



AN ANALYSIS OF FORENSIC ACCOUNTING AND INTERNAL CONTROLS THROUGH ACCOUNTING INFORMATION SYSTEMS IN MITIGATING FINANCIAL REPORT MANIPULATION

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Abstract

According to the report from the Association of Certified Fraud Examiners (ACFE) (2022), fraud occurred globally between January 2020 and September 2021, with a total of 2,110 reported cases resulting in losses exceeding \$3.6 billion—approximately \$1,783,000 per case—and involving 133 countries. The role of forensic accounting and internal control based on Accounting Information Systems (AIS) is essential in preventing financial statement manipulation. This study employs a qualitative research method with a descriptive approach to analyze the role of AIS-based internal control and forensic accounting in detecting financial statement manipulation. The results of the study indicate that forensic accounting plays a significant role in uncovering financial statement fraud. Through comprehensive analysis, forensic accounting successfully deconstructed the complex structure of Special Purpose Entities (SPEs) and identified suspicious transaction patterns, including the transfer of debt and losses to other entities. Furthermore, the findings also reveal that by integrating internal control with AIS, companies are able not only to detect irregularities in financial data but also to trace audit trails and prevent unauthorized transactions or data manipulation. Future research is expected to further identify the specific factors within forensic accounting and internal control that contribute to the detection of financial statement manipulation.

Keywords: Financial Reports Manipulation, Forensic Accounting, Internal Control, Reputation Risk



INTRODUCTION

The increasingly complex development of the global business world has created various opportunities as well as challenges in corporate financial reporting practices (Limbong et al, 2021). Along with this complexity, cases of financial fraud have become more sophisticated and systematic, which not only harm investors but also threaten the stability of the global financial system (Arnindya & Kusumawati, 2025). Financial statement fraud schemes show the highest velocity, amounting to USD 39,800 per month, followed by corruption schemes with a velocity of USD 11,100 per month. According to a report by the Association of Certified Fraud Examiners (ACFE) (2022), there were fraud incidents worldwide between January 2020 and September 2021, totaling 2,110 cases that resulted in losses of more than \$3.6 billion, or approximately \$1,783,000 per case, involving 133 countries. Of these, 675 cases (36 percent) originated from the United States and Canada, 429 cases (23 percent) from Sub-Saharan Africa, 194 cases (10 percent) from the Asia-Pacific region, 145 cases (8 percent) from Western Europe, 138 cases (7 percent) from the Middle East and North Africa, another 138 cases (7 percent) from South Asia, 95 cases (5 percent) from Latin America and the Caribbean, and 78 cases (5 percent) from Eastern Europe and Central/Western Asia (Suryandari & Gayatri, 2022).

Fraudulent actions such as financial manipulation often occur, as exemplified by the Enron case. The Enron scandal, which involved massive manipulation of financial statements through complex accounting schemes, resulted in investor losses of more than \$74 billion and the loss of thousands of jobs. This case not only exposed failures in corporate oversight systems but also revealed weaknesses in the accounting standards and practices of that time. In



this context, the role of forensic accounting has become increasingly crucial as a primary tool in uncovering and investigating complex financial fraud (William & Mary, 2024). Forensic accounting, which combines expertise in accounting, auditing, and investigation, plays a vital role in uncovering the various layers of fraud in the Enron scandal (Lestari & Kuntadi, 2022). Through the application of systematic forensic investigative techniques, forensic accountants successfully exposed various fraudulent schemes involving the use of Special Purpose Entities (SPEs), revenue manipulation, and other creative accounting practices used to conceal the company's actual financial condition (William & Mary, 2024).

