

Environmental, Social and Governance (ESG) in Banking, Financial Services, and Insurance (BFSI) : A Systematic Review and Bibliometric Analysis

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ABSTRACT

This study maps the intellectual structure and thematic evolution of Environmental, Social, and Governance (ESG) and sustainable finance research in the Banking, Financial Services, and Insurance (BFSI) sector using an integrated bibliometric and thematic analysis. A total of 61 peer-reviewed journal articles indexed in the Scopus database were analysed using performance indicators and science-mapping techniques to examine publication trends, key contributors, institutional and country-level influence, and collaboration patterns. Keyword co-occurrence and thematic clustering were employed to identify dominant and emerging research themes. The analysis reveals a rapid growth of ESG-focused BFSI research in recent years, with strong contributions from developed economies and increasing thematic diversification. Core themes centre on ESG integration, financial performance, governance, and risk, while emerging themes highlight regulatory dynamics, COVID-19 impacts, and alternative finance models such as Islamic finance. The study provides a consolidated overview of the ESG BFSI research landscape and identifies gaps to guide future research and policy development.

Keywords: ESG, BFSI Sector, Bibliometric analysis, Thematic Analysis, Systematic Review.

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INTRODUCTION

The Banking, Financial Services, and Insurance (BFSI) sector has increasingly emerged as a critical enabler of sustainable development due to its central role in capital allocation, risk assessment, and governance oversight (Alaa Aldowaish *et al.*, 2022). Growing regulatory pressures, heightened stakeholder expectations, and long-term value considerations have accelerated the integration of Environmental, Social, and Governance (ESG) principles within financial systems (Haleem *et al.*, 2022). As financial intermediaries influence investment flows and corporate behaviour, ESG adoption in the BFSI sector has implications that extend beyond firm-level sustainability to broader economic and social outcomes (Jasman Tuyon *et al.*, 2022).

In recent years, academic interest in ESG and sustainable finance has expanded substantially, with studies examining disclosure practices, financial performance implications, risk mitigation, and governance mechanisms within financial institutions (Pratap, 2022). While several reviews have synthesised ESG

research across industries, existing review studies tend to adopt a broad sustainability perspective or focus on non-financial sectors. Consequently, a systematic and sector-specific mapping of ESG research within the BFSI domain remains limited, particularly from the standpoint of research evolution, thematic concentration, and geographical dispersion (Waltman *et al.*, 2010; Zupic & Cater, 2015).

Moreover, prior reviews largely rely on narrative or traditional systematic review approaches, offering limited insight into the intellectual structure and developmental trajectories of ESG scholarship in BFSI (Galletta *et al.*, 2022). Scientometric techniques such as bibliometric mapping, when complemented with thematic analysis, provide a more robust framework for uncovering publication trends, influential contributors, collaborative networks, and dominant research themes. However, such integrated approaches have rarely been applied to ESG research in the BFSI context (Iveth & Wagner, 2023).

Addressing this gap, the present study employs a combined bibliometric and thematic analysis of 61 peer-reviewed publications to systematically examine the evolution of ESG and sustainable finance research in the BFSI sector. By analysing publication patterns, citation structures, authorship and geographical distribution, and thematic clusters, this study offers a comprehensive overview of how ESG discourse within BFSI has developed over time. In addition, the thematic analysis enables



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a deeper exploration of key focus areas, including ESG-driven financial performance, investment decision-making, governance practices, stakeholder engagement, and regional adoption disparities.

This study contributes to the literature in three key ways. First, it provides a focused scientometric mapping of ESG research specifically within the BFSI sector, addressing a notable gap in existing review studies. Second, by integrating bibliometric indicators with thematic content analysis, it moves beyond descriptive reporting to offer analytical insights into research trends and knowledge structures. Third, the study highlights emerging themes and underexplored areas relevant to developing and emerging economies, with particular attention to contextual issues such as regulatory transitions, COVID-19 implications, and alternative finance models, including Islamic finance.

By offering a structured synthesis of ESG scholarship in BFSI, this research provides actionable insights for scholars seeking to advance theory, practitioners aiming to strengthen sustainable finance strategies, and policymakers designing ESG-aligned regulatory frameworks. The following sections detail the methodology adopted for data collection and analysis, followed by a presentation and discussion of the results.

RESEARCH QUESTIONS

RQ 1: What have the features and enforcements of ESG been in banking sector research?

RQ 2: What is the effect of ESG on Banking sector research?

RQ 3: What are the important themes discussed in the domain of ESG in BFSI?

RQ 4: What is the position of ESG research in BFSI in the Indian context?

RQ 5: What is the future orientation of the study?

METHODOLOGY

Research Design

This study adopts a systematic scientometric research design integrating bibliometric analysis and thematic analysis to examine the evolution and intellectual structure of Environmental, Social, and Governance (ESG) research within the Banking, Financial Services, and Insurance (BFSI) sector (Jones & Gattrell, 2014). According to Waltman *et al.*, (2010), Bibliometric analysis enables a quantitative assessment of publication trends, influential contributors, and research networks, while thematic analysis facilitates an in-depth qualitative examination of dominant and emerging themes within the selected literature (Braun & Clarke, 2006). The combined approach ensures a comprehensive understanding of both the structural and conceptual dimensions of ESG scholarship in the BFSI domain (Zupic & Cater, 2015).

Data Source and Search Strategy

The Elsevier Scopus database was selected as the primary data source due to its extensive coverage of high-quality peer-reviewed journals in finance, management, and sustainability research. The search was conducted for articles published between 2013 and 2023, capturing a decade of ESG research developments in the BFSI sector.

The search strategy employed a combination of ESG-related and BFSI-specific keywords applied to titles, abstracts, and keywords. The search string included variations of the following terms: “ESG,” “Environmental,” “Social,” “Governance,” “Sustainable and Responsible Investment (SRI),” combined with “Banking,” “Financial Services,” “Insurance,” and “BFSI.” The initial search yielded 344 records.

Article Screening and Selection

A multi-stage screening and selection process was employed to ensure relevance, quality, and reproducibility. The screening process is illustrated in Figure 1, and the inclusion and exclusion criteria are summarised in Table 1.

In the first stage, duplicate records, non-English publications, and non-journal documents such as conference proceedings, book chapters, and editorials were excluded. This step resulted in 211 articles deemed suitable for further screening.

In the second stage, articles were reviewed for domain relevance, retaining only those explicitly focused on ESG practices and sustainable finance within the BFSI sector.

In the final stage, a quality filter was applied using the Australian Business Deans Council (ABDC) journal ranking, whereby only articles published in A, A, and B-ranked journals* were retained. Articles published in ABDC ‘C’ category and non-ranked journals were excluded to ensure methodological rigor and academic relevance. Following this screening process, a final sample of 61 peer-reviewed articles was selected for bibliometric and thematic analysis.

Bibliometric Analysis

Bibliometric analysis was conducted to map the intellectual landscape and research trajectories of ESG scholarship in the BFSI sector. The final dataset of 61 articles was exported from Scopus in CSV format and analysed using VOSviewer and Biblioshiny (R-based Bibliometrix package). The analysis examined publication trends over time, citation patterns, influential authors and journals, geographical distribution, and keyword co-occurrence networks. These techniques enabled the identification of research clusters and collaboration patterns within the ESG-BFSI literature.

