

The roles and interplay of enforcers and auditors in the context of accounting fraud: a review of the accounting literature

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Abstract

Purpose – This study reviews and discusses the accounting literature that analyzes the role of auditors and enforcers in the context of fraud.

Design/methodology/approach – This literature review includes both qualitative and quantitative studies, based on the idea that the findings from different research paradigms can shed light on the complex interactions between different financial reporting controls. The authors use a mixed-methods research synthesis and select 64 accounting journal articles to analyze the main proxies for fraud, the stages of the fraud process under investigation and the roles played by auditors and enforcers.

Findings – The study highlights heterogeneity with respect to the terms and concepts used to capture the fraud phenomenon, a fragmentation in terms of the measures used in quantitative studies and a low level of detail in the fraud analysis. The review also shows a limited number of case studies and a lack of focus on the interaction and interplay between enforcers and auditors.

Research limitations/implications – This study outlines directions for future accounting research on fraud.

Practical implications – The analysis underscores the need for the academic community, policymakers and practitioners to work together to prevent the destructive economic and social consequences of fraud in an increasingly complex and interconnected environment.

Originality/value – This study differs from previous literature reviews that focus on a single monitoring mechanism or deal with fraud in a broadly manner by discussing how the accounting literature addresses the roles and the complex interplay between enforcers and auditors in the context of accounting fraud.

Keywords Auditors, Enforcement, Accounting fraud, Literature review

Paper type Literature review

1. Introduction

Accounting fraud is the most severe form of financial statement manipulation [1]. Beasley *et al.* (2010) define it as “the intentional, material misstatement of financial statements or financial disclosures or the perpetration of an illegal act that has a material direct effect on the financial statements or financial disclosure” (Beasley *et al.*, 2010, p. 7). This definition

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highlights some features common to various fraud definitions (e.g. [Beasley, 1996](#); International Standard on Auditing (ISA) 240, [International Federation of Accountants IFAC, 2009](#)): the intentional violation of law, norms, or accounting standards by the fraudster and the deceptive nature of fraud.

The impact of fraud is not merely limited to financial losses but has wide-ranging impacts on employees, industries, the environment, and society ([International Public Sector Fraud Forum, 2020](#)). Families suffer income losses when a company vanishes in the wake of fraud, and fraud creates market distortions when fraudulent companies gain competitive advantages that drive out legitimate businesses. Furthermore, serious accounting fraud can ignite scandals that extend beyond the immediate stakeholders and contaminate society at large ([Adut, 2008](#); [Greve et al., 2010](#)). Preventing these potentially destructive events is a primary area of interest for regulators, practice, and scholars. However, despite a significant increase in the level of monitoring over companies' actions, serious corporate accounting fraud can still be observed nowadays in diverse, and theoretically strong, institutional settings.

This study reviews and discusses the accounting literature addressing the role of enforcers and auditors in fraud prevention and detection, based on the idea that enforcement bodies and auditors can be seen as components of a system of external financial reporting controls ([Quagli et al., 2021b](#)). Indeed, accounting research reveals that setting laws is not sufficient to achieve the intended effects if they are not accompanied by effective enforcement ([Leuz et al., 2003](#); [Florou and Pope, 2012](#); [Houge et al., 2012](#); [Christensen et al., 2013](#); [Cai et al., 2014](#); [Leventis and Humphrey, 2021](#)). Similarly, independent auditors play an important role for the effective functioning of capital markets by assessing the integrity of firms' financial statements ([Firth et al., 2005](#)).

Although fraud prevention and detection are not the primary focus of accounting enforcers and auditors, their oversight role in ensuring the quality of financial reporting and regulatory compliance requires meticulous attention to fraud risks and warning signals ([Wilks and Zimbelman, 2004](#); [Carpenter, 2007](#); [Brasel et al., 2019](#); [Kassem, 2023](#)). Auditing standards mandate different audit responses when misstatements are likely due to intentional act by management (e.g. Auditing Standard No. 14, [PCAOB, 2010a](#)). Furthermore, auditors' unmodified opinions on annual reports that are later found to be materially misstated represent audit failures that investors can no longer tolerate, especially in cases of accounting fraud ([Staubus, 2005](#)). Inadequate supervision and enforcement of financial reporting can delay fraud detection, severely eroding investors' trust in capital markets and their oversight function. Conversely, effective enforcement and auditors' scrutiny can reduce the incentives and opportunities for accounting fraud, impacting a crucial element of the fraud triangle model ([Cressey, 1953](#); [Wolfe and Hermanson, 2004](#)), which frames the conditions conducive to fraud.

Based on these considerations, our literature review addresses the role of enforcers and auditors in fraud prevention and detection, with particular attention to the interrelations and interplay between these two financial reporting controls. Indeed, enforcement bodies and auditors have close relationships and complex interactions, which can affect their outcomes in several ways. In many countries, accounting enforcers hold direct or indirect oversight authority over auditors. In the US, the Securities and Exchange Commission (SEC) approves the rules, standards, and budget of the Public Company Accounting Oversight Board (PCAOB), which investigates and disciplines registered public accounting firms, and their associated persons, for regulatory violations. Enforcers can affect auditor incentives and audit quality ([Bannister and Wiest, 2001](#); [Defond et al., 2018](#)) as well as higher audit efforts that are associated with a greater enforcement probability ([Leventis, 2018](#)). Enforcement actions profoundly affect the auditor-client relationship, revealing information that shapes clients' perceptions of auditors' quality and inherent risks ([Brocard et al., 2018](#)). Discovering erroneous financial statements through enforcement often triggers auditor changes, aimed at enhancing audit quality and restoring reputation. Auditors' reports are crucial sources of information for

national enforcers, and auditors must inform them of possible illegal acts that materially affect financial statements (e.g. Section 10A of the Securities Exchange Act of 1934 in the US).

Our literature review supports the view that different firms' financial reporting controls necessitate a comprehensive analysis and focus on their relationship with accounting fraud, intended as any type of fraud that leads to a financial misrepresentation. The financial reporting literature is increasingly exploring the interactions among various financial reporting controls, broadening the analysis to include monitoring actors beyond auditors, such as accounting enforcers (Chen and Cheng, 2007; Kabir and Laswad, 2015; Di Fabio *et al.*, 2021) and audit oversight bodies (García Osmá *et al.*, 2017; Gipper *et al.*, 2020; Goelzer, 2020). Recent studies also challenge the conventional view that more regulation and enforcement constantly lead to better outcomes (Christensen *et al.*, 2020) and shed light on their costs (Florou *et al.*, 2020) and unintended consequences (Tanyi and Litt, 2017; Adhikari *et al.*, 2021).

Furthermore, our analysis incorporates both qualitative and quantitative studies, recognizing that insights from different research paradigms can shed light on the complex interactions between financial reporting controls, whose weaknesses emerge in case of enforcement or audit failures. The relevance of diverse research paradigms is particularly evident in the enforcement literature. The economics-informed paradigm focuses on the impact of enforcement on financial reporting (Daske *et al.*, 2008; Preiato *et al.*, 2015), whereas the socio-political perspective delves into the complex structure of the global regulatory architecture (Caramanis *et al.*, 2015; Hartmann *et al.*, 2018; Giner and Mora, 2021; Leventis and Humphrey, 2021; Quagli *et al.*, 2021a).

This study provides a mixed-methods research synthesis (hereafter MMRS), which differs from mono-method literature reviews for using diverse qualitative and quantitative synthesis techniques (Heyvaert *et al.*, 2017). MMRS proves especially suitable for addressing complex issues by leveraging the strengths of qualitative and quantitative studies (Heyvaert *et al.*, 2013), which are jointly available in many research domains, including accounting fraud (Cooper *et al.*, 2013). The adoption of a rigorous review protocol led to an initial selection of 178 articles published in highly ranked accounting journals between 2000 and 2020. These articles went through a two-phase analysis that returned 64 academic papers which have been included in this literature review. The analysis of these articles highlights a strong dominance of quantitative studies, frequently focused on one of the two financial reporting controls investigated (i.e. auditors and enforcers) and almost exclusively conducted within the U.S. context. Auditor and enforcer activities in preventing and contrasting fraud are typically studied in isolation and consider the other control mechanism as a contextual element, except for a few qualitative studies that, instead, discuss their interactive and collaborative role. The auditor-enforcer relationships are generally taken into consideration by highlighting the concerns of enforcers, who often also serve as audit oversight. These concerns pertain to audit quality, the impact of the financial statements, the adequacy of audit regulation, and the effectiveness of their actions toward auditors. We observe that the analysis of cases where the weaknesses of both auditors and enforcers have hindered timely fraud detection is rare and, furthermore, we find no study analyzing and discussing the cooperative relationships between enforcers and auditors.

This study provides several contributions to the fraud literature. This literature review highlights trends and potential avenues for the future development of this research area, distinguishing itself from previous literature reviews that focused either on a single control or on fraud in general. Trends in this area show a robust attention to regulatory changes, with numerous studies providing valuable insights for policymakers, a growing refinement in the selection of methods and variables, and a gradual expansion of the scope of analysis. The gaps and weaknesses identified in the extant literature offer compelling pathways for future research, emphasizing the need for a common language for researchers interested in fraud, especially given the interdisciplinary perspectives used to address it (Amiram *et al.*, 2018). A highly promising research direction would be to delve deeper into the analysis of fraud, as

existing research shows a fragmentation of variables that often does not allow to capture the nuances of fraud, but treats the fraud event as a monolith. Additionally, more research is needed to analyze the enforcers' activities beyond their outputs as well as the interrelationships between the actors expected to prevent fraud, which are part of a broad system where all elements should work together and where the actions of one actor affect those of the others.

The rest of the paper is organized as follows. The next section illustrates the review objectives and how they complement previous literature reviews on accounting fraud. [Section 3](#) describes the review protocol and presents some descriptive information about the selected papers as well as the methodological choices made to analyze the articles. [Sections 4, 5, and 6](#) present our findings, focusing on the fraud proxies used by the reviewed articles, the stages of the fraud process under examination, and the roles and interplay between auditors and enforcers in the context of fraud, respectively. [Section 7](#) concludes the paper by highlighting its main findings and contributions, as well as paving avenues for future research.

