

The relationship between audit committees, external auditors, and internal control systems: a literature review and a research agenda

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Abstract

Purpose – This paper aims to focus on the relationship between audit committees, external auditors and internal control systems (ICS) and strives to point out mutual influences between the instances to provide an integrated perspective for firms' multilateral monitoring mechanisms. Furthermore, this study emphasizes the incorporation of sustainability and fraud considerations into the traditional roles of audit committees and auditors.

Design/methodology/approach – This structured literature review is based on 71 empirical-quantitative studies published in high-quality journals between 2005 and 2022. Considering the classification of ICS into ICS quality and internal audit function, the studies are analyzed with regard to audit committees' and external auditors' characteristics, divided into incentives and competencies, as well as their mutual relationships.

Findings – This study highlights a dynamic trilateral network of relationships between monitoring authorities and primarily shows that audit committees equipped with adequate competencies generate a substitutive effect for external auditors by reducing their efforts, whereas ICS quality serves as a possible mediator in this network of relationships. The establishment of an integrative three-party coalition of competent and adequately incentivized monitoring parties is essential to guarantee sufficient and appropriate ICS and overall corporate governance quality.

Practical implications – The findings should prompt legislators and firms to ensure a deeper collaboration between audit committees, internal auditors and external auditors to generate synergy effects and economies of scale within the integrative monitoring process. Legislators should develop stricter requirements for competencies of audit committees and auditors. These should include a holistic triad of sustainability, fraud and digital expertise as well as mandatory forensic procedures performed by all monitoring bodies.

Originality/value – The authors contribute to prior research by highlighting the importance of an integrative three-party coalition of monitoring authorities to ensure corporate governance quality and to generate synergy effects within a dynamic multilateral monitoring process. Furthermore, the authors offer cutting-edge implications by stressing the need for consideration of sustainability and fraud aspects in the traditional work and profiles of audit committees and auditors.

Keywords Internal control systems, Internal audit function, Audit committees, External auditors, Corporate governance

Paper type Literature review

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1. Introduction

Multiple financial scandals in the past decades (e.g. Enron or Wirecard) have led to damaged public trust in firms, their monitoring mechanisms and the corresponding monitoring bodies (Rezaee, 2005). Because of the Enron scandal, the US regulator set international standards with the implementation of the Sarbanes-Oxley Act (SOX, 2002), establishing disclosure and auditing requirements regarding internal control systems (ICS) of US-listed firms; this law was a catalyst for other international legislators (DeFond and Francis, 2005). Within the adequate monitoring of ICS, audit committees and auditors play a significant role by ensuring financial reporting quality (Li and Liu, 2024) and consequently by preventing potential misconduct and corporate scandals. Due to this increased relevance, we focus our literature review on audit committees and auditors and analyze the effects of their individual characteristics on ICS quality and vice versa. This research focus is of great importance, as existing literature and legislation mainly relates solely to the bilateral cooperation between audit committees and external auditors (Inaam and Khamoussi, 2016). The role of internal auditors within this relationship is often considered subordinately or merely within a bilateral relation (Kotb *et al.*, 2020).

Using principal agent theory (PAT) (Jensen and Meckling, 1976; Ross, 1973) and considering described gaps within existing literature, we aim to reveal mutual influences between audit committees, external auditors and ICS to provide an integrated perspective for firms' multilateral monitoring mechanisms. In addition, we strive for insights with regard to incorporating sustainability and fraud considerations into the traditional roles of audit committees and auditors. Consequently, we derived the following research questions (RQs):

- RQ1. What influence do audit committees' competencies and incentives have on ICS quality?
- RQ2. What influence does ICS quality has on audit committees' competencies and incentives?
- RQ3. What influence do external auditors' competencies and incentives have on ICS quality?
- RQ4. What influence does ICS quality has on external auditors' competencies and incentives?

In contrast to prior literature, we make the following main contributions to prior research. First, to guarantee an adequate comparability, we rely on post-SOX empirical-quantitative research on the relationship between audit committees, external auditors and ICS quality, stressing the need for a specific literature review of these multilateral relationships. Placing the focus on the post-SOX era is important, because this law generated fundamental corporate governance regulations for the auditing parties and necessitated mandatory disclosure of internal control weaknesses (SOX, 2002). Second, we show a clear structure of included variables for each monitoring institution and illustrate their mutual relations. This is of great importance because the existing post-SOX literature and legislation mainly pertain solely to a bilateral cooperation (mainly between the audit committee and the external auditor; Malik, 2014) without any integration of the ICS. Third, we develop an integrative research framework to stress synergies between audit committees, external auditors and ICS to generate efficiency and effectiveness benefits. We list and structure the various audit committee, auditor and ICS variables and deduce limitations and recommendations for future research to guide researchers for innovative designs.

Our review of 71 empirical quantitative studies stresses a dominance of US studies and relies on established processes (Denyer *et al.*, 2008). We highlight a dynamic trilateral network of relationships between the monitoring authorities and primarily indicate that the audit committee's incentives and particularly their competencies have a positive effect on ICS quality. Within the category of competencies, the audit committee's expertise, experience and size represent the primary influence factors (Weickgenannt *et al.*, 2021). Moreover, an increased ICS quality clearly affects the external auditor's competencies and particularly their incentives, leading to decreases in audit fees, audit delay, auditor rotation and improved auditor reporting (Hogan and Wilkins, 2008). Consequently, an audit committee equipped with high competencies generates, over the path of ICS quality, positive effects for external audits. In addition, also other directions of effects within the focused monitoring triangle are possible, even though they indicate not as homogeneous findings as previously mentioned direction. For instance, likewise experienced (Bedard *et al.*, 2009) and competent (Haislip *et al.*, 2016) external auditors can affect ICS quality and thereon create relieving effects for audit committees. The results of our research make a practical contribution to the prior literature as they can raise the firms' awareness of the economic benefits of specific competence staffing and of appropriate incentives of the monitoring bodies. This refers not only to the parties' capabilities with regard to the monitoring of financial reporting but also to the incorporation of sustainability and fraud considerations within their traditional roles. Furthermore, our findings should motivate legislators, firms and monitoring bodies to increase the collaborative behavior of audit committees, external auditors and the ICS to generate synergy effects and economies of scale within the monitoring process.

