

The Role of Forensic Accounting in Combating Financial Crimes Resulting From Accounting Estimates

Saddam Catea Hashim*

Al- Nahrain University, Baghdad, Iraq

Email : sadam1980@nahrainuniv.edu.iq*

Abstract ,Forensic accounting plays a vital role in combating financial crimes resulting from accounting estimates, as it combines specialized knowledge in accounting with forensic investigative skills to analyze financial statements and uncover manipulations. and The research aims to explore how forensic accounting affects the identification of financial crimes related to accounting estimates. The most important conclusions of the research were : Forensic accounting plays a vital role in discovering financial manipulations and frauds associated with accounting estimates. Through careful examination and forensic analysis of financial statements, forensic accountants are able to detect any manipulation of numbers or exaggeration of profits or losses. and The most important recommendations include examining the necessity of implementing strict internal control procedures that include reviewing accounting estimates regularly, using forensic accounting methods. This would reduce the chances of financial manipulation and fraud, and this research contributes to clarifying The role of forensic accounting in detecting financial crimes related to estimates Accounting. And improvement transparency And the accuracy of financial reports by examining estimates Accounting. and Develop effective financial investigation strategies to combat illegal financial activities.

Keywords: Accounting Judicial, crimes Finance Estimates Accounting, accounting estimates

1. THE INTRODUCTION

In light of the increasing complexity of financial operations and the expanding use of accounting estimates, new challenges have emerged related to detecting financial crimes and bringing perpetrators to justice. Forensic accounting is an advanced field that combines traditional accounting skills with forensic investigative techniques to combat these crimes. And aims The research aims to explore the role of forensic accounting in combating financial crimes resulting from accounting estimates, and to highlight the theoretical frameworks and practical applications in this regard. Domain.

2. RESEARCH METHODOLOGY

1) Search Problem:

The problem lies in the research from Manipulating accounting estimates to achieve illegal financial gains so Facing the accounting system There are significant challenges in detecting these manipulations, which leads to a loss of confidence in the financial reports of government units so Accounting estimates are vulnerable to manipulation because they depend on management's subjective assumptions The research question is How can forensic accounting contribute to combating financial crimes resulting from accounting estimates, and what is the impact of this on the accuracy and transparency of financial reports?

2) Search goal:

This research aims to achieve the following objectives:

1. Analyzing the role of forensic accounting in detecting financial crimes resulting from accounting estimates.
2. Evaluating the effectiveness of the tools and methods used in forensic accounting investigations.
3. Providing recommendations to improve the judicial accounting framework and enhance its capabilities in combating financial crimes.

3) Hypothetical Search:

The research is based on the following hypotheses:

1. There is a statistically significant relationship between tools and methods in accountingJudicial and combating financial crimesresulting from accounting estimates
2. There is a statistically significant effect between Between tools and methods in accountingJudicial and combating financial crimesresulting from accounting estimates.

4) Importance of research:

The importance of this research is highlighted by the following points:

1. Providing a deeper understanding of the role of forensic accounting in confronting financial crimes.
2. statementEffective tools and methodsIn forensic accounting
3. contributionIn developing policies and legislation related to combating financial crimes.
4. Enhancing confidence in the systemThe accounting unitTEconomic.

5) Research population and sample:

The community represents all government units that work in the public sector, including accountants and auditors, and the research sample includes accountants and auditors in the Federal Financial Supervision Bureau and the Federal Integrity Commission, within the limits of the research in the year 2024.

6) Research methodology

The research relied on the theoretical side on the deductive approach and on the practical side on the inductive approach.

7) Data collection sources

Sources of the theoretical aspect include:

1. Academic books: Presents basic theories and concepts in the field.
2. Scientific articles: It contains recent research and developments in the field.

3. Academic journals: Reliable sources containing peer-reviewed articles.
4. Theses and dissertations: Providing in-depth and documented studies.
5. Scientific conferences: Provides the latest research and discussions in the field.
6. Government reports and organizations: Provides updated data and statistics.
7. Electronic references: Such as academic databases (JSTOR, PubMed, Google Scholar).

As for the practical aspect, the research used a set of statistical methods using the statistical program SPSS v 26 and AMOS v 26, which can help in reaching research goals. The data was collected by distributing (100) questionnaires to the research sample.

3. SIDE VIEWY

1) Forensic accounting: definition and origins

Forensic accounting is a branch of specialized accounting that combines accounting skills and financial analysis with legal knowledge with the aim of investigating suspicious financial activities, providing evidence in legal cases, and determining financial damages in disputes. and Forensic accountants work as consultants or expert witnesses in courts to analyze financial evidence and detect financial manipulation or fraud. They handle issues such as financial fraud, arbitration of commercial disputes, and assessment of economic damages in civil cases (Bologna & Lindquist, 1995). And Dating grew up Get lost To the early twentieth century, with the increasing need to investigate financial fraud and economic crimes. Initially, it was practiced informally by accountants who were called to testify as experts in courts. As time passed and the complexity of business and financial legislation increased, it became clear the need for a specialized field focused on the investigation of financial crimes and legal disputes of a financial nature. Major fraud cases, such as the scandal, contributed Enron at the beginning of the twenty-first century, highlighting the importance of forensic accounting as a vital tool in detecting and preventing financial manipulation (Golden, Skalak, & Clayton, 2006).

2) Accounting Estimates: Concept and Importance

Accounting estimates are the process by which financial values that cannot be accurately measured using available data are estimated. This process requires the use of professional judgment. by accountants that may not be precisely determined at the time of preparing the financial statements. and Accounting estimates include many areas such as estimating the value of bad debts, inventory valuation, and... Depreciation of the asset Tfixed, and estimate potential liabilities (Skoda, 2017). And It plays a vital role in preparing financial reports because it contributes to providing an accurate and comprehensive picture of the

financial situation of the unit Governmental. When estimates are based on reliable information and sound professional judgement, they enable (Skoda, 2017), Providing a comprehensive picture of the unit's financial performance Governmental, which contributes to making appropriate investment and analytical decisions by investors, creditors and analysts, and Dealing with financial uncertainty Because there are some financial values that cannot be precisely determined, estimates allow economic units to deal with these uncertain circumstances in a transparent and professional manner., and investigation Commitment In to accounting standards so International and local accounting standards require government units to use accounting estimates in certain cases, such as evaluating potential assets or liabilities, to ensure the submission of financial reports that correctly reflect the financial reality (Penman, 2013).