2. Review objectives

This study focuses on the roles and interplay of auditors and enforcers in fraud prevention and detection. It builds upon and extends previous literature reviews on accounting fraud, which adopt viewpoints reflecting different purposes, ranging from policy-oriented insights to theoretical contributions. [Hogan et al. \(2008\)](#) summarize academic research findings on fraudulent financial reporting to inform regulators and facilitate the development of auditing standards. They conclude that much of the extant research focuses on only one aspect of the fraud triangle, with limited evidence on the other features, such as the rationalization dimension.

[Trompeter et al. \(2013\)](#) examine the role of auditors in deterring and detecting fraud and extend their review by considering literature outside the pure accounting field, including criminology, ethics, finance, organizational behavior, psychology and sociology. They move beyond the fraud triangle and categorize the literature in the following areas: anti-fraud measures put in place by auditors and firms; the elements of fraud such as the fraud scheme, the effort to conceal the act, and the identification of the benefits that accrue to the fraudster; the auditors' fraud risk assessment; the fraud detection procedures or auditor characteristics that are effective at detecting fraud; the consequences of fraudulent financial reporting. They suggest future research for each of the categories discussed in their paper.

Other fraud literature reviews have a more focused scope or orientation. [Free \(2015\)](#) reviews popular frameworks used in the fraud examination, focusing primarily on the development of the fraud triangle. He emphasizes that accounting research on fraud remains fragmented and emergent despite the growing interest in such an impactful phenomenon. In proposing avenues for future research, [Free \(2015\)](#) stresses the importance to investigate fraud by interacting directly with the actors in the field, for example, by using traditional behavioral methods of criminology rather than the classic cross-sectional statistical analysis. He argues that this approach would open up concepts that are directly relevant to the decision to perpetrate fraud. The article by [van Driel \(2019\)](#), instead, review business history research on financial fraud and constructs a conceptual framework for researching fraud. This framework highlights the role of regulation, which may affect fraudulent practices or their determinants and may itself change when fraud has serious socioeconomic consequences.

Other contributions emphasize the importance of a multidisciplinary approach to improve the understanding of financial fraud, whose complexity requires diverse theoretical and empirical approaches ([Anand et al., 2015](#)). Fraud-related literature from non-accounting publications is the focus of [Trompeter et al. \(2014\)](#), who review studies on anti-fraud measures associated with detection and the perception of detection through the investigation of whistleblowing, the role of regulation, computer analytics, and interviewing and

interrogation [2]. They claim that non-accounting research on regulation and oversight provides interesting insights into fraud detection and deterrence, which could inform accounting studies, primarily focused on the effect of the regulation (or potential regulation) on audit quality. A multidisciplinary approach also characterizes the work by [Amiram *et al.* \(2018\)](#), who review the literature on financial reporting misconduct from the perspectives of law, accounting, and finance, implicitly focusing on US regulation. They highlight that fraud lies at the far right of a spectrum of discretionary accounting choices, with earnings management located at the far left, as it conveys private information that complies with the provisions of generally accepted accounting principles (GAAP), and a grey area in the middle. They argue that insights from the earnings management literature have been used to develop models to predict misconduct. The main challenges they identify in the literature include open questions about the discipline and deterrence of financial misconduct around the world, and the role of gatekeepers in detecting misconduct.

Based on an agency theory approach, the impact of the monitoring and deterrent role of corporate governance on corporate financial misconduct is the focus of a recent review of archival research carried out by [Velte \(2021\)](#). He highlights that financial restatements are the dominant misconduct proxy used in the literature, while enforcement actions and fraud events are less common. Thus, he calls for a more detailed analysis of misconduct proxies. Additionally, he emphasizes the need for a better understanding of the interplay between the board of directors and external auditors and encourages future research investigating the interdependencies among different actors, including country-related governance (e.g. enforcement strength) as well.

We concur with the view that mechanisms conceived to prevent and detect fraud can have significant interdependencies ([Velte, 2021](#)), but unintended consequences must also be acknowledged ([Anand *et al.*, 2015](#)). For this reason, our study aims to complement prior literature by exploring how accounting research on financial reporting fraud has addressed the roles of auditors and enforcers and their interplay in fraud prevention and/or detection. To this end, we consider accounting studies using several proxies for exploring accounting fraud, including financial restatements and enforcement actions (e.g. Accounting and Auditing Enforcement Release – hereafter AAER). Conversely, we do not include paper exclusively focused on earnings management in our MMRS because this kind of manipulation does not always result in a violation of GAAP ([Dechow and Skinner, 2000](#)) and is also seen as having an informative nature ([Guay *et al.*, 1996](#); [Subramanyam, 1996](#)), even if some studies consider it as predictive of fraud ([Ettredge *et al.*, 2010](#); [Perols and Lougee, 2011](#)) [3].

3. Review protocol and article selection

Our study adopts a mixed-method approach to synthesize and integrate the fraud literature that focuses on the role of auditors and enforcers. A MMRS offers the opportunity of combining evidence from quantitative and qualitative studies to enhance the breadth and depth of understanding of complex phenomena ([Heyvaert *et al.*, 2013](#)). We conduct our literature review following a rigorous process that encompasses seven stages ([Heyvaert *et al.*, 2017](#)): (1) development of the review protocol; (2) selection of the sampling strategy; (3) search for studies according to the sampling strategy; (4) application of inclusion/exclusion criteria; (5) data extraction from the selected articles; (6) data synthesis; and (7) review writing.

Our review protocol documents all methodological and substantive choices, including the review objectives and design. Based on our objectives outlined in the previous section, we adopt an integrated MMRS design ([Sandelowski *et al.*, 2006](#)), which is suitable when differences between qualitative and quantitative studies do not warrant separate syntheses and both kinds of research can address the same research purposes and question in a

common domain. Indeed, the inclusion of both qualitative and quantitative research allows us to build a comprehensive picture of previous research on the roles and complex interrelations between enforcers and auditors. This choice is coherent with the primary objective of this literature review, which is a comprehensive analysis of the state of the art, not limited to the review of the proxies and methods used in previous studies.

We select the sampling strategy and conduct a selective search for primary-level studies, thereby consulting a limited number of resources to identify all relevant studies but within specified limits (Booth, 2006). Specifically, we search for studies that meet the inclusion criteria regarding the journals, the time horizon, and the topic under investigation. In terms of academic journals, we focus on articles published in accounting journals ranked 4*, 4, and 3, in the Academic Journal Guide (formerly known as ABS) 2021 Ranking list. This choice is consistent with our focus on accounting research and responds to the need to define feasible boundaries that ensure the inclusion of rigorous and impactful studies. We do not perform a separate critical appraisal of the studies' methodological quality, which is an optional phase in MMRSs (Heyvaert *et al.*, 2017), as the rigorous review process of the journals included in our analysis should already ensure strong research quality. Additionally, this reduces subjective choices in our MMRS. The time horizon ranges from 2000 to 2020, thus allowing us to consider the most recent research on accounting fraud and extend previous literature reviews covering this phenomenon with different foci and perspectives (Hogan *et al.*, 2008; Free, 2015; Trompeter *et al.*, 2013, 2014; Amiram *et al.*, 2018; van Driel, 2019; Velte, 2021).

To search for articles addressing the role of auditors and enforcers in preventing and detecting accounting fraud, we define three groups of keywords concerning fraud, auditors, and enforcement building on our knowledge of accounting fraud research and prior literature reviews, as detailed in Table 1. Specifically, the keywords chosen for the enforcement group reflect the intent to adopt a broad concept of enforcer, i.e. considering all the actors charged with monitoring activities on the firms' compliance with the applicable financial reporting regulation and having sanctioning powers in the event of a violation.

We use the Scopus database to search for the articles published in our target journal list within the defined time period, with at least one of the keywords for each group (i.e. fraud, auditors, and enforcement) in their title, abstract or keywords. The criterion of co-occurrence of words from each of these three groups is intended to increase the likelihood of obtaining articles that address the role of both auditors and enforcers, in line with the focus of our MMRS.

Fraud	Audit	Enforcement
Fraud*	Audit*	Enforce*
Misstatement	AAER	Court
Misreporting		AAER
AAER		Authority
Violation		SEC
Restatement		Regulat*
Misconduct		Monitoring
Wrongdoing		Supervisor*
Decept*		Commission
Deviance		Law
Deviant		Act
Crime		
Criminal		
Guilt*		

Table 1.
List of the keywords
used to apply the
MMRS inclusion
criteria

Source(s): Table by authors

Based on the sampling strategy described above, we obtained 178 articles. We apply the inclusion and exclusion criteria specified in the protocol to filter out irrelevant studies for the review objectives in two phases: in the first phase, we peruse the title and the abstract of each article; in the second phase, we analyze the full text of the articles remaining after the first phase. We adopt an inclusive approach in these phases. Each author first assessed the selected articles individually, and then we shared and discussed each exclusion to avoid excessive heterogeneity. The application of our inclusion and exclusion criteria resulted in the exclusion of 114 articles. Specifically, we excluded those papers that dealt with earnings management outside the context of fraud (8 papers), those that focused exclusively on internal controls (30 papers), those that did not investigate accounting fraud at all (6 papers), those focused exclusively on auditing (69 papers), and those that did not include auditors in their analyses (1 paper). At the end of this process, our literature review includes 64 academic articles. It is worth specifying that, to prevent the exclusion of articles addressing the topic of accounting fraud involving both auditors and enforcers, even if not as the main focus, the above criteria were applied with a highly inclusive approach. In other words, articles concerning earnings management and internal controls were excluded only after a thorough reading and if they did not investigate accounting fraud considering auditors and enforcers [4].

Table 2 presents some descriptive information for the papers included in the literature review.

Panel A classifies the articles according to the journal where they appear. We observe that the relative majority of the papers (about 22%) are published in *Auditing: A Journal of Practice and Theory*. Moreover, 25% of the articles are evenly published in *Accounting Horizon* and *The Accounting Review* and another 9% of the papers appear in *Critical Perspective of Accounting*. Panel B of Table 2 classifies the articles based on the year of publication. We find that about 14% of the studies are recent, having been published in 2020. The year with the lowest number of publications is 2003.