We structured our literature review as follows: First, we present an agency-theoretical, a normative and a research framework (Section 2). Second, we explain the main steps of our data selection process (Section 3) and proceed to highlight the findings and key results of our literature review (Section 4). Then, we discuss limitations and recommendations for future research (Section 5) and end with a summary of our literature review (Section 6).

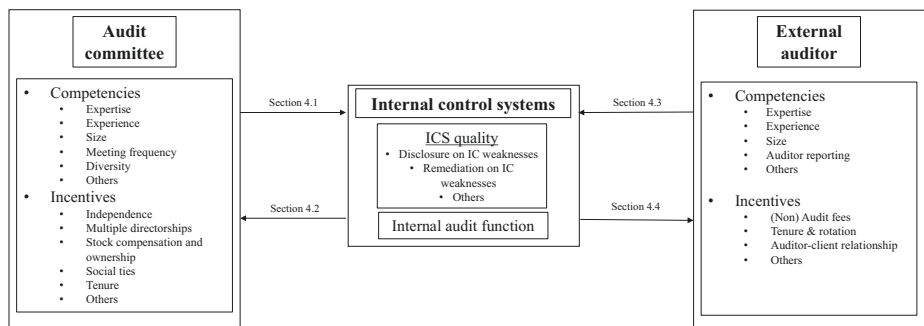
2. Theoretical basis and research framework

As most included studies focused on the PAT (Jensen and Meckling, 1976; Ross, 1973), we also relied on this theoretical framework (Goh, 2009; Hoitash *et al.*, 2009; Mitra *et al.*, 2015; Khlif and Samaha, 2016; Pérez-Cornejo *et al.*, 2019; Eulaiwi *et al.*, 2022). According to the PAT, both audit committees and external auditors represent monitoring and bonding parties (Chow and Rice, 1982). Both authorities reduce conflicts of interest and asymmetric information between management and investors that would otherwise result in moral hazards and self-serving activities (Jensen and Meckling, 1976). To reduce such agency conflicts, ICS including the internal audit function support boards of directors (Cohen *et al.*, 2004). Although management is obliged to ensure appropriate ICS, these systems are supervised and influenced by internal auditors, audit committees and external auditors. According to the double-tier PAT (Tirole, 1986) audit committees as agents of shareholders are responsible for supervising the executive directors. Thus, audit committees are also interested in sufficient ICS, as they contain monitoring activities and value drivers for the top management itself (Zahra *et al.*, 2007). To appropriately monitor existing ICS, the audit committee needs to be equipped with adequate competencies. Competencies such as the audit committee's expertise, experience and size enhance ICS quality (Hoitash *et al.*, 2009) and contribute to reducing agency conflicts. Although the external auditor is a gatekeeper for shareholders (Kraakman, 1986), this party also supports the audit committee, e.g. relating to financial reporting. As an agent for shareholders and the audit committee, the external auditor's

competencies and incentives also influence ICS and vice versa. Due to mutual relations between the instances, they can affect each other such that high-quality ICS influenced by the audit committee may lead to better efficiency and effectiveness of external audits. Consequently, audit committees, internal auditors and external auditors are economically acting agents (Antle, 1982). They may violate the independence rules by forming a coalition with the board of directors, leading to disadvantages for the shareholders. Consequently, further principal agent conflicts between the parties arise and a mutual multi-stage monitoring becomes necessary to reduce those conflicts, leading to possible doubled work and inefficiencies within the monitoring and auditing process.

These agency-theoretical assumptions have also been included in several regulatory reform initiatives of corporate governance during the past decades. Fundamental regulations according to the SOX 2002 should strengthen corporate governance quality and include regulations for audit committees (e.g. SOX Section 301, 2002) and external auditors (e.g. SOX Section 204, 2002). Among other rules, the SOX requires listed corporations to disclose whether audit committees have at least one financial expert (Bilal et al., 2018) and to include fully independent members. The SOX also extended the setup and monitoring requirements for ICS, leading to extended audit requirements for external auditors [e.g. SOX Section 404(b), 2002].

On this theoretical and normative basis, we develop a research framework to structure the main characteristics of audit committees, ICS and external auditors (Figure 1). For the structure of the characteristics, we rely on the existing framework for external auditors by DeFond and Zhang (2014) and adapted the framework for all parties by dividing the research proxies into incentives and competencies. We structure the ICS variables into disclosure of internal control weaknesses, remediation of internal control weaknesses and others. Similar to other studies (Chalmers et al., 2019), we interpret the ICS quality of firms with disclosed internal control weaknesses as low. However, successful remediations of internal control weaknesses indicate high ICS quality. Due to our expanded view of ICS and in contrast to ICS in a narrow sense, we included the very few studies dealing with enterprise risk management (ERM) systems and compliance management systems as “other proxies”. Only very few quantitative studies exist on the influence of internal auditor characteristics on ICS quality and vice versa (Mazza and Azzali, 2015). This is mainly because the internal audit function is often seen as a part of ICS (Eulerich et al., 2015) due to its involvement in designing, implementing and executing the internal controls. For this reason, we included the internal audit function in the ICS within our framework.



