yet methodological divergence among providers undermines comparability. The study by Avramov et al. (2022) suggests that the lack of standardization generates informational noise, negatively affecting pricing, capital allocation, and the effectiveness of ESG as a decision-making criterion. This underscores the urgent need for methodological convergence among investors, regulators, and analysts.

Conditional Materiality by Sector and Sectoral Heterogeneity of ESG Effects

Recent studies (Giese et al., 2021; Yin et al., 2023; Deng, 2025) show that the effects of ESG vary across sectors, time periods, and geographies. ESG materiality is not universal: it may be positive

in one sector, but neutral or negative in another. Emerging markets, for instance, face distinct regulatory environments that influence ESG outcomes (Tarczynska-Luniewska et al., 2024). These findings highlight the need for more contextualized and disaggregated approaches to ESG analysis.

ESG in Emerging Markets and Its Connection to the SDGs

Studies focused on the Global South (Dsouza et al., 2024; Yin et al., 2023; Deng, 2025) indicate that ESG can help reduce the cost of capital, strengthen institutional governance, and contribute to the Sustainable Development Goals (SDGs). By linking ESG to the SDGs, its potential is expanded as a transformational tool in contexts characterized by regulatory instability and institutional vulnerability.

Aggregate ESG vs. Individual Dimensions (E, S, G)

A growing strand of the literature examines whether the impact of ESG on risk and return is better captured by an aggregate index or by its individual components: Environmental (E), Social (S), and Governance (G). Studies such as Díaz et al. (2021) indicate that the E dimension is associated with higher returns in resource-intensive sectors, while the G dimension is linked to organizational stability and resilience. Giese et al. (2021) demonstrate that the effects of all three dimensions vary depending on industry context and time horizon. Bender et al. (2018) caution that aggregating ESG metrics may obscure important sources of risk and return.

This debate carries significant implications for portfolio construction, risk attribution, and ESG disclosure regulation by questioning the validity of using ESG as a unified metric. Research such as Auer and Schuhmacher (2016) and Limkriangkrai et al. (2017) compares aggregate versus disaggregated approaches, showing that individual pillars may produce distinct effects or reveal complementarities overlooked by composite indices.

Table 4. Proposed Integrative Framework for the ESG Field

Linha Temática	Foco Teórico	Implicações Analíticas
ESG as a risk factor and asset pricing mechanism.	ESG beta, systematic risk, pricing factor, multifactor models.	Evaluation of conditional returns, development of multifactor asset pricing models.
ESG as a non-financial investor preference.	Extended utility, ESG-SR frontier, investor typology (ESG-unaware, ESG-aware, ESG-motivated), portfolio efficiency.	Market segmentation, optimal allocation, trade-off between returns and ESG utility, differences in portfolio weights, structural rebalancing, impact on prices, liquidity, and capital flows.
ESG as a signal of organizational quality and resilience.	Governance proxy, reputation, idiosyncratic risk, crisis stability.	Selection of resilient assets, mitigation of operational risks, superior performance during shocks.
ESG as an investment style and portfolio strategy.	ESG as a style factor (value, momentum, quality); ESG smart beta.	Active and passive strategies, ESG tilt, tracking error control, portfolio customization.

Continue

Table 4. Proposed Integrative Framework for the ESG Field Concludes

Linha Temática	Foco Teórico	Implicações Analíticas
Uncertainty and divergence in ESG ratings.	Rating dispersion, informational noise, standardization issues.	Mispricing, reduced investor confidence and demand, greenwashing risks, flawed decision-making.
Conditional materiality and sectoral heterogeneity of ESG effects.	Sector-specific dynamics, varying materiality of E, S, and G, nonlinear relationships.	Sector-targeted strategies, differentiated regulation, customization of ESG metrics by industry.
ESG in emerging markets and connection with the SDGs.	ESG in the Global South, institutional transitions, political risk, weak institutions, SDG alignment.	ESG as a tool for sustainable development, public incentives, mitigation of institutional vulnerabilities.
Aggregate ESG vs. individual E, S, G dimensions.	Aggregate score vs. disaggregated pillars; differentiated relevance of E, S, and G.	Portfolio rebalancing, weighting attribution, structural analysis of impact and return.