Further analysis (not tabulated) of the research methods used by the selected articles shows that 56 out of the 64 of them use empirical analyses, while the remaining papers are more theoretical/conceptual. The data used by the selected articles come mainly from commercial databases, although we observe a relevant number of articles (12 out of 64) that use hand-collected data or data coming from proprietary datasets and/or internal resources (5 out of 64). We also observe a significant number of articles based on experiments (14 out of 64). The methodological approach has also evolved, especially in the analysis of audit effort and audit quality based on proxies built on audit fees. Indeed, an increasing number of articles employ measures based on abnormal fees (e.g. Raghunandan *et al.*, 2003; Blankley *et al.*, 2012; Hribar *et al.*, 2014; Zhao *et al.*, 2017; Asare *et al.*, 2019; Chakrabarty *et al.*, 2020) rather than the actual level of fees paid to auditors. We find that the main institutional setting studied is the US, which is analyzed by 84% of the selected articles (54 out of 64). The European context is investigated mainly focusing on the UK (2 articles) and with some evidence from Germany and the Netherlands (1 article for each of these settings).

In addition to the descriptive information reported above, we extract relevant data following a coding guide, after testing it, and then identify and discuss any difference together. In accordance with the review purpose and the extracted data, we choose a qualitzing approach for data synthesis (Heyvaert *et al.*, 2017), thus converting quantitative findings into categories and narratives for the qualitized data to be afterward included in qualitative syntheses. The selected articles are critically discussed in the following sections focusing on the main proxies for fraud used in the analysis (Section 4), the stages of the fraud process studied (Section 5), and the roles and interplay between auditors and enforcers (Section 6).

Panel A: Papers included in the literature review by journals		
Journal	N	%
<i>Auditing: A Journal of Practice and Theory</i>	14	21.88
<i>Accounting Horizons</i>	8	12.50
<i>The Accounting Review</i>	8	12.50
<i>Critical Perspectives on Accounting</i>	6	9.38
<i>Contemporary Accounting Research</i>	5	7.81
<i>Journal of Accounting and Public Policy</i>	5	7.81
<i>Journal of Accounting and Economics</i>	4	6.25
<i>Journal of Accounting Research</i>	3	4.69
<i>Review of Accounting Studies</i>	3	4.69
<i>Journal of Business, Finance and Accounting</i>	2	3.13
<i>Accounting and Business Research</i>	1	1.56
<i>Accounting, Auditing and Accountability Journal</i>	1	1.56
<i>Accounting, Organizations and Society</i>	1	1.56
<i>Behavioral Research in Accounting</i>	1	1.56
<i>International Journal of Accounting</i>	1	1.56
<i>Journal of Accounting, Auditing and Finance</i>	1	1.56
TOTAL	64	100

Panel B: Papers included in the literature review by year		
Year	N.	%
2001	2	3.13
2003	1	1.55
2004	5	7.81
2005	6	9.38
2007	3	4.69
2008	2	3.13
2009	2	3.13
2010	3	4.69
2011	3	4.69
2012	4	6.24
2013	6	9.38
2014	2	3.13
2015	2	3.13
2016	3	4.69
2017	4	6.24
2018	3	4.69
2019	4	6.24
2020	9	14.06
TOTAL	64	100

Source(s): Table by authors

Table 2.
Descriptive
information

4. Proxies for accounting fraud

Generally accepted accounting principles (GAAP) are commonly rules-based or principle-based standards allowing users some discretion in terms of accounting options, policies and estimates to prepare the annual report according to the general accounting concepts stated in the accounting framework. There are situations where firms operate within the regulatory framework and in accordance with the accounting standards but introduce biased choices to mislead stakeholders about the true performance of the firm or to favorably influence contractual conditions linked to accounting results (Healy and Wahlen, 1999). Accounting literature commonly label these practices as earnings management. As mentioned earlier, we did not consider the earnings management literature in our MMRS because it implies working

within the accounting standards and the regulatory framework, and a stream of accounting literature even recognizes an informative role of earnings management (Guay *et al.*, 1996; Subramanyam, 1996).

Accounting manipulation may become invasive and result in material errors in the financial statements. When auditors or other regulatory bodies detect these activities, firms may be required to make one or more restatements. Restatements represent an acknowledgment that prior financial statements contained material departures from GAAP (Palmrose and Scholz, 2004) that require adjustments. They have often been used to identify financial reporting failures (Kravet and Shevlin, 2010). The SEC explicitly states that the management has the duty to make all due corrections (Srinivasan, 2005) if any previously published annual report “either have become inaccurate by virtue of subsequent events, or are later discovered to have been false and misleading from the outset, and the issuer knows or should know that persons are continuing to rely on all or any material portion of the statements” (Skinner, 1997, p. 252).

There are two types of restatements: income-decreasing restatements and income-increasing restatements (Scholz, 2008). The former decrease reported income, while the latter increase it. This distinction is relevant because they have different effects on investors and users of annual reports (Scholz, 2008). It is also worth highlighting that restatements may relate to “technical” situations other than intentional errors, which may arise from particular circumstances, such as discontinued operations, spin-offs, mergers and acquisitions, unintentional errors (Srinivasan, 2005). Moreover, they may be linked to events related to accounting standards, such as the adoption of new accounting policies for certain items and changes in the accounting standards adopted by a company.

Restatements that are not caused by the technical situations highlighted above may result from intentional and significant manipulation of the accounts by the management. In fact, the SEC considers accounting restatements as “the most visible indicator of improper accounting” (Schroeder, 2001). Accordingly, twenty-one studies included in our MMRS use restatements as a proxy for financial misconduct in their analyses (Raghunandan *et al.*, 2003; Liu *et al.*, 2009; Chan *et al.*, 2012; Cassell *et al.*, 2013; Knechel and Sharma, 2012; Schmidt, 2012; Ashbaugh-Skaife *et al.*, 2007; Romanus *et al.*, 2008; Srinivasan, 2005; Blankley *et al.*, 2012; Zhao *et al.*, 2017; Singer and Zhang, 2018; Tan and Young, 2015; Francis *et al.*, 2013; Files *et al.*, 2014; Hribar *et al.*, 2014; Glendening *et al.*, 2019; Pittman and Zhao, 2020; Cao *et al.*, 2020; Burke *et al.*, 2020; Sun *et al.*, 2020).

We observe that all articles that use accounting restatements employ a research approach based on regression analysis and the variable that captures the restatement is often presented only in a dichotomous form. This approach has at least the following limitations: (1) it does not consider whether the restatement increases or decreases earnings; (2) it does not take into account the size of the restatement; (3) it does not highlight the subject that has proposed the restatement. These points need to be carefully considered in future research because they affect each restatement’s nature and its impact on users and investors.

Considering the different nature of restatements discussed above, we observe that most studies that use restatements as a proxy for accounting or audit failures only consider restatements related to intentional errors or omissions. This strategy is made possible by the existence of accurate commercial databases. For example, Zhao *et al.* (2017) note that they take data on restatements from the Audit Analytics Advanced Non-Reliance Restatement database, which excludes all technical restatements (e.g. restatements due to changes in accounting principles, mergers and acquisitions, discontinued operations) that do not imply a misstatement in the original filings (Lobo and Zhao, 2013, p. 1395). Similarly, Knechel and Sharma (2012, p. 92) explicitly state that “restatements due to changes in GAAP, mergers and acquisitions, and others of a non-economic or technical nature are not considered financial restatements in our analyses, nor are interim or quarterly restatements”. However, this

clarification is not included in all of the papers we reviewed. We believe that papers that use restatements as a proxy for accounting failures need to clarify whether technical restatements are excluded from the analyses; otherwise, it may be difficult to assess the strength of the research design. Finally, we note that the time period covered by the studies included in our literature review is quite extensive, ranging from 1995 to 2019.

The most opportunistic behaviors in terms of financial reporting refer to those strategies aimed at managing annual reports to cover up a perpetrated fraud. Any sort of business scandal, somehow, leads to accounting fraud. Jones (2011) states that providing an exact definition of fraud would be elusive. He points out that what distinguishes fraud from other types of “creative accounting” is that fraud involves working outside the regulatory framework to serve the interests of the preparers of financial statements for the following five purposes: increase income; decrease expenses; increase assets; decrease liabilities; increase cash flow (Jones, 2011). Hence, accounting fraud refers to the presentation of financial statements that do not conform to GAAP because of intentional errors, thus with the sole purpose of misleading users of annual reports (Beasley, 1996).

A significant portion of the literature uses the SEC’s issuance of an AAER as a basis for defining financial reporting fraud (Glancy and Yadav, 2011). Specifically, an AAER refers to an administrative proceeding or litigation release that entails an accounting or auditing related violation of the securities laws enforced by the SEC (Glancy and Yadav, 2011, p. 595). All AAERs are assigned a litigation number by the SEC, as well as the action or settlement and details of the fraudulent behavior once the investigation is over (Nicholls, 2016). Accordingly, AAERs, along with accounting restatements, are the most common proxies for accounting failures, observed in 16 articles included in our MMRS (i.e. O’Connell, 2001; Carcello and Nagy, 2004; Kinney *et al.*, 2004; Ashbaugh-Skaife *et al.*, 2007; Caster *et al.*, 2008; Farber, 2005; Feng *et al.*, 2011; Leng *et al.*, 2011; Markelevich and Rosner, 2013; Chakrabarty *et al.*, 2020; Eutsler *et al.*, 2016; Perols *et al.*, 2017; Jackson *et al.*, 2017; Glendening *et al.*, 2019; Mason and Williams, 2022; Cao *et al.*, 2020). With respect to the methodological approach, we express the same concerns raised for the analysis of accounting restatements. In particular, the use of regression analyses with a dichotomous AAER variable results in a lack of differentiation in terms of the type of actions sanctioned by the SEC and the number of misstatements.

Overall, we observe that the choice of any proxy for accounting fraud found in our MMRS cannot eliminate the partial observation issue that is inherent in fraud analysis. In fact, the data available to researchers only cover firms’ or auditors’ behaviors that have been previously identified as frauds and ultimately subject to enforcement actions and sanctions. The disadvantages of using this type of proxy are the large number of fraud firms that are likely to remain unidentified and possible selection biases in the cases pursued by enforcers (Dechow *et al.*, 2011). Accordingly, authors may need to acknowledge that some of the entities classified as “non-fraudulent firms” in their studies may potentially be companies that engaged in fraudulent activities that were not detected at the time of their research. Additionally, this partial observation issue only allows for research on small samples (Perols *et al.*, 2017), which poses problems for research based on statistical analysis. Several studies in our MMRS address this issue by using more than one proxy for fraud (e.g. Ashbaugh-Skaife *et al.*, 2007; Hribar *et al.*, 2014; Glendening *et al.*, 2019; Sun *et al.*, 2020) or other indirect variables (e.g. Benford’s law, Chakrabarty *et al.*, 2020) that allow for larger sample sizes.