Source: Authors' own creation

Figure 1. Research framework

3. Research methods

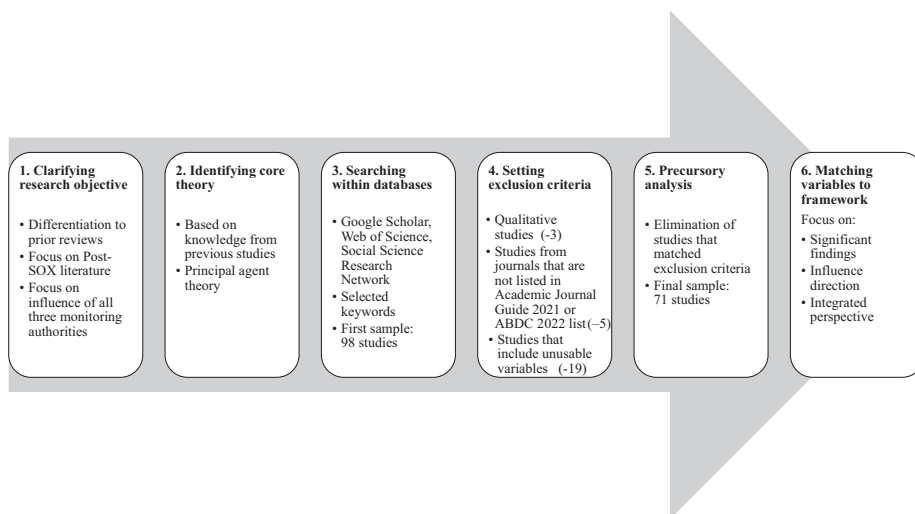
We conduct a systematic literature review of empirical articles examining the relationship between audit committees, external auditors and ICS. To perform our systematic review, we relied on established processes (Denyer and Tranfield, 2009; Denyer *et al.*, 2008; Seuring and Müller, 2008) and followed a structured approach (e.g. similar to Elmarzouky *et al.*, 2024; Ashrafi *et al.*, 2020; Tseng *et al.*, 2020) (Figure 2).

3.1 Search method and criteria for including studies

First, we clarified our research objective to set criteria for including studies in the review. Compared to prior literature reviews in ICS research (Cohen *et al.*, 2004; Schneider *et al.*, 2009; Asare *et al.*, 2013; Chalmers *et al.*, 2019), this review focuses on the relationship between audit committees, external auditors and ICS. Second, we identified the core theory (PAT) in the research field based on our knowledge of previous studies. Third, we searched within international databases instead of predefining journals: Google Scholar, Web of Science and Social Science Research Network. Due to described criteria for including studies, our search string encompassed the following relevant keywords: “internal control(s)”, “risk management”, “risk management system”, “internal audit function”, “internal audit(s)”, “audit committee(s)”, “external audit(s)”, “audit(s)”, “corporate governance” and related terms.

3.2 Criteria for excluding studies and final sample selection

As a fourth step, we set the exclusion criteria. We did not restrict the country of origin of the studies but focused on publications that have at least one year of their sample period after the implementation of the SOX rules on audit committees, external auditors and ICS. Despite significant studies within pre-SOX period (Krishnan, 2005), a focus on post-SOX period is important because there is a lack of comparability between pre- and post-SOX studies due to the



Source: Authors’ own creation

Figure 2. Data selection process

substantial regulatory changes in 2002 including fundamental reforms for the audit parties and mandatory disclosure of internal control weaknesses. We limited the search to quantitative empirical studies as the dominant research method and our focus on finding economic relations between individual variables. Besides a few experiments and partial use of surveys, most of included studies are archival based. Only studies that were published in English journals listed in two well-known journal rankings [“Academic Journal Guide 2021” or “Australian Business Deans Council (ABDC) 2022 list”] were considered. We focused on articles in which at least one dependent or independent variable is to be related to ICS quality together with either audit committees and external auditors and did not accept articles that included other variables. Fifth, we scanned the titles of the articles within a precursory analysis, and on this basis, we decided which abstracts to read. We excluded articles that matched our exclusion criteria. In a next step, we scanned the theory and method sections of the remaining articles and, again, eliminated studies that matched the exclusion criteria. The screening process resulted in a final sample of 71 studies. An overview of the final sample, organized by publication year, country and journal, can be found in [Table 1](#). The dominance of the US setting should be noted. Sixth, we analyzed the studies according to the relevant variables and matched them to our previously developed framework. Significant findings, the corresponding influence direction and an integrative research perspective were the focus of this review. The separate process steps including the corresponding work performed are shown in [Figure 2](#).

4. Findings

4.1 *Influence of audit committees’ competencies and incentives on internal control systems quality (answering RQ1)*

The studies indicate that both the audit committee’s incentives and in particular their competencies have a predominantly positive effect on ICS quality. Within the category of competences, audit committee’s expertise generates an especially positive impact on ICS quality. Financial expertise ([Zhang et al., 2007 \[1\]](#)) and also other types of expertise such as accounting expertise ([Lisic et al., 2019](#)), industry and legal expertise ([Sterin, 2020](#)) or information technology (IT) expertise ([Ashraf et al., 2020](#)) lead to higher ICS quality in form of a lower number or probability of internal control weakness disclosures or remediations of prior weaknesses. Furthermore, the audit committee’s experience ([Weickgenannt et al., 2021](#)), size ([Munsif et al., 2013](#)) and total quality as a measure of audit committee factors ([Almaqoushi and Powell, 2021](#)) improve ICS quality. Heterogeneous results exist for audit committee’s meeting frequency and diversity. Although some studies indicate a positive effect of a higher meeting frequency ([Khelif and Samaha, 2016](#)) on ICS quality, others show opposite results ([Krishnan and Visvanathan, 2007](#)). Furthermore, studies ([Chen et al., 2016a, 2016b](#)) stressed that a more diverse audit committee (e.g. higher proportion of females) leads to higher ICS quality. However, [Ashfaq and Rui \(2019\)](#) stressed a negative effect of audit committee diversity on internal control disclosure.