3) Accounting estimates And its impact on financial crimes

Accounting estimates play a dual role in the world of financial crime. On the one hand, it is a necessary tool for preparing financial reports that accurately reflect the financial reality of the economic unit. But on the other hand, these estimates can be used as a tool for financial manipulation, leading to the commission of financial crimes such as accounting fraud Through the following:

1. Using estimates to manipulate financial statements:

Used Accounting estimates to unlawfully inflate or understate profits or liabilities, with the aim of achieving certain objectives such as increasing stock value, improving financial ratios, or obtaining financing on better terms. For example, an estimate of future revenues may be inflated or the amount of bad debts may be understated to increase reported earnings (Skoda, 2017).

2. Manipulation Regarding depreciation and amortization of assets:

Accounting estimates related to depreciation and amortization of assets represent another area where manipulation can occur. By changing depreciation rates or estimating the useful life For assets, economic units can adjust apparent profits in the short run. These adjustments can hide the true financial performance of the economic unit and mislead investors and financial analysts (Dechow, Ge, & Schrand, 2010).

3. Challenges facing auditors in detecting tampering:

That Complex accounting estimates create significant challenges for auditors, who must evaluate the accuracy and reasonableness of these estimates. and If there is intent to manipulate, it may be difficult to detect financial fraud if the estimates appear

reasonable when viewed from a superficial perspective. This places a significant responsibility on auditors to ensure that estimates are based on valid information and are reviewed accurately (Brazel, Jones, & Zimbelman, 2009).

4) The role of forensic accounting in combating financial crimes resulting from accounting estimates

Forensic accounting plays a crucial role in detecting and preventing financial crimes that may result from inaccurate or intentional accounting estimates. Because accounting estimates depend largely on professional judgment and future expectations, they are vulnerable to manipulation by individuals seeking illegal gains. Here comes the role of the forensic accountant in intervening to ensure the integrity and accuracy of these estimates, through the following:

1. Detecting manipulation of accounting estimates:

That forensic accountants use advanced analytical techniques to examine accounting estimates and verify their consistency with the actual financial position of the economic unit. By analyzing discrepancies in financial statements, such as unexplained discrepancies in...Landfalls Or a sudden change in the estimate of bad debts, a forensic accountant can detect attempts to manipulate the numbers to make illicit profits (Crumbly, Heitger, & Smith, 2017). By committing to apply the international auditing standard ISA 540 It is to ensure that accounting estimates, including related disclosures, are presented fairly in accordance with the applicable financial reporting framework. This standard helps auditors identify and assess the risks of material misstatements associated with accounting estimates.

2. Financial fraud investigation:

When financial fraud related to accounting estimates is suspected, a forensic accountant conducts comprehensive investigations that include reviewing financial records and supporting documentation, interviewing relevant employees, and using financial forensic tools. The goal is to determine whether estimates have been deliberately manipulated for illegal gain, and to provide the necessary evidence to support legal cases (Golden, Skalak, & Clayton, 2006).

3. Providing testimonies as experts in courts:

In legal cases related to financial crimes, forensic accountants can provide testimony as experts to interpret and analyze disputed accounting estimates. Their role here is to clarify the reasonableness of the estimates used and determine whether there is an intent to manipulate for personal gain at the expense of financial transparency (Zysman, 2001).

4. Developing strategies to prevent financial crimes:

In addition to investigation and detection, forensic accountants develop internal strategies and procedures that help government units reduce the risk of manipulating accounting estimates. This includes training employees on best accounting practices, and establishing effective internal control systems to detect any attempts at fraud before the problem escalates (Hopwood, Leiner, & Young, 2012).

5) Tools and methods in forensic accounting

Forensic accounting is based on a variety of specialized tools and methods that contribute to detecting financial manipulation, conducting financial investigations, and presenting evidence in courts. The following are the most prominent tools and methods used in this field: Which are:

1. Financial analysis:

Financial analysis is one of the basic methods in forensic accounting. This includes analyzing the economic unit's financial statements to identify abnormal patterns or discrepancies that may indicate financial manipulation. Specific financial ratios, such as debt-to-equity ratio, profitability ratio, and liquidity ratio, can be used to analyze financial performance and ensure it is consistent with expected financial standards. (Albrecht, Albrecht, & Albrecht, 2008).

2. Big data analysis:

With the increasing volume of financial and operational data that government units deal with, big data analysis tools (Big Data Analytics) is an essential tool in forensic accounting. These tools allow forensic accountants to analyze vast amounts of data quickly and efficiently, helping to detect unusual patterns and discrepancies that may indicate fraud or financial manipulation (Alles, 2015).

3. Using specialized accounting programs:

There are a group of specialized accounting programs such as ACL and IDEA which are used to analyze financial data and detect fraud. These programs provide advanced functions such as matching data, analyzing anomalies, and creating detailed reports that can be used as evidence in judicial investigations (Coderre, 2009).

4. Cash flow analysis:

Cash flow analysis is an important tool used to examine and verify the financial flows of an economic unit. Cash flow analysis can detect illicit activities by tracking the sources and uses of funds, especially in cases where individuals attempt to hide income

or manipulate expenses (Wells, 2013).

5. Field investigation methods:

Forensic accounting is not limited to financial analysis only; It also includes field investigations that include witness interviews, document review, and site visits. These methods help the forensic accountant obtain direct evidence that supports the findings he reached through financial analysis (Golden, Skalak, & Clayton, 2006).

6. Legal examination of evidence:

Forensic accountants work closely with legal teams to ensure that the evidence collected and analyzed can be admissible in court. This includes reviewing documents and contracts and ensuring they comply with applicable laws and regulations. The legal examination also includes preparing evidence in a manner consistent with the court's requirements in terms of accuracy and objectivity (Ramaswamy, 2005).