5. The accounting fraud process

To examine how accounting research addresses the role of auditors and enforcers in fraud prevention and detection, we analyze the focus of the selected articles in relation to the stages of the fraud process under study. To this end, we adopt a process view that includes four

phases: (1) fraud determinants, including the elements that may increase or decrease the fraud risk; (2) the fraud act and concealment; (3) the discovery, which concerns only the portion of detected frauds; and (4) the fraud consequences following its public disclosure. This conceptualization builds on previous literature considering both the pre-fraud state, anti-fraud measures, and the fraud elements (Trompeter *et al.*, 2013), but adopts a process view to capture how research explores anti-fraud measures and activities by auditors and enforcers as a form of fraud prevention (phase of fraud determinants) and detection (phases of fraud act and concealment, discovery, and consequences).

All the selected articles address the role of auditors and enforcers in contrasting accounting fraud, but this area is not necessarily the primary focus of all the papers, which may also adopt different viewpoints on the fraud phenomenon. Furthermore, some studies in our MMRS examine issues related to more than one phase of the above-mentioned fraud process. For example, papers studying the association between fraud and some firm-level variables (e.g. financial items, internal controls) can be classified as research on fraud determinants and, if the relationship is confirmed, also as red flags useful for fraud detection, thus relating to the phase of discovery. Notwithstanding these considerations, we maintain that this classification can be helpful to illustrate the main findings of the selected articles, emphasizing how they relate to fraud prevention and detection.

5.1 Fraud determinants and limiting factors

This section presents the research contributions on fraud determinants focusing on the corporate features associated with accounting fraud, mainly derived from their financial reports (Section 5.1.1), and on the structural and operational features of auditors (Section 5.1.2). These studies examine the conditions that can influence the incentives and the opportunity to commit fraud, which can be limited through effective monitoring by external actors, such as auditors, who are the focus of most of the articles in our MMRS.

One of the most recent studies provides an interesting perspective by examining the influence of tax controls on accounting fraud (Mason and Williams, 2022) using the information on Internal Revenue Service (hereafter IRS) audit rates and instances of fraud disclosed in SEC AAERs. They find that the monitoring activity of IRS has a disciplining effect reducing managements' incentives to engage in rent diversion activities such as costly financial statement misreporting, supporting the idea that tax controls can have positive effects in reducing the likelihood of accounting fraud. These findings suggest a promising avenue for future research, which could assess the existence of positive externalities in reducing agency costs through monitoring and enforcement by actors other than auditors and public enforcers.

5.1.1 Firm determinants. Research on firm-specific factors that may facilitate accounting fraud primarily examines governance characteristics and firm variables derived from financial reports.

The first group of studies investigates the quality of governance mechanisms, the role of the CFO in material accounting manipulations, the influence of internal control system deficiencies, and the effectiveness of recovery (or clawback) provisions. Relative to a control sample in the year prior to the fraud discovery, fraud firms exhibit poor governance (Farber, 2005), as measured by structural and operational proxies (number and incidence of outside board members, coincidence between CEO and chairman of the board of directors, number of audit committee meetings, presence of financial experts on the audit committee). Furthermore, fraud firms improve their governance three years after the fraud detection, showing governance characteristics similar to those of the control firms and a superior stock price performance, thus suggesting also a feedback effect. A thorough analysis of AAERs sheds light on the role of CFOs in material accounting manipulations (Feng *et al.*, 2011),

concluding that CFOs are involved in material accounting manipulations because they succumb to pressure from CEOs, rather than seeking immediate personal financial benefit from their equity incentives.

Regarding the influence of internal control system deficiencies, [Ashbaugh-Skaife et al. \(2007\)](#) find that firms disclosing internal control deficiencies have more prior SEC enforcement actions and financial restatements. Additionally, they are more likely to have a dominant audit firm, have more concentrated institutional ownership, more complex operations, recent organizational changes, greater accounting risk, more auditor resignations, and fewer resources available for internal control. Instead, the incidence of accounting restatements declines after firms initiate recovery (or clawback) provisions introduced by the Dodd-Frank Act ([Chan et al., 2012](#)). These provisions also produce a positive reaction by investors (i.e. increased earnings response coefficients) and auditors, who perceive less audit risk (i.e. less likely reports of material internal control weaknesses, lower audit fees, and shorter lag in issuing their opinions).

Studies exploring the association between accounting fraud and firm-level variables from financial reports focus on debt covenant restrictions and Management's Discussion and Analysis (MD&A) disclosures. Their findings indicate that debt covenant restrictions are positively associated with the probability of financial misstatements ([Pittman and Zhao, 2020](#)), extending previous evidence on the pressure to avoid covenant violations as a contractual incentive to engage in earnings management practices ([Fields et al., 2001](#)). This positive association is observed for performance covenants rather than capital covenants, and auditors charge higher audit fees to firms with more binding covenants even outside the violation state, thereby confirming their perception of a relevant risk factor. [Glendening et al. \(2019\)](#) analyze the less studied area of financial reports' disclosure. They focus on the impact of MD&A disclosures regarding the quantification of the earnings effect of reasonably likely changes in critical accounting estimates (quantitative CAEs), which are negatively associated with management's incentives to misreport. Interestingly, they find that quantitative CAEs reduce the incidence of AAERs, misstatements, and small positive earnings surprises.

5.1.2 Auditing as a fraud limiting factor. The accounting literature has extensively explored the relationship between audit characteristics and accounting fraud ([Bonner et al., 1998](#); [Mock and Turner, 2005](#); [Hammersley, 2011](#)). Many studies in our MMRS focus on audit fees and fees for non-audit services to examine whether a high level of fees signals higher or lower fraud risk [5]. The rationale is that higher non-audit service fees may undermine auditor's independence, thus inducing auditors to be more acquiescent toward clients' misreporting practices (economic bonding theory) (e.g. [Koh et al., 2013](#); [Zhang et al., 2016](#)). An alternative view is based on the knowledge spillover effect theory, which postulates a significant negative association between non-audit service fees and fraud, or the audit effort-audit quality theory (e.g. [Paterson and Valencia, 2011](#); [Svanström, 2013](#)), which predicts a negative relationship between non-audit service fees and fraud.

Regulatory changes in the US context favored a revamping of this issue in accounting journals, which dedicated particular attention to these open questions following the mandatory disclosure of non-audit service fees required by the SEC since 2001, and the Sarbanes-Oxley Act (hereafter SOX) banning of these services for audit clients in 2002. The increase in restatements during this period motivates a study on the relation between restatements and non-audit service fees of previous periods, which derives a measure of unexpected non-audit service fees ([Raghunandan et al., 2003](#)). However, they do not find significant differences in unexpected non-audit service fees between firms with and without restatements.

Other studies exploring whether audit and non-audit service fees compromise auditor's independence result in reduced financial reporting quality, measured through restatements, yield mixed results. [Kinney et al. \(2004\)](#) find that restatements are associated with unspecified

non-audit service – but not with those regarding financial information systems design and the implementation of internal audit services – and negatively associated with tax services fees. [Knechel and Sharma \(2012\)](#) examine how non-audit service fees affect the audit effectiveness (measured by audit lags) and efficiency (proxied by restatements and discretionary accruals) finding that financial restatements do not increase when shorter audit lags occur in conjunction with high non-audit service fees. [Blankley et al. \(2012\)](#) find that abnormal audit fees are negatively associated with the likelihood of subsequent restatements, while [Lyon and Maher \(2005\)](#) show that audit fees are higher for clients that have disclosed paying bribes, supporting the balancing effects of audit fees on client business risk and audit business risk. Collectively, these results seem to conflict with prior work that finds that audit fees are positively associated with future restatements (e.g. [Beardsley et al., 2021](#)).

In contrast, some articles support the view that audit and non-audit service fees may impair audit quality, thereby increasing the accounting fraud likelihood. In this sense, evidence suggests that firms paying significantly higher total fees, non-audit service fees, and audit fees are more likely to be sanctioned for issuing materially misstated/fraudulent financial statements ([Markelevich and Rosner, 2013](#)). Similarly, unexplained audit fees correlate positively with empirical measures of low financial reporting quality, such as the occurrence of restatements, fraud, and SEC comment letters ([Hribar et al., 2014](#)).

Audit fees may also capture the audit effort, thus inducing researchers to interpret abnormally high audit fees as a proxy for stronger engagement, which can also influence the actual achievement of the expected benefits of the new regulation. Empirical evidence supports this view, showing that the incremental benefits of 404(b) SOX over other internal control regimes in reducing misstatements depend on engagement resources (i.e. at or above the mean of abnormal audit fees; [Zhao et al., 2017](#)). Similarly, the audit fees required to perform tighter audit procedures are part of the auditors' response to high perceived risk. Indeed, audit fees are higher for clients violating the Foreign Corrupt Practices Act (FCPA) beginning in the violation period, increase in the period of regulatory investigations, and exhibit a greater sensitivity to payables and SG&A expenses for FCPA violators than for non-violators ([Lawson et al., 2019](#)).

Some studies investigate auditors' economic incentives using proprietary data and experimental evidence. In the case of two offsetting errors, experimental evidence indicates that auditors are more likely to require the client to fully adjust both misstatements when the errors are in two different accounts and in the absence of client pressure ([Messier and Schmidt, 2018](#)). Additionally, the misstatement distribution interacts with quantitative materiality, and the auditor experience plays a positive role in their correction. The analysis of a very interesting proprietary database of 850 audit engagements in the period 2005 to 2015 in the Netherlands confirms that auditors' economic incentives (e.g. abnormally high audit fees, provision of non-audit services) affect audit decisions to waive economically important misstatements, thus potentially hindering financial reporting reliability and audit quality ([Asare et al., 2019](#)).

Overall, the reviewed studies confirm the sensitivity of audit fees to higher perceived audit risk. However, the relationship between audit fees and fraud seems to remain an open question due to the duality of audit fees, which can be seen as a powerful economic incentive threatening auditors' independence, but also as a measure of genuine effort in contrasting accounting misreporting. The observable trend of a reduced association between non-audit service fees and fraud may be due to growing regulatory restrictions of audit services aimed at safeguarding auditor independence. The mixed results obtained to date may also be due to small sample inferences in research that includes only actual misstatements, which may suffer from a systematic selection bias. Based on these considerations, [Chakrabarty et al. \(2020\)](#) use a metric based on Benford's Law to have a larger sample and find that greater audit effort (audit fees) reduces the likelihood of misconduct.

