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The Link Between Financial Auditors and Corporate Social Responsibility: A Review of Empirical Studies and Implications for Future Research

Patrick Velte

School of Management & Technology, Institute of Management, Accounting & Finance, Leuphana University Lüneburg, Lüneburg, Germany

Correspondence: Patrick Velte (patrick.velte@leuphana.de)

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ABSTRACT

Based on stakeholder agency theory, this structured literature review included 89 empirical quantitative studies published between 2013 and the present on the complex relationship between financial auditors and corporate social responsibility (CSR) outcomes. We created a research framework based on DeFond and Zhang's (2014) taxonomy and the bi-directional differentiation between the incentives and competencies of financial auditors. CSR outcomes were further divided into CSR performance, reporting, and assurance. We found that audit fees and big four audit firm involvement increased the level of CSR outcomes in many studies, and that CSR performance was negatively related to audit fees. The link between financial auditors and CSR assurance (quality, scope, and provider) represents the primary research gap. Future researchers should measure the effect of the sustainability expertise of financial auditors on CSR outcomes and the concrete conditions under which a joint provision of financial audit and CSR assurance leads to increased CSR.

1 | Introduction

Since the financial crisis of 2008–2009, stakeholders have demanded reliable corporate social responsibility (CSR) reporting of public interest entities (PIEs) as the subject of analysis (Mahoney et al. 2013; Christensen et al. 2021). In view of the nonmandatory character of CSR reporting in most regimes, the voluntary engagement of CSR assurance providers leads to a lack of comparability between PIEs and over time (Zaid and Issa 2025). While classical financial reports have to be audited by professional accountants, firms may also engage other non-financial auditors and external assurance providers, such as environmental certifiers. Due to the shift from voluntary to mandatory CSR reporting in some regimes, there is a global discussion on the selection of CSR assurance providers and their impact on CSR outcomes (Simnett et al. 2025).

Regardless of this selection process, financial and CSR reports have many interrelations. Financial auditors must recognize CSR reports in their financial audits to analyze potential mismatches between the two reports. For example, material environmental risks explained in the CSR report should be recognized in the volume of environmental provisions as part of the balance sheet. This highlights the increased responsibilities of financial auditors regarding CSR and the need for better integration of financial and CSR information.

The heterogeneous relationship between financial auditors and CSR has been neglected for a long time in empirical research in view of the traditional focus on financial reporting and the dominance of stand-alone voluntary CSR reports (Chen et al. 2016; Dutta and Dutta 2021). As the number of corporate sustainability regulations has increased significantly during recent years,

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including the move toward integrated reporting and the joint provision of financial audit and CSR assurance, the characteristics of financial auditors may impact CSR outcomes and vice versa (Simnett et al. 2025; Zaid and Issa 2025). On the one hand, researchers have assumed that higher-quality financial auditors positively impact CSR reporting, performance, and assurance (Zaid and Issa 2025; Pham et al. 2024). On the other hand, it is assumed that firms with increased CSR engage financial auditors with a higher level of audit quality (Blanco et al. 2024; Burke et al. 2019). Here, audit quality refers to the combined probability that the financial auditor discovers and reports material misstatements in financial reports (DeFond and Zhang 2014). Thus, the link between financial auditors and CSR is rather complex, as stated by prior empirical studies (Adel et al. 2019).

While the relationship between financial auditors and CSR has been analyzed in many studies in recent years, they have reported heterogeneous results (e.g., Zaid and Issa 2025; Blanco et al. 2024; Al Ani et al. 2024). Current debates on the relationship between financial and CSR reports are related to major differences in their quality (Burke et al. 2019). It is questionable whether the joint provision of financial audit and CSR assurance by one audit firm leads to increased CSR outcomes (Knechel 2021). Although financial auditors have adequate financial and industry expertise, their sustainability skills have been questioned (Dal Maso et al. 2020). This led to the motivation to conduct a literature review on the relationship between financial auditors and CSR.

In the following, we stress the contribution of our paper in comparison to prior studies. Prior literature reviews have either concentrated on CSR assurance and the related CSR assuror (e.g., Cohen and Simnett 2015; Huang and Watson 2015; Knechel 2021), neglecting the isolated influence of financial auditors, or relied on other corporate governance variables, such as board governance (e.g., Jain and Jamali 2016; Rao and Tilt 2016; Sahut et al. 2019) and ownership (e.g., Faller and zu Knyphausen-Aufseß 2018). In contrast to these analyses, this literature review concentrates on the financial auditor instead of the CSR assuror as a major part of the corporate governance system of PIEs. As the financial auditor and the CSR assuror may be different parties, our focus on the financial auditor increases our knowledge on the complex impact on CSR. For the first time, we structure and summarize the heterogeneous proxies of financial auditors and CSR outcomes, identify the major research gaps, and formulate recommendations for future research. In view of the increased regulations on sustainability reporting, future researchers should address the link between financial auditors and CSR to a greater extent. Moreover, we contribute to theoretical building by highlighting the shift from classical principal-agent theory to stakeholder agency theory. This theoretical framework stresses the increased responsibilities of financial auditors for shareholders and other stakeholders.

In line with the classical research framework by DeFond and Zhang (2014), the characteristics of financial auditors are separated between incentives and competencies to supply a high-quality audit. Due to the complexity of audit quality variables, low comparability between prior studies, and the heterogeneity of research results, we focus on direct measures of the financial auditor (e.g., audit fees and size), while indirect measures, based on earnings quality and market reactions, are excluded. Both the empirical research on the relationship between earnings quality and CSR (Kumar et al. 2023; Velte 2024) and on the market reactions to CSR (Carroll and Shabana 2010; Gillan et al. 2021) are summarized. CSR outcomes are separated into CSR performance, reporting, and assurance in line with prior studies (Velte 2024).

We include 89 empirical quantitative studies relating to PIEs on the link between financial auditors and CSR. We focus on archival studies as the dominant research method to achieve a higher level of comparability and to concentrate on the econometric relationship. While classical agency theory (Ross 1973; Jensen and Meckling 1976) represents the dominant theoretical framework in empirical audit research, we use stakeholder agency theory (Hill and Jones 1992) to highlight the increased responsibilities of financial auditors regarding CSR and stakeholder demands. We formulate the research framework, based on DeFond and Zhang (2014) and address the following research questions (RQ):

- RQ1: Do CSR outcomes impact financial auditors' incentives and competencies to supply high audit quality?
- RQ2: Do financial auditors' incentives and competencies impact CSR outcomes?
- RQ3: Based on the main limitations of prior research, what recommendations can be proposed for future research designs?

Stakeholder agency theory assumes a positive relationship between financial auditors and CSR and vice versa. Our literature review indicated that most studies analyzed the impact of CSR performance on audit fees and the impact of big four audit firms on CSR outcomes. We found that higher audit fees for financial auditors and using big four audit firms as financial auditors increased the level of CSR outcomes in many studies. Moreover, higher levels of CSR performance were found to be negatively related to audit fees for financial auditors. Currently, we know little about the relationship between financial auditors and CSR assurance (quality) and between financial auditors' expertise, tenure and CSR. In discussing potential future research, we highlight the need to recognize the degree of sustainability expertise of financial auditors and to include the characteristics of audit committees and international auditors as moderator analyses. Our study also highlights the shift from classical agency theory to stakeholder agency theory and the gatekeeper function of financial auditors for a broad range of stakeholders.

