

ESG AND BANK PERFORMANCE: A BIBLIOMETRIC ANALYSIS

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Abstract: *This study explores research trends and conceptual development at the nexus of Environmental, Social, and Governance (ESG) practices and banking performance. The study employs a bibliometric analysis of 443 papers from the Scopus database (2016–2025) to highlight co-authorship networks, keyword co-occurrences, and thematic development. The results show that the number of publications has grown substantially since the COVID-19 pandemic, indicating a move toward Green FinTech and sustainable banking. China and Italy are the top countries for research, while research has expanded from focusing on ESG's profitability to looking at its strategic significance in governance and risk management. Thematic mapping also shows that Digital Transformation is becoming a key theme. This means that the future performance of banks is more to how well ESG disclosure and new technology work together. This study offers new understandings by identifying a dual-driver framework in research leadership, wherein mandatory-driven research is defined by regulatory requirements, while value-driven research in emerging markets is influenced by broader ethical and moral concepts.*

Keywords: ESG, Bank Performance, Bibliometric Analysis, Sustainable Finance, Corporate Governance

1. Introduction

Sustainability is essentially defined as development that meets current needs without compromising the ability of future generations to meet their own need (Armstrong, 2020). This vision shaped the 2030 Agenda for Sustainable Development, which progressed from its initial receipt in 2014 to its formal adoption by the UN General Assembly in September 2015 (Palmer, 2015). Within this framework, global leaders made a significant commitment to protect the rights and welfare of all individuals while preserving the planet through the implementation of the 17 Sustainable Development Goals (SDGs) (Martin, 2025). The 2030 Agenda serves as a transformative blueprint, pushing global stakeholders to move the world towards a resilient path. Within the banking sector, these objectives serve as a crucial standard for aligning financial strategy with the broader global sustainability agenda. Achieving the SDGs is increasingly acknowledged as a significant external factor influencing bank profitability, since effective alignment provides banks with access to sustainable resources and green capital, hence enhancing their financial performance (Modern Finance, 2023).



Figure 1. The 17 Sustainable Development Goals

The 17 Sustainable Development Goals offer a cohesive framework designed to solving global issues related to poverty, inequality, climate change, and environmental degradation. The objectives are categorized into three fundamental pillars: the Social Pillar (Goals 1-5, 10, and 16), emphasizing human dignity and equity; the Environmental Pillar (Goals 6, 12-15), concentrating on the conservation of natural resources; and the Economic and Partnership Pillar (Goals 7-9, 11, and 17), striving to secure prosperity through sustainable infrastructure. In the financial environment, these objectives guarantee that funds are allocated to initiatives that build systemic resilience rather than only yielding short-term profits. Sustainability has consequently emerged as a fundamental criterion for operational legitimacy. The Sustainable Development Goals (SDGs) delineate global objectives, whereas Environmental, Social, and Governance (ESG) standards provide the methodology, functioning as a practical framework for banks to minimize risks and disclose their impact. By conforming to these requirements, banks adopt a "triple bottom line" that includes social, environmental, and financial factors.

ESG standards represent a substantial transition from a voluntary initiative for Corporate Social Responsibility (CSR) to a comprehensive framework for regulatory compliance and financial risk management. ESG gained recognition in the 1990s as institutional investors noticed that addressing issues such as greenhouse gas emissions could improve financial performance, while CSR was founded as a corporate response to climate change and societal effects (Armstrong, 2020; Krantz, 2024). The Task Force on Climate-related Financial Disclosures (TCFD) was established by the Financial Stability Board in 2017 to provide lenders with decision-relevant information, which expedited this evolution (TCFD, 2017). Reporting mandates have been implemented in the EU, Singapore, Hong Kong, and Brazil, suggesting that obligatory regulatory disclosures are becoming a global practice (IBM Consulting, 2023). By mandating human rights and environmental due diligence across supplier networks, the 2023 German Supply Chain Act further emphasizes this legal shift (The German Supply Chain Act, 2024).

The ESG framework consists of three fundamental pillars that facilitate the identification of risks and opportunities by stakeholders. According to Trahan and Jantz (2023), the Environmental (E) pillar requires that banks evaluate carbon emissions and resource consumption in response to governments' increasingly stringent regulations. The Social (S) pillar prioritizes diversity initiatives, equitable compensation, and labor relations in order to

enhance productivity (RL360, 2019; Ribeiro et al., 2023). Lastly, the Governance (G) pillar assesses internal systems to prevent mismanagement and guarantee compliance with regulatory penalties (RL360, 2019). In addition to ensuring compliance, the implementation of ESG principles is a strategic measure that can enhance a bank's reputation and align its operations with international benchmarks, including the Principles for Responsible Banking (PRB) and the UN Environment Programme Finance Initiative (UNEP FI) (Dufays, 2012; Feridun & Talay, 2023).

