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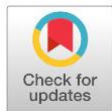
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Sustainability Accounting and Reporting in the Banking Sector: A Systematic Literature Review

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Article History



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Abstract

This paper is a systematic literature review (SLR) of research studies on Sustainability Accounting and Reporting (SAR) in the banking industry between 2019 and 2024. Two research questions guide the review: RQ1 investigates the effects of regulatory pressures and stakeholder expectations on the adoption and implementation of SAR; RQ2 will determine the degree to which SAR practices have calculable impacts on environmental performance, social responsibility, and financial risk management. Using the PRISMA protocol, the research team searched the Scopus and Web of Science databases systematically to find applicable literature and obtained an initial pool of 786 records. The next stage of rigorous screening and eligibility evaluation led to the inclusion of 99 articles in the further in-depth analysis. The analytical results suggest that the Stakeholder, Legitimacy, and Institutional theories are productive in underpinning the external forces that trigger banks to embrace SAR. However, the literature inundates a reactive, legitimacy -seeking position among banking institutions. Although SAR is often applied as a strategic tool to bargain legitimacy and control power asymmetries, it is not always a driver of transformative change. The analysis thereby finds a significant discrepancy between the symbolic implementation of SAR, that is more typical within an environment with weak regulatory enforcement and its substantive application, which seems to be conditional upon strong internal capacities and severe regulatory pressure. In terms of the impact dimension, the evidence available of tangible outcomes is mostly associative and heterogeneous and has significant methodological limitations.

Introduction

The banking sector has long been recognized as the economy's lifeblood, functioning as a critical development agent by channeling funds and facilitating economic growth. However, the banking industry's role paradigm is undergoing a fundamental shift (Meutia et al., 2023). It is no longer sufficient for banks to act merely as financial intermediaries (Sharma & Kumar, 2024) they are now increasingly positioned as pivotal actors in addressing pressing global

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challenges, including climate change, social inequality, and the imperative for robust governance (ESG) (Friedrich et al., 2023; Oyerogba et al., 2024; Luh et al., 2024). Sustainability Accounting and Reporting (SAR) has emerged as an indispensable framework in this transformative context. It provides the essential tools for banks to manage, measure effectively, and importantly (Debnath et al., 2024; Debnath et al., 2023; Lodhia & Sharma, 2019), communicate their sustainability performance transparently and accountable, aligning their strategic operations with the demands of a sustainable future (Kazemi et al., 2023; Gaba & Sharma, 2024).

A convergence of intense regulatory pressures and evolving stakeholder expectations is driving this shift. On the regulatory front, global initiatives such as the Task Force on Climate-related Financial Disclosures (TCFD), the Task Force on Nature-related Financial Disclosures (TNFD), and the UN Principles for Responsible Banking are setting new standards for transparency (Das et al., 2024; Chen et al., 2024; Tózsér et al., 2024). Simultaneously, stringent national regulations, notably the European Union's Sustainable Finance Disclosure Regulation (SFDR) and Taxonomy Regulation, make comprehensive ESG disclosures legal, compelling banks to integrate sustainability into their risk and reporting frameworks (Suhardjo & Suparman, 2024; Boni & Scheitza, 2025). Beyond compliance, banks face heightened demands from their stakeholders. Investors are increasingly leveraging ESG data for risk assessment and investment decisions, while a growing cohort of customers and civil society groups are scrutinizing banks' portfolios, demanding green financial products, and holding them accountable for the social and environmental impacts of their financing activities (Sebastião et al., 2024; Porzio & Battaglia, 2024; Nasir & Ahamed, 2024).

Consequently, the effective management of environmental and social risks has become a direct determinant of a bank's financial stability and longevity (Dong et al., 2023). Banks are exposed to tangible physical risks from climate change, transition risks associated with shifting to a low-carbon economy, and significant social risks such as those linked to financed projects in sensitive communities (Baldissera, 2023; Adeyemi et al., 2025). Herein lies the critical function of Sustainability Accounting and Reporting: it provides the necessary apparatus to proactively identify, assess, and mitigate these risks. This is encapsulated by the principle of "double materiality," which mandates that banks account not only for their external impacts on society and the environment (impact materiality) but also for how these sustainability issues, in turn, create financial risks and opportunities for the bank itself (financial materiality) (Murè et al., 2025). Therefore, robust SAR is not merely a reporting exercise; it is fundamental to safeguarding a bank's reputational capital, maintaining public trust, and securing its ongoing social license to operate in an increasingly conscious marketplace.

In response to these developments, academic interest in Sustainability Accounting and Reporting within the banking sector has proliferated over the past decade, yielding a substantial body of literature comprising empirical studies, case analyses, and narrative reviews. Despite this growing scholarly attention, a significant void remains: the absence of a comprehensive Systematic Literature Review (SLR) that meticulously maps the intellectual terrain, synthesizes dominant themes and evolving trends, and critically evaluates methodological approaches. This gap hinders the consolidation of knowledge and obscures clear pathways for future inquiry. To address this, our study employs the SLR methodology, chosen for its rigorous, transparent, and replicable protocol. This approach guarantees a thorough and unbiased examination of the extant literature, ensuring the findings are comprehensive and foundational for guiding subsequent research.

To fill this gap, this paper conducts a systematic literature review to address the following two core research questions (RQs): RQ1: How do regulatory pressures and evolving stakeholder

expectations shape the adoption and implementation of sustainability accounting and reporting in the banking sector?; RQ2: To what extent do sustainability reporting practices in banking demonstrate tangible impacts on environmental performance, social responsibility, and financial risk management?

