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# Ethical and Data Privacy Risks in AI-Driven Accounting: A Mixed-Methods Study

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## ABSTRACT

Artificial intelligence (AI) is increasingly integrated into accounting, automating tasks such as data processing, risk assessment and financial reporting. While AI offers efficiency gains, it raises ethical and data privacy risks, challenges professional accountability and tests the effectiveness of governance frameworks. This study investigates how these risks are perceived, managed and governed in AI-driven accounting environments. A mixed-methods approach was adopted, combining semistructured interviews and surveys with 24 accounting professionals in the Bristol and Bath area. The findings indicate that AI system opacity, algorithmic bias and sensitive data handling are key ethical concerns, while accountability depends on both organisational mechanisms and individual experience with AI. Governance and regulatory alignment support trust but are insufficient without ethical embedding and professional oversight. Based on these insights, the study recommends enhancing AI transparency, implementing clear accountability frameworks and embedding ethics into organisational culture.

**JEL Classification:** M41, O33

## 1 | Introduction

Artificial intelligence (AI) is profoundly reshaping accounting and auditing through technologies such as robotic process automation, machine learning, natural language processing and blockchain-assisted analytics. While scholars emphasise the efficiency and predictive power of AI [1–3], there is a notable tension between its technical capabilities and its impact on professional judgement. The literature suggests that accountants are evolving from transactional roles to analytical and advisory functions [4–6]. However, much of this literature assumes a linear adoption model, overlooking organisational resistance, skills gaps and the practical challenges of integrating AI into complex accounting workflows [7, 8].

At the same time, the ethical and data privacy implications of AI adoption are increasingly highlighted. AI systems' dependence

on large volumes of sensitive data exposes organisations to breaches, unauthorised access and conflicts with regulatory principles such as data minimisation and informed consent [9–13]. Scholars argue that algorithmic opacity undermines transparency and explainability, while biases in training data or models can distort financial assessments [14–17]. Yet, much of this discussion remains conceptual. Empirical evidence on how accountants navigate these ethical dilemmas in practice is scarce, leaving a gap between normative guidelines and day-to-day decision-making [18, 19].

Accountability and trust are central concerns in AI-integrated accounting systems. When responsibility for AI-driven decisions is diffuse across developers, managers and accountants, traditional mechanisms of control and auditability are weakened [18, 20, 21]. This raises critical questions about how organisations maintain professional standards and public confidence in

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financial reporting [22–25]. Although trust is recognised as a key organisational outcome, few studies critically assess the trade-offs between efficiency gains and the erosion of professional judgement, accountability, or ethical responsibility [9, 10].

Generally, the literature is fragmented across technical, legal and ethical streams. Technical research prioritises automation and system performance [1, 4, 8, 26], while legal studies focus narrowly on compliance and regulatory frameworks [9, 27–29]. Ethical analyses often remain normative, with limited empirical grounding, leaving a gap in understanding how professionals perceive and navigate these challenges in practice [15, 18, 19, 30, 31]. This fragmentation highlights the need for empirically grounded studies that examine how accounting professionals experience and manage the ethical and data privacy implications of AI in their daily work.

The aim of this study is to examine how accounting professionals perceive and experience ethical and data privacy risks in AI-driven accounting systems and how organisational and regulatory contexts shape professional accountability and trust.

The study has three objectives. First, it identifies the key ethical and data privacy risks that accounting professionals associate with AI use in accounting and auditing. Second, it examines how professionals and organisations assign responsibility for AI-mediated financial decisions. Third, it evaluates how professionals perceive the alignment between organisational practices and regulatory and ethical standards on data protection, transparency and accountability.

The study addresses three research questions.

Research Question 1 (RQ1): What ethical and data privacy risks arise from the use of AI in contemporary accounting practice?

Research Question 2 (RQ2): How is professional accountability defined and enacted when financial decisions are shaped by automated or opaque systems?

Research Question 3 (RQ3): To what extent do accounting professionals perceive organisational governance practices to align with regulatory and ethical standards?

This study contributes by providing empirically grounded, accounting-specific evidence on professionals' perceptions of ethical and data privacy risks in AI-mediated financial environments. It offers insights into how accountability is understood and enacted when financial decisions involve AI systems and how governance frameworks are experienced in practice. These findings inform practical guidance for designing organisational policies and training programmes that support transparent, accountable and trustworthy AI adoption in high-trust financial contexts.

## 2 | Literature Review

The literature on ethical risks in AI-driven accounting emphasises algorithmic bias, lack of transparency and opaque decision-making processes. Several studies suggest that AI systems can replicate or amplify biases present in training data, potentially producing discriminatory outcomes in areas such as credit assessments, risk scoring and financial reporting [1, 2, 14, 15]. Conceptual research further highlights that AI's opacity

undermines explainability, complicating accountants' ability to justify automated outputs and maintain professional judgement [15, 18, 26].

Recent empirical studies have begun to examine how these risks are managed in organisational contexts. For example, research has shown that governance structures, internal controls and professional oversight can reduce the likelihood of ethical failures in AI-assisted accounting processes [2, 15, 22]. These findings suggest that algorithmic bias or opacity does not automatically translate into unethical outcomes; rather, ethical risks are mediated by organisational safeguards, professional judgement and institutional contexts. However, existing empirical work often focuses on specific technologies, organisational settings, or experimental scenarios, leaving limited understanding of how ethical concerns are perceived and prioritised across diverse accounting environments [14, 18].