Our study has major implications for business practices, regulators, and researchers. Firms and financial auditors should be more sensitive to their new role in promoting CSR efforts, which leads to increased CSR reporting quality and CSR performance. Regulators should continue with global harmonization and standardization of CSR reporting and assurance processes. Finally, researchers should analyze the impact of joint provisions of financial audit and CSR assurance on CSR outcomes.

Our analysis is structured as follows: First, in Section 2, we explain the complex link between financial auditors and CSR outcomes in line with stakeholder agency theory (Hill and Jones 1992) and the research framework, based on the classical structure by DeFond and Zhang (2014). Section 3 includes a content analysis of the studies and results of the literature review, in which we differentiate between the impact of financial auditors on CSR and the inverse influence of CSR on financial auditors. Moreover, we separate financial auditors' characteristics into their incentives and competencies to supply high audit quality and CSR outcomes into CSR reporting, performance, and assurance. In Section 4, we highlight prior studies' limitations and provide useful recommendations for future research. Finally, Section 5 provides a conclusion to our analysis.

2 | Theoretical and Conceptual Framework

2.1 | Stakeholder Agency Theory

The relationship between financial auditors and CSR can be described through various theories, such as resource dependency theory, stakeholder theory, and legitimacy theory (Tyson and Adams 2020). While most studies on this research topic rely on classical principal-agent theory (Ross 1973; Jensen and Meckling 1976), we combine classical agency theory and stakeholder theory (Freeman 1984) through stakeholder agency theory (Hill and Jones 1992). While the traditional role of financial auditors was limited to shareholders as principals, their gatekeeper function includes a broad range of other stakeholders regarding sustainability reporting (Velte 2025). Financial auditors are a monitoring and bonding instrument for senior managers to increase stakeholder trust in business reporting (Chow and Rice 1982; DeFond and Zhang 2014). In line with stakeholder theory (Freeman 1984), an ethical (normative) and a managerial (instrumental) perspective must be recognized. The ethical perspective argues that the gatekeeper function of financial auditors should support all stakeholders as a moral duty, focusing on fairness and rights because stakeholders are dependent on a careful verification of financial and sustainability reports. While shareholders traditionally prefer financial reports and hard figures, other stakeholders demand sustainability information as soft facts, such as human capital or diversity issues. Financial auditors should directly contribute to successful corporate sustainability transformation, leading to a reduced probability of unethical practices, such as greenwashing or management fraud, and increased levels of CSR performance. The managerial view of stakeholder agency theory interprets financial auditors as a strategic tool for long-term success, maximizing value for a broad range of stakeholders to benefit CSR performance. This perspective stresses the assistant function of financial auditors for audit committees and other non-executive directors regarding CSR information. In view of the limited resources and skills of audit committees, they need extensive support from financial auditors to conduct an appropriate level of monitoring on CSR. Increased awareness of high-quality sustainability reporting is assumed to increase the motivation of executives to include CSR in business strategies, related products and services, and management systems (e.g., internal control and risk management). Executives may build their business cases on CSR, which leads to significant improvements in financial and CSR performance.

Consequently, the traditional focus of financial auditors on financial reporting and related shareholders (principal agent theory) needs to be extended to include CSR reporting and other stakeholder groups as principals (stakeholder agency theory) for several reasons. First, due to increased stakeholder and regulatory pressure, the external assurance of CSR reports by audit firms represents the best practice for PIEs (Dal Maso et al. 2020; Garcia-Sanchez, Raimo, et al. 2022; Garcia-Sanchez, Sierra-Garcia, et al. 2022). The joint provision of financial audits and CSR assurance is linked with major synergies and cost advantages (Ruiz-Barbadillo and Martinez-Ferrero 2020). Second, standalone CSR reports are being replaced by integrated reports or at least by CSR reports with increased linkages to financial information (Hichri 2023; Abu Afifa et al. 2025). Consequently, financial auditors must verify any potential contradictions between financial information and CSR reporting (Velte 2025). Third, stakeholder expectations rely on financial and CSR information. As CSR reports represent a central stakeholder communication tool, we assume that both shareholders and other stakeholders are dependent on a high-quality financial audit and CSR assurance (Garcia-Sanchez, Raimo, et al. 2022; Garcia-Sanchez, Sierra-Garcia, et al. 2022).

In line with senior managers and the board of directors, the financial auditor is an economic agent (Antle 1982), leading to risks of impaired ability and freedom to conduct financial audits with an appropriate level of quality. On the one hand, opportunistic managers with unsustainable business practices are likely to engage a financial auditor of lower quality, which increases the probability that CSR issues will be neglected in the financial audit (Gao and Calderon 2023; Hao et al. 2023). On the other hand, there is little to no pressure from low-quality financial auditors on senior management to increase CSR performance, reporting, and assurance in the future (Rivera-Arrubla et al. 2017). Thus, the relationship between CSR outcomes and audit quality by the financial auditor is dynamic and bi-directional. Based on stakeholder agency theory (Hill and Jones 1992) and prior studies (Chen et al. 2016; Akermi and Ben Amar 2025), it is assumed that greater CSR efforts lead to an increased level of audit quality and that higher-quality financial auditors improve CSR activities. In line with DeFond and Zhang (2014), the supply of high-quality audits is mainly influenced by financial auditors' incentives and competencies. We introduce the main characteristics of the financial auditor below.

2.2 | Research Framework

Figure 1 provides an overview of our research framework on the link between financial auditors and CSR outcomes.

While the separation between auditor incentives and competencies to supply a high quality audit is based on DeFond and Zhang (2014), we modified the specific proxies as follows: First, we extended auditor incentives by the joint provision of financial audit and CSR assurance, and auditor competencies by sustainability expertise in view of the assumed positive impact on CSR (Dal Maso et al. 2020; Garcia-Sanchez, Raimo, et al. 2022; Garcia-Sanchez, Sierra-Garcia, et al. 2022). Second, we focused on direct measures of financial auditor attributes (e.g., audit fees and size), while indirect measures based on earnings quality and market reactions were excluded. This strategy led to increased comparability of research results and a better understanding of the complex relationship between financial auditors and CSR.

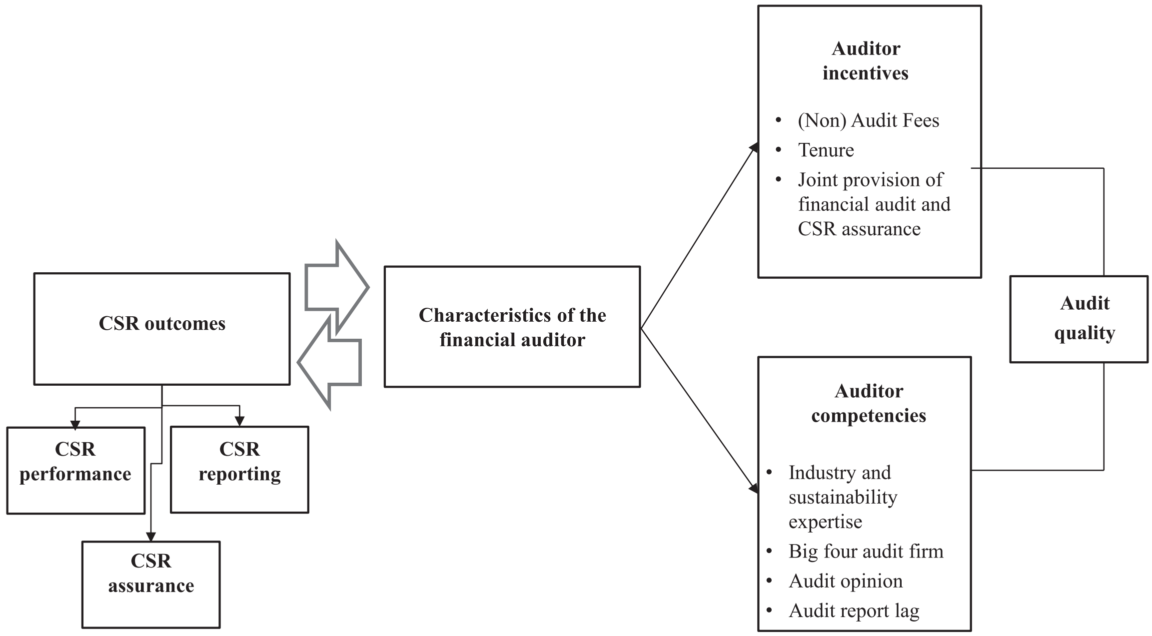

FIGURE 1 | Research framework.