This research aims to synthesize knowledge on banking sustainability disclosures from 2010 to 2024 by addressing two core questions. To systematically investigate the motivations, implementation, and consequences of Sustainability Accounting and Reporting (SAR), the analysis in this paper is primarily framed by Stakeholder Theory and Legitimacy Theory. These theories explain why banks increasingly engage in sustainability disclosure that extends beyond mere regulatory compliance (Matuszak-Flejszman et al., 2023; Khan et al., 2021; Adu, 2022; Gunawan et al., 2022). Stakeholder Theory posits that an organization's survival and success depend on effectively managing relationships with diverse groups (Lui & Zainulidin, 2024). In the banking context, this translates into a strategic imperative to address the explicit information demands from investors, customers, regulators, and civil society, directly shaping the motivations for and implementing SAR. Complementing this, Legitimacy Theory suggests that organizations operate within a social contract and must continually demonstrate that society perceives their activities as legitimate (Adeoye, 2024; Ho et al., 2024; Acuti et al., 2024). SAR is a vital managerial tool for banks to maintain this legitimacy by strategically communicating that their operations and financed projects align with prevailing societal values (Gangwani & Kashiramka, 2024). This theoretical foundation provides the necessary lens for interpreting the findings of this review, enabling a deeper understanding of how these dynamics ultimately translate into the reported consequences impacting banks' operational performance, risk management, and stakeholder relations. The findings are thus expected to offer valuable insights for banks to enhance their sustainability strategies and for regulators to shape effective policies, ultimately contributing to the broader objective of aligning the financial sector with global sustainable development goals (Hummel & Bauernhofer, 2024; Jan et al., 2023; Alhejaili, 2024; Kiruthika et al., 2024; Elansari et al., 2024).

Based on this theoretical framework, this research adopts a systematic literature review (SLR) methodology to comprehensively map the research landscape of SAR in the banking sector. The SLR approach was selected for its ability to identify, evaluate, and synthesize all relevant empirical evidence through a transparent, structured, and replicable process. The SLR procedure in this study is designed to search prominent academic databases systematically, filter empirical studies, policy analyses, and previous literature reviews related to sustainability accounting practices, ESG reporting, and their determinants and consequences for banks. This literature review synthesizes key findings from the selected studies. This literature review aims to consolidate existing knowledge, identify critical research gaps, and propose constructive future directions for developing this field. Thus, integrating a solid theoretical foundation and rigorous methodology is expected to produce a coherent and in-depth intellectual map of SAR dynamics in the banking industry.

Methods

This study employs a systematic literature review (SLR) methodology to investigate the landscape of sustainability accounting and reporting (SAR) in the banking sector. An SLR is a replicable, scientific, and transparent process that minimizes bias and error, ensuring the authenticity and reliability of the findings. This approach is particularly valuable for integrating and synthesizing existing knowledge, identifying gaps and inconsistencies, and proposing coherent pathways for future research.

The review protocol was structured in three distinct phases, guided by the PRISMA (Preferred Reporting Items for Systematic Reviews) framework to ensure methodological rigor, as illustrated in Figure 1.

Phase 1, Identification. The primary objective of this phase was to construct an initial sample of relevant scholarly works. The literature search was conducted using two premier academic databases, Scopus and Web of Science, renowned for their comprehensive coverage of high-quality, peer-reviewed literature in the social sciences. To capture the core research on the topic, a precise search string was developed, combining keywords related to the core concepts; Sustainability: ("sustainability accounting" OR "sustainability reporting" OR "ESG reporting" OR "non-financial reporting"). Sector: ("banking" OR "bank" OR "financial institution"). Context: ("disclosure" OR "reporting" OR "practice" OR "performance").