Thematic Analysis

To complement the bibliometric findings, thematic analysis was employed to explore the conceptual content of the selected studies. Following the approach outlined by Braun and Clarke (2006), articles were systematically reviewed to identify recurring patterns and themes related to ESG implementation in BFSI. Initial codes were generated through close reading of abstracts and full texts, which were subsequently refined into higher-order themes through iterative comparison. This process allowed for the identification of key thematic areas such as ESG-driven financial performance, governance practices, investment decision-making, regulatory influences, and regional adoption disparities.

Methodological Limitations

While this study adopts a rigorous and transparent methodology, certain limitations should be acknowledged. The analysis is restricted to articles indexed in the Scopus database and published in English-language journals, which may exclude relevant studies available in other databases or languages. Additionally, the application of ABDC rankings as a quality filter, while enhancing rigor, may limit the inclusion of emerging research published in lower-ranked or interdisciplinary outlets. These limitations provide avenues for future research to expand the scope and depth of ESG-BFSI scholarship (Table 2).

FINDINGS AND DISCUSSION

Features and Performance of ESG Research in the BFSI Sector

To address RQ1, this section examines the publication characteristics, citation performance, and geographical distribution of ESG research in the BFSI sector over the period 2013–2023, based on the final dataset of 61 peer-reviewed articles.

Figure 2 presents the annual publication trends in ESG-related BFSI research. The results indicate a gradual emergence of scholarly interest before 2018, followed by a marked acceleration after 2020. This upward trajectory reflects a shift in ESG research from conceptual discussions toward applied and performance-oriented investigations within the BFSI domain. The surge in publications post-2020 suggests that ESG considerations have transitioned from peripheral concerns to central research themes in financial services scholarship.

This growth pattern coincides with the institutionalisation of ESG frameworks at the global level, including the introduction of structured sustainability taxonomies, enhanced disclosure requirements, and increased emphasis on climate-related financial risk assessment. Rather than merely reflecting regulatory developments, the observed trend indicates a broader realignment of BFSI research priorities, wherein ESG factors are increasingly examined as determinants of financial stability, risk management, and long-term value creation.

Table 3 and Figure 3 further demonstrate that the rise in publication volume is accompanied by an increase in average annual citations, indicating not only greater research output but also growing scholarly influence. This pattern suggests that ESG-focused BFSI studies are gaining traction within the academic community and are increasingly cited as foundational or reference works in related research streams.

Geographical analysis (Table 4 and Figure 4) reveals that ESG research in the BFSI sector is globally dispersed, with contributions from 66 countries. However, the distribution of publications and citations is uneven. While countries such as Italy and the United States exhibit higher publication counts, Malaysia demonstrates the highest citation impact despite a smaller number of publications, indicating the presence of highly influential studies. This disparity highlights that research influence is not solely dependent on output volume, but also on contextual relevance, methodological rigor, and thematic focus.

The emergence of contributions from countries such as Romania and Bahrain signals growing interest in ESG issues within emerging and transition economies. Conversely, relatively lower citation impact from some large economies suggests that ESG-BFSI research maturity varies significantly across regions. These findings underscore the existence of regional asymmetries in ESG knowledge production, pointing to opportunities for future research that integrates emerging-market perspectives more explicitly.

Impact of 'ESG in BFSI'

To address RQ2, this section examines influential studies, citation structures, and methodological patterns within ESG-BFSI scholarship.

Influential Studies and Citation Structure

Highly cited articles play a critical role in shaping research directions by establishing dominant theoretical perspectives, empirical approaches, and policy narratives. Table 5 identifies the most influential studies, authors, countries, and institutions based on citation performance.

The results indicate that individual author influence does not necessarily correspond with national publication volume. Authors such as Dewandaru, Ginanjar, Nagayev, Ruslan, and Ng and Adam exhibit high citation counts despite being associated with countries or institutions with comparatively modest output. This suggests that thematic originality and contextual relevance may be more influential than sheer publication volume in determining research impact.

At the institutional level, organisations such as INCEIF and Khazanah Nasional Berhad demonstrate substantial citation influence, reinforcing the role of specialised financial and policy-oriented institutions in advancing ESG scholarship. In

contrast, countries with higher aggregate publication counts, such as the United States and Italy, show more dispersed citation impact, reflecting a diversity of research focus areas with varying levels of influence.

Overall, the citation analysis highlights a non-linear relationship between research productivity and scholarly impact, underscoring the importance of quality, context, and thematic alignment in ESG-BFSI research.

Methodological Trends in ESG-BFSI Research

Table 6 categorises the 61 selected studies into quantitative, qualitative, mixed-method, and review-based approaches, providing insight into the methodological orientation of ESG research within the BFSI sector.

The findings indicate a dominance of quantitative methodologies, reflecting the growing availability of ESG metrics, financial performance indicators, and disclosure datasets. However, the presence of qualitative and mixed-method studies suggests increasing recognition of the complexity and contextual nature of ESG implementation, particularly in governance practices, regulatory compliance, and stakeholder engagement.

Despite this methodological diversity, the relatively limited number of mixed-method studies highlights an opportunity for future research to adopt integrated approaches that combine empirical measurement with contextual and institutional analysis. Such approaches are particularly relevant for emerging economies, where ESG adoption is shaped by regulatory transitions, market maturity, and institutional constraints.

NOTABLE THEMES IN ESG IN BFSI

To answer the research question of identifying the prominent themes discussed in ESG within the BFSI sector (RQ3), this study carries out an in-depth analysis using VOS-Viewer and

Biblioshiny for R Studio. The analysis consists of several methods, including analysing authors’ keywords, bibliographic analysis, treemap, coupling, and creating a thematic map.

Co-occurrence of Keywords

Keyword Analysis in bibliometrics uses various elements, including keywords given by the authors, which are chosen for this study. These keywords offer valuable insights into researchers’ perspectives, helping identify trends, gaps, and emerging areas. By analyzing the patterns and frequencies of author-supplied keywords, we can map a field’s conceptual landscape and track its evolution. This approach highlights current research directions and suggests promising avenues for further studies. Using Vos viewer, the top authors’ keywords and occurrences are shown in the table above. The ranking is based on ESG, Sustainability, CSR, Sustainable Development, Corporate Governance, and Financial Services. The diagrams (Figure 5, Table 7) combine important topic keywords.

Bibliographic Coupling

Bibliographic coupling identifies intellectual connections between publications through shared references (Kessler, 1963). In this study, 29 out of 61 publications met the threshold of five citations, forming four thematic clusters (Figure 7). The Red cluster (7 items), Green cluster (6 items), Blue cluster (6 items), and Yellow cluster (6 items) highlight distinct yet interconnected

Table 1: Inclusion and Exclusion Criteria.

Inclusion Criteria	Exclusion Criteria
Articles published in Scopus databases	Duplicate articles
Articles published in the ABDC A*, A and B-ranked journals	Non-English, non-journal articles
Articles published from 2013 to 2023	ABDC 'C' category articles

Source: Author’s compilation.

