

# The role of forensic accounting in reducing financial fraud practices

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## Abstract

The aim of the research is to clarify the role and importance of forensic accounting in reducing financial fraud practices and the need for companies and economic units to forensic accounting. The research concluded that forensic accounting is an important matter for the regulatory organizations responsible for detecting fraud and corruption of a financial nature, and forensic accounting is the best way in the hands of the regulatory authorities to reduce financial fraud practices, and therefore it is necessary to provide legal legislation that defines the duties of the forensic accountant in both courts and financial and supervisory institutions. As well as developing and training forensic accountants so that they have the ability and knowledge of fraudulent practices and methods and how to detect it

**Keywords:** Forensic accounting, chartered accountant, financial fraud

## 1. Introduction

In the past decades, the world witnessed economic fluctuations that followed the global financial crisis and resulted in an maximization in the management of profits practiced by business organizations for the purpose of increasing their profitability and improving their financial position that these companies show through their published financial reports, and it has become necessary to intensively investigate these violations that occur in The field of financial statement management, where the regulatory organizations and the legislative authority are mainly seeking to establish laws that limit fraud through the financial reporting process, and if that fraud appears, it must be discovered. The application of accounting concepts, principles, and procedures in solving legal problems is often known as the concept of forensic accounting. The goal of forensic accounting is to provide and communicate financial and accounting information related to the results of business organizations to their users to benefit from them in making appropriate decisions and work to reduce manipulation in reports and financial statements and violations that may Speak where forensic accounting has become an essential thing that cannot be dispensed with, whether in the service or industrial field and all other fields. Judicial, satisfactory and fair settlement of commercial disputes. Judicial accounting is one of the modern and important mechanisms in the field of preventing, detecting, accounting and reducing financial fraud practices, after the collapse of many giant global companies, such as Enron Arthur, the auditing company responsible for the collapse of the accounts of Enron and WorldCom. With the accounting data that show the data unrealistically, as the global financial crisis led to the weakness of the accounting control mechanisms in the discovery of financial fraud practices in companies, especially in the United States of America, several banks collapsed due to the crisis in 2008 AD, and there are suspicions of fraud.

And, and cases that were not discovered and discovered cases and did not explain them, the losses in your matter reached 192 trillion dollars and a loss of 34 million and a job, and financial fraud practices are the most important challenges that face the economies of the developing countries after the savings of the savings and the facts that have been fired, and that they have fell asleep, and that they have fell asleep, and that they have fell asleep, The waste and theft of wealth by spoilers, which prompted international and regional efforts to

conduct in-depth studies to determine its causes and develop plans and strategies to confront and combat it and limit its negative effects. Thus, the research aims to clarify the role of forensic accounting and its importance in discovering and limiting financial fraud practices in economic units.

## 2. The concept of forensic accounting

Despite the spread of the concept of judicial accountability at the global level, there is no one specific agreed upon definition, where the term judicial refers to the judiciary, and this trend is accepted and recognized in legal forums that are concerned with the knowledge of the law, its application and the examination and interpretation of evidence (Grumbley,2002:37). Where there are many points of view in the accounting literature that deal with the definition of forensic accounting, as (Gray, 2008, p115) defined it as the application of accounting, auditing and financing skills, quantitative methods, certain areas of law, research and investigative skills in collecting, analyzing and evaluating evidentiary evidence and clarifying and communicating results. According to one of the definitions, it is a specialized branch of accounting that is often related to legal issues and financial complaints, in addition to providing its services as an expert in several fields such as valuation and insurance claims, in addition to cases of financial fraud and cases of personal financial damage (Zadeh & Ramazain, 2012:2). American Certified Public Accountants (AICPA) as the application of accounting principles, theories, assumptions, and financial skills in investigation to resolve disputed issues conducted within the framework of accounting evidence rules and knowledge of financial accounting, law, computing, ethics, and criminology (Ghoch & Kamal, 2011:60) as well as defined by The Canadian Institute of Certified Public Accountants (CICA) accepted it as: The ability to meet the rigorous standards of the court by having accountants the skills to understand the legal process, how to conduct financial analyzes and conduct investigations, and other accounting procedures at a level acceptable to the legal system, (Mckittrick, 2004: 1) Forensic accounting was also defined by Crumpley as the application of accounting knowledge, law, and information technology Using a combination of techniques to search for cases of financial fraud, evaluate financial statements according to generally accepted standards, provide an opinion according to the applicable accounting principles, in order to detect deviations from standards and ensure that accounting and auditing practices are used in an acceptable manner when preparing financial statements (Crumpley, 2002: 2).