The impacts of these practices on bank performance is a subject of intense debate in academics. A growing consensus links ESG practices to higher financial performance and legitimacy (Pathan & Mohanty, 2025; Loan, Anh, & Hoang, 2024), with research in Jordan proving that ESG increases both operating and market performance (Mansour et al., 2025). However, the relationship is complex. Buallay (2019) argues that while environmental transparency is valued by the market, social initiatives might negatively affect measures like ROA and ROE as they are generally perceived as high-cost. Furthermore, the efficiency of ESG is very context-dependent; it works best in individualistic civilizations with strong formal governance, but in cultures with high uncertainty avoidance, it may become just symbolic (Idrees Liaqat, Josanco Floerani, & Naseer, M. M., 2025). Market maturity also plays a role, with governance typically being the key driver in diverse economic circumstances (Huang et al., 2024). Additionally, specific banking types show unique trends; for instance, state-owned banks demonstrate a stronger ESG-performance link due to government mandates (Nathania & Ekawati, 2024), while Islamic banks show positive links in environmental and social pillars compared to conventional banks, where reducing ESG might boost short-term profits (Srairi, 2025). Ultimately, progress toward Sustainable Development Goals (SDGs) does not naturally convert to profitability, since macroeconomic factors sometimes overshadow these efforts (Amanova et al., 2025).

This lack of consensus signifies that the literature is currently packed with conflicting findings. While empirical studies are popular, the conceptual structure of this topic remains unmapped. Current assessments often fail to visualize how these different variables, such as the increasing focus on ESG practices or the distinctive contributions of emerging markets have an impact on bank performance. This study employs a bibliometric analysis to systematically examine the field's evolution and address this issue. The primary objectives are:

- 1) To examine the publication patterns, influential authors, and key journals at the nexus of ESG and bank performance.
- 2) To illustrate the collaborative networks between countries and organizations, specifically recognizing the participation of emerging markets.
- 3) To identify the conceptual structure and developing research issues, offering a clear roadmap for future empirical studies.

2. Literature Review

The adoption of ESG principles differs from traditional standards by shifting the bank's focus from the interests of financial stakeholders to a broad responsibility embracing environmental and social roles. The concept of sustainable banking is transforming the financial services sector. As investors and customers demand enhanced accountability from companies, financial institutions are increasingly integrating Environmental, Social, and Governance (ESG) elements into their operations (Tanaka, 2024). Thus, the incorporation of ESG criteria has grown as a fundamental component for banks, playing an essential part in risk management and the development of new business opportunities.

2.1 Theoretical Framework

Freeman (1984) introduced Stakeholder Theory, suggesting that banks build intangible assets like reputation by managing diverse stakeholder interests. Fatemi et al. (2018) and Buallay (2019) argue these assets reduce equity costs and enhance sustainability by minimizing conflict between the bank and its environment. Closely related is Legitimacy Theory, where Deegan (2002) and Chiaramonte et al. (2022) view ESG disclosures as strategic tools to maintain a "social license to operate," helping banks avoid regulatory friction and ensure stability by validating their standing in a socially conscious market.

On the other hand, Trade-off Theory, rooted in Friedman's (1970) Shareholder Theory, offers a skeptical view, arguing that a firm's primary duty is maximizing shareholder wealth. It implies that ESG initiatives divert resources from profit generation, a stance supported by Esteban-Sanchez et al. (2017), who found that high compliance costs can erode short-term efficiency. Similarly, Agency Theory (Jensen & Meckling, 1976) suggests managers might overinvest in ESG for personal reputation, such as winning "Green CEO" awards at shareholders' expense; Barnea and Rubin (2010) term this an "agency cost," where ESG serves managerial self-interest rather than creating firm value.

2.2 Empirical Difference: The Cost-Value Trade-Off

Esteban-Sanchez et al. (2017) and Ellili (2020) argue that the relationship between financial performance and ESG disclosure is either statistically insignificant or negative. This change is often due to the "managerial opportunism" concept or the high initial costs of compliance, which result in the shift of resources from profitable activities to non-financial reporting. Based on their observation of emerging markets, Crisóstomo et al. (2011) highlight this point by arguing that social contributions frequently result in a short-term loss of value due to a lack of immediate market reciprocity. Duque-Grisales and Aguilera-Caracuel (2021) discovered a negative correlation in Latin American markets, indicating that the capital necessary to establish comprehensive ESG frameworks may outweigh the immediate financial benefits for smaller institutions or banks in developing nations. Additionally, Nollet et al. (2016) claim that the relationship is non-linear (U-shaped), which implies that banks must endure initial losses before achieving the sufficient scale to make ESG profitable. This literature is marked by significant inconsistency in its results, which depend on the methodology, region, and time period.

2.3 Governance as Primary Driver

Although many studies combine Environmental, Social, and Governance factors into a single "ESG Score," recent research indicates that these pillars frequently have different effects on performance. Velte (2017) found that governance improvements generate more immediate financial benefits, whereas environmental initiatives often represent a deferred cost with long-term horizons. This distinction is particularly evident in the banking sector, where the Governance (G) pillar, which includes risk management, board oversight, and audit quality, is frequently identified as the most reliable indicator of financial health due to its direct mitigation of the sector's primary vulnerability: excessive risk-taking. Ellul and Yerramilli (2013) demonstrate that comprehensive risk oversight mechanisms, which are a fundamental aspect of governance, are statistically associated with higher returns and lower failure rates during economic downturns.

2.4 Government-Linked Companies and Islamic Banking

The literature indicates that Government-Linked Companies may prioritize national development agendas over pure profit maximization, potentially decoupling their ESG activities from standard financial performance metrics like Return on Assets (ROA). Nevertheless, their public nature frequently requires them to deal with more scrutiny, which results in superior disclosure standards. Additionally, Platonova et al. (2018) claim that there is a theoretical connection between Maqasid al-Shariah (the objectives of Islamic law) and ESG principles. This suggests that Islamic banks in Malaysia may have an inherent, religiously motivated urge for social and governance disclosures that exists independently of regulatory pressure. This particular "dual-banking" system establishes a distinct research context in which the factors that motivate the adoption of ESG may differ substantially from those in Western markets.

