



THE ROLE OF FORENSIC AUDITING IN DETECTING FINANCIAL FRAUD IN COMPANIES: A CASE STUDY OF IRAQI COMPANIES

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Article history:	Abstract:
Received: 6 th September 2023 Accepted: 6 th October 2023 Published: 7 th November 2023	The research aims to highlight the impact of forensic auditing on detecting financial fraud. The Beneish model was used to detect fraudulent practices carried out by companies. The model was applied to the financial statements of a research sample consisting of 5 companies listed in the Iraq Stock Exchange, representing different sectors such as insurance, telecommunications, industry, and banking. The research concluded that using the Beneish model helps forensic auditing in detecting fraudulent practices. The research also recommends enhancing the capabilities of forensic auditors and training them on auditing techniques, including the Beneish model.

Keywords: Judicial audit, financial fraud, Beneish model, private companies on the Iraq Stock Exchange.

INTRODUCTION:

In recent years, corporate financial scandals have become a central point in public discourse, raising questions about the effectiveness of existing control mechanisms. From Enron to Wirecard, prominent cases of financial misconduct have not only resulted in significant economic losses but also eroded public trust in corporate governance. Against this backdrop, forensic auditing emerges as an effective tool to enhance transparency and accountability within companies. Unlike traditional financial auditing, forensic auditing extends beyond financial transactions to audit the legitimacy and ethical conduct of companies.

The urgency of this research is emphasized by the increasing complexity of corporate structures and financial instruments. As companies become more complex, opportunities for financial misconduct also increase. Regulatory bodies and traditional auditing processes often fail to detect complex forms of financial fraud, such as creative accounting or off-budget financing. Forensic auditing, with its comprehensive scope, provides a stronger framework for supervision. They not only examine financial records but also evaluate the legality of corporate decisions and procedures, thus providing a multidimensional view of corporate governance.

However, implementing forensic auditing is not without challenges. Questions arise regarding its prevalence, initiation criteria, and the legal implications of its findings. Furthermore, there is limited empirical evidence to prove the effectiveness of forensic auditing in preventing or resolving financial scandals. This research paper aims to fill this gap by conducting an in-depth case study, examining the use of forensic auditing, the challenges encountered, and the results achieved

Axis I/Research methodology and previous studies

1-1-Research methodology :

First: The search problem

Combatting financial fraud is one of the most important challenges facing companies in most countries around the world. Financial fraud is a phenomenon suffered by many companies, but to varying degrees of severity in terms of the threats posed to financial and economic systems. This hinders the progress and development of societies and nations. Moreover, traditional auditing methods have become insufficient in resolving issues related to financial violations, in addition to the lack of awareness of the importance of developing the role of auditors and enhancing their knowledge to enable them to utilize forensic auditing. The research problem can be formulated in the following question:



1. Is there an impact between the practice of forensic auditing and the detection of financial fraud in companies listed in the Iraq Stock Exchange?

Secondly, The Importance Of The Research

lies in the role of forensic auditing in detecting cases of financial fraud in Iraqi companies. The research derives its significance from confronting various forms of financial fraud, such as cheating, fraud, and others. Therefore, focusing on forensic auditing to address cases of financial fraud will restore confidence in accounting information and consequently satisfy stakeholders' trust in this information.

Thirdly, Research objectives

The research seeks to achieve the following objectives:

1. Description of the concept, objectives, scope and mechanisms of judicial scrutiny.
2. Description of the concept, types and strategy for combating financial fraud.
3. Statement of the impact of judicial scrutiny on the disclosure of financial fraud.

Fourthly: Research hypotheses

The research is based on the following hypothesis:

There is an impact relationship between the practice of judicial audit and financial fraud of companies listed on the Iraq Stock Exchange.

Fifthly: Temporal and spatial boundaries

1. Spatial boundaries

The spatial limits for research are companies listed on the Iraq Stock Exchange.

