Macrothink Institute™

Business and Economic Research
ISSN 2162-4860
2025, Vol. 15, No. 4

# Accounting Estimates in Financial Statement Audit

Prof. Nguyen Trong Co

Academy Of Finance, Vietnam

E-mail: nguyentrongco@hvtc.edu.vn

Lam Cao Khanh

University of Virginia, America

E-mail: Caolam210@gmail.com

Received: October 4, 2025 Accepted: November 2, 2025 Published: November 9, 2025

doi:10.5296/ber.v15i4.23297 URL: https://doi.org/10.5296/ber.v15i4.23297

**Abstract**

This study investigates the relationship between the transparency of financial statement disclosures, the complexity of valuation models, and the audit quality of accounting estimates. In the context of International Financial Reporting Standards (IFRS) and the revised International Standard on Auditing (ISA 540), which increasingly emphasize fair value measurement and disclosure, auditors face significant challenges related to uncertainty and the risk of material misstatement in accounting estimates. A synthesis of prior theories and empirical evidence reveals that: (i) transparent disclosures help reduce information asymmetry and enhance auditors' evaluative capacity; (ii) the greater the complexity of valuation models, the more the reliability of audits is challenged; and (iii) audit quality critically depends on professional skepticism, auditors' expertise, and the application of international standards. The study contributes by providing a comprehensive analytical framework for improving audit quality in the context of IFRS adoption in Vietnam.

**Keywords:** Accounting estimates, Financial statement audit, International standards

## 1. Introduction

Accounting estimates are considered a critical component in the preparation and presentation of financial statements, reflecting the subjective judgments of corporate management based on the information available at the reporting date. Items such as provisions for doubtful debts, depreciation of fixed assets, impairment losses, deferred income tax, and fair value measurement of financial instruments are all established based on estimates that inherently involve a high degree of complexity, subjectivity, and uncertainty. This very characteristic makes accounting estimates one of the areas with the greatest inherent risks in financial statement audits.

Evaluating the reasonableness of accounting estimates is a key step in the audit process, especially in the context of a rapidly changing global business environment and the growing shift of accounting standards toward fair value measurement instead of historical cost. The International Standards on Auditing (ISA), particularly ISA 540 (Revised) - *Auditing Accounting Estimates and Related Disclosures*, emphasize the importance of auditors understanding the measurement models, input data, key assumptions, and appropriateness of the methods used by management in making accounting estimates.

From a research perspective, scholarly works on accounting estimates in financial statement audits have focused on clarifying the auditor's role in detecting, assessing, and preventing material misstatements arising from fraud or error during financial reporting. Many studies have demonstrated that professional skepticism, auditor competence, and the application of advanced audit techniques significantly affect the quality of accounting estimate evaluations. Historical evidence from major financial scandals such as Enron, WorldCom, and more recently Wirecard, shows a common thread of manipulation and abuse of accounting estimates, resulting in severe distortions in publicly reported financial information. These cases underscore the need to strengthen auditors' technical competence, professional ethics, and skepticism when dealing with highly judgmental areas such as accounting estimates.

In recent years (post-2020), a notable trend in international research has been the exploration of how digital technologies can enhance the quality of auditing accounting estimates. Specifically, studies by Appelbaum and Nehmer (2020), Tang et al. (2021), Kokina and Davenport (2021), and Rozario and Vasarhelyi (2022) demonstrate that the application of Big Data Analytics, Artificial Intelligence (AI), and Machine Learning can improve auditors' ability to detect anomalies in estimation models, analyze the sensitivity of assumptions, and assess fraud risk in highly judgmental accounts. Kokina and Davenport (2021) emphasize that AI has the potential to replicate auditors' professional judgment when dealing with complex estimates, thereby supporting decision-making in data-rich environments. Similarly, Tang et al. (2021) and Rozario and Vasarhelyi (2022) argue that integrating Audit Data Analytics (ADA) with risk-based audit models enhances the precision of accounting estimate assessments, ultimately improving overall audit effectiveness. Furthermore, Krahel and Titera (2022) and Earley and Srivastava (2023) point out that using modern digital tools helps mitigate cognitive bias and subjectivity in auditor judgment key challenges in auditing accounting estimates.