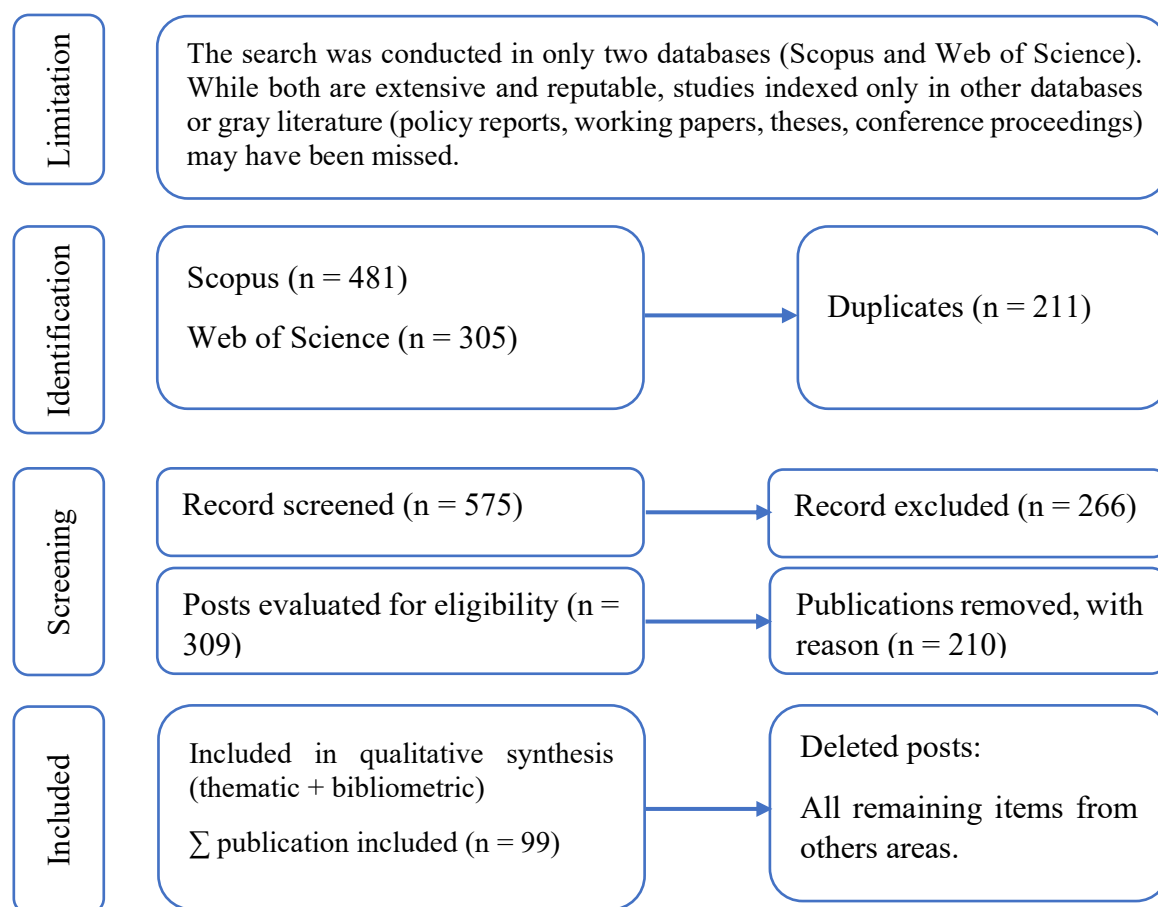


Figure 1. PRISMA Flowchart

The search was limited to articles published in English between 2019 and 2024, focusing on subject areas such as Business, Management, and Accounting. This initial search yielded a total of 786 articles. Phase 2, Screening and Eligibility. This phase involved filtering the identified records to select the most relevant studies. The 786 articles were first screened by title and abstract to exclude duplicates and publications that were clearly outside the scope of the study (studies focused on engineering, energy, or health sectors). Subsequently, the eligibility of the remaining articles was assessed through a full-text review. The inclusion criteria were:

Empirical studies, conceptual papers, and literature reviews focused explicitly on SAR in the banking or financial services industry. Studies published in peer-reviewed academic journals. The exclusion criteria removed included Book chapters, conference proceedings, editorials, and non-English publications. Studies where the banking sector was not the primary focus of

analysis. This rigorous screening process resulted in a final sample of 99 articles deemed relevant for in-depth analysis.

Phase 3, Analysis and Synthesis. In the final phase, the full texts of the 99 selected articles were thoroughly analyzed. A hybrid analytical approach was adopted, combining quantitative and qualitative methods. Quantitatively, bibliometric data were extracted to identify publication trends, leading journals, and geographical focus. Qualitatively, a thematic analysis was conducted to code the articles based on their central themes, theoretical frameworks, methodological approaches, and key findings. This synthesis was directly aligned with the two core Research Questions (RQs) of this study, allowing for a structured exploration of the drivers, practices, and impacts of SAR in the banking sector. The findings from this phase are presented in the subsequent sections of this paper.

Results and Discussion

Table 1 and Figure 2 presents the annual distribution of publications related to sustainability accounting and reporting in the banking sector. The results indicate a significant upward trend in research interest over the past six years. From 2019 to 2020, the number of studies remained relatively low, with only three publications each year, reflecting the emerging nature of the topic during this period. A gradual increase was observed in 2021 and 2022, with 8 and 10 documents, respectively, suggesting growing scholarly and institutional attention toward sustainability disclosure frameworks and environmental accountability in banking.

Table 1. Numerical Output

Year	Documents
2024	59
2023	16
2022	10
2021	8
2020	3
2019	3
Σ	99

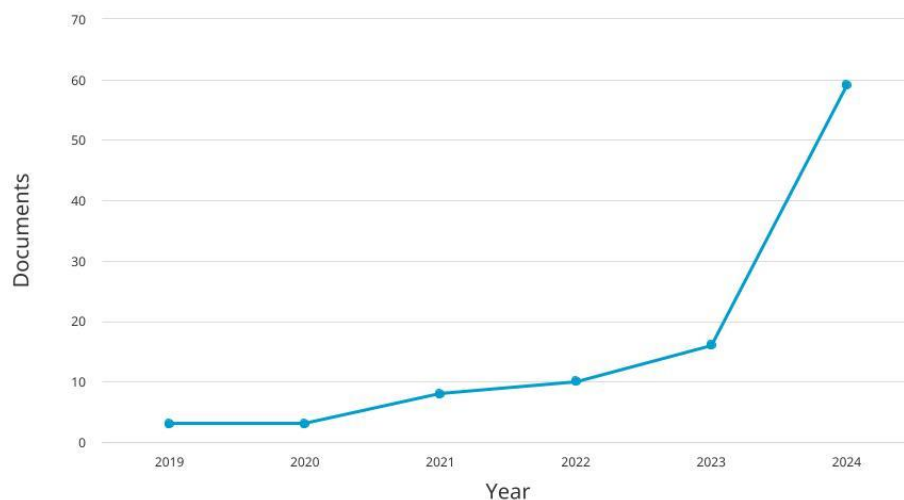


Figure 2. Documents by year (2019-2024)

The most substantial rise occurred in 2023 and 2024, with 16 and 59 publications, respectively, representing a sharp acceleration of academic output. This surge likely corresponds to intensified global regulatory initiatives (e.g., EU Taxonomy, ISSB standards) and increasing stakeholder demand for transparent sustainability reporting within financial institutions. The cumulative total of 99 documents demonstrates that sustainability accounting and reporting have evolved into a central theme in banking research, particularly in the aftermath of the COVID-19 pandemic and amid global transitions toward green finance and ESG-driven performance assessment.

Table 2 presents the distribution of the 99 selected publications by journal source, while Figure 3 illustrates the overall publication growth between 2019 and 2024. The data reveal that research on sustainability accounting and reporting in the banking sector is published across a wide range of reputable academic journals, reflecting the interdisciplinary nature of the topic spanning accounting, management, finance, and sustainability studies.

Table 2. Numerical Output

Source	Documents
Business Strategy and the Environment	18
Corporate Social Responsibility and Environmental Management	10
Cogent Business and Management	5
Journal of Cleaner Production	5
Technological Forecasting and Social Change	5
Research in International Business and Finance	4
British Accounting Review	3
Business Strategy and Development	3
Journal of Applied Accounting Research	3
Journal of Risk and Financial Management	3
Accounting Research Journal	2
Accounting in Europe	2
Administrative Sciences	2
International Journal of Finance and Economics	2
Journal of Management and Governance	2
Meditari Accountancy Research	2
Asian Journal of Business Ethics	1
Australasian Accounting Business and Finance Journal	1
Banks and Bank Systems	1
Bar Brazilian Administration Review	1
Business and Society Review	1
Competitiveness Review	1
Corporate Communications	1
Corporate Governance an International Review	1
Corporate Law and Governance Review	1
Euromed Journal of Business	1
European Research on Management and Business Economics	1
Global Journal of Flexible Systems Management	1
Innovation and Green Development	1
International Journal of Accounting and Information Management	1
International Journal of Applied Decision Sciences	1
International Journal of Bank Marketing	1
Journal of Applied Structural Equation Modeling	1

Journal of Global Responsibility	1
Journal of Management in Engineering	1
Journal of Sustainable Finance and Investment	1
Measuring Business Excellence	1
Rausp Management Journal	1
Revista Brasileira De Gestao De Negocios	1
Risks	1
Socio Economic Planning Sciences	1
Strategic Change	1
Voprosy Ekonomiki	1
Wseas Transactions on Business and Economics	1

Source: author (2025)

The most significant contributors are Business Strategy and the Environment (18 publications) and Corporate Social Responsibility and Environmental Management (10 publications). Both emphasize environmental disclosure, corporate sustainability performance, and governance mechanisms. These two journals collectively account for over one-fourth of the total output, underscoring their central role as publication outlets for sustainability-related banking research.