Other studies investigate the association between accounting fraud and different audit characteristics, such as audit procedures, audit office size, auditor tenure, and network. The amount of work conducted by foreign audit firms (i.e. component auditors) – mandatorily disclosed according to the PCAOB Form AP – is positively associated with the likelihood of misstatement, non-timely reporting, and audit fees, collectively suggesting that component auditor engagements are associated with adverse outcomes (Burke *et al.*, 2020). Adversity increases in function of the work performed by less competent component auditors and those facing significant geographic and cultural distance, weak rule of law, and low English language proficiency. A structural feature such as the decentralization of audit firms in small offices also influences the likelihood of restatements, which are more common in small audit offices (Francis *et al.*, 2013).

Auditor tenure is another debated variable that is open to different interpretations. On the one hand, a long auditor tenure may negatively influence auditor's independence, while on the other hand, it may allow for a more profound knowledge of client issues, resulting in higher quality audits. This ambivalence is also reflected in conflicting results. Carcello and Nagy (2004) compare firms sued for fraudulent reporting with two control samples. They find that fraudulent financial reporting is more likely to occur in the first three years of the auditor-client relationship, suggesting that a long auditor tenure does not increase the likelihood of accounting misbehaviors. By contrast, Singer and Zhang (2018) find that longer audit firm tenure leads to less timely discovery and correction of misstatements, as well as misstatements of greater magnitudes, documenting that the SOX has mitigated, but not eliminated, the negative effect of long auditor tenure. Another variable associated with accounting fraud is the firm's choice of sharing the same network auditor among group affiliated firms. In the Chinese setting, this decision is associated with more regulatory sanctions for fraudulent financial reporting, higher abnormal accruals, a larger standard deviation of abnormal accruals, a higher likelihood of a downward restatement in earnings, and a lower likelihood of receiving a going concern modified opinion (Sun *et al.*, 2020).

Poor audit quality can also be attributed to the engagement quality reviewers (EQR), who are responsible for assessing the quality of an audit engagement. This aspect attracts the attention of researchers in the light of the SOX of 2002 (Section 103), which introduced the position of EQR with the aim of improving the quality of audits. A detailed analysis of SEC and PCAOB enforcement actions against EQR since 1993, identifies 28 cases that involve sanctions against an EQR because of violations of generally accepted auditing standards (GAAS; Messier *et al.*, 2010). Twenty-three of such identified GAAS violations related to a lack of due professional care. The lack of professional skepticism is denounced in 22 cases, over-relied on management representations in 20 cases, and ignored materiality concerns in five cases.

Besides the technical aspects of the control system effectiveness, Reinstein and McMillan (2004) explore the lack of auditor ethics as a relevant factor in explaining the accounting fraud in the Enron case. Their analysis stresses that the departure of accountants and auditors from their prescribed ethical principles was one of the root causes of the Enron fraud and scandal, which instead has been often interpreted as a “perfect storm”, due to the concurrence of unpredictable, rare, and unusual conditions.

5.2 Fraud act and concealment

A few studies in our MMRS focus specifically on the in-depth analysis of the fraud act and its concealment, providing valuable insights to advance our understanding of fraud, derive useful policy implications and identify new avenues for future research.

Toms (2019) provides a broad picture of fraud and financial scandals with a long view over three centuries (1720–2009), discussing the type of frauds and the consequent regulatory responses of famous frauds representing different phases (i.e. the South Sea Bubble of 1720;

the City of Glasgow Bank crash of 1878; McKesson and Robbins scandal of 1937; Penn Central case of 1970; Polly Peck International case of 1990). The incidence of fraud and financial scandal emerges as historically contingent and skewed toward certain sectors, particularly banking and finance, facilitated by complex group structures and international capital mobility, and mediated by managerial incentives and ownership concentration. Until the mid-1970s, financial reporting and auditing played a mitigating role in fraud opportunities in all sectors and businesses without complex group structures. Then, the development of interconnected and international business networks, combined with wider financial deregulation, has increasingly challenged the accounting profession, leading to a resurgence of fraud and financial scandals.

Another interesting case study analyzes the nature of the fraud scandal in London and County Securities bank (L&C) in 1973, mainly using the perspective of the investigation by the Department of Trade inspectors (Matthews, 2005). Looking in detail at the shortcomings of the control system (i.e. auditors and public enforcer), and the weaknesses of the subsequent changes in the regulatory system, Matthews (2005) sheds light on the negative role of commercial pressure on auditors, the independence issue of the public enforcer, as well as the broken promises of the “self-regulation” approach.

A critical analysis of the Enron and Arthur Andersen case (Morrison, 2004) offers an original view of the links between Enron officers and the willing assistance of various prominent financial institutions, including the SEC. This study challenges the rapid identification and condemnation of Arthur Andersen, which is seen as a scapegoat in the light of the behavior of the Department of Justice, deemed responsible for unfair investigations and the understatement of Andersen’s audit workpapers.

5.3 Fraud discovery

The selected articles dealing with the fraud mainly address firm internal alerts (Section 5.3.1) and the efficiency of auditing techniques for monitoring and detecting accounting fraud (Section 5.3.2).

5.3.1 Internal alerts. A broad spectrum of potential internal alerts investigated emerges from the SEC comment letters, which provide independent and timely feedback on the clarity of disclosures and on the extent to which filings comply with GAAP and SEC reporting regulations (Cassell *et al.*, 2013). Evidence indicates that low profitability, high complexity, employing a small audit firm, and weaknesses in corporate governance are positively associated with the receipt of a comment letter, the extent of comments, and the cost of remediation. Furthermore, the probability that a comment letter results in a restatement is higher for smaller companies and those audited by a small audit firm.

Whistleblowing has attracted the attention of several experimental studies as a potentially relevant source of fraud signals and alerts, inspired by the SOX requirement (Sec. 301) that audit committees of public companies establish procedures for anonymous employee reporting of concerns regarding questionable accounting, internal control, or auditing matters. Kaplan *et al.* (2009) run two experiments to test the efficacy of whistleblowing procedures established at a firm level. They find that respondents’ intention to report a fraudulent act is counterintuitively greater under weaker safeguards condition, and that externally administered anonymous hotlines may not increase fraud reporting. Another behavioral experiment (Zhang *et al.*, 2013) comparing different whistleblowing channels suggests that the primary reporting benefits of externally administered hotlines may be obtained by firms with a history of poor responsiveness to whistleblowing and employees registering relatively low on the proactivity scale.

The Dodd-Frank Act offers substantial monetary incentives that encourage reporting to the SEC. Brink *et al.* (2013) suggest that, overall, employees are more likely to report internally

first rather than to the SEC. However, if a company offers a monetary reward for internal whistleblowing, the likelihood to report internally rather than to the SEC depends on the strength of the evidence supporting the claim. In particular, weak (strong) evidence decreases (increases) the likelihood that employees will report directly to the SEC. The importance of incentives to report frauds through whistleblowing is also the focus of an experiment based on the psychological theory of motivational crowding (Berger *et al.*, 2017), which warns that the application of financial rewards can unintentionally hijack a person's moral motivation to "do the right thing". They suggest that financial rewards can be an effective mechanism to encourage whistleblowing, even if they may have a negative impact on its timeliness. Indeed, participants rated the likelihood that the fraud would be reported promptly as lower if the amount of the fraud was below the minimum threshold required to receive a financial reward.

The relation whistleblowing-fraud is also examined in the setting of auditing standards, which prescribe to inquire of client-employees regarding their knowledge of actual or suspected fraud (PCAOB, 2010b; AICPA, 2016). Lauck *et al.* (2020) test the efficacy of two practical strategies for auditors, finding that they are more likely to stimulate client-employee fraud disclosures by actively promoting statutory whistleblower protections and strategically timing the fraud inquiry in the afternoon, when client-employee self-regulation is more likely to be depleted.

Other sources of internal fraud signals include labor employment decisions as possible indirect red flags. Indeed, negative abnormal employment changes are associated with a higher likelihood of subsequent financial restatements, accounting irregularities, and lawsuits related to accounting fraud, and generally require greater auditors' effort, as manifested by higher audit fees and longer audit report lags (Cao *et al.*, 2020). Positive abnormal employment changes are also associated with subsequent restatements, and longer audit report lags, but not associated with fraud or audit fees.

Among the articles included in our MMRS, only two articles use financial reports to detect accounting fraud. Jackson *et al.* (2017) use the AAER database to confirm the expectation that the lower the degree to which a firm's earnings are correlated with its industry, the greater the probability a firm will issue a biased signal of firm performance. Tan and Young (2015) provide an original contribution to the study of restatements by focusing on the distinction between "Big R" restatements, which must be reported through an SEC 8-K material event filing, and "little r" restatements, which occur when a firm's immaterial errors accumulate to a material error but do not require an 8-K form or a withdrawal of the auditor's opinion. Using XBRL [6] financial reports of the firms that have used this method of correcting accounting errors over the period 2009–2012, they find that "little r" firms are generally more profitable, less complex, and show evidence of more robust corporate governance and higher audit quality compared to Big R firms. Compared to non-revising or restating firms, "little r" firms exhibit lower free cash flows, higher board expertise, longer CFO tenure, are less likely to use a specialist auditor and have material weaknesses in their internal controls.

5.3.2 Approaches and techniques for monitoring and identifying accounting frauds. Research on the approaches and techniques enabling timely fraud detection investigates the efficacy of classic auditing techniques (e.g. confirmation letters), and develops new sophisticated techniques, ranging from team brainstorming to the mental and procedural segmentation of fraud risk.

Studies dealing with the general auditors' approach toward accounting frauds examine the difference between approaching the fraud risk in a holistic or more structured way by decomposing the fraud risk (i.e. separately assessing attitude, opportunity, and incentive risks prior to assessing overall fraud risk). Experimental evidence (Wilks and Zimbelman, 2004) indicates that auditors who decompose fraud-risk assessments are more sensitive to opportunity and incentive cues when making their overall assessments than auditors who simply make an overall fraud-risk assessment. However, this increased sensitivity to

opportunity and incentive cues happens only when these cues suggest low fraud risk, while no significant differences emerge when opportunity and incentive cues suggest high fraud risk.