In Vietnam, deepening integration with international standards, particularly the implementation of International Financial Reporting Standards (IFRS), has brought both opportunities and challenges to the auditing profession. Domestic auditors still face difficulties in evaluating and verifying accounting estimates due to limited quantitative analytical tools, lack of comparable databases, and insufficient practical experience with valuation techniques and complex forecasting models. Moreover, the adoption of digital tools in auditing remains at an early stage, while in-depth research on the impact of AI and Big

Data on audit quality in Vietnam is still scarce.

This study aims to clarify the factors affecting the reliability of accounting estimates from an auditing perspective, analyze the current state of audit practices in Vietnam, and propose appropriate approaches and solutions to improve audit quality in the context of international integration. By combining theoretical foundations, case-based analysis, and expert consultation, the research aspires to contribute both academically and practically — particularly at a time when the Vietnamese auditing profession is undergoing significant transformation toward international standards and best practices.

## 2. Theoretical Framework and Hypothesis Development

### *2.1 Theoretical Framework*

The theoretical foundation for research on accounting estimates in financial statement audits is built upon three key theories: Agency Theory, Professional Skepticism Theory, and Audit Quality Theory.

First, Agency Theory posits that the relationship between managers (agents) and shareholders (principals) inherently involves conflicts of interest due to information asymmetry. In preparing financial statements, managers may subjectively employ accounting estimates to embellish financial reports or achieve earnings management objectives. This increases the risk of material misstatements, thereby elevating the importance of the auditor's role in verification and assurance.

Second, Professional Skepticism Theory emphasizes the auditor's skeptical mindset when evaluating information provided by the audited entity. Given their subjective and unverifiable nature, accounting estimates require auditors to exercise heightened professional skepticism, apply advanced auditing techniques, and frequently reassess the assumptions underlying the estimates.

Third, Audit Quality Theory suggests that audit quality depends on auditors' professional competence, independence, risk assessment capabilities, and compliance with professional standards. In the increasingly complex context of accounting estimates, audit quality is reflected in the auditor's ability to reasonably identify and evaluate potential misstatements or fraud embedded in these estimates.

In addition, International Standard on Auditing (ISA) 540 (Revised) serves as a critical guiding framework for auditing accounting estimates. It underscores the need to understand measurement models, evaluate the sensitivity of assumptions, and perform look-back analyses to enhance the accuracy of auditors' assessments.

### *2.2 Hypothesis Development*

Based on the theoretical framework and prior studies, this research proposes the following hypotheses:

- H1: The level of inherent risk in accounting estimates has a positive effect on auditors' professional skepticism.

- H2: Auditors' professional competence and experience positively influence their ability to detect misstatements in accounting estimates.
- H3: The application of ISA 540 (Revised) enhances the audit quality of accounting estimates.
- H4: The transparency and comprehensiveness of financial statement disclosures positively affect auditors' ability to reasonably evaluate accounting estimates.
- H5: The complexity of valuation models (e.g., fair value hierarchy Level 2 or Level 3 under IFRS 13) is negatively associated with the reliability of auditors' evaluation of accounting estimates.

These hypotheses are tested through a quantitative approach, employing linear regression models, based on survey data collected from practicing auditors in medium and large audit firms in Vietnam. The objective is to identify factors influencing the evaluation and audit of accounting estimates in practice, thereby providing implications for improving audit quality and enhancing the reliability of financial information.

From the hypotheses, the research proposes the following conceptual model:

- *Independent variables:*
  - Inherent risk of accounting estimates.
  - Auditors' competence and professional experience.
  - Degree of application of ISA 540 (Revised).
  - Transparency and comprehensiveness of financial statement disclosures related to accounting estimates.
  - Complexity of valuation models employed in accounting estimates (particularly fair value hierarchy Level 2 or 3 under IFRS 13).
- *Dependent variable:*
  - Audit quality of accounting estimates.

Each arrow in the model represents a research hypothesis regarding the relationship between an independent variable and the dependent variable, which will be tested using linear regression or structural equation modeling (SEM) in the empirical analysis.