3. Methodology

This study adopts a bibliometric analysis with quantitative and qualitative methods to examine the developmental trends of Environmental, Social, and Governance (ESG) research in the banking sector. The primary objective is to identify collaboration patterns across authors, organizations, and countries, while discovering active and less explored subjects in the field. Bibliometrics is very useful for managing large scientific data and assessing research impact (Passas, 2024). The best approach for this study was bibliometric analysis, which enables interpretation of the evolution of the academic discourse surrounding ESG and bank performance by allowing a macro-level examination of publication trends.

The Scopus database was utilized as the major data source for this study. Scopus was used because it offers a wide-ranging and high-quality dataset that is crucial for recognizing the diverse volume of articles at the intersection of ESG and banking. Additionally, the Scopus platform features a useful filtering tool that allows researchers to easily categorize results by publication year, country, subject area, institution, and document type. This user-friendly feature supports a precise screening process. Figure 2 shows the systematic approach for data collection, including identification, screening, and final selection

The search method used the specific query `TITLE-ABS-KEY ("esg AND bank performance")` to ensure high relevance by focusing on these terms within titles, abstracts, and

keywords. The time frame selected is from 2016 to 2025, chosen to represent the significant rise in academic papers about ESG within the banking sector. Data extraction occurred on 19 January 2026, resulting in an initial yield of 469 documents. The time frame of 2016 to 2025 was purposely selected because early searches found a total lack of publications on this specific topic prior to 2016. By focusing on this decade, the study captures the complete lifecycle of the current academic discourse. After a thorough screening process, 26 records were eliminated for not satisfying the inclusion requirements, yielding a final dataset of 443 documents.

To analyze and interpret this dataset, this study employed VOSviewer software. VOSviewer is practical for this study because of its ability to build clear visual maps from massive and complex datasets. By showing the "links" and "clusters" connecting various research nodes, VOSviewer enables an expanded understanding of the logical relationships between ESG and bank performance. This study employed VOSviewer software to illustrate the intellectual structure of the area by mapping co-authorship, keyword co-occurrence, and bibliographic coupling networks (Arruda et al., 2022).

This study uses the Bibliometrix R package via the Biblioshiny application to analyze the field's conceptual evolution. According to Ivanova (2023), the Biblioshiny application enables users to import data in BibTex, CSV, or Plain Text forms from the Scopus and Web of Science databases. Following that, metadata was exported from the Scopus database and put into the application in BibTeX/CSV format to generate a thematic map for this study. This strategy graphic employs co-word analysis to cluster author keywords along two axes: Centrality (horizontal), representing a theme's relevance and external connectivity, and Density (vertical), indicating its internal development and maturity. This systematic segmentation explains the research focus by recognizing which themes serve as foundational Basic Themes or high impact Motor Themes.

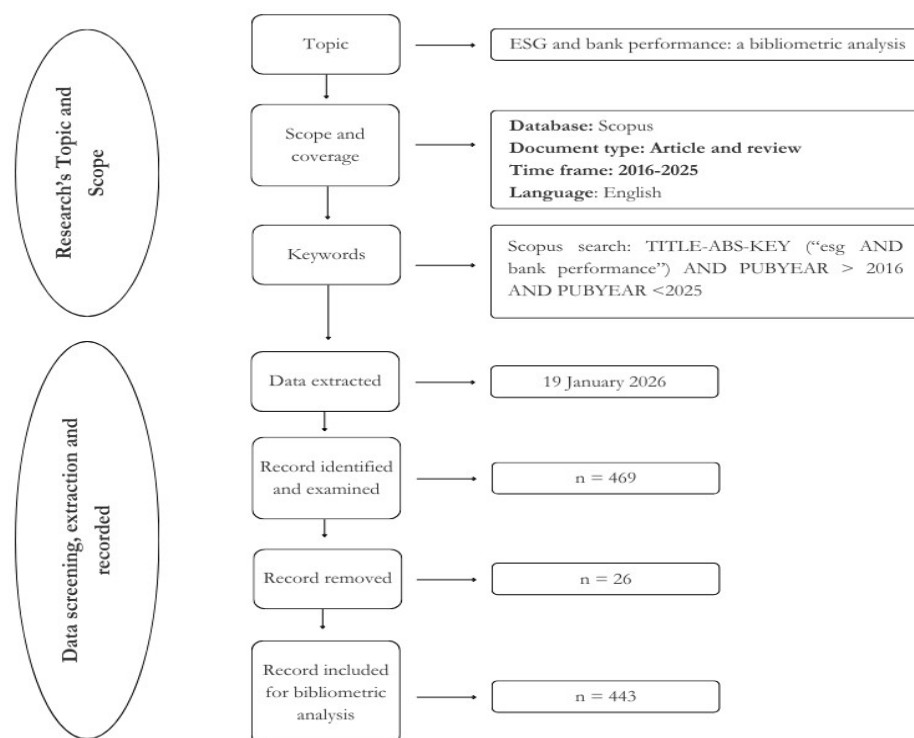


Figure 2. Scopus data collection flowchart

Source: Created by author

4. Findings

4.1 Publications on ESG and Bank Performance

Table 1. Publication metric

Description	Results
Publication years	2016-2025
Documents	200
Citations	8463
h-index	45
g-index	85
Cites per year	846.30

Source: Extraction Scopus data by Harzing's Publish and Perish

Table 1 summarizes the bibliometric analysis, which indicates that there is strong academic interest in the topic of "ESG and Bank Performance." From 2016 to 2025, Scopus recorded 200 publications with a total of 8,463 citations, resulting in an average of 846.3 citations annually. The dataset displays an h-index of 45 and a g-index of 85, reflecting consistent and high-quality citations. Figure 1 illustrates the constant increase of the volume of publications. Beginning with merely 2 documents in 2016, the total raised to 202 by 2025, signifying a massive growth over the decade. The field's rapid development and increasing value were highlighted by the significant growth in research recorded between 2020 and 2025.