Overall, integrated internal control within the accounting information system plays a vital role in maintaining the integrity of financial statements and building stakeholder trust. Proper implementation of these controls not only prevents the manipulation of financial data but also enhances operational efficiency and organizational performance. Therefore, it is essential to establish internal controls based on the Accounting Information System (AIS), which serves as a crucial tool in preventing disruptions to financial data. The Accounting Information System (AIS) is a system that organizes forms, records, reports, and other documents with the goal of producing financial information needed for business operations and managerial decision-making, as well as simplifying management (Endaryati, 2021). AIS enables automatic processing and recording of transactions, reducing manual involvement that often becomes a loophole for manipulation. Through the implementation of strong AIS-based internal control, organizations are better equipped to detect and prevent



suspicious activities such as unauthorized data changes, creation of fictitious transactions, or inaccurate reporting.

Therefore, this study aims to examine the role of forensic accounting and internal control supported by the Accounting Information System (AIS) in preventing financial statement manipulation. This is crucial to encourage business actors to pay attention to their internal controls and the AIS they implement, as well as to emphasize the importance of forensic accounting.

The objectives of this study are to examine the role of forensic accounting in preventing financial statement manipulation and to explore the role of internal control based on the accounting information system in preventing such manipulation. The research questions addressed in this study are: (1) What is the role of forensic accounting in preventing financial statement manipulation and (2) What is the role of internal control based on the accounting information system in preventing financial statement manipulation.

This study offers a novel approach by examining the combined role of forensic accounting and AIS-based internal control in preventing financial statement manipulation. Most previous studies have focused on only one aspect—either forensic accounting or internal control. This research seeks to investigate both aspects simultaneously, providing a more comprehensive understanding of the role of forensic accounting and AIS-based internal control in preventing financial statement manipulation.



LITERATURE REVIEW

Fraud Triangle Theory

The Fraud Triangle Theory, developed by Donald Cressey, explains that fraud occurs when three elements are present: pressure, opportunity, and rationalization (Wiralestari, 2017). In the case of Enron:

1. Pressure or incentive: The drive to achieve high financial performance and maintain stock prices.
2. Opportunity: Gaps in internal control systems and regulations that allowed management to use Special Purpose Entities (SPEs) and other manipulation methods.
3. Rationalization: Justifications used by perpetrators to legitimize their actions, such as the belief that the actions were in the company's best interest.

The Fraud Triangle provides a framework for understanding the conditions that lead to fraud, as seen in the Enron case. By using this approach, forensic accounting can help identify risk elements within an organization and reinforce internal control mechanisms.

Forensic Accounting

Forensic accounting is a specialized field within accounting that combines investigative skills, auditing, and accounting expertise to resolve legal disputes and address financial fraud cases (Lestari & Kuntadi, 2022). Forensic accounting primarily functions to detect and investigate fraud, embezzlement, and other complex economic crimes that often involve large sums of money. Professionals in this field collaborate with law enforcement agencies, courts, and financial institutions to ensure transparency and integrity in financial reporting, both at the corporate and individual levels (Ramadhana et al., 2024).



Forensic accounting practitioners must possess a wide range of skills, including auditing, legal knowledge, and investigative techniques. They are required to have a strong educational background in accounting and are often equipped with additional certifications (Ratih & Sisdyani, 2023), such as Certified Fraud Examiner (CFE) or Certified Forensic Accountant (Cr.FA). In performing their duties, these professionals conduct in-depth analyses of financial data to detect anomalies that may indicate potential fraud or irregularities.

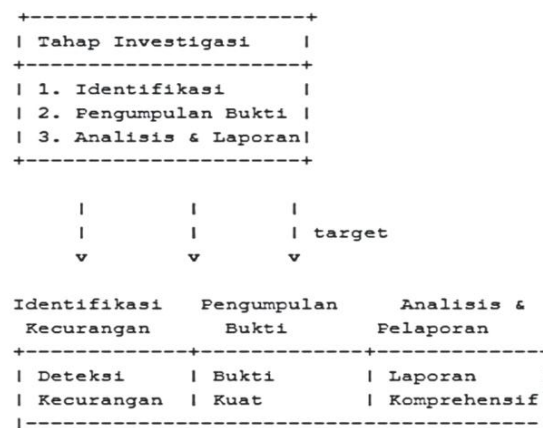


Figure 1.

