

The Application Dilemma, Causes and Improvement Path of Forensic Accounting Loss Measurement in Financial Fraud Cases

Yanfeng Fang*

Law School of Foshan University, Foshan, China

*2356831744@qq.com

Abstract

A pivotal aspect of financial fraud case adjudication involves establishing verifiable and defensible quantification of investor losses. Forensic accounting, as an interdisciplinary field integrating accounting, auditing, and legal expertise, demonstrates unique professional advantages in loss measurement. However, China's practice still faces critical challenges including an underdeveloped measurement framework, non-standardized methodology selection, and inconsistent reporting formats. This study systematically reviews existing literature and case studies, applying the "problem-cause-response" research paradigm to analyze practical dilemmas in forensic accounting loss measurement for financial fraud cases. By examining institutional frameworks, technical standards, and talent development from three dimensions, it proposes a progressive improvement path encompassing "enhanced regulations, unified methodologies, and strengthened talent cultivation". These recommendations aim to provide actionable policy suggestions for elevating investor protection standards in China's capital markets.

Keywords

Forensic Accounting; Loss Measurement; Financial Fraud; Investor Protection; System Improvement.

1. Introduction

The lack of unified definitions for valuation ranges, weighting standards, and tax boundaries resulted in compensation amounts differing by 30%-50%, leaving investors with unstable expectations and undermining judicial certainty^[1]. In current legal practice, the coexistence of statutory application, market comparison, and income valuation methods remains ambiguous in selection. Some publicly disclosed appraisal reports only provide final loss amounts without disclosing key parameters such as discount rates, beta coefficients, and risk-free interest rates. They also offer vague explanations regarding adjustment factors like market liquidity discounts and control premium. The lack of transparency not only weakens the report's defense capabilities but also creates risks for appellate and retrial proceedings, further exacerbating redundant consumption of judicial resources.

2. The Practical Dilemma of Loss Measurement in Forensic Accounting

2.1. Fragmentation of Institutional Rules

China currently lacks a systematic regulation specifically addressing the measurement of civil compensation losses in financial fraud cases^[2]. Existing provisions are scattered across documents such as the Securities Law and the Supreme People's Court's Several Provisions on the Trial of Civil Compensation Cases Involving False Statements in the Securities Market (2022 Amendment), but these contain abstract content. They only provide conceptual definitions for

"investment difference losses" while failing to specify criteria for determining three key dates: implementation date, disclosure date, and benchmark date; deduction methods for "systemic risk"; or adjustment criteria for stock splits, capital increases, and rights issues. Courts across different regions have developed fragmented practices: for instance, Shanghai Financial Court tends to use "the 30-day average price from the disclosure date" as the benchmark, whereas Shenzhen Intermediate Court adopts "the 10-day average price from the disclosure date." Significant discrepancies in the starting point, endpoint, and duration of calculation periods result in potential compensation differences exceeding 30% for investors of the same stock across different courts^[3].

2.2. Technical Method Irregularity

The statutory application method, market comparison method, and income estimation method each have their advantages and disadvantages, but the boundaries of their application remain ambiguous. Taking the Kangde Xin case as an example, the plaintiff's attorney claimed statutory application under the "Several Provisions," calculating investment difference losses at 15.6 yuan per share; while the defendant cited the market comparison method, using the decline of the CSI 300 Index during the same period as the basis for deducting systematic risk, resulting in a loss of only 7.8 yuan per share. Since judicial interpretations do not provide rigid guidelines on "when to prioritize statutory application" or "how to quantify systemic risk," appraisers often select methods based on client interests. This shifts trial focus from technical issues to methodological disputes, artificially prolonging litigation cycles. The parameter-setting phase also suffers from significant transparency deficiencies: In the income estimation method, future earnings periods are subjectively set by appraisers as 5 or 10 years, with discount rates simply copied from benchmark bank loan rates without disclosing predictive assumptions or conducting sensitivity analyses. In the market comparison method, key variables such as company selection criteria, liquidity discount rates, and control premium rates become "black boxes." The lack of standardized technical methods directly undermines the scientific validity and evidentiary credibility of appraisal opinions, providing loopholes for second-instance and retrial proceedings while further exacerbating judicial uncertainty.

2.3. The Dual Shortage of Talents and Supervision

The current talent cultivation system struggles to address the talent gap effectively^[4]. At the university level, graduate enrollment in forensic accounting remains below 200 students annually, with curricula prioritizing theoretical knowledge over practical application, lacking real-world case simulations and interdisciplinary mentorship. The continuing education sector focuses on certification exams while neglecting core competencies like loss measurement models, Python data analysis, and courtroom cross-examination techniques. This shortage has led to frequent occurrences of "multiple cases signed by a single individual," compromising the quality of forensic evaluations. Regulatory measures remain inadequate: The Judicial Appraiser Registration Management Measures only provide general guidelines for appraisal institution access, lacking specialized quality control standards for forensic accounting. Industry associations have yet to establish unified professional codes and disciplinary mechanisms, allowing persistent issues such as "low-bid contracts" and "using appraisals as legal reviews" to persist.

