



External auditors' use and perceptions of fraud factors in assessing fraudulent financial reporting risk (FFRR): Implications for audit policy and practice

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Accepted: 22 August 2023
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Abstract

This study used semi-structured interviews with twenty-four external auditors to explore how they perceive and use fraud factors when assessing fraudulent financial reporting risk in external audits. The fraud factors include top management's motive, integrity, opportunity, rationalisation, and capabilities. The participants work for Big four audit firms and have international auditing experience, specifically in the US, the UK, Egypt, the UAE, Qatar, Bahrain, and Saudi Arabia. The findings reveal that top management's integrity and motives are, in theory, the most critical factors in fraud risk assessment. However, a self-selection bias pushes external auditors not to evaluate these essential factors because they are too complicated to assess, and not enough guidance is provided to them by standard setters or audit firms. In turn, external auditors concentrate mainly on evaluating the opportunities to commit fraud when assessing fraud risk. This may lead to non-optimal fraud risk assessment and, ultimately, non-optimal audit quality. The findings have implications for policy, practice, and future research, later discussed.

Keywords Agency theory · Accountability · External auditors · Fraud · Fraudulent financial reporting · Fraud risk assessment

Introduction

The external auditor's role in maintaining accountability in an organisation can be depicted through the lens of agency theory. In broad terms, an agency is any relationship between two parties in which one, the agent, represents the other, the principal, in day-to-day transactions. The principal(s) have hired the agent to perform a service on their behalf. By definition, an agent is using the resources of a principal.

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The principal has entrusted money but has little or no day-to-day input. Principals delegate decision-making authority to agents. Because the agent makes many decisions that affect the principal financially, differences of opinion and priorities, methods, motives, and interests can arise. Agency theory assumes that the interests of a principal and an agent are not always aligned. The difference in priorities and interests between agents and principals is the principal-agent problem (Jensen & Meckling 1976; Zey 2015).

Fraud and misappropriation of funds represent perfect examples of the type of moral hazard issues that are an endemic feature of principal-agent relations, as Heath (2009) clarified. Resolving the differences in expectations is called reducing agency loss. External audits are one of the methods proposed for reducing agency loss (ICAEW 2005). If done correctly, external audits could deter fraudulent management behaviour and mitigate information asymmetry risk, thereby protecting shareholders' interests (Guragai & Hutchison 2019). From that perspective, an external audit is a vital corporate governance mechanism introduced to address the agency problem, and external auditors' ability to detect material fraud is essential to ensure accountability and restore trust in corporate governance (Dezoort & Harrison 2018).

Nevertheless, recent evidence implies that external auditors' skills in material fraud detection need improvement. Al-Dhubaibi and Sharaf-Addin (2022) find that the internal auditors' evaluation of the possibility of fraud occurrence is higher than the external auditors' evaluation.

Based on the analysis of 2110 real cases of occupational fraud, the Association of Certified Fraud Examiners (ACFE 2022) reports that although external audit is the most common anti-fraud control in organisations around the globe, external auditors only managed to detect 2% of fraud cases.

Fraud risk assessment is an integral part of the audit process, but it is also a complex task as it includes a lot of subjectivity and professional judgement (Turley et al. 2016). Task complexity could adversely impact audit performance, especially with insufficient knowledge and skills to perform a particular task (Alissa et al. 2014). To mitigate the adverse impact of task complexity on external auditors' performance, Bonner (1994) suggested providing adequate training and guidance to external auditors. A crucial starting point in enhancing external auditors' ability to detect fraud is identifying the relative importance of fraud factors in risk assessment (Asare et al. 2015). That is because knowledge of the relative importance of fraud factors reduces the risk of self-selection bias and the likelihood of ignoring essential factors that could adversely impact the quality of fraud risk assessment (Albrecht et al. 2008). Self-selection bias could arise when external auditors are unaware of the relative significance of fraud factors and under time or budget constraints, which may then force them to select fraud factors that are easier to assess rather than the ones that are more significant in assessing fraud risk (PCAOB 2012; Hurley 2017).

The extant literature identifies five fraud factors that matter in countering fraud. These factors include motives to commit fraud, the opportunity for fraud, rationalisation of fraud, integrity, and fraud perpetrators' capabilities (Cressey 1950; Albrecht, 1984; Wolfe & Hermanson 2004). Motives are viewed as key antecedents of fraud and reasons for doing something, especially one that is hidden or not obvious.



They can be financial (e.g. the desire to receive a bonus or financial need) or non-financial (e.g. revenge or ego) (Kassem 2018). Opportunities are chances to commit fraud without being caught, and they usually come about from weaknesses in an organisation's internal control system. Examples of control weaknesses include a lack of monitoring, ineffective audits, or the concentration of power in the hands of one or a few individuals (Wells 2011). Rationalisation is the ability to justify a wrongful act to feel better about it and is usually used by individuals with low integrity (Albrecht 1984). Examples of fraud rationalisation include "I was only borrowing the money, I am not a thief", "everybody is doing it", or "They mistreated me; they deserve it". On the other hand, integrity is doing the right thing even if no one is watching (Kassem 2021). Fraud perpetrators' capabilities are traits that allow individuals to commit fraud, including sound knowledge of accounting and weaknesses in an organisation's control system, the ability to overcome stress, power within the organisation, and confidence that the perpetrator will get away with fraud even if caught (Wolfe & Hermanson 2004).

Although the relative significance of these five fraud factors has long been debated, this study identified significant literature gaps. One critical gap is the very little evidence of how external auditors view the relative importance of fraud factors in fraud risk assessment (Boyle et al. 2015; Huang et al. 2017) and how external auditors use fraud factors in audit practice (Albrecht et al. 2008). Another noticeable gap is the lack of evidence regarding the rationale for external auditors' perceptions and self-selection bias in fraud risk assessment. Moreover, there are conflicting views concerning the relative significance of these five fraud factors in fraud risk assessment in auditing (see Hogan et al. 2008; Cohen et al. 2010; Boyle et al. 2015; Huang et al. 2017). Besides, only a handful of studies provided empirical evidence (Boyle et al. 2015; Huang et al. 2017).

This study addresses these gaps by exploring (i) how external auditors perceive and use fraud factors (i.e. integrity, motives, opportunities, capabilities, and rationalisation) when assessing fraudulent financial reporting risk (FFRR) in the external audit practice. (ii) the rationale for external auditors' perceptions and self-selection bias, if any. The data were collected via semi-structured interviews with twenty-four Big four external auditors with at least five years of audit experience and three years of experience in fraud risk assessment. Four interviews were conducted with audit partners, 11 with audit managers, and nine with senior external auditors.

Fraudulent financial reporting is the focus of this study for several reasons. It adversely affects published audited financial statements' integrity, quality, and reliability, severely threatening market participants' confidence in the audit profession and corporate governance system (Rezaee 2005). Besides, it is the costliest occupational fraud reported by the Association of Certified Fraud Examiners (ACFE) in its 2022 *Report to the Nations on Occupational Fraud and Abuse*. Additionally, failure to detect fraudulent financial reporting is always accompanied by scrutiny of external auditors (Sikka 2018) and, in some cases, litigation when they perform their duties negligently (Guenin-Paracini and Gendron 2010).

The five fraud factors considered in this study will be discussed from the top management's perspective for the following reasons. Top management usually perpetrates fraudulent financial reporting due to its power to override internal controls



and manipulate financial accounts (Wells 2011). Similarly, a recent global study by the ACFE (2022) reports that top management and executives committed the most fraudulent financial reporting fraud cases.

The present study's findings show that top management's integrity and motives are, in theory, the most critical factors in fraud risk assessment. However, a self-selection bias pushes external auditors not to evaluate these essential factors because they are too complicated to assess, and not enough guidance is provided to them by standard setters or audit firms. In turn, external auditors concentrate mainly on evaluating the opportunities to commit fraud when assessing fraud risk. This may lead to non-optimal fraud risk assessment and, ultimately, non-optimal audit quality. The findings have implications for policy, practice, and future research, later discussed.