Within the category of incentives, we find many different factors on ICS quality. On the one hand, the audit committee’s independence improves ICS quality either through better remediation of prior internal control weaknesses ([Goh, 2009](#)) or through enhancing ERM system quality ([Pérez-Cornejo et al., 2019](#)). On the other hand, the independence of audit committee’s chair leads to either better ([Ashfaq and Rui, 2019](#)) or weaker ([Michelon et al., 2015](#)) internal control disclosures. Remediations of internal control weaknesses were also more likely if the chair of the board also serves on the audit committee ([Johnstone et al., 2011](#)). Multiple audit committee directorships ([Cheng et al., 2019](#)) and the fact that the corresponding audit committee membership is the largest ([Khoo et al., 2020](#)) improves ICS quality. Furthermore, social ties between the audit committee and the chief executive officer

Table 1. Count of cited published papers

Panel A: by publication year

Total 71:	2022: 1
	2021: 4
	2020: 5
	2019: 6
	2018: 8
	2017: 3
	2016: 5
	2015: 5
	2014: 2
	2013: 3
	2012: 2
	2011: 6
	2010: 4
	2009: 7
	2008: 5
	2007: 2
	2006: 2
	2005: 1

Panel B: by region:

Total 71:	Cross-country setting: 2
	USA: 52
	Other regimes: 17

Panel C: by journal:

Total 71:	<i>Abacus</i> : 1
	<i>Accounting & Finance</i> : 2
	<i>Accounting Forum</i> : 1
	<i>Accounting Horizons</i> : 4
	<i>Advances in Accounting</i> : 2
	<i>Asia-Pacific Journal of Accounting & Economics</i> : 2
	<i>Auditing: A Journal of Practice & Theory</i> : 10
	<i>Contemporary Accounting Research</i> : 8
	<i>European Management Journal</i> : 1
	<i>Finance Research Letters</i> : 1
	<i>International Business Review</i> : 1
	<i>International Journal of Accounting</i> : 1
	<i>International Journal of Accounting and Information Management</i> : 1
	<i>International Journal of Accounting Information Systems</i> : 1
	<i>International Journal of Auditing</i> : 7
	<i>Journal of Accounting and Public Policy</i> : 1
	<i>Journal of Accounting, Auditing & Finance</i> : 3
	<i>Journal of Applied Accounting Research</i> : 1
	<i>Journal of Business Finance & Accounting</i> : 1
	<i>Journal of Cleaner Production</i> : 1
	<i>Journal of Contemporary Accounting & Economics</i> : 3
	<i>Journal of Financial Reporting and Accounting</i> : 1
	<i>Journal of Public Budgeting, Accounting & Financial Management</i> : 1
	<i>Managerial Auditing Journal</i> : 6
	<i>Research in Accounting Regulation</i> : 1
	<i>The Accounting Review</i> : 8
	<i>The European Journal of Finance</i> : 1

Source: Authors' own creation

(Bruynseels and Cardinaels, 2014) as well as audit committee turnover (Johnstone *et al.*, 2011) lead to higher ICS quality. Heterogenous results exist for the audit committee's stock compensation and ownership. Although a greater percentage of audit committee shareholdings of firm stock is positively associated with the remediation of internal control weaknesses (Johnstone *et al.*, 2011), audit committees with stock option plans are associated with internal control weaknesses (Cullinan *et al.*, 2010) and thus weaker ICS quality. Moreover, results indicate that audit committee's shareholding has a significant negative relationship with internal control disclosure (Ashfaq and Rui, 2019).

4.2 Influence of internal control systems quality on audit committees' competencies and incentives (answering RQ2)

Results from the very few existing studies on the influence of ICS quality on audit committees indicate that low ICS quality leads to higher audit committee turnover (Johnstone *et al.*, 2011). Furthermore, firms with a weak ICS quality show greater improvements in audit committee's independence, accounting financial expertise and size compared to control firm without internal control weaknesses (Goh and Li, 2013).

4.3 Influence of external auditors' competencies and incentives on internal control systems quality (answering RQ3)

The findings of relevant research papers show predominantly heterogenous results on the effect of external auditor's competencies and incentives on ICS quality. Within the category of competencies, auditor's size, expertise and experience has been researched most frequently. Although some studies indicate that a larger audit firm size leads to greater material weakness disclosure (Bedard *et al.*, 2009), other studies show the opposite effect (López *et al.*, 2013). Furthermore, there is evidence that audits performed by Big 4 audit firms lead to higher internal control quality (Khelif and Samaha, 2016) but also to a lower likelihood of internal control weakness remediation (Chan *et al.*, 2009) and higher compliance costs (Krishnan *et al.*, 2008). Regarding external auditor's expertise and experience, industry expertise (Stephens, 2011) and auditor's section 404 experience (Bedard *et al.*, 2009) lead to greater material weaknesses disclosure. This effect demonstrates that specialized and experienced auditors are more likely to identify internal control weaknesses. In addition, auditor's IT expertise (Haislip *et al.*, 2016) implicates a greater likelihood of material weakness remediation.

Regarding the incentives of external auditors, the effect of (non) audit fees as well as auditor tenure and rotation on ICS quality was studied most frequently. Although unexpected audit fees are significantly associated with material internal control weaknesses (Albring *et al.*, 2018), firms with increased nonaudit fees due to purchased tax nonaudit services have an improved internal control quality (De Simone *et al.*, 2015). Furthermore, higher auditor independence is also a determinant of internal control weaknesses (Zhang *et al.*, 2007 [2]) or early warning of internal control deficiencies (Hermanson and Ye, 2009).