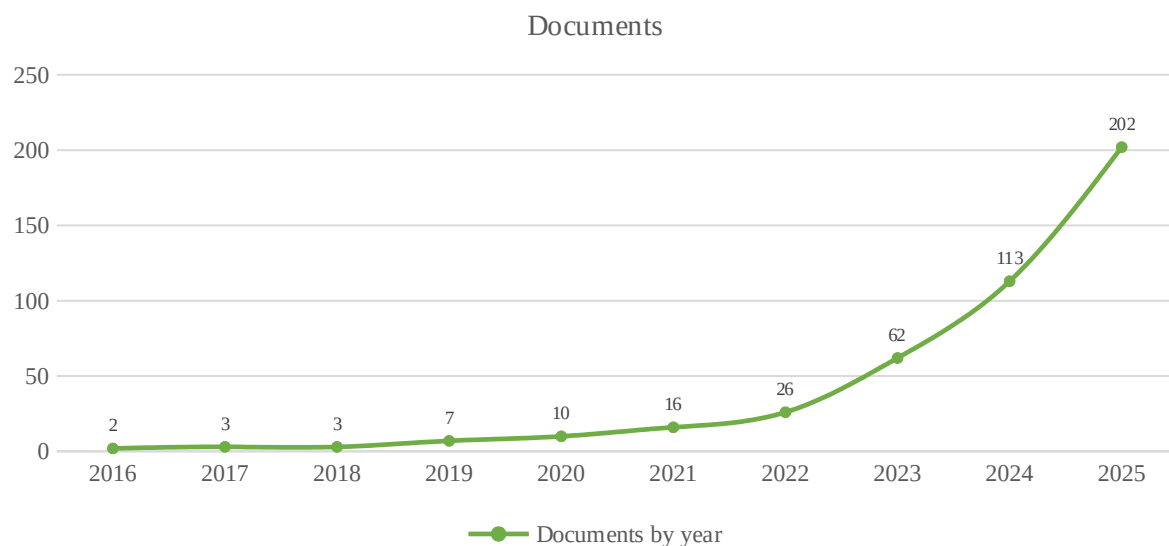


Figure 2. Total documents published each year

Source: Created by author

4.2 Most Cited Authors Analysis

Table 2. Most cited authors

Rank	Author	Citations	Documents
1	Buallay, A.	466	4
2	Birindelli, G.	379	4
3	Menicucci, E.	177	4
4	Ferilli, G.B.	56	4
5	Campanella, F.	8	4

Source: Created by author

Table 2 presents the five most-cited authors, each with four articles. A. Buallay has the most citations (466), followed by G. Birindelli (379) and E. Menicucci (177). The large gap between leading authors and the others indicates that Buallay and Birindelli have a major impact in the field of ESG and bank performance research.

Figure 3 illustrates the co-authorship network, displaying a unique 'chain' shape comprising four interconnected clusters. This linear structure suggests that research in this field is driven by various collaborating teams rather than a unified community. The blue cluster, led by M. Kabir Hassan, represents a unique research unit that links to the broader network primarily through the red cluster, led by Yunce Karina Tumewang. The yellow cluster, represented by K. Hussainey, serves as a key intermediary linking the western clusters to the green cluster, headed by Ahmad Al-Hiyari. This indicates that Tumewang and Hussainey function as primary 'bridges' in the academic dialogue, enabling the exchange of knowledge among various research teams in the domain of ESG and bank performance.

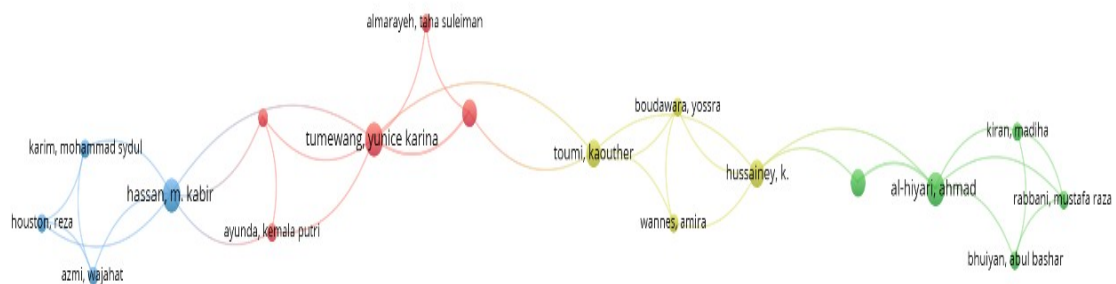


Figure 3. Co-authorship authors

Source: Created by author

4.3 Prominent Subject Area

Table 2 and Figure 4 highlight the subject area of the research field. The analysis indicates that ESG and Bank Performance are most commonly found within two principal subjects: Economics, Econometrics, and Finance, with 258 publications (34%), and Business, Management, and Accounting, which is followed closely with 248 publications (32%). More than 55% of all studies on this topic come from these two areas alone, which shows that scholars mostly view it through the perspectives of finance and management. However, the presence of Social Sciences (17%) and Environmental Science (11%) demonstrates the multidisciplinary nature of the field, suggesting that while the core analysis is financial, the implications extend into broader societal and environmental contexts.