This paper contributes to the audit literature in several ways. First, it is among very few empirical studies (Boyle et al. 2015; Huang et al. 2017) that explore how external auditors use and perceive the relative significance of fraud factors in the external audit practice. However, it is the first to provide a rationale for external auditors' views and practices in this regard. Therefore, it expands the current debate in the audit literature around accountability and fraud risk assessment in the audit practice. Second, the literature provides conflicting views regarding the relative significance of fraud factors. Providing empirical research is the way to resolve research conflicts by generating undeniable facts, as Hosmer (2000) pointed out. This study resolves the current disagreements by providing empirical evidence on what matters in assessing fraudulent financial reporting risk in the audit practice as seen through experienced external auditors' eyes.

This study is important and timely, given that the Financial Reporting Council (FRC) in the UK identified fraud risk as one of the priority areas in its future audit inspections following the increased corporate collapse due to fraud (e.g. BHS (Mus-toe 2020); Patisserie Valerie (O'Connell 2021); Wirecard (Hill 2022)) and the current need for external audit and corporate governance reforms (FRC 2019; ICAEW 2022).

The rest of the paper is organised as follows. Sect. "Elucidating external auditors' responsibility for fraud detection" elucidates external auditors' responsibility for fraud detection as highlighted in professional audit standards. Sect. "Theoretical framework" discusses the theoretical framework upon which this study is based. Sect. "Literature review" critically reviews previous studies and identifies literature gaps. Sect. "Method" describes the study's methodology. Sect. "Results" presents the results, and Sect. "Discussion and implications" presents the study's results and implications. Finally, it concludes in Sect. "Conclusion" and provides new directions for future research.

Elucidating external auditors' responsibility for fraud detection

Needless to say, the primary responsibility of detecting and preventing fraud lies in the hands of an organisation's top management and those charged with governance (Wells 2011). Nevertheless, external auditors also have responsibility for fraud detection detailed in the International Standard on Auditing (ISA) 240: *The*



Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements (IAASB 2009) and its American counterpart *Statements on Auditing Standards (SAS) 99: Consideration of Fraud in a Financial Statement Audit* (ASB 2002). The International Standards in Auditing (ISAs) are used globally except in the United States of America, where *Statements on Auditing Standards (SASs)* are used. However, there is no difference between ISA 240 and SAS 99 regarding external auditors' fraud responsibilities (Elder et al. 2010).

Both audit standards (ISA 240 and SAS 99) require external auditors to assess and respond to fraudulent financial reporting risk through the lens of the fraud triangle model by categorising this risk into (1) risk of motives/pressure to commit fraud, (2) risk of opportunity to commit fraud, and (3) risk of rationalisation of fraud. External auditors must also consider management's integrity, use professional scepticism throughout the audit, and consider the risk of management overriding controls. Additionally, external auditors are expected to discuss among the engagement team members and the engagement partner how and where the client's financial statements may be susceptible to material misstatement due to fraud, including how fraud might occur. In reporting suspected fraud, external auditors must communicate any fraud-related matters to top management and those charged with governance on a timely basis. Suppose external auditors suspect that top management or those charged with governance might be involved in fraud. In that case, they should report the occurrence or suspicion to a party outside the entity and advise the entity to seek legal counsel.

Theoretical framework

Much of the current understanding concerning fraud factors emerged from the work of Donald Cressey in 1950. Cressey posits that fraud occurs when three fraud factors exist, including (i) non-shareable financial needs, (ii) opportunity, and (iii) rationalisation. Over the years, Cressey's hypothesis has become known as "the fraud triangle". The first side of the fraud triangle represents a pressure or motive to commit the fraudulent act, including financial and non-financial motives; the second side represents a perceived opportunity, and the third stands for rationalisation (Wells 2011). Albrecht et al. (1984) introduced the "Fraud Scale Model" as an alternative to the fraud triangle model replacing rationalisation with integrity as the latter is more observable and easier to assess. Additionally, Albrecht et al. believed that individuals with low integrity tend to rationalise their acts.

In 2004, Wolfe and Hermanson introduced the "Fraud Diamond Model", which extends the fraud triangle by "the fraudster's capabilities". They argued that many frauds would not have occurred without the right person with the right capabilities to implement the details of the fraud. They also suggested four observable traits for committing fraud; (1) Authoritative position or function within the organisation, (2) capacity to understand and exploit accounting systems and internal control weaknesses, (3) confidence that they will not be detected or, if caught they will get out of it easily, and (4) capability to deal with the stress created within an otherwise good person when they commit immoral acts.



As explained in Sect. “[Elucidating external auditors’ responsibility for fraud detection](#)”, the international professional audit standards (ISA 240) and its American counterpart (SAS 99) require external auditors to explicitly consider most of the factors proposed by these theoretical fraud models while assessing fraudulent financial reporting risk (FFRR), specifically (i) motives, (ii) opportunities, (iii) rationalisation, and (iv) management integrity.

However, it does not explicitly require external auditors to consider fraud perpetrators’ capabilities, discounting what the fraud diamond model proposes. Still, empirical evidence shows that external auditors perform better fraud risk assessments when considering the fraud diamond components (see Boyle et al. 2015). To resolve these conflicting views, the current study explores external auditors’ views on the significance of the five fraud factors proposed in all these fraud models. These fraud factors include (i) motives, (ii) opportunity, (iii) rationalisation, (iv) management integrity, and (v) fraud perpetrators’ capabilities. The aim is to determine these factors’ relevance in assessing FFRR in terms of their relative significance and use in the external audit practice. The following section highlights the literature gaps that this study attempted to address.

Literature review

The extant literature identifies five fraud factors that matter in fraud risk assessment. These fraud factors include motives, the opportunity for fraud, rationalisation of fraud (Cressey 1950), integrity (Albrecht et al. 1984), and fraud perpetrators’ capabilities (Wolfe and Hermanson 2004). However, significant literature gaps exist concerning these fraud factors’ significance and use in risk assessment in external audits.

A noticeable gap is very little evidence of how external auditors view the relative importance of fraud factors in fraud risk assessment. Additionally, there is a lack of evidence regarding the rationale for external auditors’ perceptions and self-selection bias in fraud risk assessment. One study by Huang et al. (2017) considered the views of a small sample of external auditors on the relative importance of the fraud triangle factors (i.e. motives, opportunity, and rationalisation). Another study by Boyle et al. (2015) finds that external auditors evaluate fraud risk factors based on a fraud diamond practice aid that provided significantly higher fraud risk assessments than those using a fraud triangle practice aid. However, both studies did not explore the rationale behind external auditors’ views. Albrecht et al. (2008) argue that some external auditors spend too much time looking at opportunities for fraud, sometimes recognizing management motivations, and probably not much time on the rationale of management or management integrity in fraud risk assessment. However, there is no evidence of why external auditors may discretionally consider some fraud factors while overlooking others in fraud risk assessment.

In addition to the minimal empirical evidence, there are conflicting views concerning the relative significance of fraud factors. Some view top management’s motive as the most critical fraud factor (Huang et al. 2017) and that successful external auditors can combine a deep understanding of top management’s knowledge,



intentions, and preferences (Grazioli et al. 2006). In contrast, others suggest that opportunity rather than motivation better predicts deviant behaviour and is the key to controlling fraud (Dellaportas 2012). On the other hand, Cohen et al. (2010) suggest that external auditors consider rationalisation and top management attitude. Conversely, others indicate that rationalisation is the least important fraud factor (Huang et al. 2017), difficult to observe (Dorminey et al. 2010), and should be replaced by integrity (Albrecht, 1984; Albrecht 2014). Murphy (2012) adds that rationalisation is a consequence of misreporting but not a predictor. This contradicts Cressey's (1950) finding that rationalisation predicts fraud and that potential fraud offenders can justify why their crime is acceptable to themselves (and maybe others). Surprisingly, in some cases, the authors contradicted their findings. For instance, Schuchter et al. (2015) find that opportunity is crucial. Still, the same authors reported different results in another study (Schuchter et al. 2016) when they found that motivation is more important than opportunity.