6) Qualification TAcademic qualifications for forensic accountants and the education gap for accounting students

Forensic accounting requires accountants to obtain specialized academic qualifications and advanced skills in the fields of accounting, auditing and law. The following are the most important academic qualifications that a forensic accountant must possess:

1. University qualification:

The first step toward one becoming a forensic accountant is to obtain a bachelor's degree in accounting, finance, or a related field. This degree provides students with basic knowledge in accounting principles, financial reporting, and auditing. (Albrecht et al., 2016).

2. Advanced professional certificates:

A. CPA (Certified Public Accountant): Obtaining the Certified Public Accountant certification is a basic requirement in many countries for forensic accountants. This certificate proves that the accountant possesses the necessary knowledge and experience in the fields of accounting and auditing.

B. CFE (Certified Fraud Examiner): The Certified Fraud Examiner is an advanced certification that focuses on fraud detection and prevention, and is essential for forensic accountants who specialize in financial investigations (Wells, 2013).

3. Training courses in forensic accounting and financial investigations:

Enrolling in advanced courses in forensic accounting provides in-depth knowledge in the field of financial investigations, evidence analysis, and the use of specialized

technical tools to uncover financial manipulation (Golden et al., 2006).

4. Understanding the law and judicial procedures:

A forensic accountant needs advanced knowledge of commercial laws, legal procedures, and how to present evidence in court. Forensic accountants may benefit from obtaining law degrees or undertaking specialized training courses in commercial law and relevant criminal laws (Ramaswamy, 2005).

Despite the importance of forensic accounting, there is still a large educational gap for accounting students, represented by the lack of specialized educational programs concerned with teaching forensic accounting and financial investigations. Here are some aspects of this gap:

1 Lack of specialized curricula:

Most accounting programs focus on auditing accounting currently existing traditional ones. Without providing adequate education in the field of forensic accounting. This results in graduating students who possess strong general accounting skills, but lack specialized knowledge in fraud detection and financial investigations (Carnes & Gierlasinski, 2001).

2 Lack of practical training courses:

There is a lack of practical courses that allow students to deal with real-life cases in forensic accounting. Practical education is necessary to enhance students' skills in financial analysis, use technical tools, understanding judicial procedures.

3 The gap between academic education and market requirements:

There is a gap between what is taught in universities and what the labor market requires. Forensic accountants require advanced knowledge in the use of financial analysis and investigations software, which is not adequately covered in most traditional accounting software (Rezaee, 2002).

4 The need to develop legal competencies:

The work of a forensic accountant requires strong legal knowledge, but current accounting programs often lack in providing adequate legal education to students. This leads to the graduation of accountants who are not fully prepared to deal with the legal aspects of their work (Wells, 2013).

7) Case studies in forensic accounting and Financial crimes resulting from accounting estimates:

Wirecard was a German financial technology company specializing in digital payment

services. Founded in 1999, it has become one of the most prominent financial companies in Europe, even becoming a member of the DAX 30 German stock index. In 2020, a major financial scandal erupted around the company, after huge financial holes in its accounts were revealed (Kothari & Lester, 2020).

And Investigations began after it was announced Wirecard said it could not locate €1.9 billion of its assets, which are supposedly held in bank accounts in the Philippines. Later, it was revealed that this money never existed, and that the company had inflated its profits and assets over the years using false financial documents and non-existent accounts (Munter, 2021). and After the company collapsed, forensic accountants were called in to investigate the scandal. These accountants revealed the complexity of the fraud network that was set up, which included falsifying financial accounts and manipulating revenues. Forensic accounting used advanced analysis techniques and financial auditing tools to identify financial manipulations and provide evidence that supports legal cases against company executives (Kothari & Lester, 2020). and issue Wirecard led to the arrest of former CEO Markus Braun and other officials, who were charged with fraud and financial manipulation. The scandal also greatly affected Germany's reputation as a safe financial destination, and led to major reviews in the German financial supervision system (Munter, 2021). that scandal Wirecard emphasized the importance of transparency and integrity in financial reporting. It also explained the crucial role of forensic accountability in uncovering financial manipulations and providing the necessary evidence to prosecute those involved. This case also highlights the need for strong financial oversight and an independent audit system that can detect fraud early (Kothari & Lester, 2020).

8) Devices Oh Supervision in Iraq, laws and their role in judicial accountability

1. Regulatory bodies in Iraq

a. Financial Supervision Bureau Federal : YesD The main body in Iraq to monitor government spending and ensure compliance with accounting standards. He does what Monitoring and auditing The financial accounts of the government and public institutions and contributes to detecting financial manipulation and fraud (Iraqi Federal Board of Supreme Audit, 2020).

b. Integrity Commission : And it is Charged with combating administrative and financial corruption in Iraq. The Authority works to investigate corruption cases in cooperation with judicial authorities and forensic accountants to analyze suspicious financial activities and bring those involved to justice. (Integrity Commission of Iraq, 2021).

c. Central Bank of Iraq : It plays a supervisory role in monitoring banking and financial activities and ensuring that banks adhere to financial and legal standards. It also contributes

to combating money laundering by monitoring financial transfers (Central Bank of Iraq, 2021).

2. Laws related to judicial accounting:

a. Anti-Money Laundering and Terrorism Financing Law No. 39 of 2015: It aims to combat money laundering and terrorist financing in Iraq, and provides a legal framework for tracking and investigating illegal funds (Iraqi Legal Database, 2015).

b. law Companies No. 21 of 1997 (and its amendments): It includes provisions regulating the audit and oversight of government units to ensure compliance with accounting standards (Iraqi Legal Database, 1997).

c. Professional practice system monitoring and audit Accounts No. 3 For the year 1992: It regulates the auditing profession in Iraq and sets standards for auditing and accounting practices (Iraqi Legal Database, 1992).

3. The role of regulatory bodies in judicial accounting:

a. Detecting financial crimes: Regulatory bodies work in cooperation with forensic accountants to detect financial manipulation and fraud. This is done through auditing accounts and investigating suspicious financial activities (Iraqi Federal Board of Supreme Audit, 2020).

b. Promoting integrity: Through continuous oversight of financial activities, supervisory bodies contribute to enhancing transparency and integrity in public and private institutions (Integrity Commission of Iraq, 2021).

c. Support legal cases: Regulatory bodies provide the necessary evidence and analysis to support legal cases related to financial crimes, which contributes to enhancing the effectiveness of forensic accountability (Central Bank of Iraq, 2021).