Regarding *auditor incentives*, financial auditors like to decrease the risk of material misstatements in financial reports by increasing audit effort (DeFond and Zhang 2014). Consequently, *audit fees* are one of the most prominent proxies of auditor incentives (DeFond and Zhang 2014), while they represent different functions. First, higher audit fees indicate a higher level of effort and thus an increased level of audit quality (DeFond and Zhang 2014). Second, higher audit fees can lead to an increased economic bond to clients, decreased independence, and lower professional skepticism (Beck et al. 1988; Magee and Tseng 1990). Third, higher levels of audit fees can also represent impaired audit efficiency, leading to a negative impact on audit quality. In line with stakeholder agency theory (Hill and Jones 1992), auditor independence is a precondition for realizing an appropriate audit quality. While financial auditors are motivated to conduct both auditing and consulting services for their clients, many regulators have limited *non-audit services* and related fees for PIEs because they assume decreased litigation and reputation incentives in the case of extended non-audit services (Velte 2023). While non-audit fees can decrease the level of auditor independence, financial auditors prefer knowledge spillovers between audit and non-audit services, which lead to increased auditor competencies and efficiencies (Simunic 1984).

Similar discussions can be found for *audit tenure* (Abu Afifa et al. 2025; Akermi and Ben Amar 2025). While financial auditors have strong incentives for long audit tenure, the long-client tenure of financial auditors can decrease auditor independence because it may create familiarity with the client (Brooks et al. 2019). Consequently, several regulators have introduced mandatory audit firm tenures for PIEs. In line with non-audit services, regulators are concerned about a growing level of market concentration among big four audit firms and, thus, decreased competition in situations with long audit tenures (Brooks et al. 2019). However, financial auditors have lower client-specific knowledge in initial audits and less competence in conducting a strict financial audit (DeFond and Zhang 2014). Learning effects based on extended audit tenure can lead to a higher level of audit quality.

In line with these traditional auditor incentives, we introduce the *joint provision of financial audit and CSR assurance*. Both financial auditors and their clients are regularly highly motivated to conduct financial audits and CSR assurance services simultaneously (Dal Maso et al. 2020). In line with non-audit services, similar controversial impacts on audit quality can be found. On the one hand, the engagement of audit firms that conduct financial audits and CSR assurance may increase financial dependence and reduce audit quality (Garcia-Sanchez, Raimo, et al. 2022; Garcia-Sanchez, Sierra-Garcia, et al. 2022). On the other hand, due to the link between financial and sustainability reports, major synergies of scope are realistic, leading to higher levels of audit quality (Dal Maso et al. 2020).

Regarding *auditor competencies* to deliver high-quality financial audits, there are many interdependencies with auditor incentives. Higher levels of incentives to supply solid audit quality also motivate financial auditors to extend their competencies (DeFond and Zhang 2014). Prior audit research has mainly relied on auditor expertise with a focus on *industry and sustainability expertise* (e.g., Hammami and Zadeh 2020; Hichri 2023). Financial auditors improve their expertise as reputation capital if they assume higher audit fees or market shares and economies of scale of these competencies (DeFond and Zhang 2014). It is assumed that industry specialists and sustainability knowledge will improve audit quality because auditors are more skeptical about the business models and risks presented by their clients (Sun et al. 2017; Abu Afifa et al. 2025). This may also lead to higher market entry barriers for competitors to improve their individual skills (Hichri 2023). Moreover, in line with stakeholder agency theory, stakeholders have more trust in audit reports issued by financial auditors with strong industry and sustainability skills.

Moreover, *audit firm size* is a dominant attribute of auditor competencies because large auditors are assumed to have more possibilities to provide high-quality financial audits (DeAngelo 1981). In particular, the choice of *big four audit firms* is expected to display higher levels of independence in comparison to small and medium-sized audit firms in view of their increased level of reputation risk and lower pressure to succumb to an individual client (DeAngelo 1981). Big four audit firms gain higher levels of economies of scope and have more resources to build up specific expertise, such as industry and sustainability skills (DeAngelo 1981). However, the classical assumption of a positive relationship between big four audit firms and audit quality should be questioned in view of prior accounting scandals, such as Enron (Arthur Andersen) and Wirecard (EY).

As stakeholders are dependent on a trustworthy audit result, auditor competencies are strongly linked with *auditor reporting*. In line with Kraakman (1986), the gatekeeper function of financial auditors for stakeholders is expressed by *(unmodified) audit opinions*. Among others, audit opinions include relevant assumptions on the going concern principle, potential internal control weaknesses, and key audit matters (DeFond and Zhang 2014). A low degree of audit quality can result if financial auditors publish an unqualified audit opinion while material financial misstatements and severe unsustainable business practices are present (Blanco et al. 2024). Furthermore, audit (report) lag, when defined as the number of days between the fiscal year-end date and the date of the audit opinion, is crucial for stakeholders (Wang and Wang 2023). As audit (report) lag is an inverse measure of audit efficiency (DeFond and Zhang 2014), stakeholders prefer short(er) audit lags and to be informed in a timely manner about the financial situation of a firm (Wu and Li 2025). Increased audit (report) lags relate to major information asymmetries and conflicts of interest between managers and stakeholders.

In the following, we introduce the structure of CSR outcomes in this research framework (see Figure 1). *CSR reporting* as the first category refers to a voluntary or mandatory stand-alone communication tool on material sustainability (e.g., environmental and social) issues for stakeholders (Chen et al. 2016). In recent years, many regulators, such as the European Commission, have introduced mandatory sustainability reports. In view of the low comparability and increased managerial discretion of CSR reports, opportunistic management behavior may lead to greenwashing and information overload to attract specific stakeholder groups (Saeed et al. 2026). Compared with analyses of the (non)existence of CSR reports in voluntary settings, analyses of mandatory regimes include various dimensions of CSR reporting quality, based on content analyses (Pucheta-Martinez et al. 2019). We emphasize the major linkages between financial reports and CSR reports, for example, based on describing the financial impact of environmental risks, and the responsibility of financial auditors to identify potential discrepancies between financial and CSR reports. Financial auditors should improve CSR reporting quality and vice versa in line with stakeholder agency theory (Hill and Jones 1992). We also include the publication of integrated reports as a voluntary management decision except for a few regimes (such as South Africa) in this category as a combination of material financial and sustainability information (Velte 2025; Hichri 2023).