Method

Data collection

Semi-structured interviews were conducted with twenty-four Big four external auditors to gain insights into the current research issue. On average, the interviews lasted 40 min. Fourteen interviews were conducted via Skype, and ten interviews were conducted via Viber, a free international calls mobile application. Four interviews were conducted with audit partners, 11 with audit managers, and nine with senior external auditors. All interviewees had at least five years of audit experience and three years of experience in fraud risk assessment in auditing and were professionally qualified. Thus, they have sufficient experience in fraud risk assessment in different contexts and can provide meaningful insights into the fraud risk assessment process. The participants' experience was crucial to ensure that participants had enough knowledge to answer the research questions. Respondents with insufficient knowledge or experience may have deliberately guessed the answer, a tendency known as an 'uninformed response', which reduces data reliability (Saunders et al. 2009).

Given the study's focus on external auditors' views, practices, and rationale, interviewing external auditors was the most suitable method to understand how external auditors conduct a fraud risk assessment. The audit standards require external auditors to assess and respond to fraudulent financial reporting risk, as explained in Sect. "Elucidating external auditors' responsibility for fraud detection". Hence, external auditors are best positioned to tell us how they conduct a fraud risk assessment and apply the requirements of the audit standards. Semi-structured interviews were used because they allow interviewees to provide their views through free-flowing discussions and are the best way to explore research questions related to "how" and "why" (Bryman 2012).

Big 4 auditors are the four largest international accounting and professional services firms. They are Deloitte, Ernest & Young (EY), KPMG, and PwC. Each



provides audit, tax, consulting, and financial advisory services to major corporations. The Big four was chosen because they are more likely to have more knowledge and experience and better audit quality than other non-Big 4 audit firms, as noted in prior studies (Chen et al. 2016; Jiang et al. 2019).

The interviews took place between April 2016 and November 2016. They were conducted in English with external auditors having international experience in auditing. During the interview, the participants were in different jurisdictions, including the US, the UK, Egypt, the UAE, Qatar, Bahrain, and Saudi Arabia. The participants' views and practices were not dependent on one context, as clarified in the interviews through probe questions. All these countries comply with ISA 240 except the US, which applies SAS 99. However, both audit standards have similar requirements regarding external auditors' responsibilities for fraud in a financial statement audit, as elucidated in Sect. "[Elucidating external auditors' responsibility for fraud detection](#)" of this paper.

Consistent with protecting each interviewee's anonymity, Table 1 provides high-level descriptive data for each interviewee, including their code, rank, years of audit experience, years of experience in fraud risk assessment, and education. The participant code in an interview is given after each quote using the participant code identified in Table 1 (e.g. P1, P2, etc.).

Snowballing was used for sampling purposes. First, two personal contacts who are audit partners at two Big 4 audit firms were approached. Then, they were asked to approach other external auditors interested in participating in the current study and having at least five years of audit experience and at least three years of experience in fraud risk assessment. Snowballing requires the random invitation of subjects to participate in the study and hence does not create estimation issues and biases (Krishen et al. 2019). In auditing, the snowballing approach can work well, even when researching firms, as the pool of experts in some areas are so tiny that they know their peers in other firms (Malsch and Salterio 2016).

Regarding the sample size, recommendations for qualitative research were followed to continue interviewing until no new information was collected from additional interviews, a term called "saturation" (Teddlie and Tashakkori 2009). Most positive researchers in auditing have found that saturation occurs well before reaching the end of their sampling plan, which generally involves between 15 and 30 interviews (Malsch and Salterio 2016).

Several measures were taken to ensure the data's trustworthiness (i.e. reliability). A semi-structured interview script with open-ended questions was developed in consultation with two senior academics, one senior partner, and three audit managers from the Big four audit firms. This ensures the wording, structure, and questions are precise and easy to understand. Permission was sought to record each interview digitally, granted in each instance except for once. Notes were taken during the interviews to reduce errors and ensure reliability.

The research addressed all relevant ethical issues, including anonymity, confidentiality, anxiety/stress to participants, and loss or damage to data. Ethical approvals were obtained before using any human participants in this study. All participants were provided with a participants information sheet and a consent form (see supporting information).



Table 1 Demographics of Interviewees

Participant Code	Rank	Audit Experience (years)	Experience in fraud risk assessment (years)	Professional qualifications	International experience	Location	Audit Firm
P1	Audit Manager	13	10	ACCA ^a , CFE ^b , ESAA	Egypt; UK; Qatar	UK	Firm A
P2	Audit Partner	16	10	FCA ^c ; CFE; ESAA	Egypt; UK; UAE	UAE	Firm C
P3	Audit Manager	11	7	CPA ^d ; ESAA ^e	Egypt; US; Canada; UAE	US	Firm D
P4	Audit Partner	19	16	CPA; ESAA	Egypt; US; UAE; Bahrain	US	Firm D
P5	Audit Partner	21	15	FCA; CFE; ESAA	Egypt; UK; Qatar	Egypt	Firm B
P6	Audit Manager	10	6	CPA; CFE	Egypt; US	US	Firm A
P7	Senior Auditor	8	5	CPA; ESAA	Egypt; US; Qatar	Qatar	Firm A
P8	Audit Partner	20	15	CPA; ESAA	Egypt; US; UAE; Kuwait	Kuwait	Firm C
P9	Audit Manager	9	6	ACCA; CFE; ESAA	Egypt; UK; US	UK	Firm B
P10	Senior Auditor	7	5	ACA ^a ; ESAA	Egypt; UK; UAE	UAE	Firm C
P11	Audit Manager	9	5	ACCA; ESAA	Egypt; Saudi Arabia	Saudi Arabia	Firm B
P12	Audit Manager	10	8	ACCA; CFE; ESAA	Egypt; Qatar; UK	UK	Firm C
P13	Senior Auditor	8	6	CPA; ESAA	Egypt; US	Egypt	Firm D
P14	Senior Auditor	8	5	CPA	Egypt; US; UAE	US	Firm A
P15	Audit Manager	12	8	CPA	Egypt; US; UAE; Bahrain	Bahrain	Firm A
P16	Senior Auditor	5	3	CPA	Egypt; US	US	Firm D
P17	Senior Auditor	5	3	ACCA; ESAA	Egypt; UK	UK	Firm D
P18	Senior Auditor	6	4	ACCA; CFE	Egypt; UK	UK	Firm C
P19	Audit Manager	9	5	CPA; ESAA	Egypt; US	US	Firm A
P20	Senior Auditor	7	4	CPA	Egypt; US	Egypt	Firm A
P21	Audit Manager	9	5	CPA	Egypt; US	US	Firm B
P22	Audit Manager	11	6	CPA	Egypt; Qatar	Qatar	Firm A
P23	Audit Manager	12	8	CPA	Egypt; Qatar	Egypt	Firm B



Table 1 (continued)

Participant Code	Rank	Audit Experience (years)	Senior Auditor	Experience in fraud risk assessment (years)	Professional qualifications	International experience	Location	Audit Firm
P24	Senior Auditor	7	5	5	CPA	Egypt; US	US	Firm D

^aACCA: Associate Chartered Certified Accountant of the Association of Chartered Certified Accountants (ACCA)

^bCFE: Certified Fraud Examiners, Association of Certified Fraud Examiners (ACFE)

^cFCA: Fellow Chartered Accountant of the Institute of Chartered Accountants in England and Wales (ICAEW)

^dCPA: Certified Public Accountant of the American Institute of Certified Public Accountants (AICPA)

^eESAA: Egyptian Society of Accountants and External auditors

^fACA: Associate Chartered Accountant of ICAEW



My approach to interviews was to position myself as a learner and active listener to allow the researchers to speak openly and freely, as recommended in qualitative research (Berg 2009; Tracy 2019). I used prompts and follow-up questions to obtain elaborations and clarifications on the interviewees' responses and critical areas in my research.

Each interview began by describing the research's objective and emphasising that complete anonymity would be provided to the interviewees and their employing organisation. I then enquired into the interviewee's background (e.g. professional career and current position, years of audit experience, place of work, and educational background) and whether they have experience in fraud risk assessment. This was followed by two questions: "(i) In your opinion, what is the relative importance of the following five factors (top management's motives, opportunity, rationalisation, integrity, and capabilities) in assessing fraudulent financial reporting risk? Why?" "(ii) which fraud factor(s) do you consider when assessing fraudulent financial reporting risk in audit practice? Why?". The last two research questions are open-ended to avoid bias and encourage external auditors to share their views freely.