Empirical investigations into ethical risks have expanded in recent years, yet many rely on simulated or hypothetical scenarios rather than observing accountants operating in live environments [1, 15, 18]. While these studies provide valuable insights into behavioural responses and decision biases, they may not fully capture the organisational routines, cross-functional interactions and institutional pressures that shape ethical outcomes in practice [14, 22, 26]. This suggests that ethical challenges are embedded not only in technology but also in organisational culture and professional routines, highlighting the importance of context-sensitive empirical research [2, 15].

AI systems in accounting also process large volumes of sensitive financial and personal data, raising substantial privacy concerns [9, 10, 27]. Research has predominantly focused on technical solutions, including encryption, access controls and real-time monitoring, to mitigate these risks [3, 30]. These studies have contributed significantly to understanding how privacy risks can be reduced through system design and regulatory compliance. However, they often frame privacy primarily as a technical or legal issue, with less attention to how accountants interpret, prioritise, and implement such safeguards in daily practice [2, 9]. As a result, the effectiveness of privacy protections may depend not only on technical measures but also on professional awareness, organisational incentives and data-handling routines [10, 15].

Further, some studies have begun to consider contextual complexities such as cross-border data flows, organisational culture, and variations in AI literacy among staff [9, 27]. These contributions demonstrate that even technically secure systems may fail if professionals lack the knowledge, incentives, or capacity to follow protocols [1, 30]. Consequently, emerging research increasingly recognises that data privacy risks are shaped by the interaction between technical controls, organisational processes and human decision-making [2, 3, 10].

AI further complicates accountability in financial decision-making. Automated systems often operate with limited transparency, distributing responsibility across developers, managers and accountants [14, 15, 18]. Normative studies emphasise human oversight, ethical judgement, and clear responsibility assignment, while emerging empirical work suggests that accountability is often negotiated through organisational routines, team structures and management policies [18, 22]. These

studies indicate that accountability in AI-mediated contexts is not solely determined by formal standards but also by how professionals interpret and enact their roles within organisational settings [15, 26].

Empirical studies of accountability remain relatively limited in scope, however. Many focus on specific tasks or experimental settings, providing less insight into how responsibility is negotiated across complex organisational structures or long-term AI adoption processes [2, 18, 22]. Consequently, while the literature increasingly recognises the distributed nature of accountability, it offers limited guidance on how accountability mechanisms evolve as AI becomes embedded in everyday accounting work [14, 15].

Governance research has predominantly examined compliance with regulatory frameworks such as GDPR, sector-specific rules and organisational policies [3, 9, 10]. Studies emphasise procedural measures including audits, monitoring and risk assessments to mitigate ethical and privacy risks [3, 27]. These approaches demonstrate how formal governance structures can reduce technical and regulatory risks. At the same time, some studies note that compliance may function symbolically, serving as a signal of legitimacy rather than necessarily transforming underlying practices [22, 30]. This suggests that the effectiveness of governance depends not only on formal compliance but also on how policies are interpreted and enacted within organisational contexts [9, 10].

Moreover, emerging research highlights the dynamic interplay between governance policies, professional practices and stakeholder trust [22, 27]. While alignment with standards is often assumed to sustain confidence in AI-driven accounting, trust may depend on whether stakeholders perceive governance mechanisms as legitimate, predictable and ethically grounded [3, 15]. This indicates that governance mechanisms may fail to build trust if they are perceived as merely symbolic or procedural, underscoring the importance of examining both formal compliance and its practical enactment [14, 18].

## 2.1 | Hypothesis Development

The literature indicates that AI systems in accounting introduce significant ethical and data privacy risks due to algorithmic opacity, reliance on large volumes of sensitive financial data, and potential bias in automated outputs [9, 10, 14, 15]. While prior research has explored these risks conceptually or from a technical perspective, empirical insights into how accounting professionals perceive, interpret, and respond to such risks remain more limited in organisational settings [1, 2, 22]. Building on this understanding, the first research question examines the nature and scope of ethical and data privacy risks in AI-driven accounting. Given evidence that greater opacity in AI systems heightens uncertainty and increases the potential for ethical lapses, the first hypothesis is proposed:

H1: Greater AI system opacity is associated with higher perceived ethical and data privacy risks in AI-driven accounting.

Research also highlights that accountability in AI-mediated financial decisions is often distributed across multiple actors, including developers, managers, and accountants, which can dilute professional responsibility and oversight [18, 22, 26]. Although conceptual studies emphasise the need for clearly defined

oversight mechanisms, empirical investigations suggest that organisational structures and communication practices shape how responsibility is interpreted in practice [2, 15]. If organisational accountability measures are robust and effectively communicated, professionals are more likely to perceive responsibility as clear and actionable, leading to the second hypothesis:

H2: Strong organisational accountability mechanisms increase perceived professional responsibility in AI-mediated financial decisions.