The diversity of methods and contexts analyzed reinforces ESG as an expanding interdisciplinary field. The thematic structure adopted in this study aimed to move beyond the simplistic assertion that "ESG generates returns," by integrating distinct theoretical and empirical approaches, including systematic risk, investor preferences, investment style, and quality signaling, among others. The analysis also sought to clarify when and why such effects occur, without assuming universality, and by acknowledging limitations, conditions, and latent variables.

Based on this, the study proposes a theoretical-pragmatic framework that supports more effective and consistent decision-making for researchers, asset managers, and policymakers.

Temporal Evolution of the Literature

The analysis of the temporal evolution of the literature, based on the scope of this systematic review, reveals a field undergoing rapid maturation. Initially focused on the relationship between ESG and financial performance, studies have expanded to incorporate sophisticated economic theories, contextualized approaches, and emerging topics such as conditional materiality, informational noise, and social implications.

Three main phases can be identified throughout this trajectory. The initial phase (2015–2018) concentrated on the financial viability of ESG, emphasizing empirical validation and the performance analysis of sustainable portfolios. The conceptual expansion phase (2019–2021) marked the emergence of equilibrium and pricing models, incorporating non-financial preferences and formally structuring ESG as an economic factor. Finally, the maturity and complexity phase (2022–2023) delved deeper into the heterogeneity of ESG effects, rating dispersion, and challenges in emerging markets.

During the early years, the literature was primarily concerned with assessing whether ESG-oriented investments were financially viable. Studies such as Auer and Schuhmacher (2016), Nagy et al. (2016), and Filbeck et al. (2019) tested whether these portfolios outperformed benchmarks in

terms of risk-adjusted returns. Although the results were initially mixed, this phase was essential to legitimize the topic and pave the way for more robust theoretical approaches.

From 2019 onward, the literature shows increasing theoretical sophistication, with the introduction of equilibrium models that incorporate non-financial preferences (Pástor et al., 2021; Pedersen et al., 2021). ESG began to be interpreted not only as a moral or reputational concern but also as a systematic risk factor, a proxy for quality, and an investment style. This phase consolidated the understanding that ESG principles can be formally integrated into quantitative finance, elevating the debate beyond normative considerations.

In recent years, studies have become more critical, granular, and interdisciplinary. Research such as Yin et al. (2023) and Deng (2025) introduced the notion of sectoral non-linearity, showing that ESG effects vary by industry, geography, and time horizon. Avramov et al. (2022) demonstrated that divergence in ESG ratings undermines the effectiveness of sustainable allocation, highlighting significant methodological challenges. Additionally, a new research agenda has emerged focusing on emerging markets, particularly in the Global South, where ESG is examined as a response to institutional vulnerabilities, regulatory asymmetries, and structural inequalities.

This evolution reflects a shift from basic empirical testing to theory-driven and context-sensitive analyses. The conceptual transformation of ESG, from a social responsibility initiative to a systematic risk factor, illustrates the field's maturation into an autonomous area of research. By integrating financial theory, portfolio management, and public policy, ESG literature has positioned itself as a central axis in contemporary discussions on sustainability and responsible investing.

Theoretical and Practical Implications

This systematic review offers relevant contributions by rethinking classical models in Finance, such as Markowitz's modern portfolio theory and multifactor pricing models, through the lens of ESG integration in investment management. For instance, Shi et al. (2024) and Tang et al. (2024), by imposing ESG constraints on portfolio selection models, demonstrate that although asset composition changes, risk-return performance remains competitive. The ESG-SR Efficient Frontier, as proposed by Pedersen et al. (2021) and Jin (2022), expands the scope of portfolio optimization by incorporating social responsibility as a trade-off alongside return and risk.

In response to the classic debate over the financial viability of ESG, early studies such as Auer and Schuhmacher (2016), Nagy et al. (2016), and Filbeck et al. (2019) suggested that ESG investments do not compromise performance. Subsequent research, such as Walker et al. (2024) and Cardillo et al. (2022), provides evidence that sustainable portfolios exhibit lower volatility and greater resilience during crises, with competitive risk-adjusted returns. Similarly, Broadstock et al. (2021), Yin et al. (2023), and Deng (2025) show that firms with high ESG performance tend to achieve superior outcomes during systemic shocks, such as the COVID-19 pandemic.