The participants were probed to answer the first question to share any other fraud factors they perceived significant in assessing FFRR and provide the rationale for their answers.

The five fraud factors (top management's motives, opportunity, rationalisation, integrity, and capabilities) and their definitions were also provided in the participant information sheet (see supporting information) to ensure the participants equally understood fraud factors.

Data analysis

Following prior studies' approaches to qualitative data analysis (Gioia et al. 2013; Apriliyanti and Randoy 2017), thematic analysis was used to examine the data as it provides a flexible tool to analyse qualitative data in a rich and detailed manner (Yamahaki and Fyrnas 2016). Thematic analysis is a "method for identifying, analyzing and reporting patterns or themes within data" (Braun and Clarke 2006: p. 79). The interviews were conducted and coded in English to avoid translation bias or any changes in the meaning of the interviewees' responses.

The themes were selected based on inductive content analysis, meaning the codes were derived from and linked to data analysis. I coded the transcripts using open coding, a free data coding requiring carefully reading participants' responses line by line and word by word to interpret the data (Berg 2009). In qualitative research, coding identifies a passage in the text, searches and identifies concepts, and finds relations between them (Tracy 2019). I coded all the interviews to ensure a consistent approach as a sole researcher. However, I asked an independent researcher, an expert in qualitative data, to review the coding process to ensure consistency and reliability (Cohen's kappa 0.83).

In the first step of the analysis, the transcripts were coded into two main categories (i) external auditors' perceptions of the relative significance of fraud factors in assessing FFRR; (ii) the use of fraud factors in the audit practice. Afterwards, the



relative significance of fraud factors was further classified into three sub-categories based on careful analysis and observation of interviewees' responses: (a) essential or critical factor(s); (b) important but non-essential factor(s); and (c) the least important or unimportant factor.

Also, several themes emerged from analysing external auditors' rationale for the significance and use of fraud factors in the audit practice. These themes include

- Audit standards requirements,
- Availability or lack of know-how,
- Impact on accounts,
- Impact on top management behaviour, and
- Relevance to the audit context

Relevant participants' responses were matched with relevant codes/categories (see Table 2, the coding book used in this analysis). Quotations supporting the key indicators and the related themes were identified and incorporated into the coding scheme. The data were further analysed with the aid of NVivo.

Results

The relative significance of fraud factors in assessing FFRR – External auditors' perceptions and rationale

The findings reveal that all external auditors perceive top management's motives ($n=24$; 100%) as an essential or critical factor in assessing FFRR. Similarly, most external auditors viewed top management's integrity level ($n=20$; 83%) as an essential or critical factor in assessing FFRR. The majority ($n=20$; 83%) emphasised that external auditors are unlikely to detect fraud and bias in financial statements unless they understand top management's motivations and integrity.

Both opportunity ($n=23$; 96%) and fraud perpetrators' capabilities ($n=22$; 92%) were perceived as important but non-essential factors. However, all participants perceive rationalisation as the least important fraud factor in assessing FFRR. Using probe questions during the interviews, participants were asked about any other fraud factors they thought could be significant in assessing FFRR, but the answer was negative. Table 3 summarises the interviewees' responses.

The analysis of external auditors' rationale indicates that it was based on (i) the impact of fraud factors on top management's behaviour, (ii) the impact of fraud factors on the accounts, and (iii) fraud factors' relevance to the boundaries of the external audit professional requirements. From the external auditors' perspectives, top management's motives and integrity are essential because they could directly impact the financial accounts ($n=22$; 92%), determine top management actions and behaviour, and highly increase fraudulent financial reporting risk ($n=20$; 83%). Besides, the extent and degree of manipulations in the financial statements will depend on what motivates top management and how honest they are ($n=13$; 54%). Other external auditors ($n=7$; 29%) asserted that top



Table 2 The Codebook

Examples from the data	Codes	Description of codes	Related categories*
Unless external auditors understand management motivations and their integrity level, they are unlikely to detect fraud and bias in the financial statements	Relative significance of fraud factors	External auditors' views on the relative significance of fraud factors in assessing Fraudulent financial reporting risk	Essential or critical factor(s)
Opportunity is not as important as management motives and integrity level	Relative significance of fraud factors	External auditors' views on the relative significance of fraud factors in assessing Fraudulent financial reporting risk	Important but non-essential factor(s)
Top management's motives and integrity are essential because they could directly impact the financial accounts, determine top management actions and behaviour, and increase fraudulent financial reporting risk	Relative Significance of fraud factors and external auditors' Rationale	External auditors' rationale for the relative significance of fraud factors	Impact on accounts Impact on top management's behaviour
The extent and degree of manipulations in the financial statements will depend on what motivates top management and how honest they are	Relative Significance of fraud factors and external auditors' Rationale	External auditors' rationale for the relative significance of fraud factors	Impact on accounts Impact on top management's behaviour
Top management would not bear the cost of committing fraud unless they have a strong motive and lack integrity	Relative Significance of fraud factors and external auditors' Rationale	External auditors' rationale for the relative significance of fraud factors	Impact on top management's behaviour
If top management has a strong motive to commit fraud and lacks integrity, financial reporting fraud becomes more likely	Relative significance of fraud factors and external auditors' rationale	External auditors' rationale for the relative significance of fraud factors	Impact on accounts
If top management intends to avoid paying taxes, they could overstate expenses or understate revenues	Relative significance of fraud factors and external auditors' rationale	External auditors' rationale for the relative significance of fraud factors	Impact on accounts



Table 2 (continued)

Examples from the data	Codes	Description of codes	Related categories*
Top management could override strong internal controls or create opportunities	Relative significance of fraud factors and external auditors' rationale	External auditors' rationale for the relative significance of fraud factors	Impact on top management's behaviour
In the case of fraudulent financial reporting, opportunity and capabilities do not matter as much as top management motives and integrity level because top management will always have the power to override controls to achieve their targets	Relative significance of fraud factors and external auditors' rationale	External auditors' rationale for the relative significance of fraud factors	Impact on top management's behaviour
Opportunity only facilitates the perpetration of fraud	Relative significance of fraud factors and external auditors' rationale	External auditors' rationale for the relative significance of fraud factors	Impact on top management's behaviour
Focussing on the traits or factors that could enhance fraud perpetrators' capabilities will guide external auditors to individuals more likely to exploit existing internal control weaknesses	Relative significance of fraud factors and external auditors' rationale	External auditors' rationale for the relative significance of fraud factors	Impact on top management's behaviour
Individuals with excessive power in the organisation are more likely to abuse their power and override internal controls	Relative significance of fraud factors and external auditors' rationale	External auditors' rationale for the relative significance of fraud factors	Impact on top management's behaviour
Rationalisation is more likely to be only known during fraud investigations and interrogations, which is beyond the scope of the external audit	Relative significance of fraud factors and external auditors' rationale	External auditors' rationale for the relative significance of fraud factors	Relevance to the audit context



Table 2 (continued)

Examples from the data	Codes	Description of codes	Related categories*
<p>Rationalisation should not be considered independently, indicating a low top management integrity level. Should the risk assessment process relating to top management integrity indicate strong controls, this will eventually reduce rationalisation risk</p>	<p>Consideration of fraud factors—External auditors' perceptions and rationale</p>	<p>External auditors' professional opinion of what fraud factors should be considered in assessing FFRR</p>	<p>Relevance to the audit context</p>
<p>Existing opportunities for fraud are more likely to encourage top management and employees to commit fraud only if they have the motive to commit a crime, lack integrity, and the risk of them getting caught is remote</p>	<p>Consideration of fraud factors—External auditors' perceptions and rationale</p>	<p>External auditors' professional opinion of what fraud factors should be considered in assessing FFRR</p>	<p>Impact on top management's behaviour</p>
<p>The audit standards require external auditors to assess control risks and understand the control environment, which cannot be ignored, given the emphasis on this fraud factor</p>	<p>Consideration of fraud factors—External auditors' perceptions and rationale</p>	<p>External auditors' professional opinion of what fraud factors should be considered in assessing FFRR</p>	<p>Audit standards' requirement</p>
<p>Integrating top management's capabilities into assessing the opportunity for fraud could alert external auditors of those capable of exploiting internal control weaknesses</p>	<p>Consideration of fraud factors—External auditors' perceptions and rationale</p>	<p>External auditors' professional opinion of what fraud factors should be considered in assessing FFRR</p>	<p>Impact on management's behaviour</p>
<p>Top management's motives and integrity must be considered because they directly impact the financial statements' fair presentation and determine top management actions and behaviours</p>	<p>Consideration of fraud factors—External auditors' perceptions and rationale</p>	<p>External auditors' professional opinion of what fraud factors should be considered in assessing FFRR</p>	<p>Impact on management's behaviour Impact on the accounts</p>