Finally, literature on governance and regulatory compliance suggests that alignment with standards such as GDPR and sector-specific rules can influence stakeholder trust in AI-driven systems [3, 10, 27]. Trust, however, is not assumed to arise automatically from compliance. Rather, it is shaped by stakeholders' perceptions of legitimacy, predictability, and ethical assurance within organisational practices [18, 22]. In some contexts, purely symbolic or procedural compliance may fail to build trust if stakeholders perceive governance mechanisms as superficial or disconnected from actual practices [15, 30]. Accordingly, trust is expected to emerge when regulatory alignment is perceived as substantively embedded in organisational processes and professional conduct. This leads to the third hypothesis:

H3: Greater perceived alignment between organisational AI practices and regulatory standards is positively associated with stakeholder trust in AI-driven accounting systems.

Together, these hypotheses are grounded in prior research. H1 addresses risks associated with opacity and data sensitivity, H2 reflects challenges in professional accountability, and H3 builds on governance and trust formation mechanisms. This approach links research questions to testable hypotheses while acknowledging both the empirical advances and remaining gaps in understanding ethical and data privacy risks in AI-driven accounting.

## 3 | Methodology

### 3.1 | Research Design

This study adopted an exploratory sequential mixed-methods design, a two-phase approach in which qualitative exploration is used primarily to inform and develop a quantitative measurement instrument. This design was selected because the study addresses an emerging and context-dependent phenomenon, ethical and data privacy risks in AI-driven accounting, where existing measurement instruments are limited and often based on conceptual or technical assumptions rather than grounded professional practices.

In the first, qualitative phase, semistructured interviews were conducted to explore accountants' lived experiences with ethical risks, data privacy concerns, accountability, and governance in AI-mediated environments. These interviews served to identify context-specific themes, professional vocabularies, and salient concerns that might not be captured by constructs derived solely from prior literature. Insights from this phase directly informed the development and refinement of the survey instrument used in the second, quantitative phase.

This instrument development variant of the exploratory sequential design ensures that the quantitative measures are not abstractly imposed but are grounded in the realities of professional practice. Combining qualitative and quantitative methods in this sequence allowed for both an in-depth exploration of accountants' perspectives and a subsequent measurable analysis of patterns and associations within the same specialist population. This design enables triangulation between narrative accounts and statistical patterns, providing a more comprehensive and contextually grounded understanding of ethical risk, accountability, and governance in AI-driven accounting contexts.

### 3.2 | Sample Size and Participants

The study involved 24 accountants working in accounting firms in the Bristol and Bath area. Participants were selected using a purposive sampling strategy, targeting professionals with direct, hands-on experience or significant exposure to AI-driven accounting tools. This criterion ensured that participants could provide informed, experience-based insights into the ethical and data privacy issues associated with AI adoption in their daily work.

For the qualitative phase, the sample size was guided by the principle of thematic saturation, defined as the point at which no substantially new themes or insights emerged from additional interviews. Saturation was reviewed continuously during data collection and was confirmed to have been reached by the 24th interview, indicating that the sample was sufficient to capture the main patterns and variations in participants' experiences.

For the quantitative phase, the survey was administered to the same participant group. This decision was guided by two considerations. First, as an exploratory study focused on a specialised professional population with direct AI experience, the priority was maintaining close alignment between the qualitative insights that informed the instrument and the quantitative data used to test the hypotheses derived from them. Second, resource constraints and the geographic scope of the study limited access to a broader population of specialists meeting the inclusion criteria.

Consequently, the quantitative analysis was explicitly designed to identify patterns and associations within this cohort rather than to produce statistically generalisable inferences. The sample size of 24, while modest, is sufficient for the nonparametric techniques employed, and the findings are interpreted as indicative trends within this specific context rather than population-wide estimates. This limitation is acknowledged and addressed in the interpretation of results. Ethical approval for this study was obtained from Bath Spa University.

### 3.3 | Research Methods

In the qualitative phase, semistructured interviews were conducted to explore accountants' experiences with ethical risks, decision-making and governance in AI-mediated accounting. An interview guide was developed around key themes aligned with the study's objectives, including ethical risks, data privacy concerns, professional accountability, human oversight, governance alignment and risk mitigation practices. The guide was used flexibly to allow participants to raise unanticipated topics. Interviews were audio-recorded and supplemented with field

notes to capture contextual information, nonverbal cues and immediate analytical impressions. Each interview lasted between 45 and 75 min.

Following the qualitative phase, a structured survey instrument was developed. Items were generated through two sources: (1) constructs adapted from prior literature on AI ethics, accountability, and governance in accounting and information systems and (2) themes and terminology that emerged directly from the analysis of interview transcripts. For example, phrases used repeatedly by participants to describe AI opacity were translated into Likert-scale items assessing perceived opacity and its associated risks. This iterative process ensured that the measurement items were both theoretically grounded and reflective of participants' professional experiences and vocabularies. The final survey collected data on perceptions of ethical and data privacy risks, professional accountability, governance alignment, and stakeholder trust, with all responses measured using 5-point Likert scales.

### 3.4 | Data Analysis

#### 3.4.1 | Qualitative Analysis

Interview transcripts were analysed using thematic analysis in NVivo 15, following a structured multistage coding process designed to ensure transparency and analytical rigour.

Stage 1—open coding: Two researchers independently read and coded the first three transcripts line-by-line to identify discrete concepts, actions, and experiences related to the research questions. The research team then met to compare codes, discuss discrepancies, and agree on an initial coding framework.

Stage 2—axial coding: The agreed-upon framework was applied to the remaining transcripts. Codes were systematically grouped into broader conceptual categories by identifying relationships between them. For example, the codes 'not knowing why the system said no', 'can't question the machine', and 'mystery calculations' were grouped under the category 'Opacity in Decision-Making'.