## 3. Techniques and methods of forensic accounting

### • methods of forensic accounting

Financial fraud is a major concern to many organizations in various industries and in various countries after it has brought great havoc to business. Billions of dollars are lost annually due to financial fraud, and since millions of dollars are lost annually as a result of financial fraud and false statements provided by fraudsters, all of this has misled professionals, academics and researchers by seeking to discover modern techniques to prevent and detect fraud and find reliable solutions to protect companies and organizations, usually Multiple techniques are used to address the problem of financial fraud, and as will be reviewed, (Albashrawi, 2016:553). The forensic accountant and his assistant team must use appropriate techniques and methods in the accounting, auditing and investigative fields to detect and reduce financial or economic fraud, the most important actions he takes Forensic accountant before applying techniques: (Al Kubaisi, 2016:5)

- Obtaining evidence of evidence and choosing the appropriate timing to do so.
- Continuous monitoring of the activity of the economic unit in order to find evidence of crime or error.
- Configure a database for guidance according to an appropriate timeline.
- Tracking map to show the flow of funds or statements in tracking the movement of funds from their source and to the place of receipt or employment in cooperation with related parties.
- Link analysis of interpersonal relationships and between data and financial information.
- The genetic blueprint for the personal relationships between the parties involved in the case under investigation, and here some ready-made software can be used, and the following are the most important techniques for forensic accounting

### • techniques for forensic accounting:

- A. **Data mining technology** :This technology was defined as a process that uses statistical and mathematical intelligence, artificial intelligence and machine learning techniques to extract and identify useful information and gain knowledge from a large database (Albashrawi, 2016:554) and it was also known as: “The art of analyzing large amounts of data in a good manner To reveal facts, unclear trends or contradictions in a complete and effective manner using “smart” computer applications, (Greenland, 2015:21) Data mining has become a very important tool in the investigation of data. Data mining is the knowledge of a number of methods: “The process of data analysis To identify patterns or relationships” or “analyze data for relationships that have not been discovered before” Analyze data to discover patterns and relationships important for decision-making. (2005: 148, Manning):
- What relevant data might be available?
  - What skills are available within the team?
  - How will data analysis fit into the broad investigation?
- B. **Analytical techniques** : Comparisons are made not only on account balances but also on financial relationships. Perhaps among the financial analyzes that are used by the forensic accountant are:
- Horizontal analysis: it is to compare the balances of the current period with the previous periods, and this technique calculates the percentage change between the balance of the current period as well as the balances of the previous period and the base period.
  - Vertical analysis: This technique calculates each item in the financial statement as a percentage of another item of the income statement that is of common size by showing each item as a percentage of revenue.
  - Comparing the details of the total balance with similar details for the previous year: This technique works to analyze the details of a specific balance over time or at a point in time and compare it with similar details from the previous period.
  - Ratios and other financial relationships: Ratios reflect relevant information about the company's activity by defining the relationship between a selected group of items related to the financial statements. The company's ratios can be compared with ratios from different periods or periods, or with the ratios of similar competing companies (Manning . 2005: 148).
- C. **Relative volume theory** : This theory highlights unusual fluctuations, which can contain fraud or real errors, where the theory of relativity is measured by "the ratio of the largest number to the second largest number of a particular group" where there are certain measures for each group (Yadav, 2013:4) such as employees Customers, etc., and in the absence of these measures, these elements are considered as abnormal elements and therefore need to be verified, as the theory helps in making the most appropriate decision (Wadhwa&Pal, 2012:3) From the above, it is clear that this technique can work well if the volume of data is large In addition, it sheds light on the subgroups where the use of one number with the remaining numbers in the subgroup is not appropriate, in addition to its effectiveness in the event of errors in data entry, changes in decimals, in addition to the error in coding and other errors.

#### 4. The role of the forensic accountant in reducing financial fraud practices

The forensic accountant is considered to have many professional certificates, and he practices the profession effectively and continuously and is evaluated by international professional bodies every three years. , Who may not be balanced by those accounting experiences and financial aspects, where the judicial accounting performs the lawsuits and prove them, and it is acquainted with it that any human element can be committed by intentional errors for the purpose of the purpose of which is the purpose of the judgment, or it is necessary, or not, With wisdom and rationality in order to prove and clarify the facts, coupled with the evidentiary, material and technical evidence before the arbitration committees and the judiciary to decide on the disputes, and an analysis of the motives and pressures that the workers may be exposed to and prompted them to, the judge will be accused of the skills and qualifications of the judge, who will be accused of violating the qualifications of the judge. Judicial reasons, the most important of which are the following (Emma and Others, 2009:1)

- Continuous education and training.