CSR performance as the second category refers to quantitative key performance indicators, such as carbon emissions, which are collected in external CSR databases or individual environmental and social scores (Azizan and Shailer 2023; Ling et al. 2024). While CSR performance measures are also part of CSR reports, it is assumed that CSR disclosure impacts future CSR performance (Song et al. 2023). If stakeholders trust the CSR reports and if firms have implemented substantive sustainability management tools, this should increase the overall level of firm reputation and CSR performance. Otherwise, the symbolic use of CSR, such as greenwashing in sustainability reporting, may lead to decreased CSR performance.

CSR assurance refers to our third category of CSR outcomes. As with CSR reporting, the external verification of stand-alone CSR reports (CSR assurance) can be voluntary or mandatory (Chen et al. 2016; Tuo et al. 2023). While there is a best practice of PIEs for engaging (big four) audit firms in CSR assurance services, CSR assurance practices are linked to management discretion. Various assurance quality dimensions, such as provider type, reasonable versus limited assurance level, scope, the use of specialists, the use of assurance standards, and reporting transparency, are used in prior research. The CSR assurance provider is the institution supplying regular assurance of CSR reports, for which either (big four) audit firms or other external assurance providers can be selected (Sierra-García et al. 2015). The joint provision of financial audits and CSR assurance includes the selection of the financial auditor as a CSR assuror. Moreover, managers can choose between a reasonable and limited assurance level. The reasonable assurance level is mandatory for financial audits and leads to greater audit quality in comparison with the limited assurance level, which is usually cheaper and of lower quality. The assurance scope refers to the decision about what CSR information is supervised. Senior managers may engage CSR assurance providers to supervise the full CSR report or focus only on specific components, such as key performance indicators (Chen et al. 2016). Another quality dimension is linked to the reporting transparency of CSR assurors. Researchers conduct content analyses of these CSR assurance statements to measure the quality of CSR assurance. Moreover, the use of international CSR assurance standards, such as ISAE 3000, refers to increased assurance quality. Finally, as part of team composition, the use of environmental and industry experts is connected with increased CSR assurance quality. Financial auditors often lack environmental skills due to their traditional focus on financial reports (Chen et al. 2016).

While CSR assurance quality is heterogeneous, financial auditors are assumed to push senior managers for better CSR results, especially when the joint provision of financial audit and sustainability assurance by big four audits is planned.

3 | Empirical Research on the Link Between Financial Auditors and CSR Outcomes

3.1 | Sample Selection Process and Descriptive Analyses

As already noted, prior research on the relationship between financial auditors and CSR outcomes is linked with heterogeneous variables, theories, and analytical models. Literature reviews are important for scholars, practitioners, and regulators seeking to explore a specific research topic in depth (Torraco 2005; Webster and Watson 2002). The major goals of a literature review are to summarize previous results, identify the limitations of prior studies, present recommendations for future research designs, and contribute to new theoretical developments and methodological progress (Torraco 2005). In contrast to a meta-analysis, it was not our aim to measure the overall econometric significance of economic relationships based on the results of single studies or to test potential moderator or mediator variables from a statistical perspective. Furthermore, the variables included in our study were too heterogeneous to conduct a meta-analysis.

This study relied on established processes (Denyer and Tranfield 2009). First, we developed our research objective. Our aim was to summarize prior research on the relationship between financial auditors and CSR, to identify the major research gaps, and deduce recommendations for future research. This should also lead to theory building, as we included stakeholder agency theory (Hill and Jones 1992) to highlight the increased responsibilities of financial auditors regarding CSR. While prior studies have recognized the impact of various attributes of corporate governance, such as the CSR assuror (e.g., Cohen and Simnett 2015; Huang and Watson 2015; Knechel 2021), board governance (e.g., Jain and Jamali 2016; Rao and Tilt 2016; Sahut et al. 2019), and ownership (e.g., Faller and zu Knyphausen-Aufseß 2018) on CSR, a detailed analysis of financial auditors does not exist. Thus, we contribute to the literature by developing a theoretical and research framework (see Figure 1).

Second, based on stakeholder agency theory, we generated specific keywords for the selection of studies. We relied on two prominent databases (EBSCO Business Source Complete and Web of Science) and included the following keywords: “auditor” or “financial auditor” in connection with “ESG performance,” “CSR performance,” “sustainability performance,” “environmental performance,” “social performance,” “CSR reporting,” “ESG reporting,” “sustainability reporting,” “environmental reporting,” “social reporting,” “CSR assurance,” “ESG assurance,” “sustainability assurance,” and related terms. This conceptual grouping was conducted to guarantee a high degree of certainty to get the relevant studies. Based on google scholar citations, sustainability, ESG, and CSR reporting (performance) represent the most important terms. Environmental and social reporting (performance) can be classified as the most relevant subparts of sustainability, ESG, and CSR reporting (performance). The connection of these terms with “auditor” and “financial auditor” stresses our goal to restrict on these of studies, which analyze the relationship between financial auditors and CSR outcomes.

Third, we set relevant exclusion and inclusion criteria. We concentrated on archival studies as the most prominent source for this research topic and excluded all nonarchival studies. This approach increased the level of comparability within the studies included, as we were able to measure the econometric impact of financial auditors on CSR and vice versa, based on databases. Furthermore, based on the research framework (DeFond and Zhang 2014), we focused on direct measures of audit quality (e.g., audit fees and size), while indirect measures of audit quality (earnings quality and market reactions) were excluded from the review. This strategy increased the comparability of the literature review, as audit quality and earnings quality represent different categories. While audit and earnings quality have some overlaps, earnings quality also depends on other factors, such as firm size or industry. Careful inclusion of the direct impact of financial auditors on CSR should be promoted. Moreover, market reactions rely on many factors, not exclusively on financial auditors; there should be more emphasis on their direct measures. In addition, research on the relationship between earnings quality and CSR (Kumar et al. 2023; Velte 2024) and on the market reactions to CSR (e.g., Carroll and Shabana 2010; Gillan et al. 2021) has been reviewed elsewhere. Thus, there is a decreased need for a literature review on the impact of these indirect audit quality measures on CSR. We acknowledge the fact that this restriction may narrow the evidence base on how CSR relates to perceived/actual audit risk and market-priced assurance. In detail, the focus on direct measures may bias conclusions, such as the claim that audit fees and big four audit firms increase the level of CSR, which is sensitive to how quality is operationalized. To address these claims, we compare the results on the impact of earnings quality on CSR and the market reactions to CSR with our results in the relevant section.

Third, for quality reasons, we only relied on studies in international journals in the English language with a double-blind peer review process. In view of the potential bidirectional link between financial auditors and CSR, endogeneity concerns may be realistic for this research topic. Endogeneity concerns relate to reversed causality, omitted variable bias, and selection bias problems. The literature recommends using quasi-natural experiments, such as two-stage least squares/instrumental variables (2SLS/IV) and difference-in-difference approaches, and propensity score matching (PSM) (Tuo et al. 2023). We decided to include studies with regression analyses using multiple methods, such as ordinary least squares (OLS), panel regressions, tobit, logit/probit, PSM, 2SLS/IV, and difference-in-difference approaches. As we also show in Table 1 (Panel G), most of the included studies relied on at least one endogeneity check. However, the exclusion of studies without any endogeneity checks (mostly conducted in the early years) would lead to an overly small sample size.