From a theoretical perspective, models such as Pástor et al. (2021) and Hübel and Scholz (2020) demonstrate that ESG can be formally incorporated as a systematic factor, affecting asset betas, cost of capital, and market equilibrium. Optimal allocation theory thus begins to consider non-financial preferences, revealing that ESG influences not only expected returns, but also investors' risk perception and utility.

These insights have direct implications for corporate decision-making. The integration of ESG metrics can guide more responsible financing policies (Limkriangkrai et al., 2017), serve as a tool for mitigating regulatory and reputational risks, and strengthen organizational resilience. Strategies such as ESG tilt and momentum, as well as disaggregated analysis of the E, S, and G pillars, allow for more refined decision-making in both portfolio management and corporate strategy design.

The literature also reveals that ESG materiality is conditional upon context, the type of metric used, and the dimension analyzed. The effects on portfolio performance may be positive, neutral, or negative, depending on variables such as industry sector, time horizon, investor profile, and applied methodology. This finding highlights the importance of models that incorporate contextual and institutional heterogeneity, especially in emerging markets, where regulatory structures and governance standards differ (Yin et al., 2023; Deng, 2025).

Another practical challenge lies in the divergence among ESG ratings from different providers. The lack of standardization creates informational uncertainty and undermines the effectiveness of financial decisions. Avramov et al. (2022) show that this inconsistency can lead to pricing errors, inefficient capital allocation, and increased perceived risk, emphasizing the urgency for greater transparency and methodological convergence.

The practical and social implications of the findings are particularly relevant for countries in the Global South, where challenges such as weak governance, institutional instability, and social inequality are more pronounced. Studies focused on this context (Tarczynska-Luniewska et al., 2024; Dsouza et al., 2024; Yin et al., 2023; Deng, 2025) reveal the potential of ESG as a lever for effective public policy, capital attraction, and corporate strategies attuned to local socio-environmental demands. In fragile markets, ESG practices contribute to reducing idiosyncratic risk (Cardillo et al., 2022) and increasing investor confidence (Broadstock et al., 2021).

Several studies directly align with the UN 2030 Agenda and the Sustainable Development Goals (SDGs). Research on ESG disclosure and institutional governance links to SDG 16 (Peace, Justice and Strong Institutions). Work exploring the integration of financial performance and environmental impact connects to SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action). Studies on sustainability in emerging economies relate to SDG 10 (Reduced Inequalities) and SDG 17 (Partnerships for the Goals).

Concrete examples include Broadstock et al. (2021), who document the greater resilience of ESG firms in China during the COVID-19 crisis (SDGs 9 and 13), and Avramov et al. (2022), who address capital cost distortions caused by inconsistencies in ESG ratings (SDG 16). Nagy et al. (2016) show that ESG strategies based on tilt and momentum can produce superior risk-adjusted returns, contributing to SDG 8 (Decent Work and Economic Growth). Lastly, Alessandrini and

Jondeau (2021) emphasize the importance of engagement strategies and financial education tailored to investor profiles, whether unaware, aware, or motivated, aligning with SDGs 4 and 17.

Future Research Agenda

The articles analyzed in this systematic review propose a wide range of avenues to deepen the understanding of ESG integration in financial markets. The suggestions converge around topics such as ESG behavior under extreme conditions, uncertainties related to ESG ratings, theoretical modeling, refined empirical approaches, and the particularities of emerging markets. Based on these contributions, it is possible to identify a set of research gaps and promising opportunities for further investigation:

Multidimensional Unpacking of ESG

Future studies may explore in greater depth the specific effects of the Environmental (E), Social (S), and Governance (G) dimensions on risk, return, and corporate decision-making. There is ample room for analyses that examine the individual or combined influence of ESG pillars across different time horizons (short-, medium-, and long-term), while considering their interaction with the economic cycle and the institutional maturity of markets.

Uncertainty in ESG Ratings and Methodological Convergence

The divergence among ESG rating providers remains a significant source of informational noise. Future research may focus on modeling the effects of this uncertainty on asset allocation, pricing, and cost of capital, as well as on developing standardized, validated, and comparable metrics that reduce disclosure bias and enhance transparency for investors and regulators.

ESG, Climate Shocks, and Systemic Risk

There is still a lack of models that link ESG preferences, climate change, and systemic risk. Future research could integrate these dimensions into asset pricing and general equilibrium models, with particular emphasis on emerging markets and high-volatility contexts, where ESG may function as a mechanism for institutional and financial stabilization.