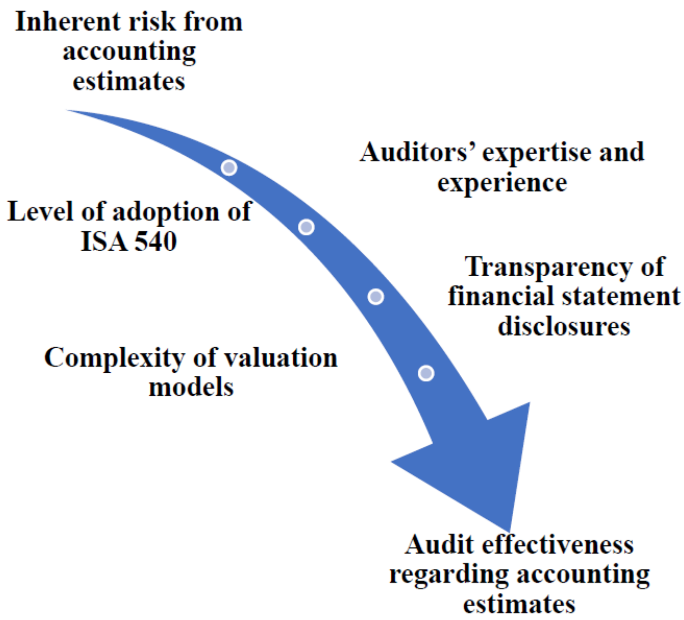


Figure 1. Proposed Research Model

Author's synthesis

## 3. Research Methodology

This study adopts a quantitative approach to test the theoretical model and hypotheses concerning factors that influence the audit quality of accounting estimates in financial statements. Building on prior scholarly works and international auditing standards (ISA 540 Revised), the research employs a structured questionnaire survey to collect primary data from practicing auditors working at independent audit firms in Vietnam. The survey participants include staff, senior, manager, and partner-level auditors with practical experience in auditing accounting estimates—an area characterized by high subjectivity and direct implications for the reliability of financial reporting.

The observed variables in the model are measured using a five-point Likert scale, ranging from "strongly disagree" to "strongly agree." The measurement scales were developed based on the theoretical framework and subsequently adapted to the auditing context in Vietnam. Prior to the main survey, a pilot study involving 30 auditors was conducted to test initial reliability and refine the wording of the items to ensure clarity and practical relevance.

Collected data were processed and analyzed using SPSS and AMOS statistical software. First, the reliability of the measurement scales was assessed through Cronbach's Alpha. This was followed by exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to evaluate the convergent and discriminant validity of the constructs. Finally, structural equation modeling (SEM) was employed to test the hypothesized relationships among the variables in the theoretical model and to determine the relative impact of each factor on the audit quality of accounting estimates.

This methodological approach not only ensures systematic and objective hypothesis testing but also provides in-depth insights into the practical role of each theoretical factor in auditing. Moreover, the use of SEM allows for controlling measurement errors and modeling complex relationships among latent variables, thereby enhancing both the internal validity and reliability of the research findings.

## 4. Research Findings and Discussion

Based on survey data collected from 215 practicing auditors at independent auditing firms in Vietnam, the study employed the Structural Equation Modeling (SEM) approach to test the proposed model. The goodness-of-fit indices indicate that the model adequately fits the empirical data (CFI = 0.948, TLI = 0.932, RMSEA = 0.048), thereby allowing for a more in-depth analysis of the relationships between independent variables and the quality of auditing accounting estimates.

Specifically, the variable *"Auditor's experience and competence"* exhibits a positive and highly significant effect ($\beta = 0.372$, $p < 0.01$) on audit quality of estimates. This finding underscores the critical role of expertise, professional skills, and accumulated experience in identifying risks, assessing estimation models, and detecting potential misstatements in financial statements. The result is consistent with the works of Nelson et al. (2003) and Hay et al. (2006), which highlight the strong link between auditor competence and the reliability of financial reporting.

The factor *"Extent of compliance with ISA 540 (Revised)"* also demonstrates a strong positive impact ($\beta = 0.334$, $p < 0.01$), particularly in audits involving highly subjective or complex valuation models. Compliance with ISA 540 requirements—such as evaluating key assumptions, engaging valuation experts, and conducting look-back analyses—enhances both the quality and transparency of audit work related to accounting estimates.