The Role of Forensic Accounting in the Investigation Process

Forensic accounting differs significantly from general accounting as commonly understood. There are several distinctions between General Accounting and Forensic Accounting, as outlined by Sayyid (2014):

Table 1.

Differences Between General Accounting and Forensic Accounting

No	Element	General Accounting	Forensic Accounting
1	Timing	Regular	Non-Regular
2	Scope	General Financial Reports	Specific Financial Reports
3	Objective	Providing Opinions	Detecting Fraud



4	Techniques	Accounting	Accounting, Auditing, Legal Aspects
5	Audit	Audit Standards	Audit, Accounting, and Legal Standards

Internal Control

Internal control refers to the organizational plans and methods used to safeguard assets, produce accurate and reliable information, achieve operational efficiency, and ensure compliance with management policies (Krismiaji, 2015). According to Adawiyah et al. (2023), internal control is a process that is intentionally designed and implemented, maintained by those responsible for governance, other personnel, and management to achieve organizational objectives related to the reliability of financial reporting, operational efficiency and effectiveness, and compliance with laws and regulations. The implementation of effective internal control plays a crucial role in minimizing the risk of fraud, which often occurs in companies with weak control systems. In the context of financial statement manipulation, a strong internal control system can detect and prevent anomalies caused by manipulative actions from either internal or external parties.

Financial Statement Manipulation

Financial statement manipulation is a deliberate act carried out by internal parties of a company to present financial conditions that do not reflect reality (Hidayatullah & Sulhani, 2018). The primary motives behind such manipulation typically include gaining financial benefits, inflating stock prices, or maintaining business continuity. This type of manipulation may involve overstatement or understatement of assets, liabilities, revenues, and expenses (Wells, 2017). Several experts assert that the incidence of financial statement manipulation is increasing, thereby necessitating effective tools for fraud



detection. Detecting such fraud is the responsibility of auditors, which is commonly performed through analytical procedures. These procedures involve analyzing significant ratios, identifying trends, and examining fluctuations that are inconsistent or deviate from other relevant information (Mardianto & Tiono, 2019). Therefore, an effective internal control system is essential to detect and prevent such manipulative actions.

RESEARCH METHOD

This study employs a qualitative method, with data collection conducted through an in-depth literature review. The sources of information used include various types of literature such as nationally and internationally accredited academic journals, reference books related to forensic accounting and financial scandals, scholarly articles, publications from professional institutions, as well as regulatory documents relevant to the research topic. The use of these diverse sources aims to obtain a comprehensive and in-depth understanding of the case under investigation.

RESULTS AND DISCUSSION

Several cases of financial statement manipulation have occurred even after the notorious Enron scandal in 2001. Financial statement manipulation is an act that can severely harm a company, especially in terms of reputational risk. Such manipulation may lead to several consequences, including:

1. **Loss of investor trust**, which can result in market uncertainty, as investors rely on accurate financial statements for decision-making.



2. **Loss of trust from business clients**, such as raw material suppliers and other business partners.
3. **Decline in employee morale**, stemming from a lack of trust in leadership that supports or allows financial manipulation.

The following are several companies that have been involved in financial statement manipulation in recent years:

Table 2.

List of Companies Involved in Financial Statement Manipulation

No	Company Ownership Status	Year	Loss Amount
1	PT. Timah Tbk (Source: Al Ahsan & Novi, 2024)	2024	Rp 300 triliun
2	PT. Indofarma Tbk (Source: BPK, 2024)	2020-20024	Rp 371,8 triliun
3	PT. Asabri (Source: Wartapemerika, 2024))	2012-2019	Rp 22,78 triliun
4	PT. Garuda Indonesia (Source: Prasetyo, 2023)	2018	Rp 2,53 triliun
5	PT. Hanson International (Source: Prasetyo, 2023)	2016	Rp 613 Miliar

Source: Processed data.