Within the category tenure and rotation, existing research indicates that firms with a longer client-auditor tenure have lower incidence of internal control weaknesses (Chen *et al.*, 2016a, 2016b), whereas more auditor changes characterize firms that report internal control weaknesses (Krishnan and Visvanathan, 2007). Moreover, firms engaging new auditors are more likely to remediate their internal control weaknesses effectively (Liu and Huang, 2020) or are more likely to receive an improved report of internal control over financial reporting (Ettredge *et al.*, 2011).

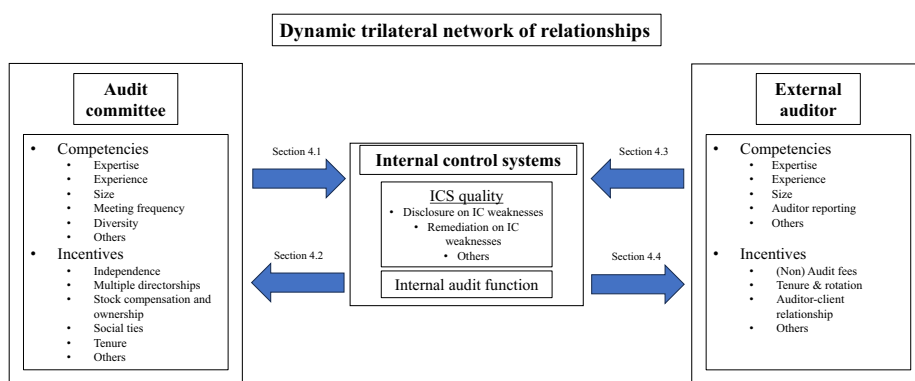
4.4 Influence of internal control systems quality on external auditors' competencies and incentives (answering RQ4)

Prior research results on the effects of ICS quality on the external auditor's incentives and competencies are rather homogeneous. This mainly relates to the influence on the external auditor's incentives. The most frequently researched categories within auditor's incentives are (lack of) audit fees, the auditor–client relationship, tenure and rotation. Auditor independence, which is included in the (lack of) audit fee category, has also been researched in some studies but only in terms of the influence of external auditors on ICS. Results indicate that a higher ICS quality significantly reduces audit fees (Hoitash *et al.*, 2008; Lu *et al.*, 2011). Higher ICS quality also leads to reduced audit hours or audit delays (Gontara *et al.*, 2023 [3]) and thus improves the auditor–client relationship. Furthermore, high ICS quality extends audit tenure or reduces auditor rotation (Ettredge *et al.*, 2011).

Within the category of competencies, high ICS quality through fewer internal control weaknesses generates a positive effect on auditor reporting by decreasing the likelihood for modified audit opinions (Elder *et al.*, 2009) or going-concern audit opinions (Jiang *et al.*, 2010). Moreover, higher ICS quality reduces the effort of external auditors by decreasing the extent of evidence necessary for testing the operating effectiveness of compensation controls or the level of precision needed in a compensation control to prevent or detect potential material misstatements (Gramling *et al.*, 2010).

4.5 Concluding remarks on the interplay of audit committees, internal control systems and external auditors

In summary, the audit committee's characteristics have, over the path of ICS quality, an indirect effect on the external auditor's characteristics and vice versa. Consequently, predominantly audit committees with high competencies generate a positive effect on external audits by reducing audit fees, audit delays and auditor rotation. This substitutive impact (Malik, 2014) of an adequately equipped and well-incentivized audit committee can relieve external auditors by reducing their effort, whereas the ICS serves as a possible mediator in this network of relationships. However, the relieving effect will become apparent with a time lag, particularly after first-time adoption. Due to dynamic relationships within this triangle of monitoring authorities (Figure 3), also other directions of effects are possible,



Source: Authors' own creation

Figure 3. Main findings

even though they show not as homogeneous results as previously mentioned direction. For instance, likewise experienced and competent auditors can achieve relieving effects for audit committees via improved ICS quality. These reflections indicate that firms should be interested in equipping their audit committees and auditors with comprehensive competences (e.g. financial expertise) to reduce agency conflicts and generate benefits.

In this respect, audit committees will coordinate (Jun Lin *et al.*, 2008) the monitoring activities of internal and external auditors more closely to generate advantages for all three instances. A cooperation of these monitoring parties promoted by audit committees (Velte, 2017) to make use of synergy effects (e.g. by mutual relief through competence sharing or shared efforts within separate audit procedures) and economies of scale requires sufficient and appropriate competencies and incentives of the involved parties. Due to the interdependences of competencies and incentives (DeFond and Zhang, 2014) of these parties, the connectivity is important to achieve such added value within this multilateral relationship. The establishment of an intensive three-party coalition could achieve a doubled support by external and internal auditors for the audit committee (Cohen *et al.*, 2004; Cohen *et al.*, 2010) that could lead to improved corporate governance quality and reduced agency problems.

4.6 Findings' connection to a research agenda

As evident from the findings presented in Sections 4.1–4.5, the results of the included studies predominantly focus on the traditional role of the entities responsible for monitoring financial reporting. However, this reveals significant research gaps concerning nonfinancial reporting, particularly regarding the integration of sustainability and fraud considerations within the interrelationships of the involved parties. For instance, similar to financial expertise (Zhang *et al.*, 2007), the presence of sustainability expertise within the audit committee could possibly enhance the quality of an ICS that incorporates sustainability aspects. This, in turn, could lead to benefits such as reduced audit fees (Krishnan *et al.*, 2008 regarding audit fees for financial reporting) for with respect to external audit of the sustainability report. Moreover, corresponding monitoring authorities frequently encounter challenges related to (management) fraud, which must be addressed to ensure the integrity and quality of nonfinancial reporting. In alignment with the practices of authorities with specialized IT expertise (Ashraf *et al.*, 2020), e.g. enhancing the forensic accounting education of involved parties could lead to improvements in the quality ICS, thereby benefiting the overall monitoring process.