The impact of using alternative fraud models on auditors' fraud risk judgments is the focus of another experimental study (Boyle *et al.*, 2015). It compares the fraud triangle with the fraud diamond model (Wolfe and Hermanson, 2004), which adds individual "capability" as a fourth component to the fraud triangle, reflecting the personal skills and attributes needed to recognize and act in the presence of fraud opportunities. This experiment shows that auditors evaluating fraud risk factors based on the fraud diamond framework assess a significantly higher (more conservative) fraud risk than auditors using the fraud triangle framework. Using the client's perspective also influences auditors when they assess the intentionality of accounting errors based on circumstances indicating a certain level of fraud risk (Hamilton, 2016). Specifically, auditors that consider the client manager's perspective assess the misstatement as significantly more likely to be intentional when the circumstances surrounding it indicate a high fraud risk. By contrast, auditors who do not consider the client manager's perspective do not assess the misstatement as intentional, regardless of the level of fraud risk.

The auditor's capability to capture fraud signals can also be influenced by the auditor industry specialization, which is negatively associated with the likelihood of accounting restatement and the likelihood of issuing restatements affecting core operating accounts (Romanus *et al.*, 2008). Similarly, the change from a non-specialist to a specialist auditor strengthens auditors' severity increasing the likelihood of restatements, whilst the opposite change reduces the likelihood of restatements.

Regarding audit procedures and their ability to support auditors in fraud identification, Caster *et al.* (2008) point out the weaknesses and the (ab)use of external confirmations, which practitioners perceive as one of the most persuasive forms of audit evidence. The critical barriers to the confirmation effectiveness are low response rates, respondent errors, and directional bias in detecting errors. Additionally, the review of AAERs indicates that specific problematic areas include identifying failure to authenticate responses, collusion between auditee and customers, and concealed side agreements and special terms.

Contemporary fraud brainstorming practices are the focus of a study (Dennis and Johnstone, 2016) based on a proprietary database of field data from 2013 to 2014 on team characteristics, attendance and communication, brainstorming structure, timing, and effort, and brainstorming quality. Despite some similarities with practices reported in previous field studies, the findings highlight several differences, such as the decreased use of checklists, shorter sessions, and risk-based deployment of resources in brainstorming. Indeed, auditors deploy more resources to brainstorming when engagement risk is heightened, thereby increasing brainstorming quality.

Three data analytics pre-processing methods to identify potential frauds are introduced and systematically evaluated by Perols *et al.* (2017). They document that two of them improve fraud prediction performance by approximately 10% relative to the best current techniques. In their view, the main concerns in developing models to detect financial statement fraud are the rarity of fraud observations, the relative abundance of explanatory variables identified by the prior literature, and the broad underlying definition of fraud. Experimental research based on interpersonal deception theory also considers the differences between using one or two auditors in noting and incorporating the behavioral cues of client personnel that may indicate deception during client inquiries (Holderness, 2018). Deceptive behavioral cues (i.e. nervousness and discussion) seem more apparent in the presence of two auditors, who are also more likely than a single auditor to successfully incorporate these cues into subsequent auditor judgments.

Auditors' efforts to detect fraud and auditees' perpetration of fraud are specifically investigated in an experimental study exploring the influence of the distribution of the

penalties incurred by auditors for failing to detect fraud (Burton *et al.*, 2011). Specifically, they compare a probabilistic, skewed audit penalty to a penalty that automatically imposes the expected penalty of the probabilistic distribution (deterministic penalty). Their findings show that a deterministic penalty with the same expected value as a probabilistic, skewed penalty increases audit effort to detect fraud and decreases the auditee's fraudulent reporting.

Audit intensity is the focus of a theoretical investigation that examines the effects of the SOX using a model of strategic auditing (Patterson and Smith, 2007). In this model, the manager can choose the strength of internal controls and the amount of fraud, and the auditor can use resources for internal control tests and substantive tests. The results suggest that SOX has increased audit risk by inducing more robust internal control systems and less fraud, but not necessarily higher levels of control testing, which are essential when control strength informs about the likelihood of fraud.

Another article dealing with the SOX effects (Victoravich, 2010) experimentally studies the impact of the implementation of SAS No. 99 (Consideration of Fraud in a Financial Statement Audit) and the financial statement and internal control certification requirement by key corporate officers. Results show that jurors assess auditors as less guilty for failing to discover fraud under SAS No. 99 and in the presence of the officer certification requirement. Further, SAS No. 99 seems to decrease guilt assessments indirectly through jurors' perception that auditors acted more appropriately, even if jurors view auditors as more responsible under the new regulation. The evaluation of audit firm culpability by jurors when financial statement fraud emerges after a clean audit opinion is also explored in the experimental study by Brown *et al.* (2020). They show how three topical regulatory factors can reduce jurors' assessments of audit firm culpability: (1) an auditor judgment rule prohibiting juror second-guessing of auditor judgments made in good faith and with a reasonable basis; (2) a critical audit matter disclosure in the audit report regarding the disputed area; and (3) a juror negligence training in which jurors learn and apply legal concepts before the case evaluation. Additionally, the perceived detectability and acquiescence can act as mediators of these factors and underlie these effects.

5.4 Fraud effects

Our selected articles explore several internal and external effects arising from accounting fraud, devoting particular attention to financial market effects (Section 5.4.1) and corporate governance and auditing effects (Section 5.4.2). While some studies focus on a specific type of impact, other contributions provide a more general view of the bundle of fraud effects. A recent article (Mehta and Zhao, 2020) goes beyond the traditional scope of fraud consequences by documenting that corporate financial misconduct has significant consequences even for politicians' election outcomes. More specifically, evidence indicates that politicians who serve on US congressional committees with SEC-relevant oversight responsibilities ("SEC-relevant politicians") have a greater likelihood of losing a reelection campaign after a local firm faces SEC enforcement for financial misconduct.

5.4.1 Market effects. Two studies on major Asian countries confirm the negative market impact of accounting fraud well investigated in the US (e.g. Cox and Weirich, 2002), thus providing empirical support to the credibility of their national enforcers. Chen *et al.* (2005) analyze the impact of the China Securities Regulatory Commission's enforcement actions, confirming their negative impact on bid-ask spreads and stock prices, with most firms suffering wealth losses of around 1–2% in the five days surrounding the event. Furthermore, firms receiving these enforcement actions experience a greater rate of auditor change, a much higher incidence of qualified audit opinions, and increased CEO turnover. In a Japanese setting, Numata and Takeda (2010) investigate the impact of the Kanebo accounting fraud and the resulting penalties for Kanebo and its auditor (ChuoAoyama) on the stock prices of

clients of ChuoAoyama and the other Big 4 in Japan. This study finds that the announcements of poor audit quality significantly decreased the stock prices of ChuoAoyama clients and, to a lesser extent, it generated a spillover effect on the stock prices of the clients of the other Big 4 auditors.

In the US context, [Leng et al. \(2011\)](#) document the long-term effects of enforcement actions on 239 firms subject to AAERs. These effects include significantly negative abnormal stock returns in up to three years following AAERs, a significantly negative abnormal operating performance in the second and third years following AAERs, and a higher probability of subsequent failure. Adverse market effects are observable also for firms that restate previously issued financial statements more than once within a relatively short period of time (repeat restatements), which experience stock prices drop after subsequent restatements but less than after the first restatement ([Files et al., 2014](#)). Repeat restatement firms are more likely to be clients of non-Big N auditors and have lower ex ante accounting quality. Besides, the auditor change between the end of the misstatement period and the restatement announcement reduces the likelihood of repeat restatements.

The fraud consequences for financial analysts are analyzed by considering firms with any type of accounting fraud identified in the AAERs from 1995 to 2009 ([Young and Peng, 2013](#)). Findings show that analysts have a higher probability of taking the more extreme action of dropping coverage instead of only revising down recommendations for these firms. Furthermore, accounting fraud and its egregiousness are positively (negatively) associated with the timeliness of the analysts' actions to drop coverage (revise only), suggesting that analysts' actions may be helpful in determining the occurrence of accounting fraud prior to the public fraud announcement.

5.4.2 Governance and auditing effects. Accounting fraud can lead to several negative consequences for the main actors of restating firms and their auditors. Financial reporting failure emerging after restatements generates reputational costs and significant labor market penalties for directors (i.e. turnover), especially for firms that overstate earnings, and for audit committee members, who have subsequent difficulties in having new positions on other boards ([Srinivasan, 2005](#)). Restatements are also seen as audit failures by shareholders, who are more likely to vote against auditor ratification after a restatement ([Liu et al., 2009](#)).

The likelihood that a restatement results in audit litigation is used as a proxy for audit failure by [Schmidt \(2012\)](#), who examines this phenomenon for the period 2001 to 2007. He finds that restatements are positively associated with the amount of non-audit service fees and the ratio of non-audit service fees to total fees. An investigation of the SEC's AAERs between 1995 and 2012 ([Eutsler et al., 2016](#)) shows that going concern report modifications accompanying the last set of fraudulently stated financials are associated with a greater likelihood of an enforcement action against the auditor. This increase in the litigation risk is consistent with the expectation of the counterfactual reasoning theory ([Reffett, 2010](#)). Conversely, prior research ([Carcello and Palmrose, 1994](#); [Kaplan and Williams, 2013](#)) shows that issuing a going concern opinion to financially stressed clients generally reduces the litigation risk against the auditor following a bankruptcy. In other words, auditors may be penalized (or rewarded) for documenting their awareness of fraud risk when financial statements are later found to be fraudulent.

6. The role of auditors, enforcers, and their interplay

The articles included in this MMRS explore accounting fraud considering the role of both auditors and enforcers, but their investigation is mainly focused on enforcers or, in most cases, on auditors. These studies predominantly adopt quantitative methods to test research hypotheses through regression analyses using auditors' features as independent variables.

Quantitative approaches are also common in studies focusing on enforcers, which mostly use regressions to test hypotheses in which enforcement actions are either the dependent or the independent variable. Studies considering the monitoring role of enforcers using AAERs can also focus on different actors, such as financial analysts (Young and Peng, 2013). Other studies (Brink *et al.*, 2013; Zhang *et al.*, 2013; Berger *et al.*, 2017) consider the anti-fraud activity of enforcers focusing on the enactment of specific programs, such as those offering financial incentives to potential whistleblowers (e.g. the SEC program enacted by the Dodd-Frank Act of 2010).