We began with an initial sample of 164 studies after using keywords. Of these, 16 non-archival studies (analytical, experimental, and qualitative papers) were deleted, and a further 37 studies with indirect measures of audit quality and 22 studies with low-quality publications were removed, leading to a final sample of 89 studies. Figure 2 presents a flow diagram of the sample selection process.

The included studies were coded by one researcher based on financial auditor characteristics and CSR outcomes. Thus, further inter-reliability checks (e.g., Cohen's kappa) were not necessary. We used the vote-counting approach (Light and Smith 1971) and included the significant findings and their indicators. This approach is dominant in prior literature reviews on related topics (e.g., Velte 2024). While we recognized the number of significances, we did not recognize sample or effect sizes (Light and Smith 1971). Positive significant regression results were marked with a (+), negative significant regression results were marked with a (–), and insignificant results were marked with a (+/–).

TABLE 1 | Count of cited studies in the literature review.

Panel A: By publication year	
Total: 89	• 2026: 2 • 2025: 24 • 2024: 14 • 2023: 14 • 2022: 6 • 2021: 4 • 2020: 9 • 2019: 6 • 2018: 2 • 2017: 4 • 2016: 2 • 2013: 3
Panel B: By region	
Total: 89	• Cross-country setting: 27 • Anglo-American countries: Australia: 3, Canada: 1, UK: 1, USA: 24 • Asian countries: China: 24, Indonesia: 1, Jordan: 1, Malaysia: 1, Vietnam: 1 • Continental European countries: Finland: 1, Spain: 3 • South Africa: 1
Panel C: By journal	
Total: 89	• *Accounting, Auditing & Finance Journal: 69* • Asian Review of Accounting: 2 • Abacus: 1 • Accounting & Finance: 2 • Accounting and Business Research: 2 • Accounting Forum: 1 • Accounting Horizons: 1 • Accounting in Europe: 1 • Accounting, Organizations & Society: 1 • Advances in Accounting: 1 • Asia-Pacific Journal of Accounting & Economics: 1 • Auditing: 3 • China Journal of Accounting Research: 1 • Contemporary Accounting Research: 1 • Corporate Governance: 1 • European Accounting Review: 3 • Finance Research Letters: 2 • International Journal of Accounting & Information Management: 3 • International Journal of Auditing: 8 • International Journal of Disclosure and Governance: 1 • International Journal of Finance & Economics: 2 • International Review of Economics and Finance: 2 • International Review of Financial Analysis: 2 • Journal of Accounting and Public Policy: 1 • Journal of Accounting, Auditing & Finance: 1 • Journal of Applied Accounting Research: 1 • Journal of Business Finance & Accounting: 2 • Journal of Contemporary Accounting & Economics: 2 • Journal of Corporate Accounting & Finance: 1 • Journal of Emerging Technologies in Accounting: 1 • Journal of Financial Reporting and Accounting: 1 • Journal of Management Accounting Research: 1 • Journal of Sustainable Finance & Investment: 1 • Managerial Auditing Journal: 8

(Continues)

TABLE 1 | (Continued)

Panel A: By publication year	
Total: 89	• Meditari Accountancy Research: 1 • Quarterly Review of Economics and Finance: 1 • Review of Accounting Studies: 2 • Sustainability Accounting, Management and Policy Journal: 1 • The British Accounting Review: 1 • *Sustainability and Management Journal: 20* • Business Ethics, the Environment & Responsibility: 4 • Carbon Management: 1 • Cogent Business & Management: 1 • Corporate Social Responsibility and Environmental Management: 4 • Emerging Markets Review: 1 • EuroMed Journal of Business: 1 • European Business Review: 1 • International Journal of Law and Management: 1 • Journal of Cleaner Production: 2 • Journal of Industrial Ecology: 1 • Journal of Knowledge Economy: 1 • Social Responsibility Journal: 1 • Society and Business Review: 1
Panel D: By financial auditor variable	
Total: 122[a]	• *Auditor incentives: 73* (Non) Audit fees: 58 Auditor tenure/switch: 8 Joint provision of financial audit and CSR assurance: 7 • *Auditor competencies: 49* • Auditor expertise: 8 • Big four audit firm: 20 • Audit opinion: 14 • Audit report lag: 7
Panel E: By CSR variable	
Total: 96[a]	• CSR performance: 55 • CSR reporting: 33 • CSR assurance: 8
Panel F: The link between financial auditor and CSR	
Total: 90[a]	• Financial auditor-CSR: 33 • CSR-financial auditor: 57
Panel G: Addressing endogeneity concerns by advanced regression methods, for example, 2SLS/IV, PSM, and difference-in-difference approach	
Total 89	• Yes: 59 • No: 30

[a]Some studies include more than one variable.

Auditor incentives were grouped into (non) audit fees, tenure, and the joint provision of financial audit and CSR assurance. Auditor competencies were separated into industry and sustainability expertise, big four audit firm, audit opinion, and audit report lag. The sum of significant results was measured per subpillar of auditor incentives and auditor competencies. As we relied on double-blinded journal publications to ensure the appropriate validity of research results and excluded gray literature, there may be a publication bias to highlight in this context.

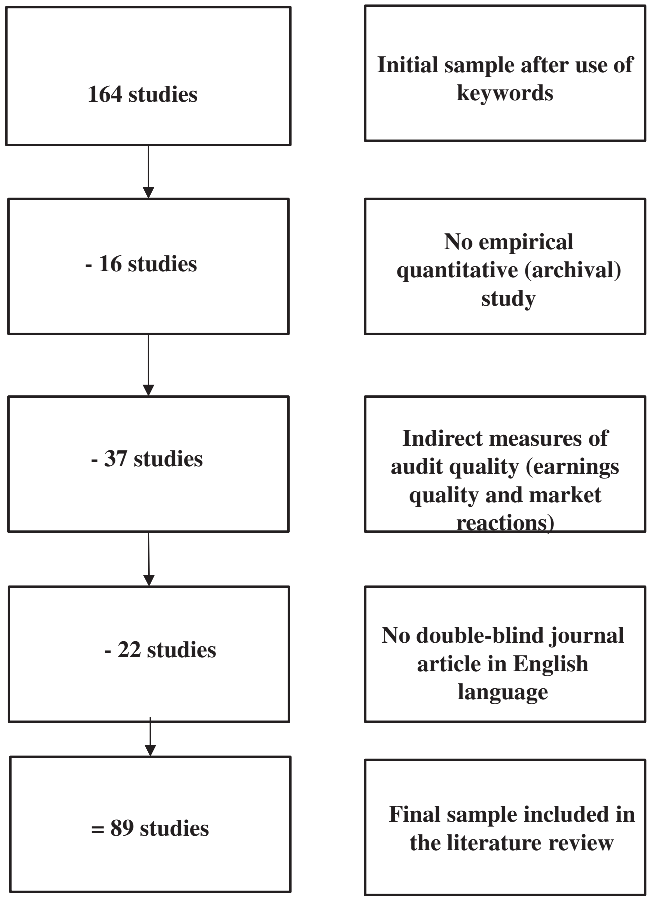

FIGURE 2 | Flow diagram of the sample selection process.

As there is a higher probability of publishing significant results in journal articles compared to gray literature, there might be an increased volume of insignificant results, which was not recognized in this literature review.