5. Limitations and recommendations for future research

Based on this review, several limitations and recommendations for further research can be formulated. Recommendations cover both content and methodology to encourage future researchers to rely on a developed research framework and gather more comprehensive results concerning the integrative influence of monitoring authorities on ICS and vice versa. In the following, we concentrate on sustainability and fraud aspects and the need for more moderator and mediator analyses as major identified research gaps in our literature review.

5.1 Sustainability aspects

The historical duty of audit committees is to supervise the financial reporting process, including the related ICS and the cooperation with external auditors (Klein, 2002). However, in addition to financial risks, environmental and social risks also have a great impact on ICS and vice versa (Su *et al.*, 2022) and affect the corresponding monitoring bodies. Already existing frameworks and regulations (e.g. sustainability reporting standards by the Global Reporting Initiative [GRI] or the Nonfinancial Reporting Directive [NFRD] issued by the

EU) motivate the involvement of all three parties in corporate sustainability issues. As audit committees need to supervise not only financial but also corporate social responsibility (CSR) reporting, they should closely interact with internal and external auditors. Both internal and external auditors support the ensuring of the related sustainability data but also need to be coordinated and monitored by audit committees. Furthermore, new global sustainability reporting standards by the International Sustainability Standards Board (ISSB) stress the responsibilities of the monitoring institutions. These new standards mainly rely on the environmental, social and governance (ESG) concept and thus require specific disclosure on the interaction between audit committees, ICS and external auditors due to corporate environmental and social goals. In addition, region-specific regulators also implement stricter sustainability reporting rules (e.g. the EU Corporate Sustainability Reporting Directive [CSRD] or the US climate disclosure rules developed by the Securities and Exchange Commission). We also stress the increased regulations due to corporate sustainability due diligence related to sustainable value chains of the firms in many countries recently. The ICS must include these requirements for an adequate and sustainable supply chain management.

Due to these regulatory initiatives, ICS and the cooperation of audit committees and auditors need to be expanded in several respects. First, ICS need to be expanded to include advanced ESG matters. Second, it needs to be ensured that the contents of ESG reports are correctly disclosed and linked with management systems. Third, as CSR assurance is not automatically linked to professional accountants, the pros and cons of selecting the existing financial auditor for CSR assurance have to be evaluated (Cohen and Simnett, 2015). For these reasons, advanced requirements for the incentives and competency profiles of audit committees and internal and external auditors do exist. Although top management must ensure the appropriateness of ICS, the internal audit function (De Simone *et al.*, 2021) has a major impact on realizing a sufficient quality of ICS. An effective internal audit function needs to be equipped with extended competencies (e.g., sustainability expertise) and increased resources to fulfill a pivotal function within the process of increased ESG requirements (Aureli *et al.*, 2020).

Although few research results (Oussii and Boulila Taktak, 2018) indicate that expertise within the internal audit function generates a positive effect on ICS quality, we still know very little about the internal audit function and ESG aspects (Tumwebaze *et al.*, 2022). Furthermore, a few research results show that audit committee characteristics contribute to ensuring high sustainability (Zaman *et al.*, 2021). Among others, the audit committee's sustainability expertise has a positive impact on the readability of integrated reports as an interaction of material financial and ESG information (Velte, 2018). Further results indicate that specific auditor characteristics (e.g. size and audit fees) have a positive influence on CSR disclosure (e.g. Pucheta-Martínez *et al.*, 2019) and that clients' CSR involvement can have different effects on the quality of internal control audit opinions (Blanco *et al.*, 2024). However, we know very little about the impact of sustainability expertise within audit committees as well as audit teams on ICS quality, particularly regarding the described ICS sustainability expansion. Such increased expertise is needed to fulfil existing and upcoming corporate sustainability requirements and thus can improve ICS quality, e.g. to ensure the appropriate content of mandatory CSR disclosures and related management processes.

Overall, we recommend innovative research designs that emphasize an integrated perspective by considering both ICS, including internal auditors, as well as audit committee and external auditor factors with a focus on prior (e.g. GRI or EU NFRD) and new requirements for sustainability reporting (e.g. EU CSRD or ISSB). This design should include mixed research methods. Following other authors that used qualitative methods in

audit committee and audit research (Rakipi and D'Onza, 2024), the required data can be collected through questionnaires or interviews. The experts should report on how they deal with upcoming sustainability regulations and what consequences they expect in comparison to existing requirements. Possible consequences could comprise aspects such as changes in personnel profiles and equipment, employee training or legal responsibility. The types of the individual's expertise (financial, industrial and sustainability), their independence and the type of relationship with each other auditing parties (complementary or substitutive) should also be considered within this exploration. The collected data or parts of it could be transformed into quantitative data and evaluated with regression analyses (Ackermann, 2017). In this way, future researchers may find new results concerning how monitoring authorities can relieve each other with a view to advanced ESG requirements within high-quality ICS and a sufficiently lean auditing process.

5.2 *Fraud aspects*

The ESG concept assumes sufficient corporate governance mechanisms, as governance (G) constitutes the basis for successful future environmental (E) and social (S) strategies. However, corresponding monitoring authorities are often confronted with (management) fraud issues that must be prevented to provide sufficient ESG quality. Although little research stresses the impact of audit committees or auditors on fraud events (Khoufi and Khoufi, 2018), there is a strong need for a more detailed analysis of fraud events (often used as a dummy variable), not only related to external auditors (Trompeter *et al.*, 2013) but also in combination with audit committees and the internal audit function (Velte, 2023b). This is of great importance because all auditing parties are responsible for fraud prevention and have also been involved in cases of top management fraud (Zahra *et al.*, 2007).