Compare the document counts for up to 10 sources. Compare sources and view CiteScore, SJR, and SNIP data

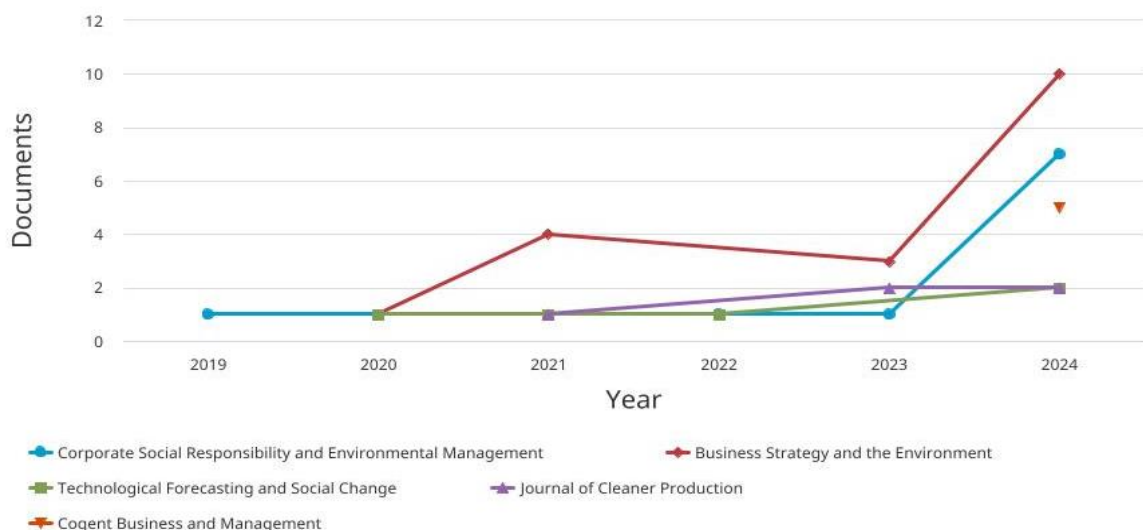


Figure 3. Publication Growth Chart (2019-2024)

A second tier of influential sources includes Cogent Business and Management, Journal of Cleaner Production, and Technological Forecasting and Social Change (each with five publications), reflecting growing attention to the intersection of green innovation, sustainable finance, and strategic transformation. Meanwhile, financial and accounting-oriented journals such as Research in International Business and Finance, British Accounting Review, Business Strategy and Development, and Journal of Applied Accounting Research contribute a moderate number of studies (3–4 publications each), indicating the topic's increasing relevance to mainstream financial reporting research.

The remaining journals (with one or two documents each) show the topic's diffusion into broader disciplinary contexts including corporate communication, governance, and ethical management suggesting that sustainability accounting in banking is no longer confined to environmental disclosure, but also linked to strategic, legal, and social dimensions of responsible financial behavior.

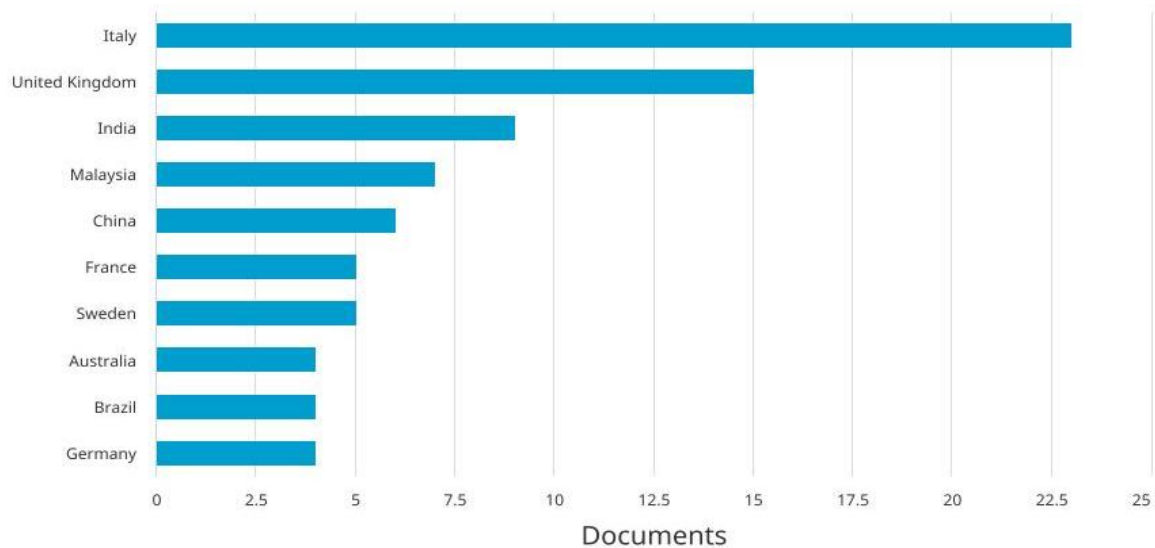


Figure 4. Country or territory distribution

Figure 4 presents the geographical distribution of publications on sustainability accounting and reporting in the banking sector. The results show that Italy is the most prolific contributor, with approximately 24 publications, indicating a strong national focus on sustainability reporting and regulatory alignment within the European Union. The United Kingdom follows with around 15 publications, reflecting its established financial market and early adoption of ESG disclosure frameworks among major banking institutions. Among emerging economies, India stands out with around 10 documents, suggesting an increasing academic and policy interest in integrating sustainability considerations into banking operations. Malaysia and China also demonstrate growing engagement, each contributing between 6 and 7 publications, emphasizing the regional expansion of sustainability reporting research in Asia. European countries such as France, Sweden, and Germany contribute a moderate number of studies, reinforcing Europe's central role in the development of sustainability accounting practices. Meanwhile, Australia and Brazil represent active participation from the Southern Hemisphere, reflecting the global diffusion of sustainability concerns in financial institutions.