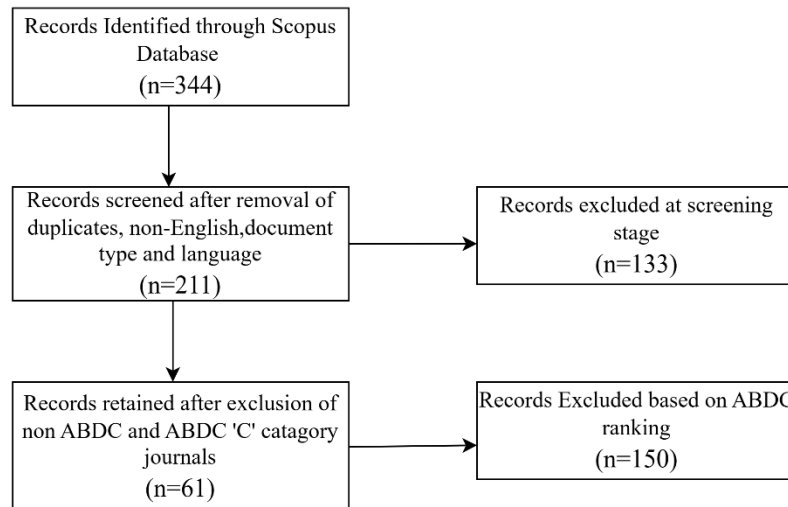


Figure 1: Article Identification, Screening, and Selection Process.

Table 2: Journals included and the number of articles in each journal.

Journal Name	ABDC Listing	No. of Papers	Journal Name	ABDC Listing	No. of Papers
Finance Research Letters	A	6	International Journal of Productivity and Performance Management	B	2
Business Strategy and the Environment	A	3	Sustainability Accounting, Management and Policy Journal	B	2
Economic Analysis and Policy	A	2	Applied Economics Letters	B	1
Journal of International Financial Markets, Institutions and Money	A	2	Social Responsibility Journal	B	2
Journal of Cleaner Production	A	2	European Business Organization Law Review	B	1
Long Range Planning	A	1	Journal of Islamic Marketing	B	1
Accounting and Finance	A	1	Review of Economics and Finance	B	1
European Journal of Finance	A	1	Review of Pacific Basin Financial Markets and Policies	B	1
Economies	A	1	Risks	B	2
British Accounting Review	A*	1	Journal of Applied Accounting Research	B	1
Review of Financial Studies	A*	1	Managerial and Decision Economics	B	1
Journal of Economic Issues	B	1	Journal of Business Economics	B	1
Journal of Risk and Financial Management	B	5	International Journal of Disclosure and Governance	B	1
Singapore Economic Review	B	1	Thunderbird International Business Review	B	1
European Actuarial Journal	B	1	Journal of Financial Services Marketing	B	1
Research in International Business and Finance	B	6	Qualitative Research in Financial Markets	B	1
Management Decision	B	3	Journal of Corporate Accounting and Finance	B	1
Journal of Business Economics and Management	B	2			61

Source: Author's compilation.

research themes in ESG and BFSI. This network visualization reflects the evolving academic landscape and key knowledge hubs in sustainable finance.

The resulting thematic map, illustrated in Figure 6, visually represents the intellectual landscape within our field of study. This approach highlights the interconnectedness of research and reveals potential subfields or research fronts emerging from the literature.

Thematic Map (based on Author Keywords)

A thematic map was created using the R studio to identify and analyze the themes among the identified research articles. This method maps main themes into four quadrants based on their centrality and density: Basic (high-centrality, low-density), Motor (high-centrality, high-density), Niche (low-centrality, low-density), and Emerging or Declining themes (low-centrality, high-density) Verma *et al.*, (2023). Motor themes are well-developed, including Sustainable Investment, Compliance, Disclosure, Socially Responsible Investment, Perceived Quality,

and Social Responsibility. These represent the core focus of current research, emphasizing sustainable practices and their compliance and disclosure in the BFSI sector. Niche themes, which are specialized and well-developed, include Content Analysis and Sustainable Finance. Although less central, these themes offer valuable insights into specific aspects of sustainable finance, demonstrating a concentrated research effort. Basic themes cover foundational aspects of ESG and sustainable finance but need further development. Identified themes include ESG, Sustainability, Corporate Governance, CSR, the Banking Sector, Board Diversity, ESG Controversies, Bank Lending, the Banking Industry, Fintech, and Islamic Finance (Figure 7, Table 8). These themes are crucial for understanding ESG practices and form the basis for future studies, indicating emerging trends that need more exploration. Emerging or declining themes are either in the early stages or losing research focus. Themes in this quadrant include European Banking, Retail Banking, ESG Rating, Banks, ESG Performance, and Volatility. These themes may either gain more focus in the future or are experiencing a decline in research interest. Monitoring these themes can provide

insights into shifting research priorities and emerging trends in the BFSI sector.

Reflexive Thematic Analysis

Reflexive Thematic Analysis (TA) allows the researcher to acknowledge their own views and biases when analyzing the data, according to Braun & Clarke (2006). The stages of Reflective Thematic Analysis are given in Table 9. This method allows for a deep engagement with the data, encouraging the identification of patterns and themes through an iterative process. Reflexive TA prioritizes the impactful role of the researcher in the process, fostering a more nuanced and contextually rich understanding of the data. This method is specifically beneficial for qualitative studies because it allows the analysis of tedious, multifold processes, as per Braun & Clarke (2019). In this study, Reflexive Thematic Analysis proved to be helpful in uncovering some nuances of the ESG integration in the BFSI sector. This allowed researcher subjectivity to be embraced and allowed a more in-depth examination of stakeholder perceptions, regulatory challenges and strategic shifts in sustainable finance.

Table 3: Annual Publication and Citation Analysis.

Year	No of Publications	Total Citations
2013	2	2
2014	1	13
2015	0	0
2016	1	12
2017	0	0
2018	0	0
2019	1	139
2020	7	237
2021	4	280
2022	18	339
2023	27	135

Source: Author’s compilation-based Scopus extracted database.

Based on Table 9, Adopted from Braun & Clark, we have identified four themes in a diagrammatic format in Figure 8.

Theme 1: Corporate and financial Performance

The influence of ESG factors on corporate performance in the banking industry is complex, affecting market value, funding costs, stability, and overall performance. ESG controversies and governance issues significantly impact bank market value, with negative events causing notable market repercussions (Goss & Roberts, 2011). Robust ESG practices lower funding costs by reducing perceived risk (Chava, 2014). Studies show a positive relationship between sustainability initiatives and banking performance, enhancing efficiency and profitability (Cornett *et al.*, 2016). Advanced models like Support Vector Machine (SVM) classify efficiency in mergers and acquisitions, emphasizing ESG’s role (Huang, 2011). ESG rating discrepancies drive corporate green innovation (Delmas & Burbano, 2011). The Task Force on Climate-related Financial Disclosures (TCFD) scrutinizes sustainable finance practices, questioning their transparency and risk management effectiveness (BlackRock, 2018). Evidence from Europe suggests robust ESG strategies bolster bank stability during crises (Liang & Renneboog, 2017). Transforming sustainability into financial value, or sustainable metamorphosis, is crucial for banks integrating ESG into their core strategies (Kotsantonis *et al.*, 2016). ESG practices mitigate the adverse effects of policy uncertainty on firm valuation (Bae *et al.*, 2020). In emerging economies, ESG activities enhance banking performance, stability, and market perception (Zhou *et al.*, 2018). Comparative analysis of investor behaviour during crises reveals ESG’s role in maintaining confidence and stability (Krueger *et al.*, 2020). ESG practices reduce perceived tail risk, providing a strategic risk management advantage (Jouffray *et al.*, 2019). Rating analysts emphasize ESG in credit evaluations, reflecting its growing significance (Sustainalytics, 2020). Stock market reactions to negative ESG disclosures highlight financial penalties associated with ESG controversies (Kölbel *et al.*, 2019).