Table 1 structures the studies included in the literature review by publication year (Panel A), region (Panel B), journal (Panel C), financial auditor variable (Panel D), and CSR variable (Panel E). Panel A shows a young research history and a significant increase in research since 2023. Moreover, as Panel B indicates, most studies adopted a cross-country structure (27 studies), whereas country-specific studies mostly included the USA (24 studies) or China (24 studies). Panel C illustrates that most studies have been published in accounting, auditing, and finance journals (69 studies), such as the International Journal of Auditing (eight studies) and the Managerial Auditing Journal (eight studies). In contrast, a lower attraction was found for sustainability and management journals (20 studies), such as Corporate Social Responsibility and Environmental Management and Business Ethics, the Environment & Responsibility (four studies). Regarding financial auditor variables (Panel D), we highlight a dominant inclusion of auditor incentives (73 studies) with a focus on (non-) audit fees (58 studies). Regarding auditor competencies (49 studies), many studies recognized big four audit firms as a proxy for auditor size (20 studies). Panel E illustrates that CSR outcomes were mostly measured as CSR performance (55 studies) in comparison with CSR reporting (33 studies) and assurance (eight studies). Regarding CSR performance, included studies relied on external databases and quantitative indicators in line with the ESG concept. We keep the term CSR performance for readability reasons. Finally, as shown in Panel F, most studies analyzed the impact of CSR outcomes on financial auditors (57 studies), while the inverse relationship was included to a lesser degree (33 studies). Panel G summarizes whether the included studies relied on endogeneity checks using advanced regression models (e.g., PSM, 2SLS/IV, and difference-in-difference approaches). Most of the included studies (59 studies) included at least one endogeneity check, while 30 studies did not have any such checks. This leads to a mixed validity of the research results, which we will mention later in the limitations section.

3.2 | The Impact of Financial Auditors on CSR Outcomes

3.2.1 | Auditor Incentives

Audit fees are one of the major attributes of auditor incentives to supply a high quality audit, assuming a positive impact on CSR outcomes. As a positive relationship was clear in our sample of included studies, audit fees indicate a higher level of audit efforts in line with stakeholder agency theory (Hill and Jones 1992), whereas client-specific auditor dependence can be neglected. In detail, audit fees improve the level of CSR reporting (Chen et al. 2016; Hammami and Zadeh 2020; Pucheta-Martinez et al. 2019), integrated reporting (Hichri 2023; Velte 2025), CSR performance (Schierstedt et al. 2025; Moalla and Dammak 2025; Zaid and Issa 2025), carbon performance (Akermi and Ben Amar 2025), and CSR assurance (Chen et al. 2016). This positive relationship was related to international studies and country-specific analyses in the USA, Canada, China, and Spain. Moreover, a positive link was stated for studies both with and without endogeneity checks.

Furthermore, Pucheta-Martinez et al. (2019) found a positive impact of *non-audit fees* on CSR reporting, while Akermi and Ben Amar (2025) found a negative influence on carbon performance.

Research on other auditor incentives is scarce. *Audit firm tenure* and integrated reporting were found to be insignificantly related (Abu Afifa et al. 2025), whereas another study found a negative impact on carbon performance (Akermi and Ben Amar 2025). The *joint provision of financial audit and CSR assurance* was found to increase environmental provisions (Dal Maso et al. 2020) and CSR assurance statement quality (Ruiz-Barbadillo and Martinez-Ferrero 2020), while it was insignificantly related to CSR performance (Garcia-Sanchez, Raimo, et al. 2022; Garcia-Sanchez, Sierra-Garcia, et al. 2022).

3.2.2 | Auditor Competencies

Using *big four audit firms* as a proxy for audit firm size is the most prominent variable of auditor competencies in this literature review. In line with stakeholder agency theory, the use of big four audit firms as financial auditors increased the level of CSR reporting (Ananzeh 2022; Fernandez-Feijoo et al. 2018; Handayati et al. 2022; Lee et al. 2026; Pucheta-Martinez et al. 2019; Saeed et al. 2026, based on decoupling as an inverse measure), integrated reporting (Abu Afifa et al. 2025; Velte 2025), carbon reporting (Shen et al. 2020; Simnett et al. 2025), CSR performance (Lee et al. 2026; Saeed et al. 2024), and the choice of big four firms as CSR assurors (Fernandez-Feijoo et al. 2016, 2018; Sierra-García et al. 2015; Zorio et al. 2013). A positive relationship was found in international studies and country-specific research in Australia, China, Indonesia, Jordan, and Spain. Most studies did not check for endogeneity concerns.

A few studies did not find any significant impact of big four audit firms on social reporting (Adel et al. 2019), carbon reporting (Dutta and Dutta 2021), integrated reporting (Chouaibi and Hichri 2021; Rivera-Arrubla et al. 2017), or CSR assurance (Sierra-García et al. 2015).

Other measures of auditor competencies were recognized to a low degree. Some studies found a positive impact of *industry expertise* of financial auditors on CSR reporting (Hammami and Zadeh 2020) and integrated reporting (Abu Afifa et al. 2025; Chouaibi and Hichri 2021). This was also related to *sustainability* expertise, CSR reporting (Liu et al. 2024), and carbon reporting (Pham et al. 2024; Simnett et al. 2025). Moreover, key environmental audit matters increased the level of carbon performance (Tang et al. 2025). The mandatory adoption of key audit matters and CSR performance was found to be positively related (Tan 2025).

3.3 | The Impact of CSR Outcomes on Financial Auditors

3.3.1 | Auditor Incentives

Many studies in our literature review highlighted the *negative* influence of CSR outcomes, especially *CSR performance*, on *audit fees*. This aligns with stakeholder agency theory and the assumption that firms with higher CSR efforts lead to decreased audit risks and, thus, major reductions in audit fees. In detail, many studies highlighted the negative impact of CSR performance (Lei et al. 2025; Azizan and Shailer 2023; Burke et al. 2019; Chakrabarty et al. 2024; Du et al. 2020; Leventis et al. 2013; Ling et al. 2024; Yuan 2025), environmental performance (Wu et al. 2025; Yao et al. 2023; Li et al. 2025), carbon performance (Ding et al. 2024; Hartlieb and Eierle 2024; Keller et al. 2024; Tan et al. 2023; Truong et al. 2020; Yu et al. 2023), biodiversity performance (Steindl et al. 2025), workforce performance (Sun et al. 2020), and green financial policy (Tian and Pan 2024) on audit fees. This was related to cross-country studies and country-specific analyses in China and the USA. Most of the included studies included endogeneity checks.

A few studies showed a non-linear relationship (Brooks and Cheng 2026; Lopez Puertas-Lamy et al. 2017) and a positive impact of CSR performance on audit fees (Alshahrani et al. 2025; Zhang et al. 2025; Al Ani et al. 2024; Garcia et al. 2020; Huang and Tang 2023; Saeed et al. 2022; Sharma et al. 2018).

Inconclusive results were found in relation to *CSR reporting and CSR assurance*. Some studies found a positive impact of CSR reporting (Carey et al. 2017; Chen et al. 2016; Tuo et al. 2023; Zheng and Ren 2019), carbon reporting (Alshahrani et al. 2025), anti-corruption disclosure (Sarhan and Cowton 2025), and CSR assurance (Chen et al. 2016) on *audit fees*, while others demonstrated a negative influence of environmental reporting (Yao et al. 2020), carbon reporting (Gao and Calderon 2023), and CSR assurance (Tuo et al. 2023) on audit fees. Moreover, an insignificant impact of integrated reporting (Lu et al. 2023) and a non-linear relationship of CSR decoupling (Li et al. 2024) on audit fees were shown. A few studies highlighted the negative impact of CSR reporting (Hao et al. 2023) and CSR performance (Asante-Appaih and Lambert 2023; Leventis et al. 2013) on *non-audit fees*.