In this regard, we recommend future researchers to focus on digitalization and big data techniques (e.g. artificial intelligence, data mining or other advanced data analytics) within monitoring and auditing activities of audit committees and internal and external auditors to find new insights for a more efficient and effective (top management) fraud prevention. Although Eilifsen *et al.* (2020) stressed that the use of audit data analytics is still relatively limited in practice, these techniques are important within fraud detection because they enable the authorities to recognize critical contents (e.g. critical posting combinations) in an efficient way. Authorities equipped with IT expertise (Ashraf *et al.*, 2020) can use these advantages even better and may increase overall monitoring quality. In addition, we encourage researchers to address the forensic accounting education (Tiwari and Debnath, 2017) of the involved auditing parties.

Yet, it is challenging to find sufficient fraud measures in archival research because fraud events are rather rare in firms' practice (Velte, 2023a). Although alternative measures such as the presence of fraud charges under regulatory interventions (Karpoff *et al.*, 2017) are limited due to a low number of applied studies, future researchers should use alternate methods to generate findings, e.g. the use of automatized textual analyses with Python. Similar to the abovementioned sustainability issues, we recommend researchers lean on existing studies of fraud detection and prevention techniques (Eilifsen *et al.*, 2020) and collect qualitative data via questionnaires or interviews with experts. The participants should report about their individual forensic accounting knowledge (inclusive IT expertise), their self-used fraud preventing and detecting methods and the proportion of digitalization and big data techniques within these methods. Furthermore, they should estimate both their own perceptions of responsibility within fraud prevention and detection as well as the perceptions of responsibility of other auditing parties. Information deficits that could arise though bias problems should always be considered within the evaluation of collected data. These

variables should be included into quantitative designs to analyze potential determinants or consequences of those corporate governance factors. On this way, future researchers could elaborate the intersections of the auditing body's knowledge, methods, tools and perceptions for a collaborative and efficient fraud prevention in terms of high-quality ICS.

5.3 Mediator and moderator analyses

Finally, we stress the need for more moderator and mediator analyses. As audit committees and external auditors represent interdependent monitoring authorities, it would be of great interest to analyze the impacts of various mediator or moderator variables on ICS quality (inclusive sustainability aspects). For example, audit fees or auditor size can cause a moderating or mediating effect on the audit committee's positive influence on ICS quality. On the other hand, an audit committee's characteristics such as independence or expertise could also represent moderators or mediators for the interaction of external auditors and ICS quality. Within the review we note very few studies that include such analyses. For example, [Ashfaq and Rui \(2019\)](#) included audit firm size as a moderator on the interrelation between audit committee quality and ICS, whereas [Li and Li \(2020\)](#) used audit committee tenure or gender diversity as moderating variables. [Michelon et al. \(2015\)](#) included the regulatory environment as a moderator, whereas [Lisic et al. \(2016\)](#) examined the moderating effect of chief executive officer power within their research on audit committee effectiveness and ICS quality. [Eulaiwi et al. \(2022\)](#) implemented the existence of lawsuits or anti-fraud policies as moderator variables within an examination of the effect of whistleblower governance on audit fees. [Pérez-Cornejo et al. \(2019\)](#) represents the only study in our review with a mediator variable; the authors analyzed the mediating effect of ERM system quality on the relationship between audit committee characteristics and corporate reputation. Due to this lack of studies, we encourage future researchers to include additional moderator and mediator variables within the research on the multilateral relationships of the three auditing parties. These variables should comprehend the individual competencies or incentives of the parties.

6. Discussion

6.1 Summary

We conducted a systematic literature review of 71 empirical-quantitative studies on the link between audit committees, external auditors and ICS based on an agency theoretical framework. Although PAT assumes that audit committees and external auditors represent monitoring and binding authorities ([Chow and Rice, 1982](#)) to reduce agency conflicts, ICS including the internal audit function also represent a significant factor. The characteristics of those monitoring bodies are of great importance to prevent such conflicts within a mutual multi-stage monitoring process. Our motivation to conduct this literature review on these monitoring authorities was to develop an integrative research framework and demonstrate the need for collaboration between the instances to increase overall corporate governance quality through synergies within a multilateral monitoring process. Furthermore, we aimed to sensitize incorporating sustainability and fraud considerations into the traditional roles of audit committees and auditors. We developed a research framework referring to [DeFond and Zhang \(2014\)](#) and divided the characteristics of the monitoring bodies into incentives and competencies. We included the internal audit function as part of the ICS in line with prior research and analyzed the influence of the audit committee's and external auditor's incentives and competencies on ICS quality and vice versa.

Our review of US-dominated studies primarily highlights that specific audit committee's incentives and competencies cause a positive effect on ICS quality. This mainly relates to

audit committee expertise, experience and size (Hoitash *et al.*, 2009; Goh, 2009). In turn, ICS quality affects the external auditor's competencies and particularly their incentives and leads to decreased audit fees, audit delay, auditor rotation and improved auditor reporting (Elder *et al.*, 2009). Consequently, audit committees equipped with high competencies (e.g. financial expertise or IT expertise) generate, over the path of ICS, a substitutive effect for external auditors by reducing their efforts, whereas ICS serve as a possible mediator. Furthermore, multiple other directions of effects within the dynamic trilateral network of relationships exist, even though they show not as homogeneous results as previously mentioned direction.

Based on the results of the literature review, we stressed the limitations of prior research and developed useful recommendations for future research. In this context, we included both content-specific and methodological suggestions. Our recommendations focused on sustainability and fraud issues within a holistic research approach by integrating all three monitoring bodies due to increased corporate sustainability regulations from an international perspective. This relates to both sustainability reporting and sustainable supply chain management duties. We recommend data collection via questionnaires or interviews considering the types of individual's expertise, the type of relationship (complementary or substitutive) and individual's self-assessment as well as the assessment by the other auditing parties and the integration in future quantitative research. Furthermore, we stress the need for more mediator and moderator analyses (Islam *et al.*, 2023) to explore the interrelations between audit committees, internal auditors, ICS and external auditors.