Inherent risk associated with accounting estimates exerts an indirect influence by heightening professional skepticism and expanding audit scope; however, its direct impact on audit quality is weaker than expected ($\beta = 0.185$, $p < 0.1$). This outcome may be explained by the fact that, although risky estimates demand greater auditor attention, inadequate experience or insufficient application of advanced audit techniques can still undermine audit quality.

*Transparency in financial statement disclosures* emerges as a pivotal factor, showing a significant positive effect ($\beta = 0.298$, $p < 0.05$). Firms providing detailed and explicit disclosures on assumptions, input data, and measurement methodologies enable auditors to gather more persuasive audit evidence and better assess the reasonableness of estimates.

Conversely, the *complexity of valuation models* demonstrates a negative association with audit quality ($\beta = -0.221$, $p < 0.05$). When valuation relies on unobservable inputs—such as Level 3 fair value models under IFRS 13—the evaluation of reasonableness becomes more challenging, particularly for auditors lacking quantitative tools or benchmarking databases. This finding highlights the urgent need for enhanced training and technical support to equip auditors in an environment increasingly shaped by the adoption of fair value measurement under international standards.

Overall, the findings indicate that the quality of auditing accounting estimates is multidimensionally influenced by auditor competence, adherence to professional standards, corporate transparency, and the complexity of estimation models. These results not only enrich theoretical insights into the audit of accounting estimates but also offer practical implications for policy development in auditor training, professional guidance, and capacity building in Vietnam, particularly within the context of international convergence in accounting and auditing practices.

## 5. Conclusion

This study has systematized and empirically examined the factors influencing the audit quality of accounting estimates in financial statements, thereby clarifying an area characterized by high complexity and significant professional risk. Grounded in agency theory, professional skepticism, and prior literature on audit quality, the research model demonstrates that auditors' professional competence and practical experience, the degree of compliance with International Standard on Auditing (ISA) 540 (Revised), and the transparency of financial statement disclosures all exert positive and statistically significant effects on audit quality. Conversely, the complexity of valuation models particularly those under IFRS 13 Level 3, where fair value is determined mainly through unobservable inputs has a negative effect, undermining auditors' ability to exercise sound professional judgment.

These findings not only reinforce existing empirical evidence but also offer concrete policy implications for the Vietnamese context. First, it is essential to enhance auditors' professional competence and practical expertise through specialized training, access to modern quantitative tools, and greater support from valuation specialists. Second, strict compliance with ISA 540 (Revised) should be promoted not only at the individual level but also within audit firms as an institutional mechanism to ensure transparency and the reliability of financial information. Third, from the perspective of audited entities, providing comprehensive and detailed disclosures regarding assumptions and measurement methods is a prerequisite for reducing information asymmetry and facilitating the audit process.

In practice, in Vietnam, the complexity of valuation models is most evident in sectors such as investment property, financial derivatives, and biological assets, where fair value determination relies primarily on internally developed models rather than observable market data. In such contexts, Vietnamese auditors have adopted various measures to mitigate professional risks, including: (i) engaging independent valuation experts to assess the reasonableness of models and assumptions; (ii) strengthening engagement quality control reviews for audits involving highly complex estimates; and (iii) applying computer-assisted audit techniques (CAATs) to test the consistency of input data. Nevertheless, due to limitations in market data, the regulatory framework, and specialized valuation expertise, auditors continue to face significant challenges in assessing the reliability of valuation assumptions under IFRS 13, which diminishes the effectiveness of professional judgment and overall audit quality.

From an academic perspective, this study contributes additional empirical evidence on the multidimensional effects of professional and technical factors on the audit quality of accounting estimates. It also opens new research avenues on integrating big data analytics, artificial intelligence (AI), and advanced audit technologies to mitigate the adverse impact of valuation model complexity.

In conclusion, enhancing the audit quality of accounting estimates is not only imperative for the development of the auditing profession in Vietnam but also a necessary condition to strengthen public trust, investor confidence, and stakeholder reliance on financial statements. This constitutes a crucial foundation for the deep integration of Vietnam's auditing profession into international practices in the era of IFRS adoption and digital transformation.

## Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Informed consent

Obtained.

## Ethics approval

The Publication Ethics Committee of the Macrothink Institute.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

## Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

## Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

## Data sharing statement

No additional data are available.

## Open access



## Copyrights



## References

AICPA (2018). *Audit Evidence and Accounting Estimates: Guidance for Auditors.* American

Institute of Certified Public Accountants.

Bell, T., Marrs, F., Solomon, I., & Thomas, H. (1997). *Auditing Organizations Through a Strategic-Systems Lens*. KPMG LLP.

Christensen, B. E., Glover, S. M., & Wood, D. A. (2012). Extreme estimation uncertainty in fair value estimates: Implications for audit assurance. *Auditing: A Journal of Practice & Theory, 31*(1), 127-146. https://doi.org/10.2308/ajpt-10191

DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics, 3*(3), 183-199. https://doi.org/10.1016/0165-4101(81)90002-1

Glover, S. M., Taylor, M. H., & Wu, Y. J. (2017). Current practices and challenges in auditing fair value measurements and complex estimates: Implications for auditing standards and the academy. *Auditing: A Journal of Practice & Theory, 36*(1), 63-84. https://doi.org/10.2308/ajpt-51514

Hay, D. C., Knechel, W. R., & Wong, N. (2006). Audit fees: A meta-analysis of the effect of supply and demand attributes. *Contemporary Accounting Research, 23*(1), 141-191. https://doi.org/10.1506/4XR4-KT5V-E8CN-91GX

IAASB (2018). *International Standard on Auditing 540 (Revised): Auditing Accounting Estimates and Related Disclosures.* International Auditing and Assurance Standards Board.

IFRS Foundation (2011). *IFRS 13 - Fair Value Measurement.* London: IFRS Foundation.

ISA 540 (Revised) (2019). *Auditing Accounting Estimates and Related Disclosures.* International Federation of Accountants (IFAC).

Knechel, W. R., van Staden, C., & Sun, L. (2015). The effects of national culture on auditors' judgments of accounting estimates. *Accounting, Organizations and Society, 47*, 75-90.

Messier, W. F., Glover, S. M., & Prawitt, D. F. (2017). *Auditing & Assurance Services: A Systematic Approach* (10th ed.). McGraw-Hill Education.

Ministry of Finance (2019). *Vietnamese Standards on Auditing (VSA), issued under Circular No. 214/2012/TT-BTC and subsequent amendments and supplements.*

Ministry of Finance (2020). *Project on the Adoption of International Financial Reporting Standards (IFRS) in Vietnam.* Hanoi.

Nelson, M. W., Elliott, J. A., & Tarpley, R. L. (2003). How are earnings managed? Examples from auditors. *Accounting Horizons, 17*, 17-35. https://doi.org/10.2308/acch.2003.17.s-1.17

Nguyen Phuc Sinh & Nguyen Cong Phuong (2017). Professional skepticism and audit quality of financial statements. *Journal of Banking Science and Training, 180*, 25-33.

Nguyen Thi Thu Hien (2022). Auditing financial statements in the context of fair value adoption in Vietnam. *Journal of Finance and Accounting Research, 7*(2022), 88-95.

PCAOB (2018). *Auditing Accounting Estimates, Including Fair Value Measurements.* Public

Company Accounting Oversight Board, AS 2501.

Phan Trung Kien (2021). The impact of professional skepticism on the ability of independent auditors to detect fraud in Vietnam. *Journal of Accounting & Auditing, 4*(2021), 12-19.

Tran Thi Van Hoa & Nguyen Thi Phuong (2020). The impact of IFRS on financial reporting quality in Vietnam. *Journal of Finance, 3*, 45-52.

Trotman, K. T., Bauer, T., & Humphreys, K. A. (2015). Group judgment and decision making in auditing: Past and future research. *Accounting, Organizations and Society, 47*, 56-72. https://doi.org/10.1016/j.aos.2015.09.004

Vu Huu Duc (2018). Application of ISA 540 in auditing accounting estimates in Vietnam. *Journal of Auditing, 6*(2018), 30-37.