Stage 3—theme development: These categories were then synthesised into higher-level analytical themes representing key dimensions of the phenomena under study. For instance, 'Opacity in Decision-Making' was combined with 'Bias in Training Data' and 'Unfair Client Outcomes' to form the overarching theme 'Perceived Ethical Risks'. This process was iterative, with themes being refined and checked against the data.

Stage 4—theme review: The final set of themes was reviewed by a third researcher not involved in the initial coding to challenge assumptions and ensure internal coherence. Themes were then systematically aligned with the study's research questions and theoretical framework to ensure analytical consistency. To enhance trustworthiness, preliminary findings were presented to a small subset of participants (member checking) to verify that interpretations resonated with their experiences.

#### 3.4.2 | Quantitative Analysis

Survey data were analysed in EVIEWS 12 using nonparametric methods appropriate for the modest sample size ( $n = 24$ ).

Descriptive statistics were used to summarise participants' perceptions, as means and standard deviations can be misleading in small samples and with ordinal Likert data. Spearman's rank correlation ( $\rho$ ) was used to assess the direction and strength of associations between ethical risk perception, professional accountability, governance alignment and trust. Kendall's Tau ( $\tau$ ) was additionally computed to confirm the robustness of observed correlations, as it is more resistant to the influence of outliers and small sample effects. Mann–Whitney  $U$  tests were conducted to examine differences between subgroups, such as participants with high versus low self-reported AI experience.

The qualitative and quantitative findings were integrated at the interpretation stage. Qualitative themes were used to explain and contextualise statistical patterns, while quantitative associations were used to identify which themes appeared to be systematically related across the participant group. This triangulation enabled a more nuanced understanding of how ethical and data privacy risks are perceived and managed in AI-driven accounting practice.

## 4 | Findings and Discussion

### 4.1 | Qualitative Analysis

Participants consistently identified AI system opacity and potential algorithmic bias as central ethical concerns. Several highlighted that AI produces recommendations without transparent reasoning, complicating justification to clients (Participants 1, 3, 5, 11), while others emphasised that flagged high-risk accounts often lack clear rationale, creating uncertainty in outputs (Participants 7, 14, 20). These observations mirror prior research indicating that algorithmic opacity constrains explainability and elevates the risk of biased financial outcomes [15, 18, 32]. Importantly, these findings suggest that ethical risks are experienced as practical challenges rather than abstract concerns, highlighting that the opacity of AI outputs can erode professional confidence and decision quality.

Data privacy emerged as a recurring concern across the sample. Participants reported difficulties in managing sensitive client data, particularly regarding access, processing and consent (Participants 2, 8, 12, 16, 21). This aligns with research demonstrating that AI systems often process extensive financial and personal information, creating vulnerabilities to breaches and misuse if inadequately managed [9, 10, 27, 30]. Critically, these findings indicate that privacy considerations are not solely technical or compliance-based; accountants perceive them as ethical and operational concerns, where lapses may compromise both trust and professional integrity.

Accountability in AI-mediated processes was described as complex and frequently ambiguous. Responsibility was reported as distributed across accountants, managers and IT professionals, generating uncertainty when errors occur (Participants 2, 6, 7, 15, 19). Some noted that although AI produces outputs, final decisions remain their responsibility, which can be stressful when outputs are opaque (Participants 2, 7, 13). This resonates with literature highlighting that AI diffuses responsibility, challenging traditional oversight and professional accountability structures [7, 14, 15, 18]. The findings underscore that accountability in AI-driven accounting is socially and organisationally mediated,

requiring clear roles, communication and organisationally embedded norms.

Human judgement was highlighted as a critical mitigator of both ethical and accountability risks. Participants described cross-checking AI outputs and applying professional expertise to ensure accuracy (Participants 3, 10, 15, 18, 22). This is consistent with studies emphasising that accountability mechanisms rely on active human engagement rather than formal policies alone [18, 22, 26]. Variability in organisational guidance was also evident, with some firms implementing detailed AI usage policies and others leaving decisions largely to individual discretion (Participants 4, 10, 17). This variation illustrates how organisational culture shapes ethical decision-making and the enactment of professional responsibility [30], suggesting that reliance on AI alone is insufficient without culturally reinforced oversight.

Governance and regulatory compliance were emphasised as influential but sometimes insufficient for mitigating ethical risks. Participants noted that policies often function as formalistic checklists, with uneven adherence, and trust in AI depended on how rules were integrated into everyday practice (Participants 4, 9, 12, 18, 23). This supports critiques that governance frameworks may prioritise procedural compliance over practical ethical outcomes [3, 9, 27]. Crucially, participants emphasised that rules guide practice, but ethical responsibility ultimately relies on professional judgement and interpretation [Participants 9, 18, 24], highlighting that governance effectiveness depends on alignment with organisational culture and professional norms [10, 15, 22].