Finally, we stress the limitations of this analysis. First, narrative literature reviews are limited in contrast to meta-analyses. As meta-analyses intend to measure the overall statistical significance of specific relationships based on multiple single-study results (Greenberg, 1992), we focused our review on a narrative analysis of underlying results mainly due to overly heterogeneous proxies within the included studies. Future researchers should conduct quantitative meta-analyses on specific relationships (e.g. the impact of audit committees on ICS) within our research framework. Second, almost all included studies represent single-country studies with regional samples (primarily USA), leading to a limited transferability to other regimes.

6.2 Practical implications

The study has main implications for legislators and standard setters as well as practitioners (similar to other studies, Elmarzouky *et al.*, 2023). The results indicate that competently equipped and usefully incentivized audit committees and auditors lead to higher ICS quality and that ICS quality leads to better audit efficiency. Thus, practitioners should strive to consider these findings by ensuring adequate competencies (e.g. financial, sustainability and IT expertise) and incentives (e.g. independence) for those auditing bodies. Although it is useful to include advanced expertise requirements for audit committees and external auditors, legislators should develop extended demands for competencies of the audit committee and internal auditors. The advanced requirements should include a holistic triad of sustainability, fraud and IT expertise, because these combined competencies are needed to realize the going-concern principle of the firm and stay innovative. All parties' efforts should encompass comprehensive ESG as well as fraud detection training and the further development of current staff (e.g. internal auditors as noted by Christ *et al.*, 2021). In addition, they should consider recruiting new personnel with specialized sustainability competencies, such as biologists or climate scientists. Internal and external auditors might also consider using specialized software tools for auditing nonfinancial reporting or conducting forensic investigations. This could be particularly relevant for the oversight of management systems (ICS, risk management system, compliance management

system), as these systems play a crucial role in ensuring the quality of both financial and nonfinancial reporting.

Legislators and standard setters might consider requiring the presence of sustainability expertise within each of the three parties. Within audit committees, this could be achieved by integrating a sustainability expert, analogous to the inclusion of financial experts (Velte, 2023c). External auditors may need to broaden the scope of their examinations to encompass sustainability-related aspects as they need to fulfil extended requirements within auditing the new sustainability report according to CSRD. Given that internal auditing remains relatively unregulated globally, legislators should consider mandating certification programs focused on sustainability for internal auditors. Policymakers may also discuss mandatory forensic audit procedures performed by external and internal auditors that could also be monitored by audit committees or adopt more restrictive standards to improve the International Standards on Auditing with a focus on fraud prevention (e.g. Elmarzouky *et al.*, 2022 with a focus on key audit matters). Moreover, it should be kept in mind that the connectivity of both competencies and incentives is of great importance to achieve required firm improvements. Overall, regulators should recognize audit committees, internal auditors and external auditors as a three-party coalition of good corporate governance and should boost their practical cooperation in financial and ESG topics.

6.3 Theoretical implications

Potential theoretical development could involve a shift in research focus from shareholders (PAT) to other stakeholders (stakeholder-agency theory, as proposed by Hill and Jones in 1992). Given that a company has implicit obligations toward its stakeholders and society, management and all relevant oversight authorities should be motivated to implement and assess CSR structures and processes within the management framework, including high-quality ICS (Dowling and Pfeffer, 1975). In this context, stakeholders demand robust financial and non-financial reporting, as well as an associated ICS (Fiandrino *et al.*, 2022) that are subject to oversight by the three independent parties. The implementation of a comprehensive financial and nonfinancial reporting framework, alongside effective fraud detection and prevention mechanisms, is anticipated to enhance overall financial and nonfinancial performance, thereby improving the firm's reputation. Stakeholders further expect that monitoring bodies are equipped with adequate expertise, such as financial, sustainability, IT and fraud-prevention knowledge, along with appropriate incentives. Incorporating stakeholder interests into the job profiles and composition criteria of these oversight bodies may lead to increased stakeholder satisfaction.

Furthermore, the behavioral agency theory, based on the work of Wiseman and Gomez-Mejia (1998) and developed by Pepper and Gore (2015) could offer a theoretical development. As an extension of traditional agency theory, behavioral agency theory further considers psychological and behavioral factors, such as loss aversion (Wiseman and Gomez-Mejia, 1998) and perceived justice (Bosse and Phillips, 2016), that influence the behavior of agents. All three parties are individually motivated by a combination of economic incentives (e.g. audit fees for external auditors or budget for internal auditors), psychological factors (e.g. each party tries to minimize its own effort while searching for individual benefits) and social influences (e.g. social ties between audit committee members and external auditors due to prior careers). These factors can lead to behavioral risks that impair the effectiveness of appropriate monitoring. Due to these risks, open communication and a clear separation of responsibilities between the three parties are necessary to minimize misconduct or conflicts of interest. An understanding of behavioral incentives could help to develop measures that promote more objective and independent monitoring.

1. Most cited article with regard to the influence of audit committees on ICS quality (and vice versa): [Zhang et al., 2007](#) (1,245 citations); least cited article with regard to the influence of audit committees on ICS quality (and vice versa): [Sterin, 2020](#) (17 citations) (updated on August 15, 2024).
2. Most cited article with regard to the influence of external auditors on ICS quality (and vice versa): [Zhang et al., 2007](#) (1,245 citations); least cited article with regard to the influence of external auditors on ICS quality (and vice versa): [Eulaiwi et al., 2022](#) (six citations) (updated on August 15, 2024).
3. Not included due to defined exclusion criteria (see Section 3).

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