Table 3: Top 5 primary subject areas

Rank	Subject Area	Publications	Percentage (%)
1	Economics, Econometrics and Finance	258	34
2	Business, Management and Accounting	248	32
3	Social Sciences	128	17
4	Environmental Science	83	11
5	Computer Science	44	6

Source: Created by author

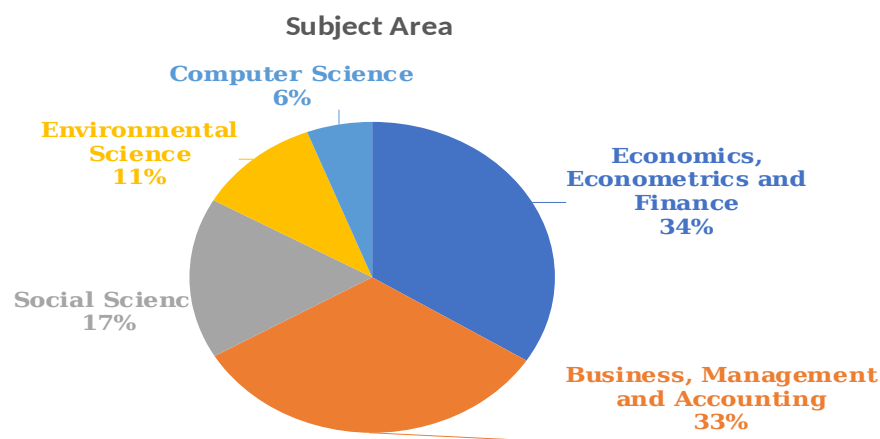


Figure 4. Top 5 primary subject area pie chart

Source: Created by author

4.4 Primary Keywords

The keyword analysis, which is shown in Table 4 and the co-occurrence network map, shows the main ideas of the research. ESG is the most common keyword, with 135 occurrences.

Keywords Sustainability (59) and ESG Performance (57) are the next most influential keywords. This confirms that these terms are the most important parts of the field.

Table 4. Most influential keywords

Rank	Keywords	Numbers
1	ESG	135
2	Sustainability	59
3	Esg Performance	57
4	Sustainable Development	55
5	Financial Performance	47
6	Banks	47
7	Corporate Governance	42
8	Corporate Social Responsibility	38
9	Performance	35
10	Banking Sector	31

Source: Created by author

The network map of co-occurrence of all keywords in Figure 5 illustrates a better view of how these topics are related to each other. The big blue node for the keyword ESG is the main core that connects directly to other big nodes like "Financial Performance" (47) and "Banks" (47). This significant connection visually supports the main goal of the research, which is to look into the link between environmental/social governance and banking performance. The presence of distinct clusters, such as the red cluster focusing on "Banks" and "Climate Change" and the yellow cluster highlighting "ESG Performance" and "Risk Management," indicates that researchers are increasingly linking ESG not only to profitability but also to risk mitigation and corporate stability.

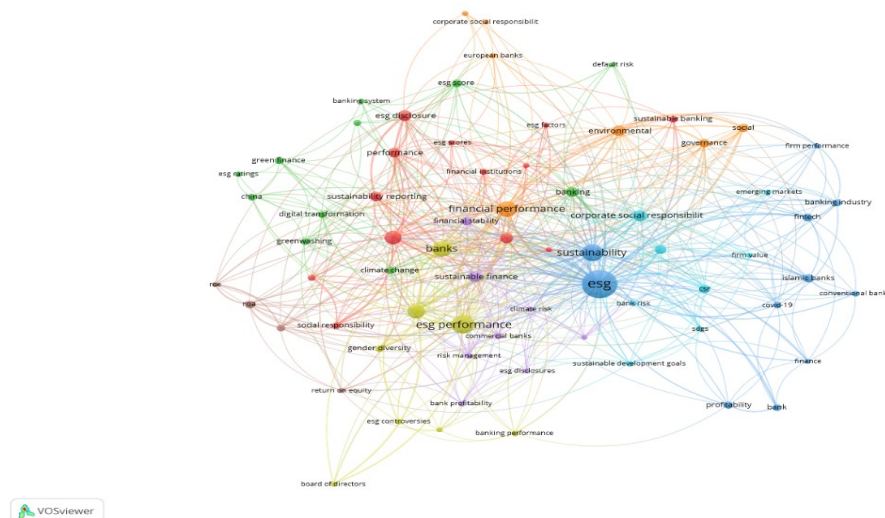


Figure 5. Co-occurrence all keywords

Source: Created by author

4.5 Country Analysis

Table 5. Most contributed countries

Rank	Country	Numbers
1	China	67
2	Italy	67
3	United Kingdom	41
4	Indonesia	32
5	India	30
6	Malaysia	28
7	United States	18
8	France	18
9	Tunisia	17
10	Spain	16