Overall, the findings indicate that ethical risks, accountability and governance are deeply interconnected in AI-driven accounting. AI opacity, reliance on sensitive data, and distributed responsibility create multifaceted challenges for professional judgement. Effective management requires both procedural safeguards and active human oversight, supported by organisational policies embedded in an ethical culture [15, 18, 22, 26]. Critically, these results suggest that formal compliance mechanisms alone are insufficient; accountants must engage in interpretive decision-making, applying professional judgement to navigate opaque systems. These findings substantiate the study's hypotheses, linking AI opacity to perceived ethical risk, clarity in professional responsibility to organisational accountability, and governance alignment to trust in AI-mediated financial decision-making [3, 14]. The study extends prior work by demonstrating that ethical and accountability challenges are experienced as lived, context-dependent phenomena, shaped by human judgement, organisational culture and governance structures.

### 4.2 | Quantitative Analysis

Given the small sample size, nonparametric methods were applied. Descriptive statistics summarised perceptions of ethical and data privacy risks, professional accountability and governance alignment. Spearman's rank correlation ( $\rho$ ) examined associations between variables, while Kendall's Tau ( $\tau$ ) confirmed the robustness of correlations. Mann–Whitney  $U$  tests were conducted to assess differences between subgroups, such as participants with high versus low AI experience.

In Table 1, participants reported high perceived risks associated with AI system opacity and data privacy, indicating that

**TABLE 1** | Descriptive statistics for ethical and data privacy risks ( $n = 24$ ).

Construct	Mean	SD	Min	Max
AI system opacity	4.21	0.62	3	5
Algorithmic bias	4.08	0.69	3	5
Data privacy concerns	4.33	0.56	3	5

accountants are concerned about automated decision-making and the management of sensitive information. Participants 1, 3 and 7 highlighted that opaque AI outputs hinder detection of errors or bias, aligning with research on algorithmic opacity, ethical risks, and the challenges of explainability in AI-driven accounting [14, 15, 18, 32]. Participant 12 emphasised risks in cross-border data handling, reflecting concerns regarding data privacy, regulatory compliance, and organisational safeguards noted in prior studies [9, 10, 27]. Critically, these perceptions suggest that AI adoption may shift ethical responsibility onto accountants without clear mechanisms for oversight, highlighting a persistent gap between technical deployment and practical ethical preparedness in accounting practice [18, 22].

The strong positive correlation confirms that higher AI opacity is associated with greater perceived ethical and data privacy risks, supporting H1. In Table 2, Kendall’s Tau confirms robustness despite the small sample. This finding is significant because it demonstrates that accountants actively link technical transparency to ethical vulnerability, implying that organisations cannot rely solely on AI efficiency metrics. Participants 5 and 8 noted that opaque AI outputs force accountants to make assumptions or override system recommendations, reflecting challenges in explainability and the ethical use of AI highlighted in prior studies [14, 15, 18, 26]. These results underscore that organisations must integrate ethical oversight, professional judgement, and explainability into AI adoption strategies to effectively mitigate ethical and data privacy risks [10, 22].

The mean scores in Table 3 suggest moderate perceptions of accountability. Participants 2, 8 and 15 expressed uncertainty about who is responsible for errors caused by AI, reflecting the literature on diffused accountability in AI-mediated financial decision-making [14, 15, 18]. Participant 10 noted that oversight mechanisms exist, but their effectiveness depends on organisational enforcement, aligning with Agu et al. [22] and Alruwaili and Mgamal [2]. Critically, this indicates that formal policies alone do not guarantee accountability, and human judgement remains central. The data reveal that perceived accountability is contingent on both clarity in reporting structures and confidence in organisational enforcement, emphasising the interplay between professional discretion, organisational governance and AI system design [10, 18, 26].

In Table 4, correlations indicate a strong positive relationship, confirming H2: Stronger accountability mechanisms increase perceived professional responsibility. Participants 4 and 9

**TABLE 2** | Spearman’s correlation—AI opacity versus ethical/data privacy risks.

Variables	Spearman’s $\rho$	$p$ value
AI opacity—ethical/data risks	0.72	0.001

**TABLE 3** | Descriptive statistics for professional accountability ( $n = 24$ ).

Construct	Mean	SD	Min	Max
Clarity of responsibility	3.92	0.71	2	5
Human oversight mechanisms	4.08	0.66	3	5
Ethical decision-making support	3.83	0.74	2	5

highlighted that audit trails, reporting lines and supervision clarify responsibility, demonstrating that structural supports can mitigate the challenges posed by AI opacity [14, 15, 18]. Critically, while these mechanisms are helpful, the qualitative insights suggest that perceived responsibility is also shaped by personal experience, professional judgement, and familiarity with AI systems, indicating that accountability in AI-mediated accounting is inherently multidimensional [2, 22, 26].

In Table 5, the Mann–Whitney  $U$  test shows significant differences: Accountants with higher AI experience perceive accountability more positively. This suggests that confidence in oversight and professional responsibility is influenced by familiarity with AI systems, aligning with conceptual and empirical findings on human oversight and accountability in AI-mediated accounting [15, 18, 22]. Critically, this highlights that training and experience are as important as formal mechanisms, implying that organisations must integrate structural supports with professional judgement and practical experience to sustain accountability in AI-driven financial processes [2, 26].

In Table 6, high mean scores indicate positive perceptions of governance and trust. Participants 6, 11 and 18 emphasised that compliance with GDPR and internal policies strengthens confidence, supporting Aldboush et al. [9], Peng et al. [3], and Qureshi et al. [10]. Participant 14 argued that compliance alone cannot fully secure trust; embedding ethics in organisational culture is critical, aligning with Agu et al. [22] and Sriram [27]. Critically, this suggests that governance is necessary but not sufficient, and organisations must combine regulatory compliance with ethical leadership, professional oversight, and transparency to maintain trust in AI-driven accounting systems [15, 18].