Table 4: Analysis of Publication and Citation by Country.

Sl. No.	Country	Publication	Citations
1	Malaysia	3	278
2	United States	6	270
3	Italy	16	219
4	Turkey	5	211
5	United Kingdom	8	184
6	Romania	1	116
7	Australia	1	79
8	Bahrain	1	64
9	Iceland	1	43
10	China	5	39

Source: Author’s compilation-based Scopus extracted database.

Table 5: Top 20 most cited authors, countries, and Organisations.

Author	TP	TC	Country	TP	TC	Organization	TP	TC
Dewandaru, Ginanjar	1	139	Malaysia	3	278	Inceif, Malaysia	1	139
Nagayev, Ruslan	1	139	United States	6	270	Istanbul Sabahattin Zaim University, Turkey	1	139
Ng, Adam	1	139	Italy	16	219	Khazanah Nasional Berhad, Malaysia	1	139
Nizam, Esma	1	139	Turkey	5	211	The Bucharest University of Economic Studies, Accounting and Audit Department, Romania	1	116
Nkoba, Malik Abdulrahman	1	139	United Kingdom	8	184	The Bucharest University of Economic Studies, Romania	1	116
Bătae, Oana Marina	1	116	Romania	1	116	Ball State University, United States	1	114
Dragomir, Voicu Dan	1	116	Australia	1	79	Inceif, United States	1	114
Feleagă, Liliana	1	116	Bahrain	1	64	Taylor's Business School, Taylor's University, Subang Jaya, Malaysia, Malaysia	1	114
Azmi, Wajahat	1	114	Iceland	1	43	University of New Orleans, United States	1	114
Hassan, M. Kabir	1	114	China	5	39	School of International and Public Affairs, Columbia University, New York, United States	1	80
Houston, Reza	1	114	Malta	1	39	Macquarie University, Sydney, 2109, NSW, Australia	1	79
Karim, Mohammad Sydul	1	114	Germany	3	37	Ahlia University, Manama, Bahrain	1	64
Dreassi, Alberto	2	101	Spain	1	32	Brunel University, London, United Kingdom	1	64
Piserà, Stefano	2	101	Pakistan	2	25	Department of Business Administration, University of Verona, Italy	1	55
De Mariz, Frederic	1	80	Sweden	3	22	Department of Economics and Statistics, University of Udine, Italy	1	55
Deschryver, Pauline	1	80	United Arab Emirates	1	12	Department of Economics, Business, Mathematics and Statistics, University of Trieste, Italy	1	55
Wong, Jin Boon	1	79	Greece	1	8	Essex Business School, University of Essex, Colchester, United Kingdom	1	55
Buallay, Amina	1	64	Poland	1	8	Fordham University, United States	1	54
Chiaramonte, Laura	1	55	Russian Federation	1	7	University of Florida, United States	1	54
Girardone, Claudia	1	55	Norway	1	4	Department Of Economics and Statistics, University of Udine, Italy	1	46

*Source: Adapted from Baker *et al.* (2020). TP- Total Publications, TC- Total Citations*.

The relationship between ESG factors and financial performance is a critical area of study in banking. Research indicates a positive correlation between ESG performance and financial outcomes in European banks (Cucari *et al.*, 2018). This relationship extends to interactions between enterprises and financial corporations, where better ESG practices can improve operational efficiencies and financial results (Belás *et al.*, 2016). Comparative studies show that sustainability reporting impacts firm performance in manufacturing and banking sectors, although effects may vary (Lo & Sheu, 2007). Customer satisfaction with socially responsible investing initiatives can drive loyalty and profitability (Glac, 2009). ESG reporting has also redefined treasury functions, integrating sustainability into strategic planning and risk management (Treasury Today, 2020). This paper uses thematic analysis to

explore how ESG practices enhance financial performance and contribute to the banking sector's sustainability goals.

Theme 2: Investment & Market Strategies

Integrating Environmental, Social, and Governance (ESG) criteria into investment strategies is crucial for sustainable finance in banking. This theme explores ESG impacts on bank lending, corporate governance, mutual fund quality, green bonds, and investor behaviour. In the MENA region, sustainable bank lending is influenced by bank capital and liquidity, highlighting financial foundations for promoting ESG-compliant investments (Al-Hares *et al.*, 2020). In Europe, major banks embed sustainability in corporate governance, ensuring ESG considerations in top-level decision-making (Busch *et al.*, 2016). Investor perception of ESG mutual funds relies on communication and transparency,

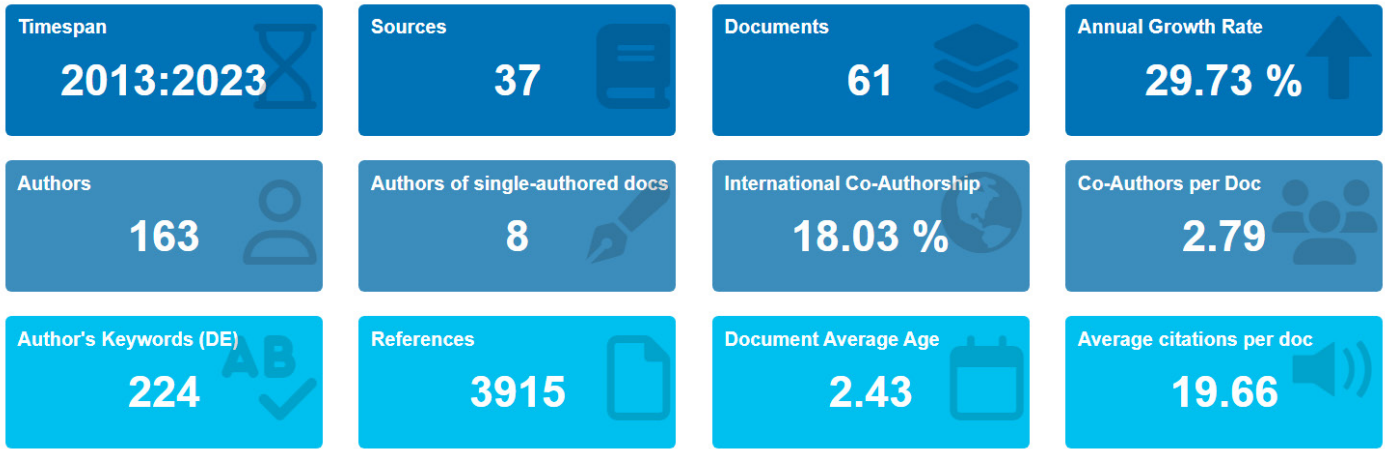


Figure 2: Key Features of Articles Published. Source: Biblioshiny for R.