4. Challenges:

a. Lack of specialized personnel: Iraq faces challenges related to the shortage of specialized personnel in the field of forensic accounting, which may affect the effectiveness of financial oversight (Integrity Commission of Iraq, 2021).

b. The need to update laws: Laws and legislation related to judicial accounting need to be updated to align with international standards and meet the needs of the changing economic environment (Iraqi Legal Database, 2015).

3. THE PRACTICAL SIDE

The role of the judicial and supervisory authorities in practicing judicial accounting procedures in Iraq will be presented through analysis of the reports issued by them, including all government units in Iraq, which are as follows:

1) The Federal Integrity Commission's report - annual report 2023

The Authority works in accordance with... to Authority law Integrity And Illicit Gain No. 30 of 2011, amended by Law No. 30 of 2019, pursuant to which its objectives, formations, tasks, investigative procedures and provisions for illegal gain were determined, as well as some general provisions. The other, this From one side and from the other side Subject to air conditioning Corruption cases and investigative procedures conducted by investigators are based on the Penal Code No. 111 of 1969 as amended and the Criminal Trials Law No. 2371 Rate. (Federal Integrity Commission, 2023) And below Table (1) shows the number of financial crimes discovered in the year 2023 and by type of crime:

Table (1) Number of people convicted of financial crimes

Ratio	number	Type of crime
71.54%	772	Employees exceeding the limits of their jobs, intentional harm to public funds, negligence or serious error, and others
8.15%	88	Embezzlement
4.07%	44	Bribery
6.76%	73	Forgery
9.48%	102	Other
1079		the total

Source: Prepared by the researcher with approval (Federal Integrity Commission, 2023)

The above defendants were subject to more than one judicial order referring them to the judiciary, and the amounts recovered as a result of applying judicial accounting methods and tools amounted to 2,556,639 million dinars, equivalent to 343,000 US dollars. Some of these crimes are preventing the issuance of forged instruments or electronic clearing procedures, as well as Fraud in transactions for the salaries of members of provincial councils, giving money to people who do not deserve it, and errors in accounting estimates that ultimately lead to all the crimes mentioned in the table above.

2) A report Federal Office of Financial Supervision-Annual Report 2022

It is the body responsible for financial control and audit in Iraq and was established under Law 17 of 1927(Al-Shafi'i, 2020)The Bureau operates in accordance with the amended Law No. 31 of 2011, which undertakes oversight functions in accordance with Article 3 of the above law on:

A - Public money wherever it exists and its audit.

B - The actions of the entities subject to its supervision and audit in all parts of Iraq in accordance with the provisions of this law and the lawsThe window.

The financial violation was described in accordance with Article 2 of the above law as:It is considered a financial violation for the purposes of this law:

- Non-complianceMLaws and regulationsAnd instructions.
- Negligence or negligence leading to loss or waste of public money or harm to the economyNational.
- Refraining from submitting the records, documents, and data necessary for the monitoring and auditing work that must be maintained, or failing to provide them to the Bureau or the entities thatHe authorizes her.
- Refraining or delaying in responding to the Bureau's reports, correspondence, objections and observations within the specified period

Below is Table (2) some of the violations that were discovered through the methods and tools of financial control that were sent to the Federal Integrity Commission to conduct a financial investigation in accordance with judicial accounting procedures.

Table (2) Violations discovered and referred to the Federal Integrity Commission

Description	Type of violation or activity
Failure to organize a document recording a settlement of the amounts disbursed amounting to 25 million dinars for the completed work out of the advance amount of 50 million dinars as well.yourLack of entry and exit documents for the purchased materials, regarding the preparation of construction materials, fees for excavating and leveling the site, pouring reinforced concrete, and labor fees.	ViolationsCommitted at Souq Al-Shuyoukh Hospital in SurFAn advance of 50 million dinars without availability Adoptionfinancial

<p>Manipulation revenue shares by reducing returns and wages by a percentage 35%, Waiver About part of Revenue Company General Ports of Iraq for Khairat Company The two tribes Without any justification and for an indefinite period, according to what was stated in the article Paragraph - Eighth - from The contract concluded between the two parties in reality -25% - With the approval of former Minister of Transport W-10% - With the approval of the public company For Iraqi ports</p>	<p>Umm Port Joint Operating Contracts Southern Palace</p>
<p>The governorate was dismissed Ratio 75% of the value of a number of works as they were executed according to the contract document F No. 388 in 8/17/2021 and after conducting a field visit by the competent supervisory authority operating in the governorate on 21-22/ 9 / 2021 The entrance to the streets of Nasiriyah city North, Al-Shibani, prosperity, victory, Umm al-Banin shows that these tasks are not completed Most of them are available on the company's website</p>	<p>Development project And update The main axes and streets in the city Nasiriyah in Al AqD No. 9 On 4/7/2021</p>

Source: Prepared by the researcher based on (Federal Office of Financial Supervision, 2022)

Accounting estimates are an important part of preparing financial statements, but they also carry risks of manipulation and deviation. It is clear from what is being said that at the top there is a role for the Federal Integrity Commission and the Federal Financial Supervision Bureau help reduce financial crimes resulting from accounting estimates through the following:

- Combating corruption: Both bodies work to combat corruption and financial crimes and achieve integrity and transparency in financial operations.
- Enhancing transparency: We seek to enhance transparency and accountability in government institutions and the public sector.
- Financial audit: Both bodies review and audit financial accounts to ensure their compliance with financial and accounting standards.
- Investigation and monitoring: Joint investigations and ongoing monitoring to detect financial manipulation and deviations in accounting estimates.
- Joint coordination: continuous cooperation and exchange of information between the two parties to ensure the effectiveness of oversight procedures and investigations.

- International cooperation: Cooperating with international organizations to enhance capabilities and adopt best practices in combating corruption and financial auditing.
- Training and development: Organizing joint training programs to improve employees' skills in detecting financial crimes and manipulating accounting estimates.
- Awareness: Joint awareness campaigns to raise awareness of the dangers of financial manipulation and the importance of integrity and transparency.