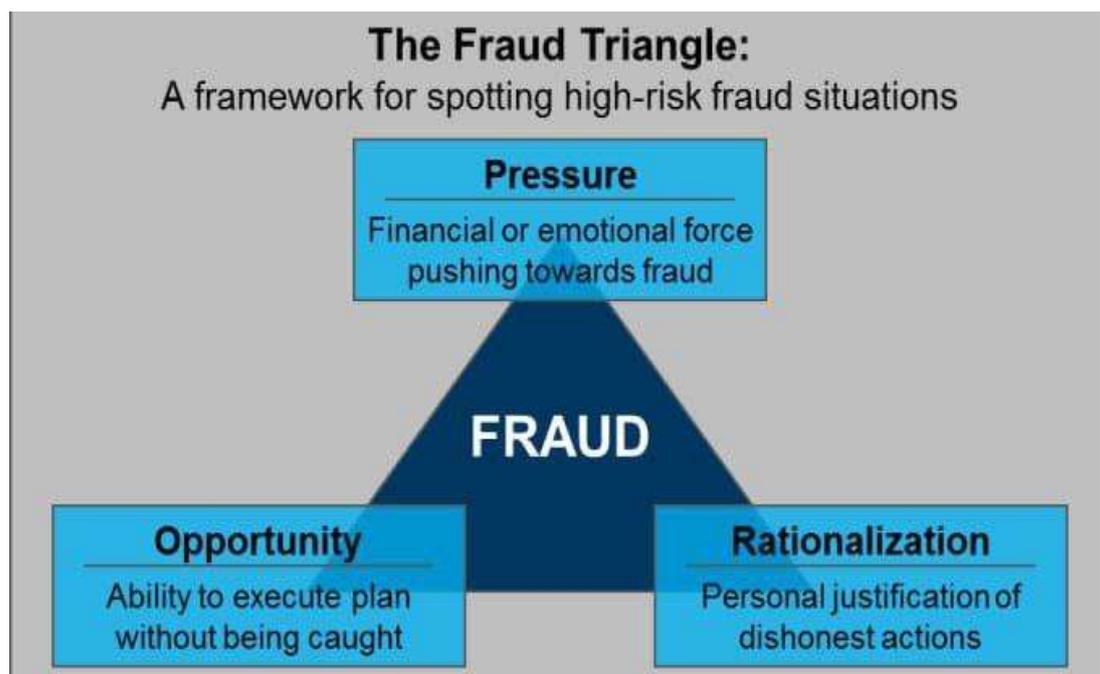
- Advanced education skill in appropriate disciplines.
- Business experience.
- Oral and written communication skills.
- Diversified experience in the field of accounting and auditing.
- The ability to interact with his work team, as the forensic accountant works with a team of accountants and investigators.
- Interpersonal skill and flexibility.
- Diverse audit experience in the fields of forensic accounting and auditing.

In addition to other important qualifications that enable the accountant to distinguish and detect financial fraud practices, which are: - (Al-Kubaisi, 2016:4)

- Educational Qualifications: The judicial accountant must have scientific qualifications in finance, law, accounting, computer science, information technology. And many other specialties.
- Practical experience: The forensic accountant must practice the profession with a minimum of three years of experience, and the forensic accountant's team consists of lawyers, accountants, experts in the judiciary and law enforcement bodies, such as internal and external auditing.
- Psychology: For the forensic accountant to possess some basic knowledge in psychology, in order to enhance his ability to investigate suspects or witnesses to detect fraud.
- Computer Science and Information Technology: The forensic accountant should be familiar with the use of computer science and information technology, and follow the rapid changes in this field, and electronic crimes, in order to facilitate prosecution.
- Other Qualities The forensic accountant must be familiar with the skill of analysis, critical thinking, the rationale of criminal behavior, and knowledge of the relevant laws.

## 5. Financial fraud

Financial fraud is intentional errors of material facts by management in the company's financial records with the aim of deceiving investors and creditors. This illegal task carried out by the management has a severe impact on the economy around the world because it greatly reduces the investor's confidence in the data presented by companies and issued by the financial markets, and given the impact of those losses, effective measures must be used to detect fraud in the financial statements(Nasser, Ahmed ,2017:1).