Source: Created by author

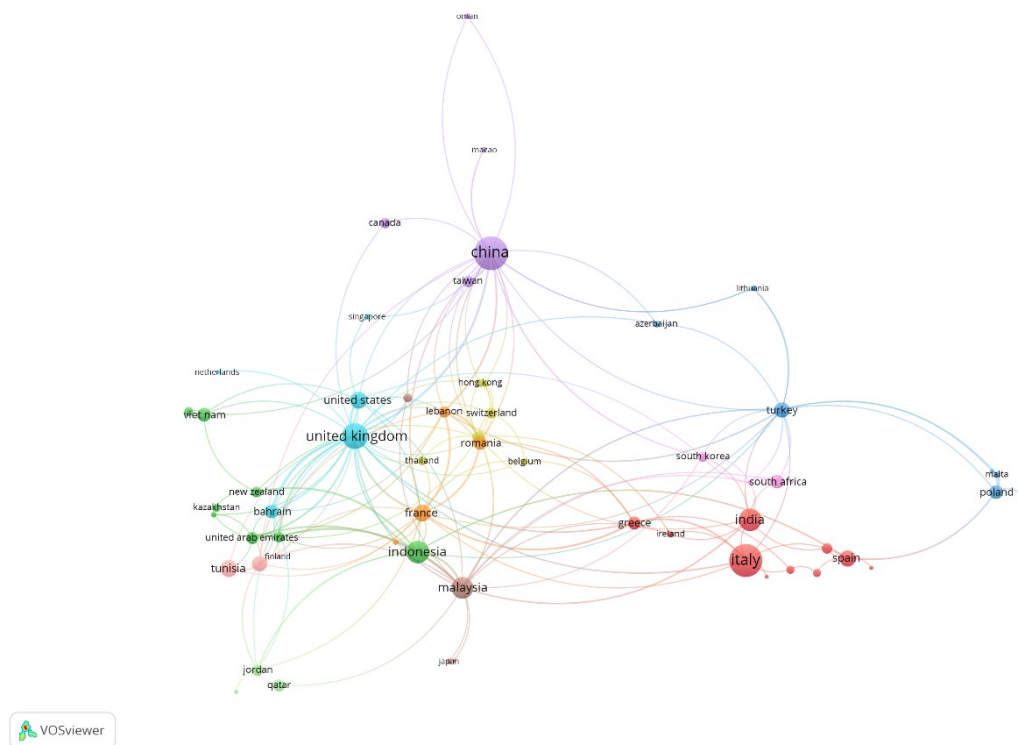


Figure 6. Co-authorship countries

Source: Created by author

The geographic distribution of research is represented in the table 5 and the co-authorship map. China and Italy are tied for the top spot in the data, with each country contributing 67 publications. The United Kingdom (41) and Indonesia (32) follow behind them. Malaysia ranks 6th with 28 publications, signifying an important contribution to this global discussion, possibly influenced by its primary focus on emerging markets and Islamic banking.

Figure 6 displays the collaborative interactions among these nations using a co-authorship map. China (purple node) and Italy (red node) emerge as the predominant nodes, functioning as key centers within their respective collaborative networks. The map illustrates multiple geographic clusters; for example, the United Kingdom (light blue) serves as a bridge linking European researchers with other worldwide clusters. Malaysia is also in a group that is quite close to Indonesia and other Asian countries. This shows that ASEAN or developing markets are paying a lot of attention to ESG concerns in the region.

4.6 Most active affiliation



Figure 7. Co-authorship organizations

Source: Created by author

Table 6. Most contributed affiliation

Rank	Affiliation	Numbers
1	Università degli studi di Bari Aldo Moro	9
2	Brunel University London	8
3	Università del Salento	8
4	Ahlia University	7
5	Symbiosis International (Deemed University)	7

Source: Created by author

Table 6 shows the main institutions driving research in this subject. The list is headed by Università degli studi di Bari Aldo Moro with 9 publications, followed by Brunel University London and Università del Salento, both with 8 publications. The prominence of Italian universities in the top five matches with the nation analysis in Table 5, indicating Italy's leadership role in this specialized sector of banking research. The presence of Ahlia University and Symbiosis International further illustrates the global spread of interest from the Middle East and India. The network map for affiliations indicates a more fragmented structure compared to the country map, suggesting that while specific universities are highly active, research efforts are often driven by specific research groups within these institutions rather than a massive, dense global network of universities. The fragmented structure of the affiliation map suggests research is centralized within specific institutions rather than distributed across a dense global network.

4.7 Thematic map

Figure 7 presents the research landscape across four quadrants. Motor Themes (top right) are well-developed and essential to the topic, whereas Niche Themes (top left) are highly specialized but still isolated. Basic Themes (bottom right) indicate foundational yet conceptually broad issues, whereas Emerging or Declining Themes (bottom left) signify marginal or new areas that lack both internal development and external connectivity.

The upper right quadrant contains the Motor Themes, which are both fully developed and crucial to the framework of the research area. There is a major focus on sustainable finance and the banking sector. These subjects serve as the "engines" of current academic discourse, effectively reconciling traditional financial objectives such as financial stability with modern moral standards like social responsibility. The high density of this cluster indicates that academics are no longer only questioning whether banks need to be sustainable, but they are conducting extensive, detailed studies into the impact of sustainability on the systemic stability of commercial banks.