Figure 5 presents the distribution of citations across the 99 research articles included in this systematic review. The data indicate a highly skewed citation pattern, where only a small number of studies have received a substantial number of citations. At the same time, the majority have been cited fewer than 50 times. This distribution is typical of emerging research fields, reflecting both the recency of publications and the growing but still developing nature of the topic. A limited set of highly influential studies those with more than 200 citations serve as core references in the field, often focusing on conceptual frameworks for sustainability accounting, ESG integration in banking, and the relationship between disclosure quality and financial performance. These seminal papers tend to originate from top-tier journals such as *Business Strategy and the Environment* and *Corporate Social Responsibility and Environmental Management*, highlighting their role as central sources for theoretical and empirical advancement.

Conversely, the large proportion of low-cited papers (below 50 citations) corresponds to recent works published in 2023–2024. This trend suggests that the field is undergoing rapid expansion, with new contributions still accumulating academic visibility and recognition. The increasing citation trajectory observed in recent years also reflects a rising scholarly interest in sustainability accounting within the banking sector, driven by global regulatory pressures and the mainstreaming of ESG principles in finance.

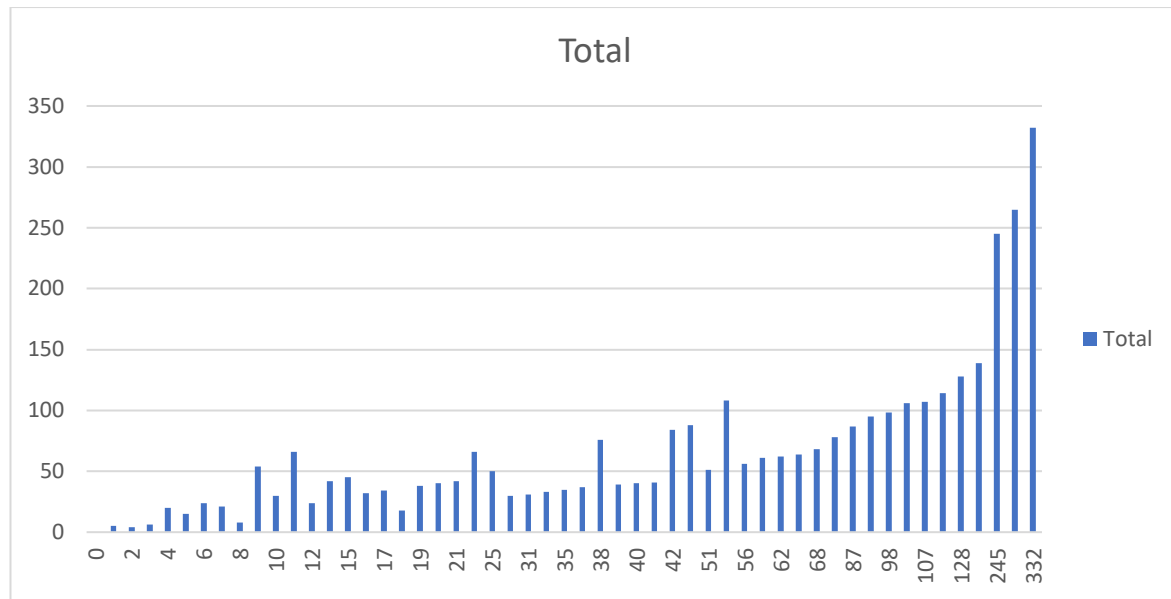


Figure 5. Citations distribution

Table 3 summarizes the theoretical frameworks applied in the reviewed studies on sustainability accounting and reporting within the banking sector. The findings reveal a firm reliance on Stakeholder Theory, which appears in 73 out of 99 articles. This dominance highlights that most scholars conceptualize sustainability reporting as a mechanism for managing relationships with diverse stakeholder groups such as regulators, investors, customers, and civil society who demand greater accountability and transparency from financial institutions.

The Legitimacy Theory (44 articles) and Institutional Theory (30 articles) follow as the next most frequently used frameworks. Together, they underscore the notion that banks adopt sustainability disclosure practices not only to meet stakeholder expectations but also to maintain organizational legitimacy and conform to institutional pressures, including regulatory mandates, social norms, and peer practices. These perspectives emphasize the external motivations and social context behind sustainability reporting behavior.

Table 3. Theories found in the research articles

No	Theories	Number of Articles
1	Stakeholder Theory	73
2	Legitimacy Theory	44
3	Institutional Theory	30
4	Resource-Based View (RBV)	22
5	Agency Theory	21
6	Signaling / Signalling Theory	22
7	Resource Dependence Theory	8
8	Upper Echelons Theory	7
9	Information Asymmetry Theory	5
10	Corporate Governance Theory	3
11	Trade-Off Theory	3
12	Risk Management Theory	2
13	Slack Resources Theory	2
14	Sustainability Theory	2
15	Stewardship Theory	2