Table 2 (continued)

Examples from the data	Codes	Description of codes	Related categories*
Top management's motives are also more likely to impact accounting assumptions, estimates, and how they are treated	Consideration of fraud factors—External auditors' perceptions and rationale	External auditors' professional opinion of what fraud factors should be considered in assessing FFRR	Impact on the accounts
Rationalisation may only be used by managers who perpetrate fraudulent financial reporting to either reduce or escape penalty and not necessarily to commit the fraud	Consideration of fraud factors—External auditors' perceptions and rationale	External auditors' professional opinion of what fraud factors should be considered in assessing FFRR	Impact on management's behaviour
Rationalisation should not be considered in fraud risk assessment due to its irrelevance to audit practice	Consideration of fraud factors—External auditors' perceptions and rationale	External auditors' professional opinion of what fraud factors should be considered in assessing FFRR	Relevance to audit practice
We only consider the opportunity in practice	Consideration of fraud factors—External auditors' practices	What fraud factors are external auditors considering in audit practice while assessing FFRR	External auditors' practice
Despite the significance of top management motives and integrity, we do not consider them in fraud risk assessment due to a lack of professional guidance on assessing these two factors. The audit standards require us to consider these two factors in assessing fraud but do not guide how to do it. Let us also be frank; audit firms never provide such guidance. The reasons for this are the lack of know-how	Consideration of fraud factors—External auditors' practices and rationale	External auditors' rationale for not considering fraud factors in the audit practice	Lack of know-how



Table 2 (continued)

Examples from the data	Codes	Description of codes	Related categories*
The only factor considered is the opportunity, to be honest. It is easy to assess and not necessarily the most significant factor. COSO, for example, provides an excellent guide regarding effective control frameworks, and we usually refer to that guide in our assessments	Consideration of fraud factors—External auditors' practices and rationale	External auditors' rationale for not considering fraud factors in the audit practice	Availability of know-how and task complexity level
I have not heard of any professional guidance that assesses top management motives and integrity anywhere I work	Consideration of fraud factors—External auditors' practices and rationale	External auditors' rationale for not considering fraud factors in the audit practice	Lack of know-how
Fraud perpetrators' capabilities (FPC) are not considered in practice because the audit standards did not explicitly require external auditors to consider them in fraud risk assessment	Consideration of fraud factors—External auditors' practices and rationale	External auditors' rationale for not considering fraud factors in the audit practice	Audit standards requirement

*Table 2 shows themes from analysing external auditors' rationale for the significance and use of fraud factors in the audit practice. Inductive thematic analysis emerging from the data was used to identify relevant categories and themes



Table 3 Ranking of fraud factors from the external auditors' perspectives—Total number of participants (n): 24

Ranking of factors	Fraud factors	n	Per cent (%)
1. Essential	Top management motives	24	100
	Top management integrity	20	83
2. Important but non-essential	Opportunity for fraud	23	96
	Top management's capabilities	22	92
	Top management integrity	4	16
3. Unimportant or least important	Rationalisation	24	100
	Top management's capabilities	2	8
	Opportunity for fraud	1	4
	Other fraud factors	0	0

This table summarises external auditors' perceptions of the significance of fraud factors in assessing FFRR. This was a closed-ended question (CE). "n" represents the number of participants who indicated each fraud factor's significance. The other category was used to encourage participants to share any other fraud factors that could be significant in assessing FFRR

management's motives are also more likely to impact accounting assumptions and estimates and how they are treated. They also believed that both factors could be good indicators for potential manipulations in the financial statements.

In explaining their rationale further, some external auditors ($n = 9$; 37%) added that top management would not bear the cost of committing fraud unless they have a strong motive and lack integrity. Some of their comments were:

Integrity goes hand in hand with motives. If top management has a strong motive to commit fraud and lacks integrity, financial reporting fraud becomes more likely. Without considering top management motivations, and their level of integrity, detecting material fraud is impossible (P1)

Top management could manipulate the financial statement figures to achieve their goals, so understanding top management motivations could alert external auditors to the more vulnerable accounts of top management manipulations. We live in a different era where external auditors need to be less trusting and more sceptical of top management practices if they wish to be successful in detecting material fraud (P3)

Motives are the main drive for fraudulent financial reporting. Pressure to achieve targets could increase the risk of fraudulent financial reporting, especially if performance is linked to financial targets (P4)

Top management motivations could lead to manipulations in the financial statements, especially if top management lacks integrity. This could impact the financial statements depending on top management's motives or what management seeks to achieve. The revenue account, for example, will always be a high-risk account as it is vulnerable to top management's manipulations (P2)

Top management must have a reason to commit fraud, such as the desire to get bonuses. Otherwise, why would they commit fraud and bear its risk (P12)



Probing questions were then used to explore how understanding top management motives and their integrity level could help external auditors assess FFRR. Some ($n=5$; 21%) explained that knowing what may motivate top management to commit FFR could forewarn external auditors of the more vulnerable accounts of top management's manipulations. In the meantime, assessing top management integrity will help external auditors decide how likely these manipulations are. They provided the following examples to show how top management motives could result in manipulations of financial statements:

Executives could manipulate the share price or earnings to receive their bonuses. This is particularly possible if their remuneration is linked to specific financial targets or if they want to meet the budget. This should alert external auditors to give more attention to the revenue and profit accounts (P5)

If top management intends to avoid paying taxes, they could overstate expenses or understate revenues. However, they will inflate profitability and share prices to obtain financing. That is why we strongly believe understanding top management motives matters. (P7)

Regarding opportunity and fraud perpetrators' capabilities, external auditors believe they are important but not essential factors because they do not have the same impact on top management's behaviour or the financial accounts that top management's motives and integrity have. More than half of the participants ($n=14$; 58%) explained that opportunity and fraud perpetrators' capabilities only facilitate the perpetration of fraud. Still, they will not be why top management perpetrates fraud and bear its consequences (e.g. reputational risk, litigation, fees).

Others ($n=12$; 50%) added that top management usually could override strong internal controls or create opportunities. So, the only thing that will trigger fraud perpetration is what top management wants to achieve (i.e. motives) and their integrity level ($n=9$; 37%). Rezaee (2005) argues that given the high cost associated with financial statement fraud, corporations' decision to engage in such activities must be justified by strong motives that compel firms to behave illegally.

A few more participants ($n=7$; 29%) explained that existing opportunities for fraud are more likely to encourage top management and employees to commit fraud only if they have the motive to commit a crime, lack integrity, and the risk of getting caught is remote. As some of them put it:

In the case of fraudulent financial reporting, opportunity and capabilities do not really matter as much as top management motives and integrity level because top management will always have the power to override controls to achieve their targets. In that case, if top management does not have the motive to manipulate the financial statements, they will not look for fraud opportunities (P2)

Motives are the drive for fraudulent behaviour. Opportunity only facilitates the perpetration of fraud. If someone does not have the motive to commit fraud, why would they look for an opportunity to commit a crime they will not benefit from (P9)



For example, in developing countries, fraud opportunities will always be found, either because of weaknesses in the internal control system or loopholes in accounting and tax regulations. However, not every manager or executive will exploit those weaknesses. I came across cases where companies were full of control deficiencies, yet top management had enough integrity not to exploit them and was happy to cooperate with the audit team (P8)

Those participants ($n=12$; 50%) who viewed fraud perpetrators' capabilities as an important fraud factor explained that their rationale is that focussing on the traits or factors that could enhance fraud perpetrators' capabilities will guide external auditors to those individuals who are more likely to exploit existing internal control weaknesses, thereby saving external auditors time and effort in fraud risk assessments. For example, others ($n=10$; 42%) referred to individuals with excessive power in the organisation as they are more likely to abuse their power and override internal controls. Hence, alerting auditors to look into these individuals' cases. Additionally, focusing on the traits or factors that could enhance fraud perpetrators' capabilities will guide external auditors to look in the right direction when assessing control weaknesses. In particular, the auditor referred to the following traits: (i) the concentration of power in the hand of one or few individuals, (ii) knowledge of weaknesses in accounting regulations or internal controls, and (iii) the ability to escape penalties due to political connections or corruption in the legal system (see Table 4).