As for the challenges shared which the search identified:

- Identifying manipulation: The difficulty of identifying manipulation in accounting estimates due to the complexity of financial operations and the ability to hide manipulation.
- Advanced techniques: The use of advanced techniques in financial manipulation is difficult for regulatory authorities to detect quickly.
- Lack of competencies: The need for specialized trained and qualified employees in the field of financial auditing and investigation of financial crimes.
- Financial resources: Limited financial resources necessary to support intensive oversight and investigation operations.
- Bureaucracy: Complexity of administrative and bureaucratic procedures that can hamper investigation and legal prosecution processes.
- Legislation: The need to update legal legislation to keep pace with developments in methods of financial manipulation and corruption.

By working to confront these challenges and strengthen their commonalities, the Federal Integrity Commission and the Federal Financial Supervision Bureau can achieve better results in combating financial crimes and manipulation of accounting estimates.

4. CONCLUSIONS AND RECOMMENDATIONS

1) The Conclusions

1. Forensic accounting plays a vital role in discovering financial manipulations and frauds associated with accounting estimates. Through careful examination and forensic analysis of financial statements, forensic accountants are able to detect any manipulation of numbers or exaggeration of profits or losses.
2. Applying forensic accounting techniques can enhance confidence in the financial reports submitted to investors and regulatory authorities. This enhances the credibility of government units and reduces the chances of committing financial crimes resulting from inaccurate accounting estimates.

3. Forensic accounting provides reliable evidence that can be used in lawsuits related to financial crimes. This evidence is essential in proving financial fraud and prosecuting those involved legally.
4. Through forensic auditing and analysis of accounting estimates, forensic accounting helps identify high-risk areas, enabling government units to take preventive measures that reduce the chances of financial fraud.
5. Forensic accounting provides an in-depth analysis of accounting estimates, which helps financial management make appropriate decisions based on accurate and reliable data, thus improving the overall financial performance of the economic unit.

2) Recommendations

1. We recommend providing advanced training programs for accountants in the field of forensic accounting, to enhance their ability to detect financial crimes related to accounting estimates, and to provide them with the tools and skills necessary to forensically analyze financial statements.
2. The necessity of using advanced data analysis techniques such as big data analysis and artificial intelligence in forensic accounting. These techniques help detect abnormal patterns in accounting estimates that may indicate manipulation or fraud.
3. The need to strengthen cooperation between financial and legal departments within government units to ensure effective and rapid exchange of information, which contributes to detecting financial crimes and addressing them early.
- 4 It is recommended to implement strict internal control procedures that include regularly reviewing accounting estimates, using forensic accounting methods. This would reduce the chances of financial manipulation and fraud.
5. Enhancing legal awareness among accountants of the importance of forensic accounting and its role in combating financial crimes. Understanding the legal aspects related to accounting estimates can help improve the quality of financial reporting and reduce financial risks.

The third axis - applied procedures for the research sample :

- 1- introduction: In this section, we will explain the method and tools used using the statistical program Costat from During the presentation of the results of the statistical description.
- 2- Study methods and tools Study methods and tools: This research deals with the most important tools and methods used in the study that were relied upon in implementing the

practical study, including (the study population and sample, the study tools used, the tools used in collecting data, the validity and reliability of the questionnaire).

• **Study population and sample Community and study sample Sample size:**

The questionnaire targeted employees of the Assyria International Bank and the Iraqi Gulf Bank, and it was distributed:45/ All questionnaires were suitable for transcribing and statistical analysis.

• **Study tools Study tools:**

Statistical tools used The statistical tools used

The program was used Excel In order to collect the data obtained through the questionnaire lists, the data was transcribed into the Costat program, where a set of statistical methods were relied upon, as follows:

- Use frequencies and percentages to describe the demographic characteristics of the study sample.
- Use arithmetic means and standard deviations.

Standard deviation It is the average deviation of values from the arithmetic mean. In other words, the farther the value is from the mean, the greater the standard deviation, and vice versa, the closer the value is to the mean, the lower the standard deviation.

- Reliability coefficient, Cronbach's alpha criterion.

• **Question naire where The questionnaire consists of two parts :**

-**First section :**It relates to the personal information of the study sample (gender, age, educational qualification).

-**Second section:** related to effectiveness, and contains (15) phrase. To answer the statements in the second part of the questionnaire, a five-point Likert scale was used, whereby respondents are asked to give their degree of agreement with each of the statements included in the scale according to the following table:

Table (3) Degrees of agreement according to a five-point Likert scale

5	4	3	2	1
I strongly agree	I agree	neutral	I don't agree	I strongly disagree

Source: Prepared by the researcher

Where the value (1) is given for the answer of not agreeing at all, the value (2) is given for the answer of not agreeing, while the value (3) is given for neutrality, the value (4) is given for agreement and the value (5) is given for strongly agree. The range of the arithmetic mean

is determined by calculating the range ($5-1 = 4$), then we divide it by the largest value in the scale to get the length of the cell ($4/5 = 0.8$), then add this value to the lowest value in the scale, which is (1) in order to determine the minimum for this cell, and thus the length of the cells becomes as It is shown in the following table:

Table (4) Levels of agreement on the research items, dimensions, and axes

Greater than 4.20	3.40 to 4.19	2.60 to 3.39	1.80 to 2.59	Less than 1.80	Arithmetic average
I strongly agree	I agree	neutral	noI agree	noI strongly agree	direction
Highvery	High	middle	weak	weakvery	Evaluation score

Source: Prepared by the researcher

Questionnaire reliability:

The reliability of the questionnaire statements was examined through the Cron Nebach alpha scale to calculate reliability, where the stability of the scale means that it is free from error resulting from misunderstanding or lack of understanding of the questions, or the sample members' reliance on random answers that do not reflect the situation to be measured, and cause the tool to give different results regarding If it was reused, it was noted that the reliability coefficient was (0.845), and this percentage is considered highly statistically significant and satisfies the purposes of the research. The validity index was calculated by calculating the square root of the reliability coefficient, and on this basis, the overall validity index became (0.92), which is a high reliability coefficient, and accordingly, the questionnaire became a high degree of validity.