2. Temporal limits

Temporal boundaries are the years of research (2020 - 2021)

1-2-Previous studies

Firstly: Judicial audit studies

1- Study (Nazarova K et al, 2020) Entitled "FORENSIC-AUDITAS AN IMPERATIVE OF ECONOMIC SECURITY AND DEVELOPMENT OF THE COMPANY IN THE CONDITIONS OF GLOBAL TRANSFORMATIONS"

This study addressed the procedures of forensic auditing as a promising means of protecting businesses in the context of global transformations and emerging cyber risks in the increasingly complex digital business environment. It also explained the main trends of forensic auditing in risk management, and analyzed the types of economic crimes faced by Ukrainian companies during the period from 2017 to 2019. The study reached a number of conclusions, including that bribery and corruption are the leading crimes in economic offenses. The study also made a number of recommendations, including the use of forensic auditing when business owners doubt important decisions and when there is a leak of trade information.

2- A study (Tawilb, 2022) titled "The Role of Judicial Review in Limiting Creative Accounting Practices"

Aimed to understand the concept of creative accounting and discover manipulation techniques used by management to deceive financial reports. It also highlighted important measures and methods used in judicial auditing to detect creative accounting practices in financial reports, in order to maintain the reliability and accuracy of financial reports. The study found that the proliferation and development of creative accounting methods have been greatly influenced by the spread of modern technology. Creative accounting seeks to alter reality in line with the interests of certain parties within the company. Judicial auditing works to strengthen and enhance control mechanisms to protect the business environment from financial crimes such as embezzlement and repeated theft, through the adoption of a set of procedures, including the activation of corporate governance mechanisms.

Secondly: Financial fraud studies

1-A Study(DeZoort & Harrison,2018)

""Understanding auditors' sense of responsibility for detecting fraud within organizations"

The auditors' awareness of their responsibility to detect fraud within organizations.

This study aimed to evaluate the auditors' responsibility for detecting fraud and that auditors play a crucial role in managing fraud risks within companies. The study found that although professional standards and guidelines emphasize the auditor's responsibility for detecting fraud, few auditors are aware of this responsibility. The study also found that external auditors are responsible for detecting fraud only in financial statements, while internal auditors



are responsible for detecting all types of fraud. Therefore, internal auditors have a greater responsibility than external auditors in fraud detection. The study also highlighted the importance of brainstorming during auditing processes for fraud detection.

2-A Study (Zuhair and Ghania, 2019) titled "The Role of Forensic Accounting Expertise in Reducing Financial Fraud: The Case of Enron and General Electric."

This study aimed to clarify the role of forensic accounting expertise in reducing financial fraud. The study concluded that forensic accounting requires a set of accounting, auditing, and legal skills, as well as investigative skills, in order to uncover the facts, minimize damages, resolve disputes, and achieve justice through the use of various techniques.

Axis II/Concept of judicial audit and financial fraud

2-1: Judicial scrutiny

Firstly, The concept of judicial scrutiny

1. The judicial auditing is defined as "an activity that involves collecting, operating, and analyzing data, verifying its accuracy, with the aim of obtaining evidence related to financial and judicial violations and disputes, and preparing a report with the appropriate corrective measures" (Hamed, 383:2017).
2. Similarly, the concept of judicial auditing is defined as "the application of all accounting and auditing skills integrated with investigation skills by specialized professionals, and the main objective of the judicial auditor is to present material facts of financial crimes and fraud, through various financial documents prepared by traditional auditing" (Nashwan, 2022: 113).

Secondly: Objectives of Judicial Auditing

The objectives of judicial auditing are represented in providing financial and accounting information for legal purposes, identifying the most dangerous illegal activities within the auditing scope that facilitate fraud, and providing specialized judicial auditors who have the knowledge to narrow the expectation gap in auditing (Zein et al., 2018: 354).

Thirdly: Scope of Judicial Auditing

The scope of legal examination services can be determined by relying on professional standards issued for this purpose, as well as some directions of professional organizations in subsequent stages (Tawilb, 2022: 61).

1. The stage of acceptance of assignment.
2. Implementation phase.
3. Planning and supervision phase.
4. The results disclosure phase.
5. Confidentiality phase.
6. Treatment phase

Fourthly: Judicial scrutiny mechanisms to combat fraud

During the past period, and in many developed countries, there has been an increasing interest in forensic auditing and its impact on combating fraud and corruption. Proposed mechanisms for forensic auditing in cases of financial fraud and corruption include the following (Khalifa, 2017: 16-17):

1. Availability of skills, capabilities, and specialized knowledge to prevent or reduce cases of fraud, detect them, and investigate fraud cases.
2. Use of modern information technology methods to combat fraud and corruption in the business environment.
3. Availability of skills to provide legal and judicial consulting services related to fraud cases.
4. Availability of skills related to examining and resolving legal disputes and conflicts related to fraud cases.
5. Availability of necessary capabilities, skills, and knowledge to deal with fraudulent methods.