Source: Preparing researchers

**6. Data analysis, testing and discussion of research hypotheses**

6. 1. The research assumed one main hypothesis, from which three secondary hypotheses are branched:

**“The main hypothesis of the research: There is no significant relationship with statistical significance between forensic accounting and financial fraud practices, and three secondary hypotheses emerge from it” :**

- First Secondary Hypothesis: There is no significant, statistically significant relationship between “measuring forensic accounting methods and financial fraud practices.
- Second Secondary Hypothesis: There is no significant, statistically significant relationship between measuring the stages of forensic accounting and financial fraud.
- Third Secondary Hypothesis: There is no significant, statistically significant relationship between the measurement of judicial accounting procedures and financial fraud practices.

The research was based on the descriptive-analytical approach in testing hypotheses, research and description of data related to the research sample and the analytical approach in analyzing data and finding results. auditors, legal), and thirty (30) forms were returned, i.e. the response rate is 100%, as shown in the following table:

**Table (1)  
 The characteristics and proportions of the research sample**

sequence	the information	Respondents		
		Category	the number	The ratio
1	transponder type	male	17	57%
		feminine	13	43%
		the total		100%
2	Position	checker	6	%20
		legal officer	2	%7
		accountant	22	%73
		the total	30	%100
3	Academic achievement	diploma	6	%20
		BS	20	%67
		Master's	4	%13
		the total	30	%100

Source: Preparing researchers based on the questionnaire data

Through the results contained in Table (1), which includes a description of the sample of respondents with regard to gender classification, the percentage of males reached (57%), which is higher than the percentage of females (43%). This means that most of the research sample is from the male component, as for the Occupational type The percentage of auditors (20%) and the percentage of legal professionals (7%), they

constitute the lowest percentage compared to other percentages, while the percentage of accountants was (73) %. (67%) of the sample size. As for those who hold a master’s degree or higher, it reached (13%), which is the highest percentage compared to other percentages. These values indicate that the individuals in the research sample possess the full ability to answer the questions of the questionnaire in order to achieve the objectives of the research and test its hypotheses.

**6.2. The validity of the questionnaire:**

The researchers verified the sincerity of the internal consistency and the extent of the reliability of the resolution, where the Cronbach’s alpha coefficient of the research form was used as shown in Table No. (2), where it was noted that the general reliability coefficient of the resolution was high, reaching a value of (43.3) compared to the fixed standard 63%, and the values of the coefficients ranged for the axes of the resolution Between (25.3-42.3) and what indicates that the questionnaire in all its axes enjoys a high and acceptable degree of stability and it can be relied upon in conducting application and field analysis.

**Schedule( 2)**

**Cronbach's alpha coefficients to measure the stability of the study axes (research sample)**

Axes	number of phrases	Stability coefficient value
Measuring forensic accounting methods	3	0.79
Measuring the stages of judicial accounting	3	0.76
Measuring forensic accounting procedures	3	0.79
total axes	9	0.78
the pressure	3	0.89
the opportunity	3	0.85
justification	3	0.75
total axes	9	0.81

Source: Prepared by researchers based on the spss program

**5.3 : Displaying the results:**

The following is a display of the results produced by the current search.

Table No. (3)

Frequency distribution, arithmetic mean and standard deviation of the answers of the research sample on the dimensions of judicial accounting

Dimensions	Paragraph Codes	I totally agree	I agree	neutral	disagree	Strongly Disagree	Weighted arithmetic mean	standard deviation
Measuring forensic accounting methods	C1	9	8	13	-	-	3.867	0.860
	C2	2	4	19	5	-	3.100	0.759
	C3	8	7	15	-	-	3.767	0.808
Measuring the stages of judicial accounting	C4	2	6	11	4	7	2.733	1.230
	C5	2	10	12	5	-	3.300	0.837
	C6	-	2	12	8	8	2.267	0.944
Measuring forensic	C7	2	5	10	8	5	2.700	1.149

accounting procedures	C8	6	5	16	3	-	3.467	0.937
	C9	4	7	15	4	-	3.367	0.890

Source: Prepared by researchers

It is evident from the results of Table (3) that there is an increase in the arithmetic mean, which amounted to (3.867), which means that this dimension is commonly used in the studied bank, and with a general standard deviation of (0.860) as “we find the general weighted arithmetic mean is greater than the hypothetical mean” and this This means that this variable (judicial accounting) has a significant impact on financial fraud practices according to their personal point of view, and the reason for this is due to the fact that judicial control forces the institution to prepare transparent and honest financial statements devoid of all fraudulent practices that show that the company is in an easy financial position.