Table (5) Reliability of the questionnaire according to Cronbach's alpha coefficient

Workers in commercial banks	Search sample
0.845	Cronach's alpha coefficient

Source: Prepared by the researcher based on data Costat

From the table we notice that the Cronbach's alpha coefficient reached 84%, as this percentage is considered to have high statistical significance and a good level of confidence and stability that meets the purposes of the study. This means that there is a high degree of stability in the results of the questionnaire and that they do not change significantly if it were redistributed. on sample members several times.

1- Research results and discussion Study results and discussion

After determining the study method and tools, the results of the applied study will be presented, statistically analyzed, and the results will be discussed and interpreted.

- **Presentation of the study results**

The results of the study will be presented based on the information collected, summarized, and processed through the aforementioned statistical programs.

- **Show results related to demographic characteristics**

- 1) **presenting the results related to age**

Table (6): Distribution of the study sample according to age in the administration under study

Percentage %	Repetition	the age
13.3	6	20-25 years
28.9	13	30-26 years old
17.8	8	35-31 years old
22.2	10	40-36 years old
11.1	5	45-41 years old
6.7	3	46 years and over
100	45	the total

Source: Prepared by the researcher based on the outputs Costat

From the previous table, it is clear to us that the percentage of workers aged between (20-45) May year It reached 93.3%,Of the total number of employees.

- 2) **Display results related to academic qualification**

Table (7): Distribution of the study sample according to academic qualification in the administration under study

Percentage %	Repetition	Academic qualification
28.9	13	diploma
35.6	16	Bachelor's
20	9	Master's degree or equivalent
15.6	7	Doctorate or equivalent
100	45	the total

Source: Prepared by the researcher based on the outputs Costat

From the previous table, we can see the distribution of percentages according to academic qualification, as we find that workers who hold a bachelor's degree are represented 71% of the total number of employees.

3) Presenting the results related to specialty Scientific

Table (8): Distribution of the study sample according to specialty Scientific research in management

Percentage %	Repetition	AFor scientific specialization
15.2	7	accounting
23.9	11	Accounting and auditing
21.7	10	Accounting and financial oversight
15.2	7	Chartered Accounting
6.5	3	business management
17.4	8	Other
100	45	the total

Source: Prepared by the researcher based on the outputs Costat

4) Show related results By job title

Table (9): Distribution of the study sample according to :Job title In the administration in question

Percentage %	Repetition	AFor scientific specialization
15.6	7	Accounts clerk
8.9	4	Assistant accountant
13.3	6	accountant
6.7	3	Senior accountant
2.2	1	Assistant Account Manager
2.2	1	Account Manager
8.9	4	Senior Accounts Manager
4.4	2	Financial manager
2.2	1	Audit writer
4.4	2	Auditor assistant

4.4	2	Auditor
8.9	4	Senior auditor
4.4	2	Assistant Audit Manager
8.9	4	Audit Manager
0	0	Senior audit manager
2.2	1	Auditing expert
100	45	the total

Source: Prepared by the researcher based on the outputs Costat

- **Presentation of related results With the first hypothesis(There are relationship Self indication Statistics between Tools And methods in Accounting Judicial And combat Crimes Finance Resulting on Estimates Accounting)**

Arithmetic means and standard deviations were calculated, as well as the general average value, as shown in the following tables:

table (10) Arithmetic means and standard deviations of the workers' answers to the first statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
4.2444	1.0693	2	2	3	14	24	repetition	that Use techniques analysis Data(Data Analytics)Helps in to improve accuracy	01
		5	5	6	31	53	%	Reveal on Estimates Accounting wrong.	

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the value of the arithmetic mean for the first paragraph (4.2444(occurs in the period)Greater than 4.20)According to the response scores specified in Table (2), which indicates the degree of agreement with the first statement, with a standard deviation (1.0693) about the average value of the answers.

table (11) Arithmetic means and standard deviations of the workers' answers to the second statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
3.9778	1.138	2	4	5	16	18	repetition	AnTools used in Accounting Judicial Effective in Revealing on Estimates Accounting Misleading.	0 2
		5	8	11	36	40	%		

Source: Prepared by the researcher based on the outputsCostat

We note from the previous table that the value of the arithmetic mean for the second paragraph (3.9778(occurs in the period)3.40-4.19)According to the response scores specified in Table (2), which indicates the degree of agreement for the second statement, with a standard deviation (1.138)About the average value of the answers.

table (12) Arithmetic means and standard deviations of the workers' answers to the third statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
4.0667	1.0531	1	4	5	16	19	repetition	that Programs	03
		2	8	11	36	42	%	And applications Advanced in Accounting Judicial to improve quality Investigations Finance.	

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraph Third (4.0667 (occurs in the period) 3.40-4.19) According to the response scores specified in Table (2), which indicates the degree of agreement for the third statement, with a standard deviation (1.0531) about the average value of the answers.

Table (13) Arithmetic means and standard deviations of the workers' answers to the fourth statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
4.2222	1.042	2	2	2	7	22	repetition	that Training	04
		5	5	5	16	49	%	The specialist	

								in Accountin g Judicial enhances from capacity Accountan ts on discovery Manipulati on in Estimates Accountin g.
--	--	--	--	--	--	--	--	---

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraph Fourth (4.2222 (occurs in the period) Greater than 4.20) According to the response scores specified in Table (2), which indicates the degree of agreement for the fourth statement, with a standard deviation (1.042) about the average value of the answers.

Table (14) Arithmetic means and standard deviations of the workers' answers to the fifth statement.

Arithme tic average	Standa rd deviati on	I strong ly disagr ee	I don' t agre e	neutr al	I agre e	I strong ly agree		phrase	M
4.0889	1.1836	3	2	5	13	22	repetiti on	that Enhance Legislation And the laws Related With	0 5
		7	5	11	29	49	%		

								accountabil ity Judicial Contribute in reduction Crimes Finance Resulting on Estimates Accounting .	
--	--	--	--	--	--	--	--	--	--

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraphFifth(4.0889(occurs in the period)3.40-4.19)According to the response scores specified in Table (2), which indicates the degree of agreement for the fifth statement, with a standard deviation (1.1836) about the average value of the answers.