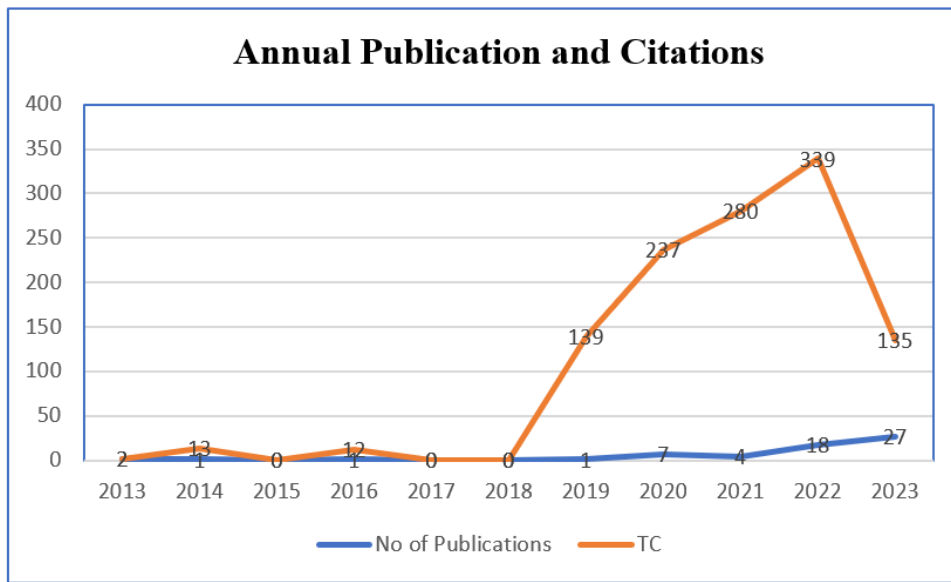


Figure 3: No of studies; TC, Total Citations. Source: Author's compilation.

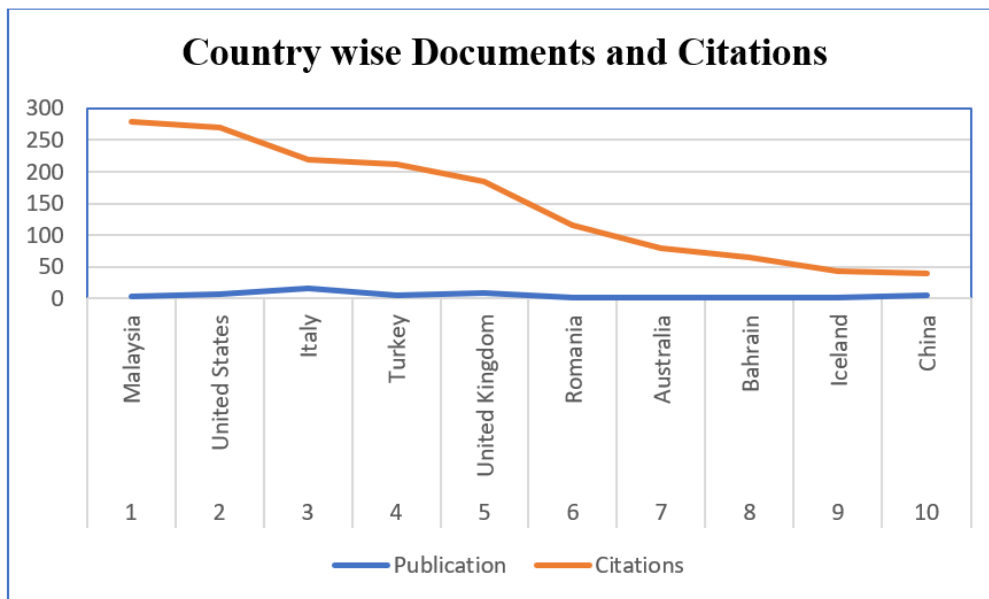


Figure 4: Country Wise Document and Citations. Source: Author's compilation.

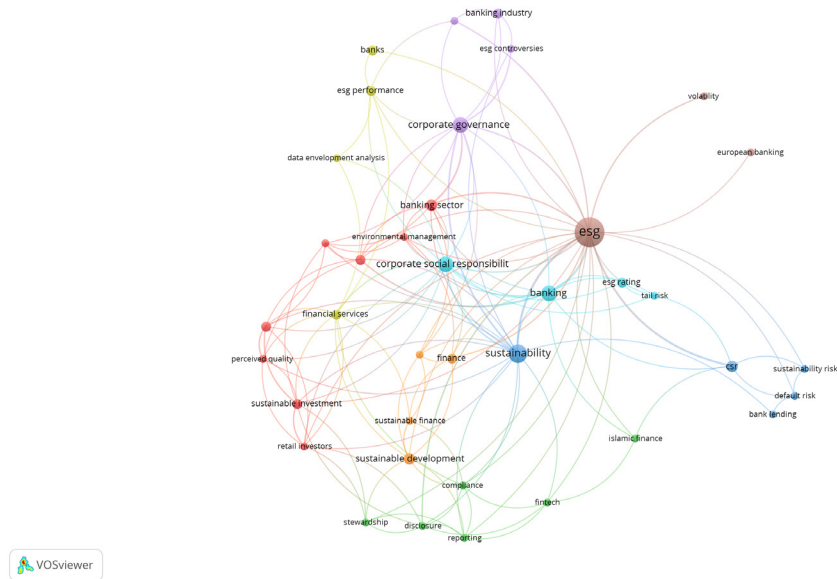


Figure 5: Co-Occurrence of Author Keywords. Source: Vosviewer.

attracting ESG-conscious investors (Bauer *et al.*, 2005). The green bond market is vital for ESG strategies, requiring supportive regulatory frameworks and incentives for growth (Bachelet *et al.*, 2019). ESG ratings impact investment decisions, with agencies considering various ESG metrics affecting creditworthiness (Berg *et al.*, 2020). Tax incentives promote ESG investments by reducing capital costs for sustainable projects (Clapp *et al.*, 2010). Understanding the risk-return profiles of ESG versus conventional investments aids in informed decision-making and portfolio diversification (Auer & Schuhmacher, 2016). This analysis provides insights for policymakers, investors, and financial institutions aiming for sustainability.

The role of Environmental, Social, and Governance (ESG) factors in influencing market performance has gained significant attention, emphasizing sustainable and responsible investment practices. This theme explores how ESG considerations impact market performance through responsible investment's ability to mitigate short-term stock market shocks, social capital and trust influence on bank tail risk, and the effect of competition on ESG controversies in the banking industry. Responsible investment practices provide insurance against immediate market volatility, though this effect is not persistent long-term (Giese, 2019). The interplay between social capital, trust, and ESG ratings is crucial in understanding bank tail risk, especially during crises where strong ESG ratings can buffer against adverse shocks (Lins *et al.*, 2017). Increased competition within the banking sector can exacerbate ESG controversies, highlighting the need for robust ESG frameworks to mitigate negative impacts (Oikonomou *et al.*, 2012). This paper uses the Braun and Clarke reflexive method to explore these dynamics through thematic analysis, offering insights into the relationship between ESG practices and market performance.

Theme 3: Regulatory & Compliance Factors

Integrating ESG factors within the banking industry is crucial for aligning financial activities with sustainability goals. ESG considerations influence banking operations and financial performance. Herding behaviour in European banking affects ESG dynamics, either advancing or hindering integration (Gibson *et al.*, 2020). Institutional investors drive climate action and advocate for sustainable development (Sullivan *et al.*, 2020). Comprehensive ESG integration in insurance and pension funds reflects the sector's evolving sustainability approach (Sassen *et al.*, 2016). ESG performance in banking is gaining scholarly attention, identifying trends and future research directions (Gangi *et al.*, 2018). Socially responsible investing is growing, reflecting societal demands for ethical investment options (Renneboog *et al.*, 2008). Treasury roles in ESG reporting have expanded, incorporating ESG compliance into strategic functions (Treasury Today, 2020). Fintech infrastructure facilitates efficient ESG disclosure (Zhang *et al.*, 2020). In China, ESG performance and digital finance enhance corporate financing efficiency (Wang *et al.*, 2020). Generative neural networks and data envelopment analysis models improve banking efficiency and risk management (Buehler & Liu, 2018; Färe *et al.*, 2018). ESG ratings positively impact bank financing in China (Wang, 2019). Studies show that sustainability positively impacts financial performance globally (Gangi & Varriale, 2020; Wu, 2020).