Other proxies of auditor incentives were recognized to a small extent. CSR performance was found to decrease the level of auditor resignation (Burke et al. 2019) and non-big four switching (Du et al. 2020) and to increase *audit firm tenure* (Brooks et al. 2019). However, environmental risks and audit tenure were found to be unrelated (Wu et al. 2025). Finally, mandatory CSR reporting in line with the EU Non-Financial Reporting Directive (NFRD) did not influence the joint provision of financial audits and CSR assurance (Garcia-Sanchez, Raimo, et al. 2022; Garcia-Sanchez, Sierra-Garcia, et al. 2022).

3.3.2 | Auditor Competencies

We know little about the impact of CSR outcomes on financial auditors' competencies. While CSR performance is positively related to the *industry expertise* of financial auditors (Sun et al. 2017) and the choice of a *big four audit firm* (Du et al. 2020), CSR reporting decreases it (Zheng and Ren 2019).

Inconclusive results were also found in relation to *audit opinions*. Lu et al. (2023) found a positive impact of integrated reporting on going concern opinions, while others showed a negative influence of CSR reporting (Tuo et al. 2023) and environmental reporting (Yao et al. 2020) on audit opinions. CSR divergence was found to decrease (Yang and Tian 2025) or increase (Zhang et al. 2024) audit opinions. Moreover, CSR performance decreased adverse audit opinions (Tian and Pan 2024), adverse internal control audit opinions (Blanco et al. 2024), and going concern opinions (Chakrabarty et al. 2024), whereas it increases key audit matter disclosure (Sulaiman et al. 2025). Non-linear relationships between CSR reporting (Nguyen and Trinh 2020), CSR performance (Brooks and Cheng 2026), and audit opinions were also found.

Furthermore, *audit report lag* was found to be negatively influenced by mandatory CSR reporting (Wang and Wang 2023), CSR performance (Al-Absy et al. 2024; Asante-Appiah 2020), carbon performance (Tan et al. 2023), and air pollution risk (Wu and Li 2025), whereas Wu et al. (2025) found an insignificant impact of environmental risks on audit lag.

3.4 | Major Results

Figure 3 provides an overview of the main results of the literature review. We highlight two major results of the literature review. First, *audit fees* (auditor incentives) and *big four audit firms*

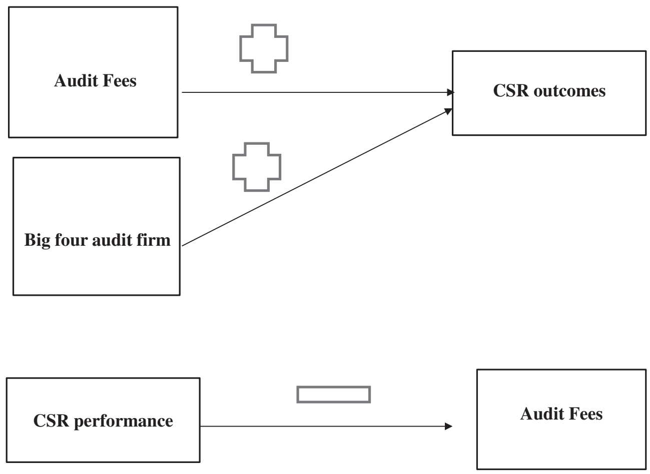

FIGURE 3 | Main results of the literature review.

(auditor competencies) were *positively* related to CSR outcomes. Three international studies and six country-specific analyses of the Anglo-American, Asian, and European capital markets showed a positive impact of audit fees on CSR outcomes. Five studies included endogeneity checks.

These results are in line with stakeholder agency theory (Hill and Jones 1992) because financial audits with higher quality pressure senior managers to increase their CSR efforts. Increased audit fees are a symbol of increased audit efforts and audit firm reputation, as the financial audit is assumed to be conducted with better efficiency and effectiveness. Stakeholders demand proper financial audits, and this is related to improved firm reputation and stakeholder relationships. A counter-mechanism of increased audit fees, assuming impaired independence of higher audit fees and market concentration of big four audit firms, would relate to a negative association between audit fees and CSR outcomes. The economic bonding of (big four) audit firms and the risks of market concentration tend to be lower in comparison to the positive reputation effects. In the following, we highlight the results of prior literature reviews on the impact of earnings management as an indirect measure of audit quality on CSR. The authors emphasized a very low number of studies, leading to heterogeneous results (e.g., Kumar et al. 2023; Velte 2024). This also relates to prior literature reviews on market reactions to CSR (Gillan et al. 2021).

Our results are also in line with increased regulatory pressure for financial auditors to promote their increased responsibilities toward CSR. Among others, the EU Corporate Sustainability Reporting Directive (CSRD) is linked to the mandatory assurance of CSR reports, whereas the selection of financial auditors as CSR assurors represents best practice.

Second, many studies found a *negative* impact of *CSR performance on audit fees*. Both cross-country studies (4) and country-related analyses in China and the USA were conducted. Most studies (14) included proper endogeneity checks.

These results are in line with stakeholder agency theory in view of financial auditors' assumptions of lower audit risks. Firms with an increased level of CSR performance are assumed to prepare financial reports with higher earnings quality, as many links between financial and CSR reports exist. As we relied on direct measures of audit quality, prior research on the impact of CSR on earnings quality as indirect measures of financial audits also showed a negative influence of CSR on earnings management (e.g., Velte 2024). This connectivity was also highlighted by global standard setters, such as the sustainability reporting standards of the ISSB, and included in the European Sustainability Reporting Standards (ESRS).

In comparison to CSR reporting and performance, prior research has often neglected the relationship between financial auditors and *CSR assurance*. Research gaps can be identified for all characteristics of financial auditors and for both econometric directions. Studies have shown that CSR assurance is positively influenced by audit fees (Chen et al. 2016), the joint provision of financial audit and CSR assurance (Ruiz-Barbadillo and Martinez-Ferrero 2020), big four audit firms as CSR assurors (Fernandez-Feijoo et al. 2016, 2018; Sierra-García et al. 2015; Zorio et al. 2013). Thus, in line with stakeholder agency theory, financial auditors promote the voluntary engagement of CSR assurors with an appropriate assurance quality. Moreover, CSR assurance may increase (Chen et al. 2016) or decrease audit fees (Tuo et al. 2023).

The Tables S1 and S2 include the detailed results of the literature reviews and give a detailed overview of all included studies.

4 | Limitations and Future Research Recommendations

While research activities on the link between financial auditors and CSR outcomes have increased in recent years, we highlight several limitations of prior studies, leading to selective recommendations for future research. Regarding *CSR variables*, as already mentioned, we know little about the impact of financial auditors on *CSR assurance* or vice versa (Chen et al. 2016; Zorio et al. 2013). Future research designs should measure the level of CSR assurance quality (Ruiz-Barbadillo and Martinez-Ferrero 2020) by analyzing the assurance level inclusion of international assurance standards, the contents of CSR assurance statements, and the recognition of multiple stakeholders in the assurance process.