Table (15) Arithmetic means and standard deviations of the workers’ answers to the sixth statement.

Arithme tic average	Standa rd deviati on	I strongl y disagr ee	I don' t agre e	neutr al	I agre e	I strong ly agree		phrase	M
4	1.2247	2	6	3	13	21	repetiti on	that Programs And application s Advanced in Accounting Judicial to improve	0 6
		5	13	7	29	47	%		

								quality Investigatio ns Finance.	
--	--	--	--	--	--	--	--	--	--

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraph Six (4 (occurs in the period) 3.40-4.19) According to the response scores specified in Table (2), which indicates the degree of agreement for the sixth statement, with a standard deviation (1.2247) about the average value of the answers.

Table (16) Arithmetic means and standard deviations of the workers' answers to the seventh statement.

Arithmet ic average	Standar d deviatio n	I strongl y disagr ee	I don' t agre e	neutr al	I agre e	I strongl y agree		phrase	M
4.0889	1.1836	2	4	5	11	23	repetiti on	that cooperatio n between Entities Superviso ry And accountan ts Judicial judges	0 7
		5	8	11	25	51	%	Contribut es in Anti Crimes Finance Resulting on Estimates Accountin g.	

Source: Prepared by the researcher based on the outputsCostat

We note from the previous table that the arithmetic mean value of the paragraphSeven(4.0889(occurs in the period)3.40-4.19)According to the response scores specified in Table (2), which indicates a high degree of agreement for the seventh statement, with a standard deviation (1.1836) about the average value of the answers.

Table (17) Arithmetic means and standard deviations of the workers’ answers to the eighth statement.

Arithmet ic average	Standa rd deviatio n	I strongl y disagr ee	I don' t agre e	neutr al	I agre e	I strong ly agree		phrase	M
3.9333	1.2505	4	1	9	11	20	repetiti on	that Use techniques	0 8
		8	2	20	25	44	%	Intelligenc e Artificial It improves accuracy Reveal on Manipulati on With estimates Accountin g.	

Source: Prepared by the researcher based on the outputsCostat

We note from the previous table that the arithmetic mean value of the paragraphEighth(3.9333)falls in the period (3.40-4.19)According to the response scores specified in Table (2), which indicates the degree of agreement for the eighth statement, with a standard deviation (1.2505) about the average value of the answers.

Table (18) Arithmetic means and standard deviations of the workers' answers to the ninth statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
3.8444	1.2424	3	5	5	15	17	repetition	that Tools And methods current in Accounting Judicial Enough To combat Crimes Finance Resulting on Estimates Accounting.	09
		7	11	11	33	38	%		

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraphNine(3.8444(occurs in the period)3.40-4.19)According to the response scores specified in Table (2), which indicates the degree of agreement for the ninth statement, with a standard deviation (1.2424) about the average value of the answers.

Table (19) Arithmetic means and standard deviations of the workers' answers to the tenth statement.

Arithmetic average	Standard	I strongly	I don't	neutral	I agree	I strong		phrase	M
--------------------	----------	------------	---------	---------	---------	----------	--	--------	---

	deviation	disagree	agree			ly agree			
4.2222	1.042	1	3	5	12	24	repetition	Facing Challenges Great in Use Tools Available in Accounting Judicial To reveal on Manipulation With estimates Accounting.	10
		2	7	11	27	53	%		

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraph Ten o'clock (4.2222 (occurs in the period) Greater than 4.20) According to the response scores specified in Table (2), which indicates the degree non Corresponding to the tenth statement, with a standard deviation (1.042) about the average value of the answers.

table (20) Arithmetic means and standard deviations of workers' answers.

Ranking	Arithmetic average	Standard deviation	phrase	M
7	4.2444	1.0693	that Use techniques analysis Data(Data Analytics) Helps in to improve accuracy Reveal on Estimates Accounting wrong.	01
20	3.9778	1.138	that Tools used in Accounting Judicial Effective in Reveal on	02

			Estimates Accounting Misleading.	
11	4.0667	1.0531	that Programs And applications Advanced in Accounting Judicial to improve quality Investigations Finance.	0 3
10	4.2222	1.042	that Training The specialist in Accounting Judicial enhances from capacity Accountants on discovery Manipulation in Estimates Accounting.	0 4
17	4.0889	1.1836	that Enhance Legislation And the laws Related With accountability Judicial Contribute in reduction Crimes Finance Resulting on Estimates Accounting.	0 5
13	4	1.2247	that Programs And applications Advanced in Accounting Judicial to improve quality Investigations Finance.	0 6
5	4.0889	1.1836	that cooperation between Entities Supervisory And accountants Judicial judges Contributes in Anti Crimes Finance Resulting on Estimates Accounting.	0 7
15	3.9333	1.2505	that Use techniques Intelligence Artificial It improves accuracy Reveal on Manipulation With estimates Accounting.	0 8
14	3.8444	1.2424	that Tools And methods current in Accounting Judicial Enough To combat Crimes Finance	0 9

			Resulting on Estimates Accounting.	
24	4.2222	1.042	Facing Challenges Great in Use Tools Available in Accounting Judicial To reveal on Manipulation With estimates Accounting.	10
	4.0689	1.1413	the total	

Source: Prepared by the researcher based on the outputs Costat

It is clear from the table (32(The responses of the study sample were high, as the general average value (4.0689(occurs in the period)3.40-4.19)According to the response scores

specified in Table (2). The results of the statistical analysis also showed that the most positive statements are “ that Use techniques analysis Data(Data Analytics) helps improve the accuracy of detecting incorrect accounting estimates. Which came in first place with a arithmetical average (4.2444(and standard deviation)1.0693), then the phrase " Facing Challenges Great in Use Tools Available in Accounting Judicial To reveal on Manipulation With estimates Accounting."With an arithmetic average (4.2222(and standard deviation)1.042), while the phrase "that Tools And methods current in Accounting Judicial Enough To combat Crimes Finance Resulting on Estimates Accounting.“In last place with arithmetic average (3.8444(and standard deviation)1.2424) **Show related resultsBy the second hypothesis(There are impact Self indication Statistics between between Tools And methods in Accounting Judicial And combat Crimes Finance Resulting on Estimates Accounting)**

table (21) Arithmetic means and standard deviations of the workers’ answers to the first statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
4.2889	1.1205	3	1	2	13	26	repetition	Affect techniques Analysis Financial Advanced In a way big on capacity Institution s in a statement Estimates Accountin g	01
		7	2	4	29	58	%		