Theme 4: Stakeholder and Social Impact

This theme explores the relationships between ESG factors and their influence on stakeholders in the banking sector. European bank boards are crucial in managing ESG controversies and enhancing stakeholder trust (Arayssi *et al.*, 2020). Italian studies show board characteristics significantly influence ESG

Table 6: Overview of the year of publication and Research Method used.

Sl. No.	Year of Publication	Research Method	Sl. No.	Year of Publication	Research Method
1	2023	Quantitative Research	32	2022	Quantitative Research
2	2023	Quantitative Research	33	2022	Mixed Method
3	2023	Qualitative Research	34	2019	Quantitative Research
4	2023	Quantitative Research	35	2021	Quantitative Research
5	2023	Review	36	2021	Quantitative Research
6	2023	Quantitative Research	37	2022	Bibliometric
7	2022	Quantitative Research	38	2022	Quantitative Research
8	2023	Quantitative Research	39	2022	Quantitative Research
9	2023	Quantitative Research	40	2021	Quantitative Research
10	2023	Quantitative Research	41	2019	Quantitative Research
11	2022	Quantitative Research	42	2021	Qualitative Research
12	2022	Quantitative Research	43	2022	Quantitative Research
13	2022	Quantitative Research	44	2019	Quantitative Research
14	2023	Quantitative Research	45	2022	Quantitative Research
15	2022	Quantitative Research	46	2022	Quantitative Research
16	2023	Qualitative Research	47	2022	Quantitative Research
17	2023	Qualitative Research	48	2019	Quantitative Research
18	2021	Quantitative Research	49	2022	Quantitative Research
19	2021	Quantitative Research	50	2021	Quantitative Research
20	2023	Quantitative Research	51	2021	Quantitative Research
21	2023	Quantitative Research	52	2020	Review
22	2022	Mixed Method	53	2022	Quantitative Research
23	2021	Quantitative Research	54	2022	Quantitative Research
24	2022	Quantitative Research	55	2021	Quantitative Research
25	2022	Quantitative Research	56	2021	Quantitative Research
26	2023	Quantitative Research	57	2020	Quantitative Research
27	2023	Quantitative Research	58	2013	Quantitative Research
28	2022	Mixed Method	59	2014	Quantitative Research
29	2020	Quantitative Research	60	2013	Quantitative Research
30	2021	Quantitative Research	61	2013	Quantitative Research
31	2021	Quantitative Research			

Source: Author's compilation.

dimensions (De Luca & Marziani, 2019). Gender diversity on boards impacts ESG disclosures, particularly in environmental and social areas (Liao *et al.*, 2015). Board composition and the quality of non-financial disclosures are critical for transparency, especially following the 2014/95/EU directive (Manita *et al.*, 2018). Advanced analytical models underscore governance's relevance in operational outcomes (Wu, 2010). Translating ESG commitments into tangible outcomes remains challenging (Eccles *et al.*, 2014). The insurance industry is also called to champion sustainability (UNEP FI, 2021). This paper uses thematic analysis to explore how ESG considerations shape stakeholder impact across the banking and financial services sector. This theme explores ESG in specific contexts like Islamic finance, fintech,

and firm engagement. Green banking and Islamic finance are complementary, emphasizing ethical and sustainable practices (Ali & Al-Ali, 2019). Islamic financial principles align with ESG objectives, promoting sustainable practices globally (Hassan *et al.*, 2019). Islamic fintech's competitiveness highlights technological innovation's role in advancing ESG goals (Abdullah *et al.*, 2020). Corporate ESG engagement significantly impacts firm value and risk management. Firms must prioritize the right ESG aspects for long-term sustainability (Friede *et al.*, 2015). Corporate social responsibility has been linked to reduced bank risk in banking, emphasizing ESG's importance in enhancing financial stability (Bae *et al.*, 2021). This paper uses thematic analysis to examine how ESG integration varies across different contexts and sectors.

ESG in India

This part of the paper addresses the RQ4: What is the position of ESG research in BFSI in India? The year 2011 saw discussions about sustainability in India, starting with the Reserve Bank of India (RBI) asking banks to incorporate sustainability as an integral part of their operations. To embed sustainability into corporate practices, the Ministry of Corporate Affairs, 2012, Introduced the ‘Business Responsibility Report (BRR)’, ‘National Voluntary Guidelines (NVGs)’ and other requirements. In 2019, the RBI joined the “Network for Greening the Financial System (NGFS)”, which aligns India’s financial system with global standards of sustainability. The significant development was when SEBI’s 2020 mandated “Business Responsibility and Sustainability Reporting (BRSR)” for the top 1,000 listed companies (SEBI Business Responsibility and Sustainability Reporting by Listed Entities, 2021). In 2020, the RBI issued a discussion paper on climate risks and sustainable business, focusing on governance, strategy, risk management, disclosures and building capacity (IIMA). SEBI revised its green debt securities framework to include blue, yellow, and transition bonds. This ongoing regulatory evolution reflects a growing focus on sustainable finance (Kumar & Prakash, 2019). India, the sixth largest issuer of green, social, and sustainability-linked bonds in the Asia-Pacific region, is expected to see ESG-themed investments account for nearly 30% of the total fund volume, reaching over \$270 billion by 2030 (Kumar, 2023). SEBI’s announcements on ESG rating norms and transition bond guidelines will likely expand the investable universe for ESG investments (LOOKING AHEAD ESG 2030 PREDICTIONS, n.d.). The Indian banking sector is rapidly adopting a sustainable business model, influenced by the COVID-19 pandemic’s impact on the perception of ESG issues. Financial institutions

now consider ESG factors crucial for economic viability and resilience beyond ethical considerations (Pérez *et al.*, 2022). Banks face pressures from stakeholders and regulators to provide sustainable business amid increasing Non-performing Assets, fintech competition, and path breaking models (Jaiwani & Gopalkrishnan, 2023). The increasing regulations related to climate change drive banks to update their investment and

Table 7: Co-Occurrence of Author Keywords.

Keyword	Occurrences	Total Link Strength
ESG	25	42
Sustainability	9	19
Banking	6	11
Corporate Governance	6	14
Corporate Social Responsibility	5	8
Banking Sector	4	8
CSR	4	9
Banking Industry	3	4
Banks	3	2
Esg Performance	3	4
ESG Rating	3	3
Socially Responsible Investment	3	7
Sustainable Investment	3	9
Bank Lending	2	2
Board Diversity	2	5

Source: Author’s Compilation.