In the upper left, the Niche Themes show highly specialized yet somewhat isolated areas of study. China, greenwashing, and green finance are all present in this context, which signifies that, despite extensive specialized data on Chinese green finance and the specific mechanics of greenwashing, these topics are treated as specialized "deep dives" rather than universal principles applicable to all banking studies. In contrast, the bottom right quadrant represents the Fundamental Themes, such as ESG, sustainability, and fintech. These are the general topics that demonstrate significant relevance and connectivity to nearly all other clusters (high centrality); however, they are often used as broad conceptual frameworks rather than as highly specialized sub-disciplines (low density).

Digital transformation and ESG disclosure are identified in the bottom left quadrant as Emerging or Declining Themes. Given the present global push for mandatory reporting, it is possible that these are emerging rather than declining. They represent the next focus area of research that has not yet achieved high levels of density or centrality. Lastly, the clusters that are present very near the center, including Islamic institutions, gender diversity, and corporate governance, serve as transitional themes. They are progressing toward the Motor Theme quadrant, which implies that the industry is beginning to recognize the increasing importance of diversity and specific banking models such as Islamic finance in the broader discussion of global ESG performance.

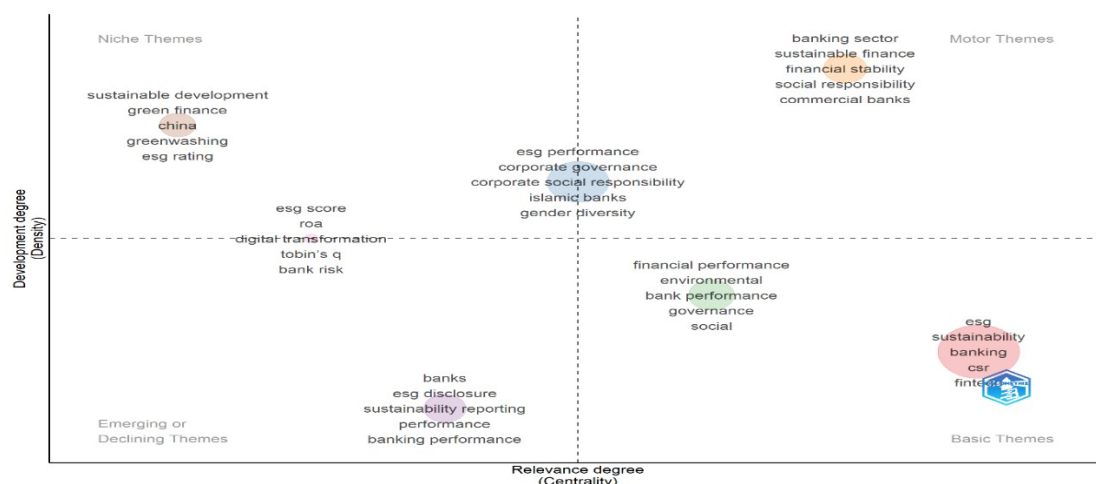


Figure 7: Thematic map

5. Discussion

The growing field of ESG and bank performance research indicates rising academic interest, as publication volume increased between 2016 and 2025. As ESG becomes a fundamental blueprint for the banking sector, the field must continue to grow to support developing regulatory frameworks and market demands. The significant growth in publications in 2020 is likely linked to the post-pandemic landscape, where the crisis pushed the adoption of Green FinTech. According to Tobiloba (2025), Green FinTech comprises digital technologies such as eco-friendly payment systems, blockchain-enabled sustainable financing, and AI-driven environmental risk assessment tools. By integrating these solutions, banks may cut operational expenses and manage financial risks more effectively.

However, the impact of ESG on performance remains debated. While Tobiloba (2025) suggests that Green FinTech enhances operational efficiency, other scholars find that ESG activities may initially reduce bank profitability, supporting the trade-off hypothesis that high compliance costs outweigh short-term gains. This matches with Yuen et al. (2022), who observed a U-shaped relationship between ESG and bank profitability, suggesting that banks must endure initial costs before realizing long-term performance benefits. Ultimately, this growth reflects a fundamental strategic shift moving from "shareholder primacy" to a broader stakeholder model where environmental stewardship is equated with long-term financial stability (Tanaka, 2024).

The analytical intersection of Corporate Governance and Financial Performance indicates a major difference between Stakeholder Theory and Agency Theory. While the older generation believes that ESG develops reputational capital and long-term value, this bibliometric research reveals a more complex reality where managers may over-invest to gain personal reputation, a process frequently labeled Greenwashing or managerial signaling. Barnea and Rubin (2010) term this an "agency cost," where ESG serves managerial self-interest rather than creating firm value. Our analysis shows Governance as the main filter for these agency costs. The high centrality of the Governance node in the co-occurrence network (Figure 5) demonstrates that robust board supervision is the major mechanism ensuring ESG initiatives are strategic and value-creating rather than merely performative or cost-adding. Without this structural filter, the change from shareholder primacy to a broader stakeholder model risks weakening short-term efficiency through high compliance costs.

The thematic map (Figure 7) demonstrates a notable finding on the maturity of the field. The movement of Digital Transformation from an Emerging quadrant toward a Motor Theme suggests that the future of banking performance is no longer influenced by ESG or FinTech in isolation, but by their combination. This Green FinTech nexus, including AI-driven risk assessment and blockchain-enabled sustainable financing, offers an alternative to traditional trade-off costs. By automating compliance and boosting transparency, these technologies help banks to achieve a profitability scale faster, effectively minimizing the period of the initial compliance trough and turning the U-shaped performance curve into a faster upward trajectory for financial returns.