Studies focusing on the activities of both auditors and enforcers use prevalently qualitative methods and show a greater variety of theoretical approaches and research objectives. Indeed, they range from a summary of research and enforcement release evidence on confirmation use and effectiveness (Caster *et al.*, 2008) to critical studies examining audit and enforcement failures (Sikka, 2001; Morrison, 2004) as well as the limitations of using AAERs, which could reflect prevailing SEC agendas without being representative of the population of financial statement frauds (O'Connell, 2001).

Our analysis explores the role of auditors and enforcers in all the selected articles, paying particular attention to how they consider the interactions and interplay between them. The role and effectiveness of auditors in detecting and preventing fraud emerges in those studies in several ways, including (in descending order by the number of studies focused on each aspect): (1) features of audit firms and auditors; (2) audit fees and fees for non-audit service fees; (3) auditors' interest in tools and techniques to detect fraud; (4) audit failures; and (5) fraud consequences for auditors.

Studies focusing on the features of audit firms and auditors primarily examine which ones are associated with higher audit quality in terms of fraud prevention. The main features under investigation include the size of audit offices (Francis *et al.*, 2013) and audit firms (Farber, 2005; Cassell *et al.*, 2013; Files *et al.*, 2014), the nationality of auditors (Burke *et al.*, 2020), auditors' industry specialization (Romanus *et al.*, 2008), the use of double auditors (Holderness, 2018), auditors' resignation (Ashbaugh-Skaife *et al.*, 2007), the characteristics of the other clients of the audit office (Glendening *et al.*, 2019), the fact that auditors belong to the same network among group affiliated firms (Sun *et al.*, 2020). Audit tenure is another essential feature investigated to assess whether it can impair audit quality due to a progressive loss of independence. This question raised a lively regulatory debate on audit rotation, thus stimulating accounting research that, so far, obtained mixed results (Carcello and Nagy, 2004; Singer and Zhang, 2018).

The thorny issue of auditor's independence is also at the center of research exploring the role of auditors delivering audit and non-audit services to clients, whose magnitude could be predictive of less effective anti-fraud monitoring. Using different proxies for fraudulent behaviors, this stream of studies also seems to achieve conflicting results thus far (Kinney *et al.*, 2004; Knechel and Sharma, 2012; Markelevich and Rosner, 2013; Asare *et al.*, 2019). However, there is evidence indicating that audit litigants perceive that non-audit services can strengthen the case against the auditors, in the presence of audit failures, due to a higher economic dependence of auditors from clients (Schmidt, 2012). Studies investigating auditors' monitoring using audit fees consider them as a measure of audit effort and quality, which is expected to be increased in case of high fraud risk to enable an effective and timely detection (Markelevich and Rosner, 2013; Lawson *et al.*, 2019). Accordingly, low audit fees are associated with underestimated risk and/or lower expected audit effort (Blankley *et al.*, 2012). Other studies explore the effectiveness of auditors' fraud risk assessment focusing on specific procedures and events, such as fraud brainstorming sessions (Dennis and Johnstone, 2016), the use of the fraud triangle and/or diamond models (Wilks and Zimbelman, 2004; Boyle *et al.*, 2015), the consideration of the manager's perspective in assessing the intentionality of a misstatement (Hamilton, 2016), the distribution of prior auditors' penalties for failing to detect fraud (Messier and Schmidt, 2018).

While most studies in this MMRS deal with the auditors' effectiveness, some aim to shed light on audit failures from various perspectives. The failure to detect fraud can be a major risk or event considered in the overall scenario, as in the case of the event study by [Numata and Takeda \(2010\)](#), which finds an industry-wide spillover effect of auditors' reputation loss after the audit failure related to the Kanebo fraud in a low litigation setting (i.e. Japan). In other studies, audit failure is the primary concern motivating reflections to improve regulation. In this sense, [Gavious \(2007\)](#) proposes that the enforcer (i.e. SEC) should scrutinize audit fees to monitor the economic dependence of auditors from clients and that audit firms retiring due to audit rotation should accompany the new audit firms until the completion of the audit of the first annual financial statement. This domain attracts the attention of critical research, which warns that little effective regulatory action is taken against auditing firms implicated in audit failures, highlighting a situation where auditing firms seem to have colonized the political power to shield themselves from regulatory action ([Sikka, 2001](#)). Conversely, the notorious audit failure in the Enron fraud stimulates a critical discussion of the destruction of Arthur Andersen, which [Morrison \(2004\)](#) interprets as an example of scapegoating aimed at shifting the limelight away from the malfeasance of political and financial cronies.

Diverse perspectives characterize studies considering the fraud consequences for auditors. Some of them have a sharp focus on documenting auditor turnover after restatements ([Srinivasan, 2005](#); [Liu et al., 2009](#)) and jurors' perceptions of auditors' responsibility to detect fraud ([Victorovich, 2010](#)). [Toms \(2019\)](#), instead, provides a historical analysis of the incidence of fraud in the UK to illuminate the regulatory response to scandals and the implications for accounting and financial reporting, including the recommendation of compulsory audit, the growing importance of fraud detection among auditor's duties and also the weaknesses in the self-regulated audit process. This analysis illustrates attempts to improve accounting and auditing standards and documents the rebound in fraud and financial scandals in the second half of the twentieth century. This is primarily explained with the increasing scale and complexity of the financial sector, and the associated power imbalances between regulators and regulated.

The investigation of the enforcers' role in the domain of fraud revolves around four main aspects (in descending order by the number of studies focused on each paper): (1) imposing sanctions on firms and/or auditors; (2) issuing a regulation to contrast fraud directly or indirectly; (3) expressing concerns about auditors' and/or firms' behavior; and (4) enforcement failures. Enforcement actions against companies and the other public outputs of the enforcement process are at the center of most studies, which focus on the US context and use SEC comment letters, AAERs, and sanctions to investigate variables associated with these measures without a detailed analysis of the enforcement process. The same objective characterizes one of the few studies examining a different institutional setting (i.e. China), which finds negative stock returns and negative economic consequences of enforcement actions by the Chinese Securities Regulatory Commission (CSRC), thus supporting the credibility of the Chinese enforcer ([Chen et al., 2005](#)).

Some of these studies explore the likelihood of enforcement actions against the auditors, finding that it increases in the presence of auditors' report containing going concern modifications to the last set of fraudulently stated financials ([Eutsler et al., 2016](#)). This stream of literature provides valuable contributions to improve our understanding of the fraud risk, but inevitably suffers from a partial observation issue, as it only covers firms' or auditors' behaviors receiving enforcement actions, which are just the tip of the iceberg due to the enforcers' resource constraints. This partial observation issue only allows for the study of small samples ([Perols et al., 2017](#)).

Another important focus of scholarly interest relates to the enforcers' regulatory activity, aimed at reducing the opportunities for accounting fraud and promoting its timely detection by enhancing audit quality and supporting specific anti-fraud measures, such as

whistleblowing (Brink *et al.*, 2013; Zhang *et al.*, 2013; Berger *et al.*, 2017). This line of studies considers the role of enforcers by examining their regulatory function, which complements the monitoring activities based on inspections but does not constitute an enforcement activity in a strict sense. From this perspective, the enforcer's role under investigation relates primarily to the regulatory setting in which controls work to prevent and detect accounting fraud rather than to the implementation of such controls. This broad view of the enforcer's role in preventing accounting fraud also seems to emerge in some studies that do not directly address the enforcement activity but motivate their investigation based on enforcers' statements and concerns. These include, for example, the SEC's concern for restatements and non-formal restatements (Romanus *et al.*, 2008; Tan and Young, 2015), and PCAOB's criticism of auditors' performance in fraud risk identification and risk response generation (Dennis and Johnstone, 2016).

A few qualitative studies address the enforcer's role by examining its failures mainly through in-depth case studies, such as the corporate fraud scandal of the London and County Securities Bank (Matthews, 2005), which stimulates interesting reflections on the nature of the fraud, the shortcomings of the bank's audit and the poor performance of the inspectors of the Department of Trade.

The roles of auditors and enforcers investigated in the selected articles can stimulate reflection on how accounting research has dealt with their activities in preventing and detecting accounting fraud (Figure 1).

Studies on fraud prevention primarily examine the controls and activities that may reduce the fraud risk, including various proxies for audit quality and the enforcer's activities in terms of regulation (regarding companies and auditors) and enforcement levels. The role of enforcers and auditors in the phase of the fraud act and concealment emerges mainly in critical studies that discuss the failure of controls, which can refer to late fraud detection and the conditions preventing a more timely discovery or to the limited number of sanctions imposed compared to the unobservable population of all frauds, which includes undetected frauds as well.

Research that analyzes fraud discovery addresses the techniques and conditions that enhance the timely detection of fraud, especially by auditors. By contrast, the inspections by enforcers and their sampling procedures seem to remain a black box, studied only in terms of

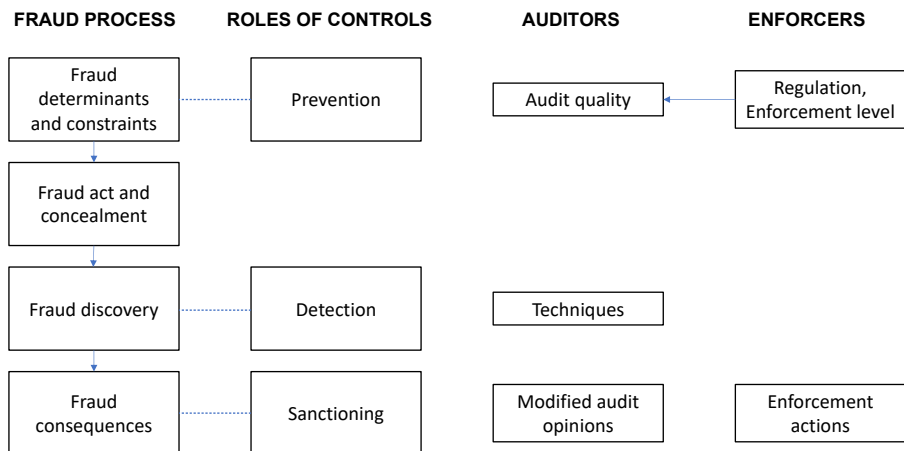


Figure 1.
The fraud process and the roles of auditing and enforcers

Source(s): Figure by authors

their public output. In fact, in many studies, the fraud discovery by the enforcer implicitly coincides with enforcement actions, which more precisely represents the first consequence of fraud, namely public disclosure, which necessarily implies a prior fraud detection. These enforcement actions are then the basis for various economic and capital market consequences that affect external control, such as auditors. Auditors, for their part, cannot issue sanctions when they detect fraud, but their modified opinions can be seen as a way to alleviate auditor risk (Chen *et al.*, 2005). Notwithstanding the typical distinction between fraud prevention and detection, we acknowledge that effective fraud detection outcomes may also reduce the perceived opportunity for fraud by potential fraudsters, thereby having a positive impact on fraud prevention as well.