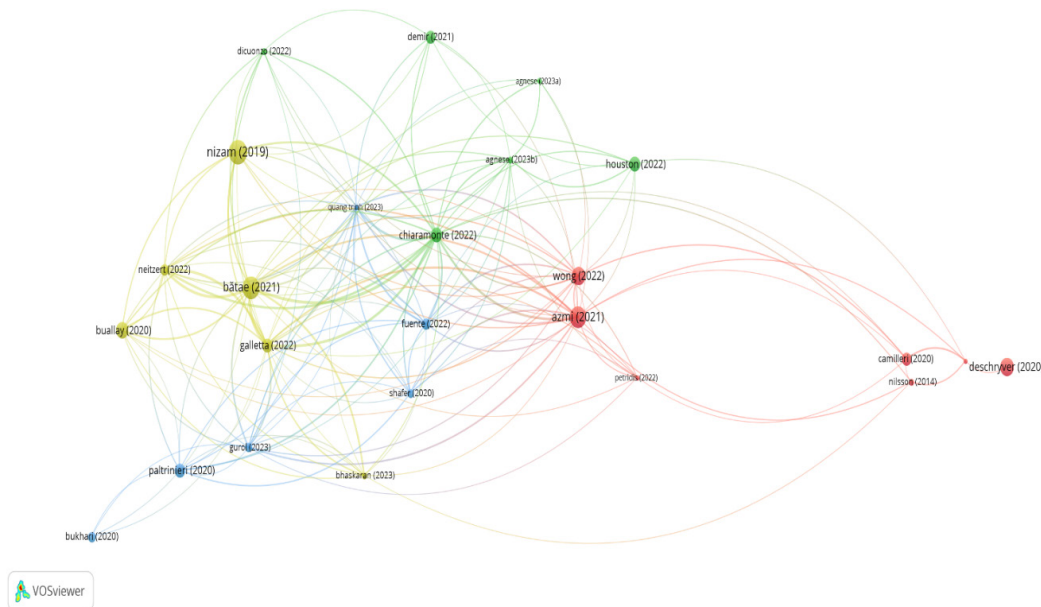


Figure 6: Bibliographic Coupling. Source: Vosviewer.

Table 8: Overview of Thematic Clusters (Based on Author Keywords).

Cluster	Cluster Name	Occurrences/Cluster Frequency	Words
Cluster 1	Socially Responsible Investment	7	Socially Responsible Investment, Perceived Quality, Social Responsibility.
Cluster 2	Sustainable Investment	15	Sustainable Investment, Compliance, Disclosure, Reporting, Retail Investors, Stewardship, Sustainable Development
Cluster 3	ESG Rating	3	ESG Rating
Cluster 4	Banking	18	Banking, CSR, Default Risk, Financial Performance, Sustainability Risk, Tail Risk
Cluster 5	Content Analysis	4	Content Analysis, Sustainable Finance
Cluster 6	ESG	53	ESG, Sustainability, Corporate Governance, CSR, Banking Sector, Board Diversity, ESG Controversies
Cluster 7	Banks	6	Banks, ESG Performance
Cluster 8	Volatility	2	Volatility
Cluster 9	Bank Lending	2	Bank Lending
Cluster 10	Fintech	4	Fintech, Islamic Finance
Cluster 11	Banking Industry	3	Banking Industry
Cluster 12	European Banking	2	European Banking

Source: Biblioshiny for R.

Table 9: Stages of Thematic Analysis for "ESG in BFSI Sector: An In-depth Examination (Adapted from Braun & Clarke, 2006).

Stage	Description of the Process
1. Familiarising with data	Reading and re-reading the 61 papers, and noting the initial ideas relevant to ESG in the BFSI sector.
2. Developing initial codes	Systematically coding interesting Characteristics of the data across the data set, collating data relevant to each code.
3. Identifying themes	Collating codes into probable themes, gathering all data relating to each potential theme identified in the 61 papers.
4. Evaluating themes	Examining if the themes work for the coded extracts (Level 1) and the entire data set (Level 2).
5. Defining themes	Continues analysis to refine the specifics of each theme and the complete story the analysis tells, generating clear definitions and names for each of the 7 identified themes.
6. Producing the report	The final analysis stage. Selecting various compelling extract examples, the final analysis of selected extracts, relating the analysis back to the research question and literature, and producing a scholarly report of the analysis.

"Source: Braun & Clarke, 2006".

lending frameworks to include ESG considerations, reflecting the sector's contribution to a sustainable and resilient financial system (Park & Jong Dae Kim, 2020).

FUTURE DIRECTION OF RESEARCH

This part of the article gives an answer to RQ5: What is the future orientation of the study?

Future research should explore regional disparities in ESG adoption, examining how regulations, market maturity, and cultural factors shape ESG implementation in BFSI. Assessing the long-term financial impact of ESG integration can provide

deeper insights into its sustainability, beyond short-term benefits. Another key area is ESG in credit risk assessment and lending decisions, requiring further study on its impact on loan defaults, interest rates, and financial stability. Additionally, the role of digital transformation, including FinTech and AI, in enhancing ESG compliance and transparency, remains an emerging research avenue. As India emerges as a key player in sustainable finance, future studies should evaluate its ESG regulatory frameworks compared to global standards and their impact on investment attractiveness.

The following Table 10 provides a structured overview of existing and future research directions in ESG and BFSI:

Table 10: The following suggestions can be incorporated into future research on ESG in BFSI.

Author	ABDC Listing	Future Agenda
(Jin Boon Wong & Zhang, 2022)	A*	Future studies should examine how unfavourable ESG media coverage affects different industries' stock market performance. It would also be helpful to look at the long-term effects of controlling corporate reputation in reaction to unfavourable ESG media coverage on business valuation and financial performance.
(Azmi <i>et al.</i> , 2021)	A	Examine how ESG practices affect developing market banks' financial results, in the long run, to learn about resilience and sustainability. Examine the effects of particular ESG initiatives on banks' general performance and standing in emerging economies.
(Caterina Di Tommaso & Mazzuca, 2023)	A	To learn more about the longer-period effects of ESG ratings on the value of insurance businesses, future studies might investigate different ways to quantify ESG ratings and evaluate data over the long term.
(Palmieri <i>et al.</i> , 2023)	A	Analyze how the various ESG sub-pillars affect the default risk of companies in different industries. Examine how banks' lending decisions and total portfolio risk are affected by incorporating ESG considerations in credit risk assessment.
(Zhou <i>et al.</i> , 2023)	A	The long-term effects of ESG rating divergence on business sustainability practices may be the subject of future studies. Further investigation into how laws and rules affect the connection between company environmental actions and ESG ratings might also yield insightful information.
(Agnese <i>et al.</i> , 2023)	A	Subsequent investigations may examine the enduring impacts of ESG Governance dynamics on ESG Controversies in banking institutions beyond the 2016–2021 period.
(Wang, 2023)	A	Future research can examine how regulatory modifications affect the convergence of ESG performance in the European banking industry. Understanding the impact of regulatory frameworks and stakeholder pressure on banks' ESG practices could help in understanding the dynamics of ESG in the banking sector.

Source: Authors Compilation.