3. The Analysis of The Deep Causes of Difficulties

3.1. Lagging Institutional Supply

The measurement of forensic accounting losses spans four major domains: accounting measurement, audit evidence collection, tort compensation, and financial regulation. While theoretically requiring an "integrated" institutional framework, China's system has developed

into a fragmented landscape of multi-departmental governance. The Ministry of Finance oversees accounting standards and certified public accountant (CPA) management; the Ministry of Justice regulates the accreditation and disciplinary actions for forensic experts and institutions; the China Securities Regulatory Commission (CSRC) handles liability determinations for information disclosure violations; and the Supreme People's Court defines civil compensation scopes through judicial interpretations. The absence of cross-departmental legislative coordination has created regulatory gaps in scope, terminology, and procedural frameworks. For instance, the Securities Law only provides a general principle that "investor losses shall be compensated" without specifying calculation methodologies. The Supreme People's Court's Provisions on Civil Compensation Cases Involving False Statements in Securities Markets list three loss calculation methods but fail to establish priority hierarchies or provide guidance on quantifying exclusion criteria for "systemic risks" and "non-systemic risks." The CPA practice guidelines issued by the Ministry of Finance address traditional auditing services but lack targeted provisions for court-adjudicated loss measurements. This fragmented legislative model forces courts to rely on local pilot programs, case-specific approvals, or discretionary judgment when adjudicating cases. Critical factors like measurement thresholds, time periods, and adjustment criteria exhibit significant regional and hierarchical disparities, ultimately resulting in inconsistent judicial standards and unstable legal expectations.

3.2. Lack of Technical Standards

From international experience, the technical unification of forensic accounting loss measurement primarily relies on industry self-regulatory organizations to formulate operational guidelines and ensure implementation through mandatory professional inspections. In contrast, China's Certified Public Accountants Association and China Appraisal Society have successively issued documents such as the "Basic Standards for Certified Public Accountants' Assurance Services" and "Asset Appraisal Practice Standards — Enterprise Value," but their content mainly targets traditional audit or asset appraisal scenarios. They lack detailed provisions addressing special requirements for civil compensation in financial fraud cases (such as disclosure date effects, event study method window periods, and systemic risk models). The direct consequence of this technical vacuum is that different appraisal institutions can freely choose key parameters like discount rates, beta coefficients, and liquidity discounts in the same case without disclosing sensitivity analyses. Some institutions even adjust variables through "client-oriented" approaches to compete for business, creating a reverse selection phenomenon where inferior practices drive out superior ones.

3.3. Disconnection in Personnel Training

The measurement of forensic accounting losses requires practitioners to master accounting measurement techniques, legal procedures, and evidence investigation methods. However, China's higher education and continuing education systems have yet to establish effective cross-training mechanisms. Firstly, academic disciplines exhibit significant barriers: Law schools focus primarily on substantive and procedural law, leaving students with limited training in financial statement analysis, statistical modeling, and data forensics. Accounting schools offer auditing and financial analysis courses but rarely cover tort law, evidence law, or court cross-examination techniques, resulting in graduates with fragmented knowledge. Secondly, graduate-level forensic accounting programs face enrollment constraints—fewer than ten universities nationwide offer MPAcc or legal master's programs with related tracks, producing fewer than 200 graduates annually. Practice bases are concentrated in accounting firms, with low engagement in real-world scenarios like courts and investor service centers, depriving students of hands-on experience with judicial procedures and evidentiary rules. Thirdly, the continuing education market prioritizes certification exams, with separate tracks

for Certified Public Accountants and legal professional qualifications. Practical components such as case studies, mock trials, and data labs are absent, leaving professionals struggling to bridge skill gaps.