Collectively, the articles included in our MMRS do not pay much attention to the interactions and interplay between auditors and enforcers in their efforts to contrast fraud. Even though all studies consider the role of both in preventing and detecting accounting fraud, most of them investigate the actions of each actor in isolation and do not address their interrelations or any communication interchange. The other studies highlight the following relations (in descending order by the number of studies focusing on each aspect): (1) the enforcer expressing concerns about audit quality; (2) the enforcer's statements or regulations affecting auditor behavior; (3) enforcement actions that also impact auditors; and (4) enforcers and auditors sharing weaknesses that lead to control failures.

Enforcers' concerns about audit quality can be general or specific, such as issues with confirmation evidence uncovered by SEC investigations (Caster *et al.*, 2008). Enforcers' rules, programs or statements affect auditors in different ways, ranging from fraud prevention measures enacted under the SOX and administered by the SEC to SEC's voluntary disclosure program regarding questionable payments to foreign government officials (Lyon and Maher, 2005). Other studies focus on the impact of enforcement actions on auditors, including their effects on audit fees, auditor's change, and sanctions against auditors. Finally, some critical and interdisciplinary studies discuss the weaknesses of the entire system of controls aimed at contrasting accounting fraud reflecting on several controversial issues that may lead to its substantial failures, such as the increasing social and political power of the auditing industry (Sikka, 2001).

In the scenario highlighted above, we note that some studies that do not explicitly address the interplay between different controls still conceptualize fraud by emphasizing the interactions between multiple elements. For example, Rezaee (2005) explains financial statement fraud as a combination of five interactive factors, encapsulated in the acronym CRIME, including cooks (fraudsters), recipes, incentives, monitoring (also including auditors and enforcers), and end results (consequences). Our analysis also suggests that some possible relationships between auditors and enforcers in preventing fraud are largely under-researched. In particular, the cooperative flow of information that is required by law in most jurisdictions, the consequent issue of the enforcer's proactivity in fraud investigation, and the complementary or substitution effect between the two controls in the fraud domain may be examples of research areas that need significant exploration.

7. Concluding remarks: a lot done, more to do

This study adopted a mixed-method approach to provide a review synthesis of the accounting research that explores the complexity of accounting fraud by considering the roles of auditors and enforcers, as well as their interplay and interactions, in preventing and detecting this destructive phenomenon.

The monitoring activity of these gatekeepers is crucial to contrast the incidence of fraud and its devastating impact on society, especially considering the increasing fraud opportunities and risks arising from the expansion, complexity, and internationalization of the business environment (Toms, 2019). The scandals provoked by accounting frauds can

severely harm trust in financial reporting, in complete contrast to the audit objective of enhancing the degree of confidence of intended users in the financial statements (ISA 200) and the enforcers' objective of underpinning investors' confidence in financial markets (Duro *et al.*, 2019). Additionally, the failure of auditors and enforcers to detect accounting fraud in a timely manner may trigger adverse reactions driven by the social impact of fraud and the exacerbation of the audit and enforcer expectation gap.

Our review shows some interesting trends regarding the research implications, methods, and scope of investigations into the role of auditors and enforcers in fraud prevention and detection. Firstly, many empirical studies address research questions strictly related to recent or prospective regulatory changes in order to develop helpful policies and practical implications aimed at combating accounting fraud more effectively. To this end, they examine the impact of rules (e.g. mandatory audit rotation) or the best way to enact new regulatory provisions (e.g. comparing the effectiveness of different channels for whistleblowing). These analyses have the merit of obtaining sound evidence for policymakers and practitioners, even if they are predominantly referred to the US context.

Furthermore, the reviewed quantitative studies show an increasing sophistication in the methods and variables used. For instance, many studies (Raghunandan *et al.*, 2003; Blankley *et al.*, 2012; Hribar *et al.*, 2014; Zhao *et al.*, 2017; Asare *et al.*, 2019; Chakrabarty *et al.*, 2020) consider abnormal audit fees instead of the actual level of audit fees disclosed in annual reports, determined as the residual obtained after regressing audit fees on variables controlling for risk, audit effort, and industry. The adoption of this two-stage approach better captures the level of audit effort, which is expected to increase in the case of a high audit risk assessment, and/or the auditor's ties to the client, which may affect the auditor's independence and judgment.

Another promising trend relates to the progressive broadening of the scope of the analyses to include different actors involved in enforcement activities. Despite the preponderance of studies focusing on the SEC, other actors such as tax authorities (e.g. the US Internal Revenue Service in Mason and Williams, 2022) seem to be increasingly attracting scholarly attention, thus contributing to revealing a more comprehensive picture of the activities that may counteract fraud directly or indirectly. Similarly, research shows a broader consideration of fraud consequences, addressing those that affect fraudulent firms and deficient controls, as well as external effects, such as the impact on political election outcomes (Mehta and Zhao, 2020).

This review also highlights some weaknesses and gaps in how accounting research addresses the role of auditors and enforcers in preventing and detecting accounting fraud, which, in our view, represent promising areas for future research. A first issue relates to the variety of terms and concepts used to capture the fraud phenomenon. On the one hand, this heterogeneity stems from the complexity and diversity of fraud. On the other hand, it reinforces the need for a common language for researchers interested in this area of research, especially in the light of the numerous disciplinary perspectives used to address it (Amiram *et al.*, 2018). This fragmentation is also reflected in the use of different proxies for fraud, including restatements, SEC comments, AAERs and sanctions, which may not be comparable in terms of their level of severity. In many cases, the choice to use variables that do not necessarily reflect fraud, but rather ensure an acceptable sample size, gave us the impression that the research method was influencing the choice of the variables and the nature of the study, rather than the other way round. In this regard, we also recognize that the potential sample size of fraud cases is inevitably limited to those ultimately detected (partial observation issue), thus limiting the methodological options available to researchers.

Additionally, our MMRS highlights a limited level of detail in the analysis of fraud typologies and characteristics, and a relatively low number of case studies that would instead allow for more in-depth analysis. Many quantitative studies represent accounting fraud as a

monolith, typifying a complex process as a dummy variable collected from databases, with only a few exceptions highlighting their differences (e.g. [Caster et al., 2008](#); [Messier et al., 2010](#); [Feng et al., 2011](#); [Eutsler et al., 2016](#)). From this perspective, one gap that future research could address is the distinction between direct accounting fraud, which originates in corporate financial statements, and indirect accounting fraud, which affects financial reporting but has a non-accounting origin (e.g. misappropriation of funds). More generally, we echo [Velte's \(2021\)](#) call for a more detailed analysis of fraud proxies to develop a more nuanced picture and avoid downplaying the dynamics and complexity of this phenomenon. We argue that this shift from “the fraud” to “the frauds” is crucial to designing and implementing effective policies to counter this destructive phenomenon.

Similarly, we encourage future research to explore more deeply the role of enforcers, which is mostly observed only through their public outputs (e.g. AAERs), with a focus on the process dimension and its effectiveness. Indeed, these aspects seem to be largely under-researched, with the exception of critical studies that shed light on major frauds triggering serious financial scandals. We also believe that this type of approach has also resulted in limited attention being paid to the interactions and interplay between enforcers and auditors, suggesting a widely held view of the enforcer as a somewhat static element of the environment that sets out rules and monitors companies and auditors in a ‘cat and mouse’ game. Further research is needed to emphasize the dynamics and potentially convoluted relationships among the actors expected to act as gatekeepers and to contrast fraud with regard to their own areas of responsibility. In addition, future research could shed light on less studied actors, such as courts, by complementing the growing body of experimental analysis with in-depth investigations and more diverse geographical settings, paying more attention to non-Anglo-Saxon countries.

We understand that many of the issues mentioned above hinge on the limited data available about fraud, and studies based on proprietary databases are rare ([Asare et al., 2019](#); [Dennis and Johnstone, 2016](#)). However, we maintain that a collaborative effort of the academic community, policymakers, and practitioners is essential to prevent the fraud’s destructive economic and social consequences in an increasingly complex and interconnected environment. In pursuit of this common goal, scholars are called to venture off the beaten path to account for the nuanced diversity of fraud and open the black box of the enforcers’ processes, as well as provide empirical insights into their relations with auditors. Policymakers and public authorities, on their part, could encourage impactful academic research and obtain valuable results by sharing data on frauds and their monitoring processes with appropriate confidentiality agreements.

Notes

1. Financial statement manipulation (more commonly known in accounting research as “earnings management” or “earnings manipulation” is defined as the “use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers” ([Healy and Wahlen, 1999](#), p. 368). Earnings management, *per se*, is not a synonymous with fraud. Indeed, a stream of research recognizes an informative role for earnings management and defines it as “a means for managers to reveal to investors their private expectations about the firm’s future cash flows” ([Beneish, 2001](#), p. 3).
2. Whistleblowing refers to the act of employees reporting their employers’ illegal or unethical activities.
3. As indicated in [Section 3](#) of the papers, the exclusion of papers dealing with earnings management happened after a careful analysis of the title and the abstract of each article as well as the reading of the full text of the papers, only when a paper did not investigate earnings management in the context of an accounting fraud.

4. The authors acknowledge that their inclusive approach reduces, but cannot eliminate completely, the possibility that some relevant papers may have been excluded from the authors' analysis.
5. Non-audit services refer to a range of professional services offered by accounting firms to their clients, excluding the traditional audit function.
6. eXtensible Business Reporting Language (XBRL) is a standardized digital format for financial and business reporting, enabling the efficient exchange and analysis of financial data, enhancing transparency and streamlining regulatory filings.

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