ESG Impact Beyond Financial Performance

A significant gap remains in the measurement of real-world ESG impact, particularly regarding environmental and social dimensions. Future research should aim to develop methods for

quantifying not only financial returns but also the tangible effects of ESG practices on the environment, social equity, and institutional development.

Investor Preference Heterogeneity

There is a lack of empirical studies analyzing the transition between investor profiles, from unaware to motivated, and its effects on capital flows and asset pricing structures. Future research could examine the role of institutional investors, retail investors, and regulators in ESG pricing dynamics, as well as the engagement mechanisms and financial education strategies that promote broader adoption of sustainable investment criteria.

Conditional Materiality and Nonlinear Effects

The materiality of ESG practices varies across sectors, geographies, and stages of economic development. New studies could incorporate nonlinear relationships and conditional effects into their analyses, assessing the specific contexts in which ESG is relevant to performance. This would support the development of public policies and regulatory frameworks better aligned with local productive structures.

Theoretical Refinement of ESG Integration in Portfolios

There is room to advance the integration of ESG into asset allocation theory, treating it not merely as a screening filter but as an additional dimension in the utility function. Portfolio selection models can be expanded to accommodate multiple investor preferences, leveraging recent developments in behavioral economics and socially conscious utility theory.

Exploration of Underrepresented Contexts

Most studies are concentrated in developed economies. Future research agendas should prioritize less liquid markets and developing countries, assessing how factors such as political instability, informational asymmetries, and weak institutional governance condition the effects of ESG.

Meta-Analyses and Quantitative Synthesis of ESG Effects

Given the methodological diversity and variation in empirical findings, future research could advance through meta-analyses or quantitative reviews that systematize the average impact of ESG on portfolio performance. This would allow for the estimation of consistent effect sizes, the assessment of statistical heterogeneity, and the identification of significant moderators such as sector, country, or period.

FINAL REMARKS

This systematic review aimed to map the scientific literature on the relationship between ESG and portfolio diversification, based on 87 articles published between 2014 and 2023. Its main contribution lies in the proposal of an integrative conceptual framework capable of explaining the effects of ESG on portfolio performance, highlighting transmission mechanisms and conditional factors that modulate these effects.

The bibliometric analysis confirmed a consistent increase in the number of publications on the topic, widely distributed across journals and regions, with particular growth in academic output from China. This trend reflects improvements in ESG data availability, the expansion of sustainability policies, and increasing market maturity regarding ESG integration.

The findings reveal a significant theoretical evolution. The literature has moved beyond a narrow focus on financial performance to incorporate equilibrium models with non-financial preferences, multifactor asset pricing approaches, discussions on conditional materiality, and methodological challenges related to ESG data standardization. Rather than treating ESG as a single and universal factor, this review demonstrates that it operates through multiple channels, as a risk factor, investor preference, quality proxy, or investment style, and that its effects are highly context dependent.

The impact of ESG on risk-adjusted returns is neither linear nor uniform, but contingent upon a range of variables such as firm size, industry, investor profile, type of ESG strategy, investment horizon, rating quality, and the regulatory environment. The literature, therefore, reinforces the need for a contingent and contextualized approach, recognizing that "including ESG" does not inherently lead to superior financial outcomes.

This critical perspective also extends to how ESG is modeled: there are significant limitations in the aggregation of the E, S, and G pillars into composite indices, and in the overreliance on a small set of data providers. Such methodological choices may introduce bias and compromise both the external validity of findings and the practical effectiveness of ESG strategies. The field thus demands greater granularity and rigor in the development of metrics and econometric models.

This study also contributes by connecting the findings with the main theoretical frameworks underpinning the ESG, portfolio performance relationship. While stakeholder theory, agency theory, and shareholder theory have been employed to explain both positive and negative effects, the contrasting results point to the relevance of institutional approaches, such as Institutional Theory and Neo-Institutionalism, which acknowledge the influence of contextual, normative, and cultural factors on corporate and investor behavior.

From a practical standpoint, the results are directly relevant to investors, fund managers, and policymakers, especially in developing countries. ESG emerges as a tool for resilience and competitive advantage in settings characterized by institutional vulnerability, but its effectiveness depends on how it is adapted to local conditions. The relationship between ESG and the

Sustainable Development Goals (SDGs) is also emphasized, indicating important synergies between sustainable investment practices and global development goals.