4. Improve The Path Design

4.1. Unified Rules: Build S "1+N" Dttandard System

First, the "Guidelines for Loss Measurement in Financial Fraud Cases" were formulated. Authorized by the Standing Committee of the National People's Congress, the Supreme People's Court led the drafting process with joint participation from the Ministry of Finance, Ministry of Justice, and China Securities Regulatory Commission (CSRC), establishing cross-departmental unified standards. Second, the "three-point benchmark" criteria were solidified: Implementation Date-the date of delivering the administrative penalty notice; Disclosure Date-the earlier of a correction announcement or the first public report by authoritative media; Benchmark Date-30 trading days after disclosure, extended for suspension periods. Third, methodological hierarchy was clarified: statutory provisions apply by default, market comparison method requires defendants to prove systemic risk, and event-based $R^2 > 0.25$ method applies only to sustained losses with predictable cash flows. Fourth, "N" supporting measures were introduced. The Ministry of Finance issued the "Loss Measurement Parameter Database Management Measures," specifying parameters including risk-free interest rates, industry β -values, and liquidity discounts with publication entities, update frequencies, and quality responsibilities. The Ministry of Justice collaborated with CSRC to develop the "Electronic Data Forensics Standards," detailing procedures for extracting transaction logs, emails, and chat records. The Supreme People's Court provided a "Sensitivity Analysis Template," requiring separate calculations and disclosure of interval values for scenarios where key parameters exceed $\pm 10\%$, $\pm 20\%$, and $\pm 30\%$.

4.2. Unified Method: Rstablish S "Three-Dtage" Technical Process

First, the pre-event phase. By leveraging the "Loss Measurement Parameter Cloud" jointly established by the Shanghai and Shenzhen Stock Exchanges and the China Securities Investor Service Center (CSISS), daily data collection, quarterly verification, and annual audits are implemented for government bond interest rates, industry β values, and limit-down liquidity discounts. The interface is freely accessible, with real-time traceability of call logs on the blockchain. Second, the in-process phase. The "Dual Model + Differential Threshold" approach is adopted: Appraisal institutions must concurrently apply statutory interpretation methods and market comparison methods. When discrepancies exceed 10%, sensitivity analysis must be supplemented; when exceeding 20%, a differential explanation signed by two independent reviewers must be submitted to the judicial blockchain. Third, the post-event phase. The "One-Page Disclosure + Chain Tracing" mechanism is enforced: The report's first page lists model selection criteria, parameter sources, and sensitivity ranges. Complete calculation processes are generated as PDF files written to the blockchain, with hash values disclosed alongside court judgments for real-time verification.

4.3. Unify Talents: Implement The "Three-Dimensional" Training Project

First, the academic education dimension. The Master of Professional Accounting (MPAcc) and Juris Master programs have established a "Forensic Accounting and Loss Measurement" specialization, requiring mandatory courses in Financial Tort Law, Econometrics, and Python-based data forensics. Provincial High Court, securities investor service centers, and universities jointly operate "dual-mentorship" bases, where students must complete a real case exercise with reproducible code submissions. Second, continuing education dimension. The Chinese Institute of Certified Public Accountants (CICPA) annually organizes an advanced workshop on

"Forensic Accounting Loss Measurement," structured in three stages: reconstructing classic case data → independent measurement → joint cross-examination by judges, securities law firms, and plaintiffs' attorneys. With annual training reaching 500 participants, completion lists are synchronized to the National Judicial Appraisal Platform^[5]. Third, industry supervision dimension. The Ministry of Justice, Ministry of Finance, and China Securities Regulatory Commission (CSRC) jointly issued the "Credit Evaluation Measures for Forensic Accounting Appraisal Institutions," incorporating acceptance rates, complaint rates, and error rates into star ratings^[6].

5. Conclusion

Forensic accounting is crucial in financial fraud cases by investigating irregularities, identifying fraudulent schemes, and collecting admissible evidence. It bridges accounting and legal expertise, quantifies losses, traces assets, and testifies in court. By analyzing complex financial data, it uncovers hidden fraud, supports regulatory actions, and helps recover misappropriated funds, safeguarding stakeholders' interests and ensuring financial transparency.

References

- [1] Fu Xiaoyu. Application of Forensic Accounting Loss Measurement in Financial Fraud Cases [J]. Accounting Communications, 2024(03):126-130.
- [2] Shi Zhengbao and Tian Qili. Optimization of Legal Accounting Talent Training Path under the Background of New Liberal Arts [J]. Accounting Communications, 2023(22):171-176.
- [3] Li Li. Evolution and Frontier Trends of Judicial Accounting Appraisal in China-- Visual Analysis Based on Knowledge Graph [J]. Chinese Certified Public Accountants, 2022(12):33-38.
- [4] Qin Hao, Hu Jingnan, and Li Qian. 20 Years of Research on Forensic Accounting: Literature Review, Analysis and Prospects [J]. Accounting Friends, 2022(24):136-141.
- [5] Akims M A, Pyoko O, Akims K A, et al. Tax education and tax compliance: a review of literature[J]. Journal of Economics, 2023(1): 51-63.
- [6] Trawule A Y, Gadzo S G, Kportorgbi H K, et al. Tax education and fear-appealing messages: a grease or sand in the wheels of tax compliance?[J]. Cogent Business & Management, 2022(1): 2049436.