2-2: Financial Fraud

First: Concept of Financial Fraud

- 1- Al-Awsi defined it as "an act intended by one or more individuals in management, employees, or third parties, resulting in distortion of financial statements" (Mohammed, 2016: 278).
- 2- Al-Jjawwi and Al-Zarfi also defined it as "an intentional act of deception committed to obtain an unauthorized benefit or deprive the company and its customers of a certain benefit" (Al-Jjawwi and Al-Zarfi, 2018: 45).



Secondly: Types of Fraud

There are several types of fraud that vary from one company to another depending on its activities and operational processes. Fraud can arise from various relationships between the perpetrator of fraud and the victim of fraud. Examples of fraud include: (CIMA, 2008: 7)

- 1- Fraud committed by individuals against customers, consumers, or other businessmen, such as product quality tampering.
- 2- Employee fraud against employers, such as salary fraud, expense manipulation, asset or cash theft, or intellectual property theft.
- 3- Crimes committed by companies against consumers, investors, and employees, such as financial statement fraud, selling counterfeit goods as genuine, non-payment of taxes or insurance by employees.
- 4- Crimes committed by individuals or companies against the government, such as tax evasion.
- 5- Crimes committed against financial institutions, such as the use of fraudulent bonds or stolen credit cards, or fraudulent insurance claims.
- 6- Crimes committed by individuals using computer and technology, such as online fraud and hacking crimes.

Thirdly: Anti-Fraud Strategy

It is appropriate for every company to develop a comprehensive plan to combat and address fraud in all its aspects, relying on the best international practices. Each company should develop procedures that suit its circumstances, as the essence of fraud prevention lies in adopting a risk management approach. The use of management techniques can identify most weaknesses in controls. This strategy includes the following conditions: (Al-Jajawi & Al-Zarfi, 2018: 47)

1. Organizational framework and responsibility structures
2. Anti-Fraud Strategy and control policy
3. Awareness raising about fraud
4. Fraud risk assessment
5. Monitoring and follow-up
6. Control procedures
7. Investigation standards
8. Behavior and disciplinary standards
9. Fraud reporting systems

Axis III / Description and analysis of the relationship between research variables and testing hypotheses

The mathematical model (Beneish) is used to detect financial fraud in companies by using eight main variables in income and public balance sheet data to identify fraudulent practices used by companies, symbolized by (M). If the ratio is less than -2.22, it indicates the financial soundness of the company. If the ratio is greater than -2.22, it indicates manipulation in the company's financial statements. The indicators of the model can be calculated as follows:

$$\mathbf{1-DSRI\ Administrative\ selling\ expenses} = \frac{\text{current year sales} \div \text{current year debtor}}{\text{prior year sales} \div \text{previous year debtor}}$$

This indicator measures the ratio of debtors to sales for two consecutive periods. The increase for this indicator indicates that debtor and sales accounts are overstated for the purpose of increasing profits.

$$\mathbf{2-GMI\ Gross\ Margin\ Index} = \frac{\text{Gross profit margin for the prior year}}{\text{Gross profit margin for the current year}}$$

This index when it falls indicates a high probability that management is manipulating profits to create bogus profits or a reduction in losses.

$$\mathbf{3-Asset\ Quality\ Index\ AQI} = \frac{\text{Total assets of the year (Assets fixed for current year + Current Year Traded Assets)}}{\text{Total assets of the year (Assets fixed for prior year + prior Year Traded Assets)}}$$

The increase in this indicator indicates that management tends to take advantage of costs by capitalizing them rather than by taking them as expenses, resulting in increased profits.

$$\mathbf{4-SGI\ Sales\ Growth\ Index} = \frac{\text{current year sales}}{\text{prior year sales}}$$

The high ratio of this indicator indicates the likelihood that the company has added fake sales to current year sales and is a warning indicator of manipulation.