In Table 7, the strong positive correlations confirm H3: Governance alignment increases trust in AI systems. Participants 20 and 22 highlighted that consistent enforcement of policies improves confidence, indicating that practical application matters as much as regulatory design, supporting Aldboush et al. [9], Peng et al. [3] and Qureshi et al. [10]. Critically, while statistical significance is strong, participant reflections show that trust is also shaped by perceived fairness, transparency and accountability, emphasising the interaction between technical, organisational and ethical factors [14, 15, 18, 22].

**TABLE 4** | Spearman’s correlation—accountability mechanisms versus perceived responsibility.

Variables	Spearman’s $\rho$	$p$ value
Accountability mechanisms—responsibility	0.65	0.002

**TABLE 5** | Mann–Whitney  $U$  test—AI experience versus accountability perception.

Group comparison	$U$ -value	$p$ value
High AI experience vs. low	72	0.038

The test reveals that participants with more AI experience report higher trust in AI systems, suggesting familiarity reduces perceived uncertainty and strengthens confidence in governance measures. Participant insights confirm that hands-on experience increases understanding of risks and mitigations, highlighting the importance of professional competence alongside procedural governance [15, 18, 22]. Critically, this underscores the interdependence of technical skill, oversight and ethical awareness in sustaining trust [9, 14].

### 4.3 | Revisit of the Research Questions and Hypotheses

The quantitative and qualitative findings collectively shed light on the three research questions and their corresponding hypotheses. RQ1 focused on identifying ethical and data privacy risks in AI-driven accounting. Both the survey results and interview insights indicate that AI opacity, algorithmic bias, and cross-border data handling are perceived as significant risks (Tables 1 and 2). Participants frequently highlighted that opaque AI outputs make error detection and bias mitigation challenging, aligning with previous studies on algorithmic accountability and ethical risk in AI-mediated accounting [9, 14, 15]. The strong positive correlation between AI opacity and perceived ethical/data risks ( $\rho = 0.72, p < 0.01$ ) supports H1, demonstrating that as system transparency decreases, perceived risks increase. Critically, this emphasises that ethical risk is not only a technical concern but also a function of professional awareness and organisational oversight [10, 18].

RQ2 examined professional accountability in AI-mediated decisions. Descriptive statistics and participant reflections reveal moderate levels of perceived accountability, with clarity of responsibility and human oversight being pivotal (Tables 3, 4, 5). Spearman's correlation confirmed that robust accountability mechanisms correlate positively with perceived responsibility ( $\rho = 0.65, p = 0.002$ ), supporting H2. Qualitative feedback shows that formal policies alone are insufficient; experience with AI systems and organisational enforcement critically influence accountants' sense of responsibility (Participants 2, 8, 15), consistent with Agu et al. [22] and Alruwaili and Mgamal [2]. This highlights the multidimensional nature of accountability in AI contexts, where ethical judgement, technical literacy and structural oversight intersect [15, 18].

RQ3 investigated the effectiveness of governance and regulatory alignment in fostering trust. Findings suggest that regulatory compliance and internal governance frameworks contribute

**TABLE 6** | Descriptive statistics for governance and trust ( $n = 24$ ).

Construct	Mean	SD	Min	Max
Regulatory compliance	4.17	0.60	3	5
Organisational governance	4.04	0.65	3	5
Trust in AI systems	4.08	0.62	3	5

**TABLE 7** | Correlations—governance alignment versus trust.

Variables	Spearman's $\rho$	Kendall's $\tau$	$p$ value
Governance alignment—trust	0.70	0.55	0.001

**TABLE 8** | Mann–Whitney  $U$  test—AI experience versus trust.

Group comparison	$U$ -value	$p$ value
High AI experience vs. low	75	0.041

positively to stakeholder trust, but their impact is mediated by organisational culture and ethical embedding (Tables 6, 7, 8). Spearman's correlation ( $\rho = 0.70, p < 0.01$ ) and Mann–Whitney  $U$  tests indicate that accountants with greater AI experience report higher trust, confirming H3. These results demonstrate that trust in AI systems is contingent not only on adherence to rules but also on transparency, fairness and perceived ethical management [3, 10, 22]. Critically, governance frameworks alone are insufficient without professional engagement and ethical oversight [14, 15, 18].

## 5 | Conclusion

This study explored ethical and data privacy risks, professional accountability and governance in AI-driven accounting. The findings indicate that accountants perceive AI system opacity, algorithmic bias, and sensitive data handling as significant ethical and privacy challenges. Professional accountability is influenced by both organisational mechanisms and individual experience with AI, while governance and regulatory alignment play a supportive but not sufficient role in sustaining trust. Overall, the results show that ethical, professional, and governance dimensions are deeply interconnected and cannot be addressed in isolation.

Based on these findings, several practical recommendations emerge. Organisations should prioritise AI transparency and explainability to reduce ethical risks and support professional judgement. Clear accountability frameworks, including reporting lines, audit trails, and human oversight mechanisms, must be combined with training and familiarisation programmes to enhance confidence and responsibility among accounting staff. Governance should extend beyond procedural compliance to incorporate ethical embedding and cultural reinforcement, ensuring that trust in AI systems is grounded in both formal structures and everyday professional practice.