16	Others (Moral Attentiveness Theory, Real Option Theory, Decision-Usefulness Theory, Triple Bottom Line Framework... and others	17
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Several studies also integrate perspectives from the Resource-Based View (22 articles) and Signaling Theory (22 articles), which focus on the strategic and communicative value of sustainability disclosures. From this viewpoint, sustainability reporting is seen as a strategic resource that enhances reputation, competitive advantage, and market differentiation, while simultaneously signaling financial strength and long-term commitment to responsible banking. Other theoretical frameworks appear less frequently but add valuable nuance. Agency Theory (21 articles) often explains the role of governance mechanisms and disclosure in reducing information asymmetry between managers and shareholders. Resource Dependence Theory (8 articles) and Upper Echelons Theory (7 articles) extend this logic by examining how leadership characteristics and external dependencies shape sustainability strategies. Less common theories such as Information Asymmetry Theory, Corporate Governance Theory, Trade-Off Theory, Risk Management Theory, and Stewardship Theory are applied in specific contexts to explore risk disclosure, decision-usefulness, or the balance between profitability and sustainability objectives. Finally, the “Others” category (17 articles) includes emerging frameworks such as Moral Attentiveness Theory, Real Option Theory, Decision-Usefulness Theory, and the Triple Bottom Line (TBL) Framework. These reflect an ongoing theoretical diversification in sustainability accounting research, indicating that scholars are moving beyond traditional legitimacy and stakeholder perspectives toward multi-theoretical and integrative approaches.

Trends in Publication: Niche Concern to Strategic Mainstreaming

The significant increase in the amount of scholarly output, i.e. three publications in 2019 and fifty-nine in 2024, as shown in Table 1, is, however, more than a simple multiplication of the academic interest; it is a significant institutionalization of sustainability-conscious risk (SAR) as a central strategic issue in the global banking industry. Such a trend is consequential in nature. This surge being particularly active in 2023/2024 coincides well with the implementation of strict European Union rules, such as the Sustainable Finance Disclosure Regulation (SFDR) and the EU Taxonomy. This alignment suggests that it is a partial reactive response to regulatory shocks to place banks not in the role of active sustainability leaders but merely as organizations adjusting to an emergent institutional reality. The geographic distribution of publications as Figure 4 shows is very concentrated in Italy and the United Kingdom, which can support the idea that the research agendas are shaped by the regional regulatory stringency. This geographical bias can mask innovative custom and opposition forces in less studied areas.

Theoretical Hegemony and Its Dead Air

Such a dominant presence of the Stakeholder Theory, Legitimacy Theory and Institutional Theory, presented in Table 3, provides a consistent but limiting analytical prism. On the one hand, these frameworks skilfully explain the reasons why banks have to integrate SAR due to external reasons, but on the other hand, they often lead to a literature that takes the legitimacy-seeking accounts of banks at face value. These views have dominated the academic interest and under-theorized internal power relations, managerial cognition, and the process of strategic decision-making, which accounts for either substantive change or a ritualized front that SAR produces. The relative lack of Signalling Theory and Resource-Based View applications is educative: the two paradigms re-frame SAR as a strategic resource and a resource of competitive advantage and reputation management, making sustainability no longer an ethical requirement, but a calculative strategic resource. This slight paradigm shift is fundamental to the understanding of the changing logic of sustainability in banking which is more about

dealing with systemic risk and achieving greater market valuation than it is about meeting the moral duty.

Answer to RQ1: How regulatory pressures and stakeholder expectations shape SAR adoption

Regulation and stakeholder pressure consistently emerge as key drivers of sustainability accounting and reporting (SAR) adoption and implementation in the banking sector. Evidence from 99 articles indicates the dominance of pro-external theoretical frameworks, primarily Stakeholder Theory (73 articles), Legitimacy Theory (44 articles), and Institutional Theory (30 articles), which assert that banks respond to external demands to gain legitimacy, maintain reputation, and meet stakeholder expectations. At the macro level, the surge in publications in 2023–2024 and the concentration of studies in jurisdictions such as Italy and the United Kingdom (Figure 3) correlate with the tightening of reporting policies in Europe and international initiatives (e.g., ESG taxonomies/standards), thus enabling regulation to act as a driver for rapid and widespread adoption in countries with mature regulatory environments.

Mechanistically, regulation operates through two main channels: (1) enforcing or encouraging disclosure practices through mandatory requirements and harmonization of standards; and (2) increasing the relevance and materiality of ESG information, leading internal management to restructure reporting processes, governance, and data capabilities. Meanwhile, stakeholder pressure (institutional investors, customers, NGOs, and capital markets) is expanding the scope of reporting, not only environmental data but also social and governance aspects, because reporting is considered a signaling and risk management tool. Studies adopting Signaling Theory and the Resource-Based View highlight how banks utilize SAR to highlight sustainability capabilities as a competitive advantage, while Agency Theory-based papers demonstrate the importance of corporate governance mechanisms (ESG committees, independent assurance) to bridge the conflict of interest between managers and investors.

However, the effects of regulation and stakeholder expectations are not homogeneous; the national context strongly moderates them, the nature of bank ownership (public vs. private), the size of the institution, and internal data capacity. In many developing countries, limitations in enforcement, data infrastructure, and heterogeneity of standards lead to slower or symbolic adoption (greenwashing). Furthermore, the literature still shows sample concentration on listed banks and developed countries indicating a geographic bias that needs to be mitigated to understand global dynamics. Practically, these findings suggest that regulatory harmonization, improved assurance mechanisms, and internal capability building are prerequisites for external pressure to truly drive substantive change, rather than simply increasing the volume of disclosure.

The current consideration proves that regulatory influences and expectations of the stakeholders are the main reasons of SAR adoption. However, it is not just this confirmation that the investigation uncovers, but also that banks do not passively act on this pressure, they actively bargain and plan their actions. The literature shows that the SAR is not simply a method of achieving some legitimacy by banks, especially large ones, and especially systemically important; but rather it is a practice created by banks. In developed regulatory settings like the European Union, SAR has become a tool of demonstrating compliance with norms set up by state institutions, thus obtaining a license to operate and avoiding more restrictive regulation. In this case, it is the strategy conforming process. On the other hand, where enforcement is weaker, the same external forces often lead to symbolic adoption or decoupling where sophisticated reporting conceals normal business operations. This effect is not an indication of system failure, but is a rational consequence of it. When this happens, banks react to the shape of stakeholder demand as opposed to the content of its substance,

which is necessarily rational in the context of a legitimacy-theory approach, but unsatisfactory in the context of accomplishing real-world effect. In addition, the review reveals an essential asymmetry in the stakeholder engagement. The most mentioned influential stakeholders are the powerful ones such as institutional investors and regulators. Whilst the voices of the civil society, local communities and other less powerful depositors, on the other hand, are much less pronounced in dictating the content of the SAR. This implies that the use of SAR is often customized to deal with the strongest of stakeholders who position significant material financial or regulatory threats, which only strengthens power systems in the existing economic system and not democratizing accountability.