5-Gross benefit indicator to total assets = $\frac{\text{Change in working capital accounts} - \text{cash in change} - \text{extinction}}{\text{Total supplies}}$

An increase in this indicator suggests a manipulation of profits.

6-DEPI Consumption Index (Extinction) = $\frac{\text{prior year extinction rate}}{\text{Current year extinction rate}}$

Where this indicator is larger than one, it indicates that the loss of fixed assets is at a slower rate and that the Organization has applied the extinction reduction method to increase profits.

7-Administrative selling expenses index = $\frac{\text{Prior year's expenses}}{\text{current year's expenses}}$

This indicator indicates that the ratio of prior-year expenditure to current-year expenditure and the extent to which it increases to the current year affect the increase or reduction of profits.

8-Lever indicator LVGI = $\frac{\text{Total liabilities in current year}}{\text{Total liabilities in prior year}}$

An increase in this indicator indicates an increased risk of non-payment forcing the Organization to manipulate profits. This model has been applied to the companies' financial statements. The research sample for the two years (2020-2021) consisted of 5 companies listed on the Iraq Stock Exchange and included various sectors (insurance, telecommunications, industry and banks). The model consists of eight variables:

M = 4.84 + 0.92*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.511*DEPI - 0.172*SOAI + 4.679*TATA - 0.327*LVGI

Table (1)

SEQ	Ratio	Information
1	DSRI	Increase in debtor account to maximize profits
2	GMI	Decrease in gross profit
3	AQI	Low quality of assets
4	SGI	Increase in sales
5	DEPI	Depreciation
6	SGAL	Increase in operating expenses
7	LVGI	Increase in debt
8	TATA	Having a profit play



Seq	Name of company	Type of sector	DS RI	GMI	AQI	SGI	DEPI	SGAI	LVGI	TATA	M
1	Gulf Insurance	Insurance	0.180	0.850	2.766	6.284	1.043	0.124	1.168	0.277	11.817
2	Asia Seal	Communications	0.488	0.613	0.776	1.087	1.010	1.029	0.802	0.033	7.696
3	National Insurance Company	Insurance	0.444	-0.213	2.588	10.447	0.880	0.451	1.097	0.607	13.546
4	Mansour Pharmaceutical Industries Corporation	Industry	7.234	0.510	1.991	0.063	14.835	2.862	1.759	0.026	21.15
5	Mansour Investment Bank	Banks	0.427	0.886	0.557	1.095	13.969	0.945	0.421	1.313	8.197

Beneish indicators, as shown in table 2, have been applied using Excel, as follows:

Table 2. Application of Beneish indicators to the research sample

Beneish indicators, as shown in table 2, have been applied using Excel, as follows:

Table 2. Application of Beneish indicators to the research sample Preparation of researcher based on the financial statements of companies listed on the Iraq Stock Exchange for two years (2020 - 2021)

First: Through studying the table and studying the indicators of the companies represented by the research sample, the following observations were made:

- 1- It appears that the Asset Quality Index (AQI) was greater than (1), indicating that the company exaggerates the value of its assets.
- 2- It was noticed that the Sales Growth Index (SGI) was greater than (1), indicating the possibility of fraudulent practices through inflating sales growth, such as recognizing revenues before collection or manipulating sales revenues or provisions.
- 3- It is evident that the Selling and Administrative Expenses Index (SGAI) was greater than (1), indicating that the company inflates its expenses to reduce its profits.
- 4- Based on the results, it is evident that the Leverage Index (LVGI) was greater than (1), indicating that the company uses debts to finance its operations, which may increase liquidity risks. It also indicates the inflation of ownership rights by not reporting obligations, leading to improved financial ratios.
- 5- Based on the results, it is evident that the Total Accruals to Total Assets Index (TATA) was less than (1), indicating that the company managed to pay off some of its obligations.

Secondly: Applying it to Asia Cell Company and through column (M), the indicators for the years (2020-2021) were greater than (-2.22), indicating the presence of fraudulent practices carried out by the company. The following is an explanation for these results:

- 1- It was observed that the sales growth index (SGI) was greater than (1), indicating the possibility of fraudulent practices through inflating sales growth, such as recognizing revenues before collection or manipulating sales revenues or provisions.
- 2- It is evident that the selling and administrative expenses index (SGAI) was greater than (1), indicating that the company inflates its expenses to reduce its profits.