Several of the aforementioned cases occurred after the Enron scandal in 2001, which is considered the largest accounting scandal in history and marked a turning point in both national and international accounting regulations and corporate governance. Key regulatory shifts include:

The Implementation of the Sarbanes-Oxley Act (SOX) of 2002

The Enron case was a major driving force behind the enactment of SOX in the United States, which aimed to enhance transparency and accountability in financial reporting, with a strong emphasis on strengthening internal controls. SOX requires companies to engage independent external auditors and



introduced severe penalties for financial statement manipulation. It also brought about stricter accounting standards, including revisions to Generally Accepted Accounting Principles (GAAP) and the strengthening of the International Financial Reporting Standards (IFRS) to close loopholes in accounting methods, such as mark-to-market accounting. Key provisions of SOX include:

- a. Reinforcement of the role of the audit committee.
- b. Mandatory audits of financial statements by independent auditors.
- c. Introduction of the Internal Control System (ICS).

Direct Impact on Accounting Regulation: The Sarbanes-Oxley Act (SOX) of 2002.

This law was enacted shortly after the Enron case and was designed to prevent similar manipulations through:

- a. **Increased Executive Accountability:** CEOs and CFOs are required to sign financial reports, facing criminal penalties if proven dishonest.
- b. **Strengthening Internal Control Systems:** Companies must annually report the effectiveness of their internal controls.
- c. **Auditor Independence:** Auditors are prohibited from providing consulting services to their audit clients, to avoid conflicts of interest.

At the Global Level

The Enron scandal accelerated the strengthening of international reporting standards, such as IFRS, to address loopholes that could be exploited for financial manipulation by improving financial transparency and harmonization. Revisions to financial reporting standards reinforced the principle of transparency in IFRS and GAAP, aimed at limiting creative



accounting practices. The mark-to-market accounting method is now closely monitored to prevent misuse.

A Greater Role for Regulators and Auditors

The scandal highlighted the critical importance of independent external auditors and regulatory bodies in preventing fraudulent practices. Their role in overseeing financial reporting and ensuring compliance has since become more prominent and influential.

What is the Role of Forensic Accounting in Preventing Financial Statement Manipulation

Forensic accounting not only plays a role in assisting auditors in uncovering fraud cases but also provides a strong foundation for enhancing audit practices that focus on accuracy, reliability, and transparency in financial reporting. By emphasizing the application of best practices, forensic accounting encourages the development of auditors' capabilities to address increasingly complex and dynamic audit challenges.

The 2001 Enron scandal marked a significant turning point in the world of finance and accounting, as it exposed massive financial statement manipulation through forensic investigation. Research conducted by experts and investigative institutions revealed that this manipulation involved the misuse of the mark-to-market accounting method and the establishment of Special Purpose Entities (SPEs) to conceal the company's debts and losses. The investigation also found that Enron reported fictitious profits from contracts that had not yet generated actual revenues, aiming to inflate the company's stock price. These practices were carried out with the direct approval of senior



management, including CEO Jeffrey Skilling and CFO Andrew Fastow, who actively designed schemes to deceive investors and shareholders.

Forensic accounting played a crucial role in uncovering the manipulations committed by Enron. Through in-depth analysis, forensic accountants were able to deconstruct the complex structure of Special Purpose Entities (SPEs) and identify suspicious transaction patterns, including the shifting of debts and losses to other entities. The investigation also revealed that Enron's financial statements were inconsistent with applicable accounting principles, especially in terms of transparency and reliability.

In addition, forensic techniques successfully detected collusion between Enron's management and the audit firm Arthur Andersen, which not only failed to perform its oversight role independently but also actively helped Enron conceal critical documents. The evidence generated through forensic accounting was later used in legal proceedings, which resulted in severe penalties for Enron's top executives.

The discovery and disclosure of potential fraud is the main objective of forensic accounting. This process is conducted through strategic approaches, structured procedures, and specific techniques aimed at addressing fraudulent actions. Forensic accounting also applies elements that support investigative audit processes, where investigators are required to have a thorough understanding of accounting in order to assess and estimate the losses and impacts caused by fraud.