This article not only systematizes the existing academic literature but also offers a conceptual repositioning. By proposing an integrative and contingent framework, it provides a new analytical lens for the ESG field, one that is sensitive to market heterogeneity and the complexity of investment decisions. The findings are of interest to three primary audiences: i) Researchers, who can rely on a solid conceptual map to guide new investigations; ii) Fund managers and financial analysts, who may apply the insights to construct more effective and contextualized ESG portfolios; and iii) Policymakers, particularly in emerging economies, who can use this foundation to structure incentives, regulations, and integration strategies.

Finally, this study opens avenues for future research that compares ESG performance across different contexts, such as between BRICS nations and developed economies, considering factors like regulatory frameworks, market maturity, investor types, and economic sectors. There is also an opportunity to advance in ESG asset pricing by testing competing models and examining ESG effects under different financial integration regimes. The development of robust, standardized, and context-sensitive metrics will remain a priority for ESG integration to evolve as both a scientific field and a market practice.

REFERENCES

Alessandrini, F., & Jondeau, E. (2021). Optimal Strategies for ESG Portfolios. *The Journal of Portfolio Management*, *47*(6), 114-138. https://doi.org/10.3905/jpm.2021.1.241

Andersson, E., Hoque, M., Rahman, M. L., Uddin, G. S., & Jayasekera, R. (2022). ESG investment: What do we learn from its interaction with stock, currency and commodity markets? *International Journal of Finance & Economics*, *27*(3), 3623-3639. https://doi.org/10.1002/ijfe.2341

Auer, B. R., & Schuhmacher, F. (2016). Do socially (ir) responsible investments pay? New evidence from international ESG data. *The Quarterly Review of Economics and Finance*, *59*, 51-62. https://doi.org/10.1016/j.qref.2015.07.002

Avramov, D., Cheng, S., Lioui, A., & Tarelli, A. (2022). Sustainable investing with ESG rating uncertainty. *Journal of Financial Economics*, *145*(2), 642-664. https://doi.org/10.1016/j.jfineco.2021.09.009

Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*, *22*, S119-S127. https://doi.org/10.1016/j.bir.2022.11.006

Bender, J., Bridges, T. A., He, C., Lester, A., & Sun, X. (2018). A blueprint for integrating ESG into equity portfolios. *The Journal of Investment Management*, 16(1). https://ssrn.com/abstract=3080381

Broadstock, D. C., Chan, K., Cheng, L. T., & Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. *Finance Research Letters*, *38*, 101716. https://doi.org/10.1016/j.frl.2020.101716

Cardillo, G., Bendinelli, E., & Torluccio, G. (2023). COVID-19, ESG investing, and the resilience of more sustainable stocks: Evidence from European firms. *Business Strategy and the Environment*, 32(1), 602-623. https://doi.org/10.1002/bse.3163

Carhart, M. M. (1997). On persistence in mutual fund performance. *The Journal of Finance*, 52(1), 57-82. https://doi.org/10.1111/j.1540-6261.1997.tb03808.x

Daugaard, D. (2020). Emerging new themes in environmental, social and governance investing: A systematic literature review. *Accounting & Finance*, *60*(2), 1501-1530. https://doi.org/10.1111/acfi.12479

Demers, E., Hendrikse, J., Joos, P., & Lev, B. (2021). ESG did not immunize stocks during the COVID-19 crisis, but investments in intangible assets did. *Journal of Business Finance & Accounting*, *48*(3/4), 433-462. https://doi.org/10.1111/jbfa.12523

Deng, J. (2025). Exploring the heterogeneous effects of environmental, social, and governance performance on idiosyncratic risk: do political ties matter?. *Humanities and Social Sciences Communications*, *12*(1), 1-16. https://doi.org/10.1057/s41599-025-04755-6

Díaz, V., Ibrushi, D., & Zhao, J. (2021). Reconsidering systematic factors during the COVID-19 pandemic: The rising importance of ESG. *Finance Research Letters*, 38, 101870. https://doi.org/10.1016/j.frl.2020.101870

Dsouza, S., Momin, M., Habibniya, H., & Tripathy, N. (2024). Optimizing performance through sustainability: the mediating influence of firm liquidity on ESG efficacy in African enterprises. *Cogent Business & Management*, *11*(1), 2423273. https://doi.org/10.1080/23311975.2024.2423273

Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *Journal of Finance*, 47(2), 427–465. https://doi.org/10.1111/j.1540-6261.1992.tb04398.x

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33(1), 3-53. https://doi.org/10.1016/0304-405X(93)90023-5

Fama, E. F., & French, K. R. (2015). A five-factor asset pricing model. *Journal of Financial Economics*, *116*(1), 1-22. https://doi.org/10.1016/j.jfineco.2014.10.010

Fama, E. F., & French, K. R. (2018). Choosing factors. *Journal of Financial Economics*, 128(2), 234–252. https://doi.org/10.1016/j.jfineco.2018.02.012

Ferrat, Y., Daty, F., & Burlacu, R. (2022). Short-and long-term effects of responsible investment growth on equity returns. *The Journal of Risk Finance*, *23*(1), 1-13. https://doi.org/10.1108/JRF-07-2021-0107

Ferrat, Y., Daty, F., & Burlacu, R. (2023). Screening: Value enhancing or diminishing?. *Business Ethics, the Environment & Responsibility*, 32(1), 358-370. https://doi.org/10.1111/beer.12453

Filbeck, A., Filbeck, G., Zhao, X. (2019). Performance Assessment of Firms Following Sustainalytics ESG Principles. *The Journal of Investing*, 28 (2). https://joi.pm-research.com/content/28/2/7

Fisch, C., & Block, J. (2018). Six tips for your (systematic) literature review in business and management research. *Management Review Quarterly*, *68*, 103-106. https://doi.org/10.1007/s11301-018-0142-x

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210-233. https://doi.org/10.1080/20430795.2015.1118917

Gangi, F., Varrone, N., Daniele, L. M., & Coscia, M. (2022). Mainstreaming socially responsible investment: do environmental, social and governance ratings of investment funds converge?. *Journal of Cleaner Production*, 353, 131684. https://doi.org/10.1016/j.jclepro.2022.131684

Giese, G., Nagy, Z., & Lee, L.-E. (2021). Deconstructing ESG ratings performance: Risk and return for E, S and G by time horizon, sector and weighting. *Journal of Portfolio Management*, *47*(3), 112-127. https://doi.org/10.3905/jpm.2020.1.198

Hong, H., & Kacperczyk, M. (2009). The price of sin: The effects of social norms on markets. *Journal of Financial Economics*, 93(1), 15-36. https://doi.org/10.1016/j.jfineco.2008.09.001

Hou, K., Xue, C., & Zhang, L. (2015). Digesting anomalies: An investment approach. *Review of Financial Studies*, 28(3), 650–705. https://doi.org/10.1093/rfs/hhu068

Hübel, B., & Scholz, H. (2020). Integrating sustainability risks in asset management: The role of ESG exposures and ESG ratings. *Journal of Asset Management*, *21*(1), 52-69. https://doi.org/10.1057/s41260-019-00139-z

Jin, I. (2022). ESG-screening and factor-risk-adjusted performance: The concentration level of screening does matter. *Journal of Sustainable Finance & Investment*, *12*(4), 1125-1145. https://doi.org/10.1080/20430795.2020.1837501

Kempf, A., & Osthoff, P. (2007). The effect of socially responsible investing on portfolio performance. *European financial management*, *13*(5), 908-922. doi: 10.1111/j.1468-036X.2007.00402.x

Limkriangkrai, M., Koh, S., & Durand, R. B. (2017). Environmental, social, and governance (ESG) profiles, stock returns, and financial policy: Australian evidence. *International Review of Finance*, *17*(3), 461-471. https://doi.org/10.1111/irfi.12101

Markowitz, H. (1952). Portfolio selection. *Journal of Finance*, 7(1), 77–91. https://doi.org/10.2307/2975974

Mendes-Da-Silva, W. (2019). Contribuições e limitações de revisões narrativas e revisões sistemáticas na área de negócios. *Revista de Administração Contemporânea*, *23*(2), 1-11. https://doi.org/10.1590/1982-7849rac2019190094

Nagai, R. A. (2023). Temas emergentes em ESG: Uma revisão da literatura. *Controle Externo: Revista do Tribunal de Contas do Estado de Goiás*, *3*(6), 127-139. https://doi.org/10.52028/TCE-GO.v3i6-art10