Thirdly: Applying it to National Insurance Company and through column (M), the indicators for the years (2020-2021) were greater than (-2.22), indicating the presence of fraudulent practices carried out by the company. The following is an explanation for these results:

- 1- It is evident that the asset quality index (AQI) was greater than (1), indicating that the bank has the possibility of engaging in fraud by inflating the value of assets.
- 2- Based on the results, it is apparent that the sales growth index (SGI) was greater than (1), indicating the possibility of fraudulent practices through inflating sales growth, such as recognizing revenues before collection or manipulating sales revenues or provisions.
- 3- It was observed that the disappearance index (DEPI) was less than (1), indicating the possibility of manipulating disappearance expenses.



- 4- 4-Through the results, it appears that the financial leverage ratio (LVGI) was greater than 1, indicating that the company uses debt to finance its operations, which may increase financial risks. It also indicates an inflation of equity by not disclosing commitments, leading to improved financial ratios.
- 5- 5-Through the results, it appears that the total liabilities to total assets ratio (TATA) was less than 1, indicating that the company was able to repay some of its liabilities.

Fourthly, applying it to Mansour Pharmaceutical Industries Company and through column (M), the indicators for the years 2020-2021 were greater than -2.22, indicating fraudulent practices by the company. The following is an explanation for these results:

- 1- It is evident that the Debt Service Coverage Ratio (DSRI) was greater than 1, indicating an exaggeration in the creditors' calculation to increase profits.
- 2- It is evident that the Asset Quality Index (AQI) was greater than 1, indicating that the company is exaggerating the value of its assets.
- 3- It is evident that the Selling and General Administrative Expenses Index (SGAI) was greater than 1, indicating that the company inflates its expenses to reduce profits.
- 4- Based on the results, it is apparent that the Leverage Ratio (LVGI) was greater than 1, indicating that the company uses debt to finance its operations, which may increase liquidity risks. It also indicates an inflation of equity by not disclosing obligations, which improves financial ratios.
- 5- Based on the results, it is apparent that the Total Accruals to Total Assets ratio (TATA) was less than 1, indicating that the company was able to settle some of its outstanding obligations.

Fifthly, when applied to Mansour Investment Bank and through column (M), the indicators for the years 2020-2021 were greater than -2.22, indicating fraudulent practices carried out by the bank. The following is an interpretation of these results:

1. Through the results, the Sales Growth Index (SGI) was found to be greater than (1) indicating the potential for fraud practices by amplifying sales growth such as acknowledging revenue before collection or manipulating sales proceeds or allocations.

The researcher's findings show that there are fraudulent practices by companies listed on the Iraq Stock Exchange and this proves the validity of the hypothesis that "there is an impact relationship between the practice of judicial audit and financial fraud of companies listed on the Iraq Stock Exchange."

Axis IV/Conclusions and recommendations

The main conclusions reached by the researcher through theoretical study and practical practice are as follows:

Firstly, the conclusions are:

- 1- The emergence of forensic auditing is an urgent need to support other auditing services because it combines several specialized and integrated skills in accounting, auditing, and law.
- 2- The research concluded that the concept of forensic auditing is one of the branches of auditing that relies on knowledge in accounting, auditing, and legal aspects.
- 3- Forensic auditing is considered a modern and advanced profession with an increasing demand for its services.
- 4- The use of the (Beneish) model assists forensic auditing in detecting fraudulent practices.

Secondly: Recommendations

- 1- It is necessary to incorporate the curriculum in the primary and higher studies of the College of Management and Economics in Iraq to teach the curriculum of forensic auditing to qualify graduates to practice this type of service.
- 2- Legislative bodies should issue a law regulating forensic auditing to protect the country's economic resources from waste due to financial fraud.
- 3- It is necessary to focus on the profession of forensic auditing and work on its development and improvement for the purpose of using it to investigate financial fraud.
- 4- Judicial auditors' abilities should be developed and they should be trained in auditing techniques such as the Beneish model.

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