All external auditors ($n=24$; 100%) consented that rationalisation is the least important fraud factor in assessing FFRR. Their rationale was based on the factor's relevance to the external audit profession's nature or requirements. Their reasons were that rationalisation is more likely to be only known during fraud investigations and interrogations, which is beyond the scope of the external audit ($n=11$; 46%). Others added that dishonest top management might only use rationalisation to deny responsibility and escape penalty, not necessarily a condition to commit fraud ($n=13$; 54%).

Based on their rationale, some participants ($n=10$; 42%) believe that only individuals with low integrity tend to rationalise their fraudulent behaviour or misconduct. As such, they recommended that rationalisation be integrated into assessing top management integrity rather than being regarded as a separate fraud factor. A

Table 4 Traits that external auditors recommended considering when assessing fraud perpetrators' capabilities—Total number of participants (n): 24

Traits	n	Per cent (%)
The concentration of power in the hand of one or few individuals within the organisation	20	83
Good knowledge of weaknesses in accounting regulations and/or the internal control system	18	75
The ability to escape the penalty due to political connections or a corrupt legal system	18	75

This table summarises external auditors' views on the traits that should be considered in assessing fraud perpetrators' capabilities to commit fraudulent financial reporting. 'n' refers to the number of participants that have identified each trait



few more external auditors ($n=4$; 17%) indicated that rationalisation might only be used by managers who perpetrate fraudulent financial reporting to either reduce or escape penalty and not necessarily a condition for fraud perpetration, which is another reason why it should not be considered as a separate fraud factor.

The comments of two participants were as follows:

Rationalisation is somehow linked to integrity because if a person lacks integrity, rationalisation will be more likely to help them escape the penalty. Also, only people who lack integrity tend to rationalize their misbehaviour, so rationalisation should not be considered as a separate fraud factor but integrated into the assessment of top management's integrity (P11)

Rationalisation should not be considered independently, indicating a low top management integrity level. Should the risk assessment process relating to top management integrity indicate strong controls, this will eventually reduce rationalisation risk (P12)

Fraud factor(s) external auditors use in assessing FFRR in the audit practice

Regarding external auditors' actual practices, they all mentioned that only opportunity is considered in assessing FFRR. External auditors justified this as follows. There is no professional guidance in the current audit standards (ISA 240; SAS99) to incorporate top management's motives and integrity in the fraud risk assessment. Audit firms do not provide such guidance due to the lack of know-how and time constraints. As quoted by some

Despite the significance of top management motives and integrity, we do not consider them in fraud risk assessment due to a lack of professional guidance on assessing these two factors. The audit standards require us to consider these two factors in assessing fraud but do not guide how to do it. Let us also be frank; audit firms never provide such guidance. The reasons for this are the lack of know-how and also the time pressure we face daily (P16)

The only factor considered is the opportunity, to be honest. It is easy to assess and not necessarily the most significant factor. COSO, for example, provides an excellent guide regarding effective control frameworks. We usually refer to that guide in our assessments. I have not heard of any professional guidance that assesses top management motives and integrity anywhere I worked (P2)

Two more external auditors added that opportunities come about due to weaknesses in internal controls. The audit standards require external auditors to assess control risks and understand the control environment, which can easily be assessed using guidance from the audit standards or COSO internal control framework. However, no clear guidance exists on integrating management's motives and integrity into fraud risk assessments. As one senior auditor put it:

We must consider the opportunity for fraud because the audit standards require us to assess control risk and to have a good understanding of the control environment. There is actually much emphasis on this. Weaknesses in internal con-



trols result in more opportunities for fraud. There is also clear guidance on control assessments in both the standards and professional reports like COSO (P10)

Most external auditors (20, 83%) added that fraud perpetrators' capabilities (FPC) are not considered in practice because the audit standards did not explicitly require external auditors to consider them in fraud risk assessment. As explained earlier, the rationalisation of fraud is hardly considered due to its irrelevance to the auditing context. From the external auditors' perspectives, rationalisation is not observable and is more likely to be known during fraud investigations and interrogations outside the external audit scope. Additionally, rationalisation might only be used by managers who perpetrate fraudulent financial reporting to either reduce or escape the penalty and is not necessarily a condition for fraud perpetration.

Discussion and implications

This study's findings show that top management's integrity and motives are, in theory, the most critical factors in fraud risk assessment. However, a self-selection bias pushes external auditors not to evaluate these essential factors because they are too complicated to assess, and not enough guidance is provided to them by standard setters or audit firms. In turn, external auditors concentrate mainly on evaluating the opportunities to commit fraud when assessing fraud risk. This may lead to non-optimal fraud risk assessment and, ultimately, non-optimal audit quality. The findings have implications for research, policy, and practice, as discussed below.

From a theoretical perspective, the findings support and align with the agency theory that highlights the issue of trust between agents and principals due to different interests and motives. This study argues that top management can manipulate an organisation's financial statements if they have motives and lack integrity. Therefore, the findings urge external auditors to spend more time and effort assessing management's motives and integrity when assessing FFRR, as these two fraud factors directly impact management's behaviour and financial accounts.

Given the minimal empirical evidence on this topic, the current study expands the audit literature by adding practice-based evidence concerning the fraud factors that matter the most in assessing FFRR in the external audit practice. The results support Huang et al.'s (2017) conclusion that motives are the most critical fraud factors, and rationalisation is the least important in assessing FFRR. However, unlike Huang et al., this study explores five fraud factors instead of three factors and provides a rationale for external auditors' views.

Equally, this study agrees with the results of Boyle et al. (2015) concerning the consideration of fraud perpetrators' capabilities in fraud risk assessment to improve overall audit quality. This study highlights three traits external auditors must consider when assessing top management's capabilities. These traits include power within the organisation, knowledge of accounting and existing weaknesses in internal controls, and the ability to escape penalties. However, unlike Boyle



et al., this study provides a rationale for external auditors' views and explores management integrity, which Boyle et al. overlooked.

Further, the results explain the reasons behind Albrecht et al. (2008) conclusion that external auditors spend too much time looking at the opportunity for fraud in practice but probably not much time on top management motivations or integrity. The present study's findings show that top management's integrity and motives are, in theory, the most critical factors in fraud risk assessment. However, a self-selection bias pushes external auditors not to evaluate these essential factors because they are too complicated to assess, and not enough guidance is provided to them by standard setters or audit firms. In turn, external auditors concentrate mainly on evaluating the opportunities to commit fraud when assessing fraud risk. Therefore, the present study implies that unless audit standards guide external auditors to assess top management's motives and integrity, they will continue to self-select the fraud factors that are easier to assess despite their relative importance. This may lead to non-optimal fraud risk assessment and, ultimately, non-optimal audit quality. The findings call for future studies exploring ways to aid external auditors in assessing and integrating top management's motives and integrity in the audit process.

The study also uncovers that the auditors believe rationalisation is not a fraud predictor but rather a way dishonest management can shift the blame and escape penalties. Therefore, it agrees with Murphy's (2012) conclusion that rationalisation is a consequence of misreporting and not a predictor. In contrast, it disagrees with Cressey's (1950) findings that rationalisation is a predictor of fraud.