Nagy, Z., Kassam, A., & Lee, L. E. (2016). Can ESG add alpha? An analysis of ESG tilt and momentum strategies. *The Journal of Investing*, 25(2), 113-124. https://doi.org/10.3905/joi.2016.25.2.113

Pástor, Ľ., Stambaugh, R. F., & Taylor, L. A. (2021). Sustainable investing in equilibrium. *Journal of Financial Economics*, *142*(2), 550-571. https://doi.org/10.1016/j.jfineco.2020.12.011

Pedersen, L. H., Fitzgibbons, S., & Pomorski, L. (2021). Responsible investing: The ESG-efficient frontier. *Journal of Financial Economics*, *142*(2), 572-597. https://doi.org/10.1016/j.jfineco.2020.11.001

Shi, C., Wei, Y., Zheng, Y., Wang, Z., & Wang, Q. (2024). Is ESG investment rewarded or just doing good? Evidence from China. *International Review of Economics & Finance*, *96*, 103712. https://doi.org/10.1016/j.iref.2024.103712

Silva, A. C. da, Carvalho, F. de M. (2024). Relação entre práticas ESG e desempenho empresarial: uma revisão sistemática da literatura. *Revista GeSec – Revista de Gestão e Secretariado*, 15(1), 1425-1456. http://dx.doi.org/10.7769/gesec.v15i1.3430

Statman, M., & Glushkov, D. (2009). The wages of social responsibility. *Financial Analysts Journal*, 65(4), 33–46. https://doi.org/10.2469/faj.v65.n4.5

Tang, Y., Qiao, X., & Chen, H. (2024). ESG performance and investment expansion: Evidence from Chinese listed firms. *Finance Research Letters*, *69*, 106072. https://doi.org/10.1016/j.frl.2024.106072

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management*, 14(3), 207–222. https://doi.org/10.1111/1467-8551.00375

Tarczynska-Luniewska, M., Maciukaite-Zviniene, S., Nareswari, N., & Ciptomulyono, U. (2024). Analysing the Complexity of ESG Integration in Emerging Economies: An Examination of Key Challenges. In *Exploring ESG Challenges and Opportunities: Navigating Towards a Better Future* (Vol. 116, pp. 41-60). Emerald Publishing Limited. https://doi.org/10.1108/S1569-375920240000116004

Walker, T., Fernandes, A., & Karami, M. (2024). Corporate resilience during crises and the role of ESG factors: Evidence from the COVID-19 pandemic. *Finance Research Letters*, 69, 106168. https://doi.org/10.1016/j.frl.2024.106168

Williams, R. I., Jr, Clark, L. A., Clark, W. R., & Raffo, D. M. (2021). Re-examining systematic literature review in management research: Additional benefits and execution protocols. *European Management Journal*, 39(4), 521-533. https://doi.org/10.1016/j.emj.2020.09.007

Xie, J., Nozawa, W., Yagi, M., Fujii, H., & Managi, S. (2019). Do environmental, social, and governance activities improve corporate financial performance? *Business Strategy and the Environment*, 28(2), 286-300. https://doi.org/10.1002/bse.2224

Yin, X. N., Li, J. P., & Su, C. W. (2023). How does ESG performance affect stock returns? Empirical evidence from listed companies in China. *Heliyon*, 9(5). https://doi.org/10.1016/j.heliyon.2023.e16320

ACKNOWLEDGMENTS

We thank the participants of the 18th ANPCONT Congress (2024), where this research was presented in its early stages, for their valuable feedback and insights. We also extend our gratitude to the team of reviewers and editors of this paper, their guidance was precise and significantly contributed to improving the quality of the study.

FUNDING

This study was partially funded by the Coordination for the Improvement of Higher Education Personnel (CAPES, Cordenação de Aperfeiçoamento de Pessoal de Nível Superior do Brasil), Brazil – Financial Code 001.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

AUTHOR CONTRIBUTIONS

Mariane Bezerra Nóbrega: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Writing – original draft; Writing – review & editing.

Israel José dos Santos Felipe: Conceptualization; Funding acquisition; Methodology; Project administration; Resources; Supervision; Validation; Writing – original draft; Writing – review & editing.

Rodrigo Farias Leite de Araújo: Data curation; Investigation; Methodology; Visualization; Writing – original draft; Writing – review & editing.