Enron, a giant U.S. energy company, systematically abused accounting principles to create an illusion of profitability and financial stability. Some of the main manipulative practices carried out by the company included:



1. Use of Special Purpose Entities (SPEs): Enron hid massive debts and losses in separate entities that did not appear in its consolidated financial statements.
2. Recording Fictitious Revenues: Enron recognized profits from speculative transactions before they were actually realized, using the mark-to-market accounting method.
3. Weak Internal Controls: The lack of effective oversight from both management and auditors allowed fraudulent practices to continue unchecked.

The Role of Forensic Accounting in Uncovering the Scandal Forensic accounting was used to identify hidden manipulation patterns within financial statements, such as uncovering complex and suspicious transactions between SPEs; analyzing financial data to trace fraudulent activities like fund transfers and invalid profit reporting; and conducting deep audits of the accounting methods used, particularly those related to revenue recognition that did not comply with standards. Forensic accounting also provided accountable evidence used in litigation against Enron executives, including CEO Jeffrey Skilling and CFO Andrew Fastow.

What is the Role of Internal Control Based on Accounting Information Systems in Preventing Financial Statement Manipulation

Internal control based on Accounting Information Systems (AIS) plays a crucial role in preventing the manipulation of financial statements. This system allows companies to record, process, and analyze financial data automatically, thereby reducing the likelihood of human error that could create opportunities for fraud. By integrating internal control with AIS, companies can not only



detect anomalies in financial data but also track audit trails and prevent unauthorized transactions or data manipulation.

Various cases of financial manipulation in Indonesian companies have demonstrated that weak internal controls can lead to significant financial losses and damage public trust. Therefore, the effective implementation of AIS is essential for improving operational efficiency as well as transparency and accountability in financial management. In addition to functioning as a tool for fraud prevention, AIS-based internal control also supports more accurate decision-making through relevant financial data. Thus, the implementation of AIS-based internal control not only protects companies from the risk of manipulation but also provides significant added value to business operations.

Internal control within Accounting Information Systems (AIS) has a significant impact in preventing disruptions to financial data, according to existing literature. Without proper internal control, AIS becomes ineffective and can pose high risks, including fraud. Business performance can be improved by applying appropriate and effective internal controls, facilitating decision-making, and preventing data manipulation.

CONCLUSION

The results of this study indicate that forensic accounting plays a crucial role in uncovering financial statement manipulation. Through in-depth analysis, forensic accounting has successfully deconstructed the complex structure of Special Purpose Entities (SPEs) and identified suspicious transaction patterns, including the transfer of debts and losses to other entities. Manipulated financial statements were found to be inconsistent with applicable accounting principles,



particularly in terms of transparency and reliability. As demonstrated in the Enron case, forensic techniques can detect collusion between Enron's management and the audit firm Arthur Andersen, which not only failed to perform its oversight function independently but also actively assisted Enron in concealing critical documents. The evidence produced by forensic accounting was subsequently used in legal proceedings, resulting in severe penalties for Enron's top executives. The findings also reveal that by integrating internal control with an Accounting Information System (AIS), companies are not only able to detect irregularities in data but also to track audit trails and prevent unauthorized transactions or data manipulation. Various cases of financial manipulation in Indonesian companies have shown that weak internal controls can lead to significant financial losses and erode public trust. Therefore, the effective implementation of AIS is essential to enhance operational efficiency as well as financial transparency and accountability.

This study contributes to the public, particularly business practitioners, as a reminder of the importance of internal control supported by an Accounting Information System (AIS) in preventing financial statement manipulation. Moreover, this research adds novelty to the understanding of the role of forensic accounting in detecting financial reporting fraud. Future research is expected to further explore the specific factors within forensic accounting and internal control systems that, when tested simultaneously, may influence the detection of financial statement manipulation.

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