From a policy perspective, the study finds that top management motives and integrity are essential factors in assessing FFRR. Drawing external auditors' attention to the significance of these two factors could reduce the risk of self-selection bias and improve the quality of fraud risk assessment. In the meantime, it calls for an update in the fraud-related audit standards (ISA 240; SAS 99) to emphasise the relative significance of top management's motives and integrity level and guide on assessing and incorporating these two fraud factors in the audit process. Although the audit standards (ISA 240; SAS 99) require external auditors to consider top management's motives and integrity in fraud risk assessments, their significance is underrated and not emphasised enough in both standards.

The study also recommends that audit standards consider fraud perpetrators' capabilities in assessing FFRR, as this fraud factor is currently overlooked yet was viewed by experienced external auditors as equally important to opportunity. Ignoring important fraud factors could reduce the quality of fraud risk assessment, reducing the likelihood of detecting material fraud (Albrecht et al., 2008). Also, dealing with knowledgeable and capable personnel for committing and concealing fraud has limited guidance in the standards.

The Financial Reporting Council (FRC, 2016) asserts the importance of following up on audit standards by seeing how they are put into audit practice, asking the external auditors whether they are working, and revising the standards accordingly to ensure audit quality. The requirements of the audit standards had not changed since 2016, when this study was conducted. However, there is more emphasis on improving external auditors' skills in challenging management (FRC 2019) and



detecting fraudulent financial reporting (ICAEW 2022). In particular, the FRC Executive Director of Supervision, David Rule, said

While we see many examples of high-quality audits, our inspectors are still identifying too many audits which require significant improvements. Inspections show that challenge of management is a particular area of concern on which audit firms need to focus (FRC 2019)

The Institute of Chartered Accountants and Wales (ICAEW 2022) reported there is a public perception that external auditors can and should be doing much more to deter and detect fraud and prevent the unexpected failure of large companies. Consequently, the ICAEW recommends that audit firms “change ingrained cultures, behaviours and mindsets, assessing the need for greater, risk-assessed specialist and forensic involvement at all audit stages, embedding fraud-related learnings across the firm and reinforcing professional scepticism”.

The current study draws audit regulators’ attention to the type of change required to enhance external auditors’ skills in fraud risk assessment. Such guidance should not be ignored or left to audit firms as this will result in inconsistencies in audit qualities among audit firms. Audit standards are the benchmark against audit quality. Hence they should include precise and complete guidance.

From an audit practice perspective, this study suggests that external auditors are unlikely to detect fraud and bias in the financial statements unless they consider top management motives and integrity level. For that reason, it recommends that future audits focus more on the audit of top management’s motives and integrity in assessing fraudulent financial reporting risk and proactively look for signs of management dishonesty and motives to commit fraud during the ordinary course of the audit. Prior studies suggest that reactive strategies based on history and experiences do not give external auditors the forward predictive approach necessary to detect and deter top management from engaging in financial manipulations in today’s dynamic and competitive business setting (Apostolou et al. 2001).

In addition, it calls audit firms for enhanced professional training, curriculum, and communication where the relative importance of fraud factors in assessing FFRR is emphasised and professional guidance on assessing significant factors is provided. Research confirms that fraud-related knowledge is gained mainly through training and not through experience (Hammersley 2011; Siriwardane. et al., 2014), and insufficient fraud-related knowledge and training are among the most critical inhibitors to external auditors in detecting fraud (Asare et al. 2015).

Conclusion

This study uses semi-structured interviews with external auditors to explore how external auditors use and perceive the relative significance of fraud factors (i.e. integrity, motives, opportunities, capabilities, and rationalisation) when assessing FFRR during an audit. The findings show that top management’s integrity and motives are, in theory, the most critical factors in fraud risk assessment. However, a self-selection bias pushes external auditors not to evaluate these essential factors



because they are too complicated to assess, and not enough guidance is provided to them by standard setters or audit firms. In turn, external auditors concentrate mainly on evaluating the opportunities to commit fraud when assessing fraud risk. This may lead to non-optimal fraud risk assessment and, ultimately, non-optimal audit quality.

Overall, it recommends that future research, audit firms, and audit regulators must develop guidance on incorporating these two significant fraud factors in fraud risk assessments in auditing to encourage external auditors to consider them in the audit practice. How external auditors could assess and incorporate top management's motives and integrity is an understudied research area and an overlooked issue in the audit practice.

Like any other study, this study has limitations. First, it did not consider any data regarding age or gender, as this is outside the scope of the current study's aim. The study focussed on how external auditors view and use fraud factors in assessing FFRR, not the impact of external auditors' characteristics in fraud risk assessment. Future research should explore the impact of these variables on external auditors' views and practices in fraud risk assessment. Second, some issues were not raised in the interview, such as the time pressure of external auditors, access to documents and other factors that may hinder a successful audit. Future research should expand the current study by exploring these issues and their impact on fraud risk assessment in the audit practice. Future studies should also explore external auditors' views on the fraud pentagon in fraud risk assessment, as the current study did not cover this fraud model. Despite these limitations, this study is among very few empirical studies (Boyle et al. 2015; Huang et al. 2017) that explore how external auditors view and use the relative significance of fraud factors in fraud risk assessment. However, it is the first to provide a rationale for external auditors' views and practices in this regard.

Funding This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declarations

Conflict interest The authors declare that they have no conflict of interest.

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References

- ACFE., 2022 *Report to the Nation on Occupational Fraud and Abuse*. Available at: www.acfe.com
- Albrecht, W.S., K.R. Howe, and M.B. Romney. 1984. *Deterring fraud: The internal auditor's perspective*. Altamonte Springs: Institute of Internal External Auditors Research Foundation.
- Albrecht, W.S., C. Albrecht, and C.C. Albrecht. 2008. Current trends in fraud and its detection. *Information Security Journal: A Global Perspective* 17 (1): 2–12.
- Albrecht, S., 2014, Iconic fraud triangle endures. *Fraud Magazine*. Available at <https://www.fraud-magazine.com/article.aspx?id=4294983342>
- Al-Dhubaibi, A.A.S., and H.H.H. Sharaf-Addin. 2022. An analysis of external and internal auditors' use of ISA 240 red flags: The impact of auditors' estimation of fraud pervasiveness. *Cogent Business & Management* 9 (1): 2118209.
- Alissa, W., V. Capkun, T. Jeanjean, and N. Suca. 2014. An empirical investigation of the impact of audit and auditor characteristics on auditor performance. *Accounting, Organisations and Society* 39 (7): 495–510.
- Apostolou, B., J.M. Hassell, and S.A. Webber. 2001. Management fraud risk factors: Rating by forensic experts. *The CPA Journal* 71 (10): 48–52.
- Apriliyanti, I.D., and T. Randoy. 2017. Between politics and business: Boardroom decision-making in state-owned Indonesian enterprises. *Corporate Governance: An International Review* 27: 166–185.
- Asare, S., A. Wright, and M. Zimelman. 2015. Challenges facing external auditors in detecting financial statement fraud: Insights from fraud investigations. *Journal of Forensic and Investigative Accounting* 7 (2): 63–111.
- Auditing Standards Board (ASB), 2002, *Statement on Auditing Standard No.99: Consideration of Fraud in a Financial Statement Audit (SAS 99)*. Available at: www.aicpa.com
- Berg, B.L. 2009. *Qualitative research methods*, 7th ed. Pearson: Boston.
- Bonner, S.E. 1994. A model of the effects of audit task complexity. *Accounting, Organisation, and Society* 19 (3): 213–234.
- Boyle, D.M., T. DeZoort, and D.R. Hermanson. 2015. The effect of alternative fraud model use on external auditors' fraud risk judgments. *Journal of Accounting and Public Policy* 34 (6): 578–596.
- Braun, V., and V. Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3 (2): 77–101.
- Bryman, A. 2012. *Social research methods*, 4th ed. Oxford: Oxford University Press.
- Chen, C., G. Gotti, D. Herrmann, and K. Schumann. 2016. Earnings quality of foreign versus US reverse mergers: Geographical location or firm-level incentives? *Journal of International Accounting Research: Spring* 15 (1): 49–66.
- Cohen, J., Y. Ding, C. Lesage, and H. Stolowy. 2010. Corporate fraud and managers' behavior: Evidence from the press. *Journal of Business Ethics* 95 (2): 271–315.
- Cressey, D.R. 1950. The criminal violation of financial trust. *American Sociological Review* 15 (6): 738–743.
- Dellaportas, S. 2012. Conversations with inmate accountants: Motivation, opportunity and the fraud triangle. *Accounting Forum* 37 (1): 29–39.
- DeZoort, F.T., and P.D. Harrison. 2018. Understanding external auditors' sense of responsibility for detecting fraud within organisations. *Journal of Business Ethics* 149: 857–874.
- Dorminey, J., A. Fleming, M. Kranacher, and R. Riley. 2010. Beyond the fraud triangle. *The CPA Journal* 80 (7): 17–23.
- Elder, R.J., M.S. Beasley, and A.A. Arens. 2010. *Fraud auditing. Auditing and assurance services: An integrated approach*. Pearson.
- Financial Reporting Council (FRC). 2016, *Enhancing confidence in the value of audit: A research report commissioned by the FRC*, Retrieved from <https://www.frc.org.uk/>
- FRC. 2019. Auditors need to improve their challenge of management urgently. News I Financial Reporting Council (frc.org.uk)
- Gioia, D.A., K.G. Corley, and A.L. Hamilton. 2013. Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organisational Research Methods* 16 (1): 15–31.
- Grazioli, S., P.E. Johnson, and K. Jamal. 2006. A cognitive approach to fraud detection. *Journal of Forensic Accounting* VII: 65–88.
- Guenin-Paracini, H., and Y. Gendron. 2010. External auditors as modern pharmakoi: Legitimacy paradoxes and the production of economic order. *Critical Perspectives on Accounting* 21 (2): 134–158.