This analysis shows the dominance of specific countries driven by state policy. China has made significant progress in developing its green finance sector, positioning itself as an important driver in the global sustainable finance landscape (Yue & Nedopil, 2025). This aligns with the bibliometric findings (Table 5) where China ranked first, reflecting the country's "top-down" implementation of mandatory green credit guidelines which has stimulated a massive volume of educational research. Malaysia's sixth-place finish is quite outstanding. It indicates

that Malaysia is punching above its weight as a thought leader in the developing world, probably driven by the unique intersection of ESG and Islamic Banking. As discussed in the literature, Islamic banks possess a fundamental alignment with social responsibility (Maqasid al-Shariah), creating an ideal foundation for ESG research that differs from the Western, mainly risk-based approach (Platonova et al., 2018).

The co-authorship map (Figure 6) illustrates a significant contrast in how global financial institutions approach sustainability. Strict reporting requirements like the EU's Sustainable Finance Disclosure Regulation (SFDR), the UK's TCFD-aligned disclosures, and the Corporate Sustainability Reporting Directive (CSRD) drive discussions in the North, which consists of countries like Italy, the UK, France, and Spain. In these circumstances, ESG serves as a strategic License to Operate, focused on measuring climate-related risks and evaluating performance to mitigate greenwashing and assure systemic stability in the banking industry.

In contrast to the North's strict regulatory strategy, many emerging markets are increasingly active contributors who transform the narrative from being merely compliance-driven to value-driven. A valuable driver for this change is the inclusion of ethical banking concepts, notably the Maqasid al-Shariah. As observed by Platonova et al. (2018), Islamic banks contain a fundamental connection with social responsibility because pillars such as the preservation of wealth, life, and posterity organically emphasize social welfare and environmental care. This offers a research foundation that differentiates from the Western, mostly risk-based approach by approaching ESG not only as a response to regulatory challenges but as a core moral mandate. This alignment generates a lasting performance benefit where sustainability has become part of institutional culture, making it theoretically more resilient to macroeconomic swings compared to strictly risk-based mandates.

The keyword analysis in Figure 5 demonstrates a maturing research ecosystem. Compared to the past, early academic research was largely focused on Financial Performance and discussing whether ESG translates to rapid profit; the current evidence reveals a deeper evolution. Researchers have progressed beyond asking whether ESG pays off to exploring how it protects banks from systemic threats, as shown by the establishment of significant clusters around Risk Management and Corporate Governance. It's interesting to note that while the obvious connection between Banks and Climate Change highlights how urgent the Environmental pillar is, the ongoing emphasis on Corporate Governance highlights a crucial fact: as Velte (2017) claims, governance is the engine room that drives sustainable bank performance rather than just a metric.

6. Conclusion

In conclusion, the findings demonstrate that the topic has developed from a minor interest into a major focus of financial writing, evidenced by the huge publication volume. This dramatic increase signifies a fundamental concept shift where sustainability is no longer considered as a choice for profitability, but as a crucial component of long-term financial stability. The research is characterized by a North-South duality, showing that China and Italy lead the global output due to state-driven Green Finance policies and rigorous European reporting directives; Malaysia has emerged as a significant voice for developing economies, bridging the gap between conventional ESG frameworks and Islamic finance principles.

This analysis reflects a maturity in the academic discussion from a thematic perspective. The conceptual focus has moved from simple inquiries into Financial Performance toward complicated studies of Risk Management and Corporate Governance. This validates

Stakeholder Theory within the banking context, confirming that governance remains the engine room that powers actual performance and mitigates systemic risk. Future study should address the discovered fragmentation in collaboration networks and specifically map the intersection of Cybersecurity, Green FinTech, and ESG, as digitalization increasingly becomes the frontier where governance and risk management converge.

This study gives bank managers, investors, and policymakers a clear path to follow as they move toward sustainable financing. One of the most important things for managers to remember is that they need to quickly adopt "Green FinTech." As digital transformation becomes a major theme in the literature, banks should use AI-driven risk assessments and blockchain-based financing to automate the long compliance process. By doing this, institutions can avoid the high upfront expenditures that are generally associated with the "U-shaped" performance curve. This turns ESG from a cost center that drains money into a real generator of profitability much faster than traditional techniques do.

Additionally, for board members, the findings show that corporate governance must be the main driver of any plan for long-term growth. ESG committees should not only look at general disclosures, but they need to be a big part of the bank's main risk management system. This structural alignment is the only thing that can really protect you from the legal and reputational damage that comes from "greenwashing." Finally, policymakers in emerging markets may learn from Malaysia's "dual-banking" system. It shows that combining ESG requirements with existing ethical banking norms, such as Maqasid al-Shariah, makes the financial industry much stronger. To take advantage of this, authorities should push for mandated, standardized reporting that puts governance first. This will keep the system stable and attract the long-term green capital needed for future growth.

This study has a few limitations that future researchers could address. First, this analysis was based only on data from the Scopus database. This means that the dataset may not include all important papers. Researchers should try to combine data from additional sources such as Web of Science or Google Scholar to provide a more comprehensive overview of the research landscape. Second, this study only focuses on ESG as a whole and not on its pillars. Considering that the Environmental, Social, and Governance pillars can each have an independent impact on a bank's performance, examining them collectively might hide important details. In the future, studies might look at how each pillar affects a bank on its own.

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