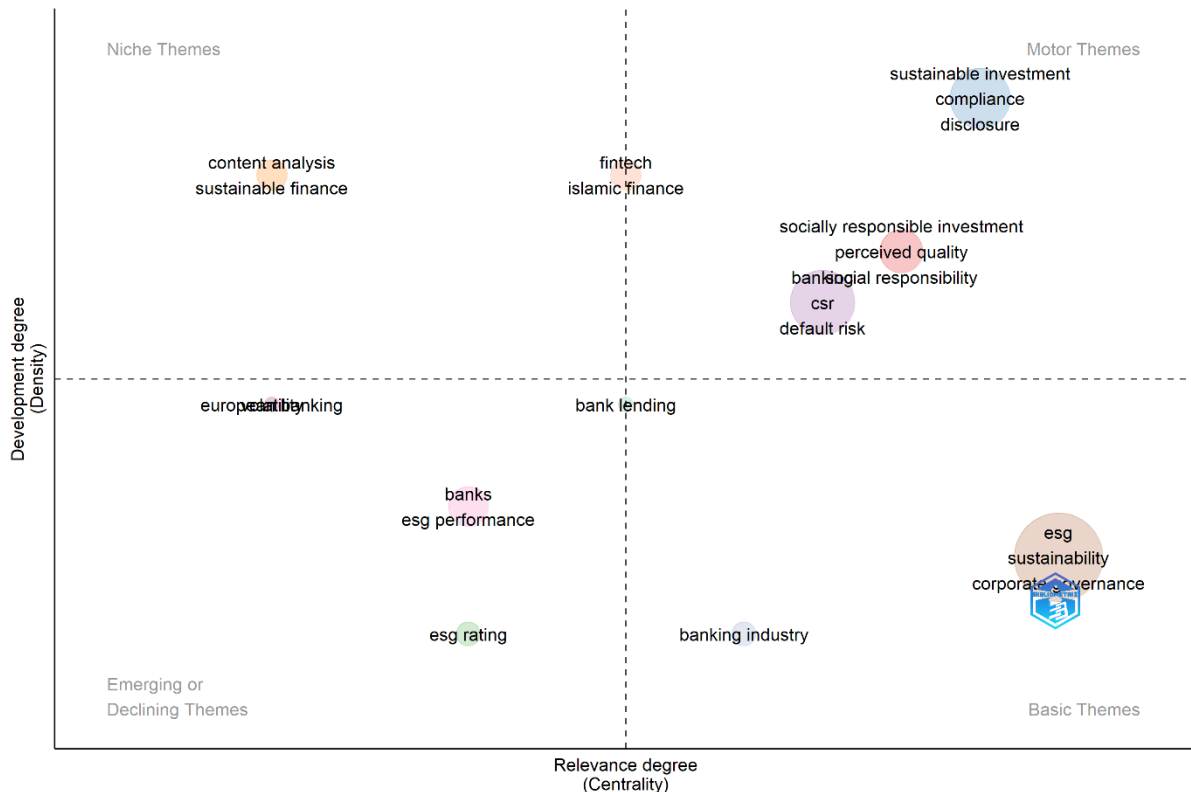


Figure 7: Thematic Map of ESG in BFSI (based on Author Keywords). Source: Biblioshiny for R.



Figure 8: Thematic Analysis. Source: Authors Compilation.

DISCUSSION

This study presents a structured synthesis of ESG and sustainable finance research within the BFSI sector, integrating bibliometric mapping with thematic analysis. The results show that ESG research in BFSI has emerged from a peripheral concern to a central research domain, driven prominently by increasing regulatory scrutiny, stakeholder expectations, and the recognition of ESG factors as material to financial performance and risk management.

The bibliometric evidence displays notable geographical asymmetries in ESG research production and influence. While developed economies dominate publication volume, several emerging economies demonstrate disproportionately high citation impact, suggesting that contextual relevance and policy alignment play a critical role in shaping influential ESG scholarship. This uneven distribution suggests that ESG adoption in the BFSI sector is not uniform, but rather shaped by regulatory framework, institutional capacity, and market structure. Consequently, the transferability of ESG frameworks across regions remains limited, reinforcing the need for context-sensitive ESG models.

The thematic analysis further illustrates that ESG integration in BFSI extends beyond regulatory compliance and disclosure practices. Dominant themes such as stakeholder engagement, financial performance implications, governance quality, and investment decision-making highlight ESG as a strategic mechanism impacting organisational resilience and long-term value creation. The importance of performance-related themes

suggests a transition in research focus from ethical justification toward economic and strategic relevance, reflecting the sector's growing emphasis on ESG as a risk mitigation and competitiveness-enhancing tool.

Despite these advances, the findings also reveal persistent challenges, particularly the lack of standardisation in ESG metrics and inconsistencies in disclosure practices across markets. These challenges constrain comparability and limit the effectiveness of ESG-based decision-making in BFSI institutions. The relatively limited use of mixed-method research further indicates that current scholarship may insufficiently capture the institutional, behavioural, and regulatory complexities underpinning ESG implementation.

From a research perspective, these results suggest that future ESG-BFSI studies should move toward longitudinal, multi-country, and mixed-method designs to better understand causal mechanisms and long-term impacts. For practitioners, the results underscore the importance of embedding ESG principles into core governance and risk frameworks rather than treating them as standalone compliance exercises. Policymakers, in turn, can draw on these insights to develop clearer, harmonised, and sector-specific ESG guidelines that balance regulatory oversight with operational feasibility.

CONCLUSION

This study systematically examined the evolution, structure, and thematic orientation of ESG and sustainable finance research within the BFSI sector using an integrated bibliometric and thematic approach. By analysing 61 high-quality peer-reviewed articles, the study provides a comprehensive overview of how ESG scholarship in BFSI has developed over the past decade, highlighting key research trends, influential contributors, and dominant thematic areas.

The findings confirm that ESG integration in BFSI is a multi-dimensional and strategically significant phenomenon, shaped by regulatory pressures, stakeholder expectations, and growing recognition of ESG factors as determinants of financial stability and long-term performance. While research output remains concentrated in developed economies, emerging markets are increasingly contributing impactful insights, signalling a broader global transition toward sustainable finance.

Importantly, this study advances existing literature by offering a sector-specific scientometric mapping of ESG research in BFSI and by revealing gaps related to methodological diversity, regional representation, and metric standardisation. These gaps present clear opportunities for future research to develop market-specific ESG frameworks, assess long-term financial and systemic impacts, and refine ESG measurement and rating methodologies.

From a practical standpoint, the study equips financial institutions with evidence-based insights to strengthen ESG integration

within governance, risk management, and investment strategies. For policymakers, the findings highlight the necessity of coherent and consistent regulatory frameworks that support ESG adoption while accounting for regional and institutional differences.

Overall, by synthesising the fragmented ESG literature within the BFSI context, this study contributes to a deeper understanding of sustainable finance and provides a foundation for advancing research, policy, and practice toward a more resilient, transparent, and sustainable financial system.

ABBREVIATIONS

BFSI: Banking, Financial Services, and Insurance; **ESG:** Environmental, Social, and Governance; **SRI:** Sustainable and Responsible Investment; **CSR:** Corporate Social Responsibility; **ABDC:** Australian Business Deans Council; **TCFD:** Task Force on Climate-related Financial Disclosures; **SVM:** Support Vector Machine; **MENA:** Middle East and North Africa; **FinTech:** Financial Technology; **AI:** Artificial Intelligence; **NGFS:** Network for Greening the Financial System; **RBI:** Reserve Bank of India; **SEBI:** Securities and Exchange Board of India; **BRR:** Business Responsibility Report; **BRSR:** Business Responsibility and Sustainability Reporting; **NVGs:** National Voluntary Guidelines; **IIMA:** Indian Institute of Management Ahmedabad; **EU:** European Union.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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