Regarding the characteristics of *financial auditors*, we show the dominant use of audit fees (auditor incentives) and big four audit firms (auditor competencies) in our literature review (e.g., Carey et al. 2017; Yao et al. 2020). Due to the heterogeneous interpretation of these proxies, there should be more emphasis on the *joint provision of financial audit and CSR assurance* and *sustainability expertise* of financial auditors. With this in mind, researchers should analyze the expertise of big four audit firms based on their prior experiences in CSR assurance services, additional cooperation with external environmental experts, and the existence of multidisciplinary audit teams. As we note, there are active discussions about whether audit firms have the relevant *sustainability expertise* to conduct high-quality CSR assurance (Simnett et al. 2025), and future research should address the question of whether *big four joint provision increases CSR assurance quality only when sustainability experts are embedded*.

Prior research on specific subpillars of CSR performance and reporting has concentrated on climate issues (e.g., Pham et al. 2024; Simnett et al. 2025). Carbon-sensitive industries are under increased stakeholder and regulatory pressure, which should lead to greater sensitivity in CSR assurance (Simnett et al. 2025). On the one hand, this strategy may lead to the substantive use of CSR reporting and assurance in line with stakeholder preferences. On the other hand, opportunistic management is associated with a symbolic use of CSR assurance. Future research should address the question of *whether the joint provision of financial and CSR audits will outperform single-provider models in carbon-intensive industries.*

While an increased number of studies included firm attributes as potential moderators of the financial auditor-CSR link, there was an absence of recognition of other monitoring bodies, such as *audit committees and internal auditors*. While the "golden triangle" between financial auditors, audit committees, and internal auditors is traditionally linked to financial audits, it can easily be transferred to CSR issues (Wehrhahn and Velte 2024). As with studies on financial auditors, we identified a large increase in studies on the impact of audit committees on CSR reporting, performance, and assurance (e.g., Wehrhahn and Velte 2024). Future studies should analyze a possible complementary versus substantive relationship between the three monitoring bodies.

5 | Conclusion

This study included a structured review of empirical quantitative research on the relationship between financial auditors and CSR outcomes. Based on stakeholder agency theory (Hill and Jones 1992), the traditional role of financial auditors to supply a high quality audit of financial reports is extended to CSR reports. Even if a joint provision of financial audits and CSR assurance is not conducted, there are many interrelations between financial and CSR reporting. It is assumed that financial auditors with higher audit quality increase the level of CSR outcomes and that firms with increased CSR outcomes engage financial auditors with a higher level of audit quality (e.g., Zaid and Issa 2025; Lee et al. 2026).

Based on DeFond and Zhang (2014), our research framework differentiates between auditor incentives (e.g., audit fees) and auditor competencies (e.g., big four audit firms). CSR outcomes are separated into CSR reporting, performance, and assurance, and we present the first literature review on this topic. Thus, we contribute to prior research that addresses the link between the CSR assuror (e.g., Cohen and Simnett 2015; Huang and Watson 2015; Knechel 2021), board governance (e.g., Jain and Jamali 2016; Rao and Tilt 2016; Sahut et al. 2019), ownership (e.g., Faller and zu Knyphausen-Aufseß 2018), and CSR outcomes. Our literature review indicates that most studies recognized the impact of *CSR performance on audit fees* and the impact *of big four audit firms on CSR*. While many research results on specific variables are heterogeneous or too small, *audit fees for financial auditors and big four audit firms increase* the level of CSR outcomes in many studies. Moreover, CSR performance was found to be *negatively* related to audit fees. Among others, we highlight research gaps in the relationship between financial auditors and CSR assurance (quality) and between financial auditors' expertise, tenure and CSR. Future research should explore in detail the *sustainability expertise* of financial auditors, audit committees, and internal auditors as moderator analyses. Our review also highlights the shift from classical agency theory to stakeholder agency theory, as the gatekeeper function of financial auditors is not restricted to shareholders.

We conclude that the increased responsibilities of financial auditors toward CSR outcomes, which are based on stakeholder agency theory (Hill and Jones 1992), have been verified by this literature review. The realization of major synergies between financial audit and CSR assurance will lead to increased joint provision of both assurance audit and assurance services. Otherwise, the risks of information overload and greenwashing in CSR reports may not be reduced significantly.

Our literature review has some *limitations*, because the vote-counting approach only included the number of significances and did not recognize sample or effect sizes (Light and Smith 1971). A quantitative meta-analysis may overcome these restrictions. The financial auditor and CSR variables are too heterogeneous and the number of studies on specific attributes, such as audit fees and CSR performance, remains too small to conduct a meta-analysis. In view of the great awareness of archival studies on the link between financial auditors and CSR, we expect an increased number of studies on specific auditor characteristics in the coming years, leading to the possibility of conducting meta-analyses. Moreover, while most of the included studies addressed endogeneity checks in the regression models, others did not. This leads to a mixed validity of the research results, which should be overcome in future research designs.

Our paper has significant *practical implications*. First, the extended job profile of financial auditors regarding CSR reports has major impacts on their cooperation with audit committees. Audit committees should motivate the executive directors to provide an adequate volume of audit fees for financial auditors and engage a high-quality audit firm, as future improvements on financial and CSR outcomes are realistic. Second, audit committees should realize that the successful progress in corporate sustainability transformation may be linked with decreased audit fees. Firms with high CSR outcomes may be related to decreased audit risks, leading to lower audit fees. Third, because CSR assurance can be conducted with a limited and reasonable assurance level from a global perspective, audit committees should push for a reasonable assurance level for their CSR reports and engage audit firms with sustainability experts, such as the big four audit firms. This will lead to a balanced recognition of financial and CSR issues by stakeholders. Finally, audit firms, especially small and medium-sized ones, are forced to increase the sustainability skills of their auditors in line with stakeholder demands. Environmental and social skills are needed to analyze CSR reports with a high quality. If smaller audit firms see some challenges to engage sustainability experts, strategic cooperations with other sustainability assurance providers, such as environmental experts, should be started.

Our study also has major *theoretical implications*. Due to the classical job profile of financial auditors, principal agent theory (Ross 1973; Jensen and Meckling 1976) is still the dominant theoretical framework for empirical research. The recognition of management theories, such as stakeholder agency theory (Hill and Jones 1992), is helpful in emphasizing the relationship between financial auditors and multiple stakeholders. Classical principal agent theory restricts the responsibilities of financial auditors to financial audits and related capital market providers. However, financial auditors should not only decrease agency conflicts between management and shareholders but also be responsible for overseeing CSR strategies and interlinks with financial reporting. Agency theory should relate to other management theories, such as resource dependence and legitimacy theories, to emphasize the multifunctional role of auditors in corporate governance.

Finally, some *policy implications* of our analysis should be highlighted. Based on the positive impact of audit fees and big four audit firms on CSR outcomes, regulatory bodies should promote the link between financial auditors and CSR assurance as follows: First, as CSR assurance is still voluntary and firms can choose between several assurance providers, in many countries, regulations should harmonize CSR assurance processes. In view of the huge connectivity between financial and CSR reports, regulations on a mandatory combined assurance of financial and CSR reports by financial auditors are useful. Regulators should stipulate at least PIEs to engage financial auditors for sustainability assurance services instead of other assurance providers. Synergies between financial audits and CSR assurance services are linked with increased quality of financial and CSR reports. Second, standard setters should explicitly force PIEs to engage financial auditors with a reasonable assurance level in line with financial reporting. These proposed regulations are in line with stakeholder demands and are assumed to increase the sensitivity of firms to publish high-quality CSR reports.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Appendix S1:** Supporting information.