Answer to RQ2: Tangible impacts on environmental performance, social responsibility, and financial risk management

Regarding the actual impact of SARs on environmental performance, social responsibility, and financial risk management, the literature presents promising but heterogeneous and often associative rather than causal evidence. On the ecological dimension, several studies report a correlation between more comprehensive disclosures and increased green lending initiatives, sustainable financing products, or capital allocation to low-carbon projects suggesting that reporting can facilitate changes in credit and portfolio policies. The proposed mechanism generally involves increased transparency on stakeholder pressure/market valuation, internalization of environmental targets, and reallocation of financing. However, empirical evidence measuring quantitative ecological outcomes (e.g., aggregate emissions reductions in a bank's portfolio) is limited, so claims about direct, measurable environmental impacts should be interpreted with caution.

On the social side, SARs have been reported to encourage increased disclosure on financial inclusion policies, employment practices, and client responsibility; several case studies demonstrate improvements in CSR programs and inclusion efforts at more transparent banks. However, evidence on measurable social outcomes such as increased access to credit for vulnerable groups or changes in welfare indicators is scarce and insufficient to draw firm causal conclusions. This suggests that reporting tends to improve policy structures and social communication, but the effects of the field require more rigorous verification.

The impact of SARs on risk management and financial performance has yielded mixed results. Some studies find a positive relationship between the quality of ESG disclosures and lower capital costs, improved credit ratings, or mitigated reputational risk, suggesting that disclosures can reduce information asymmetry and influence investor judgment. Conversely, other studies find no significant effect on credit risk or short-term profitability; some even highlight a trade-off between sustainable investment and short-term margin pressure. The quality of disclosure data often moderates these variations in results, the presence of assurance, the bank's size and risk profile, and the regulatory context. In other words, SARs have the potential to improve risk profiles when the available data is relevant, reliable, and internalized into the risk management process but if disclosures are merely ceremonial or not standardized, the financial benefits may not automatically emerge.

Methodological limitations that hinder firm conclusions include the predominance of archival-based cross-sectional studies, the heterogeneity of ESG metrics, a bias toward developed countries and listed banks, and the lack of longitudinal and experimental studies capable of testing causality (e.g., natural experiments related to the implementation of new regulations). Therefore, while evidence suggests that SARs can drive environmental improvements, enhance social practices, and provide risk management benefits under certain conditions, the consistency and magnitude of these effects require further research particularly causal, multi-

country studies that measure tangible outcomes (emissions, credit allocation, verified social indicators).

Empirical data relating to the actual effects of sustainability accounting regulation (SAR) is not unanimous or shallowly heterogeneous but instead, its ambiguity in nature provides an analytical value. The continuation of a non-causal, but associative nature of SAR and positive outcomes is indicative of the importance of a paradigm shift in accountability in the banking sector. The exhibited correlation between SAR and increased green lending is statistically significant, but it shows a tendency to focus on funding the green, as opposed to making finance machinery actually green. A bank can announce a growing base of green loan and at the same time keep funding fossil fuels; the former can also operate like a whitewashing action against the latter. The lack of evidence in specifying absolute portfolio-level reductions further highlights that in its current incarnation SAR will be more effective at the management of the environmental reputation of a bank than the reduction of the environmental impact of its financial flows, which demonstrates a critical limitation of the existing accountability paradigm.

The innovations in the social disclosure process, including the one related to financial inclusion, serve as signals of SAR application aimed at reducing the social risk and preventing the mass protests (Gonzalez et al., 2025). Nevertheless, there is a dearth of measurably social impactful effects, which would imply that such disclosures tend to play a public-relations role, as indicators of commitment but not an inherent change in core business practices that might keep social inequality the same. This most consistent interpretation can be obtained when assuming the connection between robust SAR and reduced cost of capital or better credit rating that is one of the best correlations reported in the literature. This fact is a strong indicator that the main, concrete, impact of SAR is financial self-preservation: having alleviated information asymmetry and suggesting advanced risk management to the market, SAR in effect reduces the economic and reputational risk of a bank. SAR is, therefore, not necessarily an ethical tool but it is part and parcel of modern financial risk management, in which sustainability risks are included because they are seen as material to the bottom line of the bank today (Prata, 2024; Shkalenko & Nazarenko, 2024).

Thus, the relevant question is not whether SAR has tangible effects, but the nature of the tangibility that it creates. Current evidence suggests that the most significant impacts of SAR are pushed on the financial stability and market position of the bank itself. Its implications to both the external environment and society are more indirect, contentious and often used to resocialize the deep-seated accountability issues into achievable reporting and risk-management practices.

Practical Implications

For regulators and policymakers, the results underscore the urgency of accelerating the harmonization of global sustainability reporting standards, such as those from the ISSB and the EU. However, harmonization alone is insufficient. Regulators, particularly in developing nations, must build strong enforcement capacities to prevent symbolic adoption or greenwashing. A "phased-in implementation" approach is advisable in contexts with less mature data infrastructure, initially focusing on the most material ESG aspects while concurrently building the internal capabilities of banks.

For bank management and boards of directors, it is imperative to view Sustainability Accounting and Reporting (SAR) not as a mere compliance exercise but as a core strategic function. To achieve substantive impact, SAR practices must be fully integrated into key business processes, particularly credit risk management, portfolio allocation, and strategic

planning. This requires strategic investment in data governance, technology, and human resources to ensure the accuracy and reliability of ESG information. Furthermore, establishing a dedicated ESG committee at the board level with clear authority is a proven mechanism to oversee sustainability strategy and signal serious commitment to stakeholders (Kateb & Alahdal, 2024; Rosyidah & Ningsih, 2025).