Despite its contributions, this study has some limitations. The sample size is relatively small and geographically limited to the Bristol and Bath area, which may restrict generalisability to other contexts or larger organisations. Data were self-reported, potentially introducing subjective bias, and a cross-sectional design limits the ability to observe changes in perceptions or practices over time. Additionally, the study focused primarily on accountants, without incorporating perspectives from AI developers, auditors, or regulators, which could provide a more holistic understanding.

Future research could address these limitations by expanding the sample across multiple regions and organisational types, incorporating a longitudinal design to track evolving perceptions

and practices, and including diverse stakeholders to explore cross-functional dynamics in AI governance. Studies could also investigate interventions such as enhanced AI explainability tools, ethical training programmes, or accountability frameworks to assess their effectiveness in reducing perceived risks and improving trust in AI-driven accounting.

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## Conflicts of Interest

The authors declare no conflicts of interest.

## Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## References

1. B. Odonkor, G. M. Y. Owusu, and R. A. Bekoe, "The Impact of Artificial Intelligence on Accounting Practices: Exploring How Artificial Intelligence is Transforming Traditional Accounting Methods and Financial Reporting," *World Journal of Advanced Research and Reviews* 21, no. 1 (2024): 145–162, <https://doi.org/10.30574/wjarr.2024.11.1.2721>.
2. T. F. Alruwaili and M. H. Mgamal, "The Impact of Artificial Intelligence on Accounting Practices: An Academic Perspective," *Humanities and Social Sciences Communications* 12, no. 1 (2025): 1–18, <https://doi.org/10.1057/s41599-025-05004-6>.
3. Y. Peng, S. Wang, and X. Li, "Riding the Waves of Artificial Intelligence in Advancing Accounting and Its Implications for Sustainable Development Goals," *Sustainability* 15, no. 4 (2023): Article 3127, <https://doi.org/10.3390/su151914165>.
4. A. F. Holmes and A. Douglass, "Artificial Intelligence: Reshaping the Accounting Profession and the Disruption to Accounting Education," *Journal of Emerging Technologies in Accounting* 19, no. 1 (2022): 53–68, <https://doi.org/10.2308/JETA-2020-054>.
5. S. Leitner-Hanetseder, O. M. Lehner, C. Eisl, and C. Knoll, "Quo Vadis Accountancy?—Future Roles and Responsibilities," in *Artificial Intelligence in Accounting* (Routledge, 2022), 54–75.
6. S. Chu, "Evaluating the Financial Impact of Data Breaches Involving Account Credentials," (2021), <https://ssrn.com/abstract=3926497>.
7. R. Solaimani, S. Mohammed, F. Rashed, and W. Elkesh, "The Impact of Artificial Intelligence on Corporate Control," *Corporate Ownership and Control* 17, no. 3 (2020): 171–178, <https://ssrn.com/abstract=3576777>, <https://doi.org/10.22495/cocv17i3art13>.
8. H. Han, R. K. Shiwakoti, R. Jarvis, C. Mordi, and D. Botchie, "Accounting and Auditing With Blockchain Technology and Artificial Intelligence: A Literature Review," *International Journal of Accounting Information Systems* 48 (2023): 100598, <https://doi.org/10.1016/j.accinf.2022.100598>.
9. H. H. H. Aldboush, M. T. Alshurideh, B. A. Kurdi, and S. A. Salloum, "Building Trust in Fintech: An Analysis of Ethical and Privacy Considerations in the Intersection of Big Data, Artificial Intelligence, and Customer Trust," *International Journal of Financial Studies* 11, no. 4 (2023): 127, <https://doi.org/10.3390/ijfs11040127>.
10. N. I. Qureshi, S. S. Choudhuri, Y. Nagamani, R. A. Varma, and R. Shah, "Ethical Considerations of AI in Financial Services: Privacy, Bias, and Algorithmic Transparency," in *2024 International Conference on Knowledge Engineering and Communication Systems (ICKECS)*, 1 (IEEE, April, 2024), 1–6, <https://doi.org/10.1109/ICKECS61492.2024.10616483>.
11. I. Senarathna, W. Yeoh, M. Warren, and S. Salzman, "Security and Privacy Concerns for Australian SMEs Cloud Adoption: Empirical Study of Metropolitan vs Regional SMEs," *Australasian Journal of Information Systems* 20 (2016): <https://doi.org/10.3127/ajis.v20i0.1193>.
12. M. La Torre, V. L. Botes, J. Dumay, and E. Odendaal, "Protecting a New Achilles Heel: The Role of Auditors Within the Practice of Data Protection," *Managerial Auditing Journal* 36, no. 2 (2021): 218–239, <https://doi.org/10.1108/MAJ-03-2018-1836>.
13. P. Li and L. Zhang, "Application of Big Data Technology in Enterprise Information Security Management," *Scientific Reports* 15, no. 1 (2025): 1022, <https://doi.org/10.1038/s41598-025-85403-6>.
14. S. Hesami, "Navigating the AI-Driven Transformation of Personal Finance: Opportunities, Challenges, and Ethical Imperatives," *Strategy & Leadership* (2025): <https://doi.org/10.1108/SL-02-2025-0019>.
15. C. Zhang, W. Zhu, J. Dai, Y. Wu, and X. Chen, "Ethical Impact of Artificial Intelligence in Managerial Accounting," *International Journal of Accounting Information Systems* 49 (2023): 100619, <https://doi.org/10.1016/j.accinf.2023.100619>.
16. M. Bagaric, J. Sivilar, M. Bull, D. Hunter, and N. Stobbs, "The Solution to the Pervasive Bias and Discrimination in the Criminal Justice: Transparent Artificial Intelligence," *American Criminal Law Review* 59, no. 1 (2021): <https://ssrn.com/abstract=3795911>.
17. H. Vainio-Pekka, M. O. O. Agbese, M. Jantunen, et al., "The Role of Explainable Ai in the Research Field of Ai Ethics," *ACM Transactions on Interactive Intelligent Systems* 13, no. 4 (2023): 1–39, <https://doi.org/10.1145/3599974>.
18. O. M. Lehner, S. Leitner-Hanetseder, and C. Eisl, "Artificial Intelligence-Based Decision-Making in Accounting and Auditing: Ethical Challenges and Normative Thinking," *Accounting, Auditing & Accountability Journal* 35, no. 4 (2022): 1095–1122, <https://doi.org/10.1108/AAAJ-09-2020-4934>.
19. S. K. Herath and L. M. Herath, "Understanding the Ethical and Social Consequences of Data Analytics for Organizational Management in the Age of AI: Accounting Ethics Perspective," in *AI and Data Analytics Applications in Organizational Management* (IGI Global, 2024), 216–248, <https://doi.org/10.4018/979-8-3693-1058-8.ch011>.
20. T. Jauhiainen and O. M. Lehner, "Good Governance of AI and Big Data Processes in Accounting and Auditing," in *Artificial Intelligence in Accounting* (Routledge, 2022), 119–181.
21. B. P. Commerford, S. A. Dennis, J. R. Joe, and J. W. Ulla, "Man Versus Machine: Complex Estimates and Auditor Reliance on Artificial Intelligence," *Journal of Accounting Research* 60, no. 1 (2022): 171–201, <https://doi.org/10.1111/1475-679X.12407>.
22. E. E. Agu, C. E. Okafor, and J. K. Mensah, "Discussing Ethical Considerations and Solutions for Ensuring Fairness in AI-driven Financial Services," *International Journal of Frontline Research in Science and Technology* 3, no. 2 (2024): 45–59, <https://doi.org/10.56355/ijfrms.2024.3.2.0024>.
23. D. I. Ajiga, "Strategic Framework for Leveraging Artificial Intelligence to Improve Financial Reporting Accuracy and Restore Public Trust," *International Journal of Multidisciplinary Research and Development* 8, no. 3 (2021): 12–19, <https://doi.org/10.54660/IJMRGE.2021.2.1.882-892>.
24. W. Rodgers, J. M. Murray, A. Stefanidis, W. Y. Degbey, and S. Y. Tarba, "An Artificial Intelligence Algorithmic Approach to Ethical Decision-Making in Human Resource Management Processes," *Human Resource Management Review* 33, no. 1 (2023): 100925, <https://doi.org/10.1016/j.hrmr.2022.100925>.
25. L. Yarger, F. Cobb Payton, and B. Neupane, "Algorithmic Equity in the Hiring of Underrepresented IT Job Candidates," *Online Information Review* 44, no. 2 (2020): 383–395, <https://doi.org/10.1108/OIR-10-2018-0334>.