- Guragai, B., and P.D. Hutchison. 2019. Material weakness disclosures and restatements: Value of external auditor attestation. *Accounting Research Journal* 32 (3): 362–380.
- Hammersley, J.S. 2011. A review model of auditor judgements in fraud related planning tasks. *Auditing: A Journal of Practice & Theory* 30 (4): 101–128.
- Heath, J. 2009. The uses and abuses of agency theory. *Business Ethics Quarterly* 19 (4): 497–528.
- Hill, J. 2022. Wirecard trial of executives opens in German fraud scandal. Wirecard trial of executives opens in German fraud scandal - BBC News
- Hogan, C.E., Z. Rezaee, R. Riley, and U.K. Velury. 2008. Financial statement fraud: Insights from the academic literature. *Auditing A: Journal of Practice & Theory* 27 (2): 231–2524.
- Hosmer, L.T. 2000. It is time for empirical research in business ethics. *Business Ethics Quarterly* 10 (1): 233–242.
- Huang, S.Y., C. Lin, A. Chiu, and D. Yen. 2017. Fraud detection using fraud triangle risk factors. *Information Systems Frontiers*. 19 (6): 1343–1356.
- Hurley, P. 2017. Ego depletion and external auditors' busy season. *Behavioral Research in Accounting* 29 (2): 25–35.
- ICAEW, 2005, Agency Theory and the Role of External Auditors. *Audit Quality Forum*. Available at: <https://www.icaew.com/-/media/corporate/files/technical/audit-and-assurance/audit-quality/audit-quality-forum-fundamentals/fundamentals-agency-theory-and-the-role-of-audit.ashx>
- ICAEW. 2022. Sharpening the Focus on Corporate Fraud: an Audit Firm Perspective. [sharpening-the-focus-on-fraud.ashx](https://www.icaew.com/-/media/corporate/files/technical/audit-and-assurance/audit-quality/audit-quality-forum-fundamentals/fundamentals-agency-theory-and-the-role-of-audit.ashx) (icaew.com)
- International Auditing and Assurance Standards Board (IAASB), 2009, *International Standard on Auditing No. 240 (ISA No.240): The External Auditors' Responsibilities Relating to Fraud in an Audit of Financial Statements*. Available at: www.iaasb.org
- Jensen, M., and W. Meckling. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3: 305–360.
- Jiang, J.X., I.Y. Wang, and K.P. Wang. 2019. Big N auditors and audit quality: New evidence from quasi-experiments. *The Accounting Review* 94 (1): 205–227.
- Kassem, R. 2018. Exploring external auditors' perceptions of the motivations behind management fraud in Egypt – A mixed-method approach. *Managerial Auditing Journal* 33 (1): 16–34.
- Kassem, R. 2021. Corporate fraud risk management. In *Corporate risk management and modelling*, 33–54. Berlin: Springer.
- Krishen, A.S., O. Berezan, S. Agarwal, and P. Kachroo. 2019. Social media networking satisfaction in the US and Vietnam: Content versus connection. *Journal of Business Research* 101: 93–103.
- Malsch, B., and S.E. Salterio. 2016. 'Doing good field research': Assessing the quality of audit field research. *Auditing A: Journal of Practice & Theory* 35 (1): 1–22.
- Murphy, P. R., 2012, Attitude, Machiavellianism and the Rationalization of Misreporting. *Queen's School of Business Research Paper No. 01–08*. Available at <https://www.ssrn.com>
- Mustoe, H. 2020. BHS collapse: 'I was in charge of millions, then I had nothing.' Retrieved from BHS collapse: 'I was in charge of millions, then I had nothing' - BBC News
- O'Connell, D. 2021. Grant Thornton fined £2.3m for Patisserie Valerie scandal. Retrieved from Grant Thornton fined £2.3m for Patisserie Valerie scandal - BBC News
- Public Company Accounting Oversight Board (PCAOB). 2012, *Observations from 2010 Inspections of Domestic Annually Inspected Firms Regarding Deficiencies in Audits of Internal Control over Financial Reporting*. PCAOB Release No. 2012–006. Washington, PCAOB.
- Rezaee, Z. 2005. Causes, consequences, and deterrence of financial statement fraud. *Critical Perspectives on Accounting* 16 (3): 277–298.
- Saunders, M., P. Lewis, and A. Thornhill. 2009. *Research methods for business students*, 5th ed. London: Pearson Education Limited.
- Schuchter, A., and M. Levi. 2015. Beyond the fraud triangle: Swiss and Austrian elite fraudsters. *Accounting Forum* 39 (3): 176–187.
- Schuchter, A., and M. Levi. 2016. The fraud triangle revisited. *Security Journal* 29 (2): 107–121.
- Sikka, P., 2018, Why is no one exposing our failing firms in advance? Available at: <https://www.theguardian.com/commentisfree/2018/feb/22/expose-failing-firms-accounting-firms-carillion-mps>
- Siriwardane, H., B. Hu, and K. Low. 2014. Skills, knowledge, and attitudes important for present-day external auditors. *International Journal of Auditing* 18 (3): 193–205.
- Teddle, C., and A. Tashakkori. 2009. *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. California: SAGE Publications Inc.



-
- Tracy, S.J. 2019. *Qualitative research methods: Collecting evidence, crafting analysis, Communicating impact*, 2nd ed. New Jersey: Wiley-Blackwell.
- Turley, S.; Humphrey, C.; Samsonova-Taddei, A.; Siddique, J.; Woods, M.; Basoudis, I.; Richard, C. 2016. Skills, Competencies and The Sustainability of The Modern Audit. *The Institute of Chartered Accountants in Scotland (ICAS) and The Financial Reporting Council (FRC)*.
- Wells, J.T. 2011. *Corporate fraud handbook: Prevention and detection*, 3rd ed. Hoboken: John Wiley.
- Wolfe, D.T., and D.R. Hermanson. 2004. The fraud diamond: Considering the four elements of fraud. *The CPA Journal* 74 (12): 38–42.
- Yamahaki, C., and J.G. Fyrnas. 2016. Institutional determinants of private shareholder engagement in Brazil and South Africa. The role of regulation. *Corporate Governance: An International Review* 24 (5): 509–527.
- Zey, M. 2015. Rational Choice and Organization Theory in *International Encyclopedia of the Social & Behavioral Sciences* (Second Edition). Retrieved from International Encyclopedia of the Social & Behavioral Sciences|ScienceDirect

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