**Table (4)**  
**Frequency distribution, mean and standard deviation, answers of the research sample about the dimensions of financial fraud**

Dimensions	Paragraph Codes	I totally agree	I agree	neutral	disagree	Strongly Disagree	Weighted arithmetic mean	standard deviation
the pressure	C10	2	12	11	5	-	3.376	0.851
	C11	2	7	12	6	3	2.976	1.06
	C12	-	7	15	4	4	2.822	0.950
the opportunity	C13	2	9	17	2	-	3.367	0.851
	C14	2	15	13	-	-	3.622	0.614
	C15	6	5	14	2	3	3.300	1.179
justification	C16	4	6	15	5	-	3.301	1.179
	C17	4	6	19	1	-	3.433	0.773
	C18	2	8	20	-	-	3.401	0.621

Source: Prepared by researcher

It is clear from the results of Table (5) that there is an increase in the arithmetic mean of the second axis, reaching (3.62) in its highest paragraph, which means that this dimension is commonly used in the surveyed banks, with a general standard deviation of (0.851) (the arithmetic mean is greater than the mean for to the sample according to “hypothesis” (3), which means that there is clear transparency according to the financial statements if.

## 7. Hypothesis testing and analysis of results

- Hypothesis testing and analysis of results

Test the first sub-hypothesis of the main hypothesis. The first sub-hypothesis emanating from the main hypothesis was tested by testing the correlation between the dimension of measuring forensic accounting methods and after pressure from the dimensions of financial fraud. It was found from the results of the test by Spearman's rank correlation method that the value of the correlation coefficient (rs) between the two mentioned variables was (0.902) The calculated value of (t) reached (13.55), which is greater than the value of (t) tabular, which confirms the existence of a significant correlation between the two variables at a level of significance (0.01), which calls for rejecting this null hypothesis and accepting the alternative hypothesis i.e. (there is a significant correlation between the two dimensions). Measuring forensic accounting methods and pressure.

- Testing of the second sub-hypothesis of the main hypothesis

The results of the test using Spearman's ordinal correlation method indicated that the value of the correlation coefficient (rs) between after measuring the stages of forensic accounting and after the opportunities from the dimensions of financial fraud was (0.715) and that the calculated t value amounted to (6.43), which is the largest From the value of (t) tabular, which indicates the existence of a significant correlation between the two variables at a level of significance (0.01), which calls for rejecting this null hypothesis and accepting the alternative hypothesis, i.e. there is a significant correlation between the dimensions of measuring the stages of forensic accounting and the opportunities

- Test the third sub-hypothesis of the main hypothesis

The results of the test results by Spearman's rank correlation method showed that the value of the correlation coefficient (rs) between the dimension of forensic accounting procedures and after justification from the dimensions of financial fraud was (0.735), and that the value of (calculated t) amounted to (6.17), which is greater than the value of (t) tabular, which indicates There is a significant correlation between the two variables at a level of significance (0.01), and therefore this calls for rejecting the null hypothesis and accepting the alternative hypothesis, that is, there is a significant correlation between the measurement of forensic accounting procedures and after justification

- **Test the main hypothesis**

The results of the test using Spearman's ordinal correlation method showed that the value of the correlation coefficient (rs) between forensic accounting and financial fraud practices, amounted to (0.844) and the value of t (calculated) reached (10.92), which is greater than the tabular t value, which confirms the existence of a significant correlation between the two variables when Significance level (0.01) and this calls for rejecting this null hypothesis and accepting the alternative hypothesis which states that there is a correlation between forensic accounting and financial fraud

## Conclusion

Forensic accounting is an important matter for the regulatory organizations responsible for detecting fraud and corruption of a financial nature. Forensic accounting is the best way for the regulatory authorities to reduce financial fraud practices, and the Iraqi criminal environment needs the services of a forensic accountant who can play a role by presenting facts in an understandable way to The judiciary, which contributes to crystallizing the convictions of judges, especially in light of the increasing number of lawsuits in the financial aspects, and therefore it is necessary to provide legal legislation that defines the duties of the judicial accountant in each of the courts and financial and supervisory institutions. As well as developing and training forensic accountants so that they have the ability and knowledge of fraudulent practices and methods and how to detect them

## Acknowledgments

Assistant Lecturer Saja Najeh Kareem, naseem khudair, Sarah Amer Abdulazeez would like to thank AL-Mustaqbal University College

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