For investors, analysts, and rating agencies, a critical shift in focus is needed from the quantity to the quality of ESG disclosures. Key considerations should include the presence of independent assurance, the depth of information provided beyond generic statements, and the integration of sustainability data with mainstream financial reporting. Investors should actively question how SAR practices tangibly influence a bank's risk profile, lending portfolio, and verified social impact. As influential stakeholders, they can collectively advocate for the adoption of harmonized reporting standards to enhance comparability across institutions and regions.

For certification bodies and professional standard-setters, there is a clear opportunity to develop and promote standardized metrics that move beyond measuring reporting outputs to capturing tangible outcomes. This involves creating indicators that measure real-world impacts, such as the reduction of carbon emissions in a loan portfolio or verified improvements in financial inclusion for underserved communities. By implementing these practical implications, various stakeholders can collaborate to transform external pressures into substantive internal action, thereby realizing the full potential of Sustainability Accounting and Reporting to transform the banking sector.

Limitations and Directions for Future Research

This systematic review, while comprehensive, is subject to certain limitations that reflect the current state of the academic literature. Primarily, the scope of our analysis is constrained by the geographic and institutional bias prevalent in the existing research. The body of literature is overwhelmingly dominated by studies focusing on large, listed banks in developed economies, particularly within Europe. This limits the generalizability of our findings and results in a significant knowledge gap regarding the dynamics of SAR in emerging markets, as well as among smaller, private, or state-owned financial institutions. Furthermore, our conclusions are inevitably shaped by the methodological limitations of the underlying studies, which rely heavily on cross-sectional and correlational designs, making it difficult to discern true causal relationships.

To address these limitations and propel the field forward, we propose several critical avenues for future research. A primary imperative is the need for studies that can establish causality rather than mere association. Future research should employ longitudinal designs that track banks over a significant period and, more powerfully, quasi-experimental methods such as natural experiments. These could exploit the staggered implementation of major regulations like the EU's Sustainable Finance Disclosure Regulation (SFDR) to rigorously assess the causal impact of SAR adoption on environmental performance, financial risk, and social outcomes.

Concurrently, there is a pressing need to develop and validate a new generation of metrics that move beyond measuring reporting outputs to capturing tangible, real-world outcomes. Scholars should focus on creating standardized indicators that quantify a bank's direct environmental footprint, such as the financed emissions of its loan portfolio, or its verified social impact, such as through audited data on financial inclusion for marginalized communities. Expanding the empirical scope of research beyond its current narrow focus is equally crucial. Future studies must deliberately investigate SAR practices in underrepresented regions like Southeast Asia,

Africa, and Latin America, and across different types of financial institutions, including non-listed and community banks, to build a truly global understanding of these phenomena.

Finally, research must delve deeper into the internal mechanisms of banks to understand how external pressures are translated into substantive action. We encourage investigations into the mediating role of internal factors, such as the composition and expertise of board-level ESG committees, the integration of ESG performance into executive compensation, and the deployment of advanced data management technologies. Exploring how these internal governance structures and digital capabilities either facilitate or hinder the transition from symbolic reporting to integrated risk management will provide invaluable insights for both theory and practice. By pursuing these directions, scholars can significantly enhance the rigor, relevance, and impact of future research on sustainability in the banking sector.

Conclusion

This systematic review of 99 articles on sustainability accounting and reporting (SAR) in the banking sector yields several key conclusions. First, regulatory pressure and stakeholder expectations are primary drivers of SAR adoption and implementation. The predominance of external-oriented theoretical frameworks particularly Stakeholder Theory, Legitimacy Theory, and Institutional Theory and the marked increase in publications in 2023–2024 (especially in jurisdictions with mature reporting regimes) indicate that regulatory tightening and stronger stakeholder demands are motivating banks to expand and improve their sustainability disclosures.

Second, the influence of regulation and stakeholder pressure is strongly conditioned by contextual factors. National regulatory strength, enforcement capacity, the bank's ownership structure, institutional size, and internal data capabilities all moderate how external pressures translate into substantive practice. In many developing markets, weak enforcement, limited data infrastructure, and fragmented standards lead to slower, more symbolic, or uneven adoption sometimes resulting in superficial disclosures rather than meaningful organizational change. This geographic and sample bias toward listed banks in developed countries limits the generalizability of current findings.

Third, evidence on the tangible impacts of SAR on environmental performance, social responsibility, and financial risk management is encouraging but mixed. Several studies document correlations between more comprehensive disclosures and greater green lending, the introduction of sustainable financial products, and improvements in CSR structures. There is also some evidence that higher-quality disclosures, especially when accompanied by independent assurance, can reduce information asymmetry, lower the cost of capital, and mitigate reputational risk. Yet most of this evidence is associative rather than causal, and robust quantitative measures of direct environmental or social outcomes (for example, aggregate portfolio emissions reductions or verified improvements in financial inclusion) remain limited.

Fourth, methodological limitations across the literature reduce the strength of causal inferences. The field is dominated by archival, cross-sectional designs and heterogeneous ESG metrics, and it tends to concentrate on advanced economies and publicly listed banks. These characteristics hinder comparability, obscure causal pathways, and leave important questions about long-term and systemic impacts unanswered. From a policy and practice perspective, the findings imply that harmonized reporting standards, stronger assurance mechanisms, and investment in banks' internal data and governance capabilities are prerequisites for converting external pressure into substantive, measurable outcomes. Regulators should prioritize comparability and enforcement. Banks should integrate SAR into core risk-management and

strategic processes rather than treating it as a stand-alone reporting exercise. Investors and other stakeholders should use verified disclosures while remaining attentive to quality and boundary issues.

Finally, the review points to a clear agenda for future research. Scholars should pursue longitudinal and quasi-experimental designs (for example, natural experiments around new regulatory rollouts) to test causality, develop standardized measures that capture real environmental and social outcomes, expand empirical coverage to emerging markets and smaller banks, and explore the moderating roles of assurance, governance structures, and digital disclosure technologies. Only through more rigorous, standardized, and geographically inclusive research can the field determine the true magnitude and durability of SAR's effects on banking practice and societal outcomes.

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