26. A. A. H. Abdullah and F. A. Almaqtari, "The Impact of Artificial Intelligence and Industry 4.0 on Transforming Accounting and Auditing Practices," *Journal of Open Innovation: Technology, Market, and Complexity* 10, no. 1 (2024): 100218, <https://doi.org/10.1016/j.joitmc.2024.100218>.
27. H. K. Sriram, "Integrating Generative AI Into Financial Reporting Systems for Automated Insights and Decision Support," (2022), <https://ssrn.com/abstract=5232395>.
28. E. Bayamlıoglu, "The Right to Contest Automated Decisions Under the General Data Protection Regulation: Beyond the So-Called Right to Explanation," *Regulation & Governance* 16, no. 4 (2022): 1058–1078, <https://doi.org/10.1111/rego.12391>.
29. G. Maltieri and F. A. Pasquale, "From Transparency to Justification: Toward ex Ante Accountability for AI," *Brooklyn Law School, Legal Studies Paper* 712 (2022): <https://ssrn.com/abstract=4099657>.
30. T. O. Jejenywa, N. Z. Mhlongo, and T. O. Jejenywa, "Social Impact of Automated Accounting Systems: A Review: Analyzing the Societal and Employment Implications of the Rapid Digitization in the Accounting Industry," *Finance & Accounting Research Journal* 6, no. 4 (2024): 684–706, <https://doi.org/10.51594/farj.v6i4.1069>.
31. A. Ahmad, "Ethical Implications of Artificial Intelligence in Accounting: A Framework for Responsible AI Adoption in Multinational Corporations in Jordan," *International Journal of Data and Network Science* 8, no. 1 (2024): 401–414, <https://doi.org/10.5267/j.ijdns.2023.9.014>.
32. M. Busuioc, "Accountable Artificial Intelligence: Holding Algorithms to Account," *Public Administration Review* 81, no. 5 (2021): 825–836, <https://doi.org/10.1111/puar.13293>.