								Misleading?	
--	--	--	--	--	--	--	--	-------------	--

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the value of the arithmetic mean for the first paragraph (4.2889(occurs in the period)Greater than 4.20)According to the response scores specified in Table (2), which indicates the degree of agreement with the first statement, with a standard deviation (1.1205) about the average value of the answers.

table (22) Arithmetic means and standard deviations of the workers’ answers to the second statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
4.1333	0.8944	1	1	6	20	17	repetition	Contributes	02
		2	2	13	44	37	%	cooperation between Entities Supervisor y And accountant s Judicial judges in reduction Crimes Finance Resulting on Estimates Accountin g?	

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the value of the arithmetic mean for the second paragraph (4.1333) falls in the period (3.40-4.19) According to the response scores specified in Table (2), which indicates the degree of agreement for the second statement, with a standard deviation (0.8944) about the average value of the answers.

table (23) Arithmetic means and standard deviations of the workers' answers to the third statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
4.333	0.9045	1	1	4	15	24	repetition	Affect rules Data	03
		2	2	9	33	53	%	The big one And analytics Statistics In a way positive on a statement Manipulation With estimates Accountin g?	

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraph Third (4.333) (occurs in the period) Greater than 4.20) According to the response scores specified in Table (2), which indicates the degree of agreement for the third statement, with a standard deviation (0.9045) about the average value of the answers.

Table (24) Arithmetic means and standard deviations of the workers' answers to the fourth statement.

Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	I agree	I strongly agree		phrase	M
4.1111	1.0493	1	3	7	13	21	repetition	lead Challenges	04
		2	7	16	29	47	%	Use Tools Available in Accounting Judicial to impact negative on effectiveness Reveal on Manipulation With estimates Accounting?	

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraph Fourth (4.1111) (occurs in the period) 3.40-4.19) According to the response scores specified in Table (2), which indicates the degree of agreement for the fourth statement, with a standard deviation (1.0493) about the average value of the answers.

Table (25) Arithmetic means and standard deviations of the workers' answers to the fifth statement.

Arithmetic average	Standard deviation	I strongly	I don't	neutral	I agree	I strong		phrase	M
--------------------	--------------------	------------	---------	---------	---------	----------	--	--------	---

	deviati on	disagr ee	agre e			ly agree			
4.1111	1.1124	1	6	1	16	21	repetiti on	Affect procedures	0 5
		2	13	2	35	47	%	Censorship Interior in Units Governmen tal in reduction Crimes Finance Resulting on Estimates Accounting ?	

Source: Prepared by the researcher based on the outputs Costat

We note from the previous table that the arithmetic mean value of the paragraph Fifth (4.1111) (occurs in the period) 3.40-4.19. According to the response scores specified in Table (2), which indicates the degree of agreement for the fifth statement, with a standard deviation (1.1124) about the average value of the answers.

table (26) Arithmetic means and standard deviations of workers' answers.

Ranking	Arithmetic average	Standard deviation	phrase	M
7	4.2889	1.1205	Affect techniques Analysis Financial Advanced In a way big on capacity Institutions in a statement Estimates Accounting Misleading?	0 1
20	4.1333	0.8944		

			Contributes cooperation between Entities Supervisory And accountants Judicial judges in reduction Crimes Finance Resulting on Estimates Accounting?	0 2
11	4.3333	0.9045	Affect rules Data The big one And analytics Statistics In a way positive on a statement Manipulation With estimates Accounting?	0 3
10	4.1111	1.0493	lead Challenges Use Tools Available in Accounting Judicial to impact negative on effectiveness Reveal on Manipulation With estimates Accounting?	0 4
17	4.1111	1.1124	Affect procedures Censorship Interior in Units Governmental in reduction Crimes Finance Resulting on Estimates Accounting?	0 5

Source: Prepared by the researcher based on the outputs Costat

It is clear from the table (32) (The responses of the study sample were high, as the general average value (4.1956 (occurs in the period) 3.40-4.19) According to the response scores specified in Table (2). The results of the statistical analysis also showed that the most positive statements are " Affect rules Data The big one And analytics Statistics In a way positive on a statement Manipulation With estimates Accounting? Which came in first place with a arithmetical average (4.3333 (and standard deviation) 0.9045), then the phrase " Affect techniques Analysis Financial Advanced In a way big on capacity Institutions in a statement Estimates Accounting Misleading? " With an arithmetic average (4.2889 (and standard deviation) 1.1205), while the phrase "lead Challenges Use Tools Available in Accounting

Judicial to impact negative on effectiveness Reveal on Manipulation With estimates Accounting? “In last place with arithmetic average (4.1111(and standard deviation)1.0493)

table (27) Arithmetic means and standard deviations of workers’ answers.

Ranking	Arithmetic average	Standard deviation	I strongly disagree	I don't agree	neutral	Strongly agree	I agree	repetition	phrase	M
7	4.2444	1.0693	2	2	3	14	24	repetition	that Use techniques analysis Data	01
			5	5	7	31	53	%	Data Analyticshelps in to improve accuracy Reveal on Estimates Accounting wrong	
20	3.9778	1.138	2	4	5	16	18	repetition	that Tools used in Accounting Judicial Effective in	02
			5	8	11	36	40	%	Reveal on Estimates Accounting Misleading	
11	4.0667	1.0531	1	4	5	16	19	repetition	that Programs And applications	03
			2	8	11	36	42	%	Advanced in	

									Accounting Judicial to improve quality Investigations Finance	
10			2	2	2	7	22	repetit ion	that Training The specialist in Accounting Judi cial enhances from capacity Accountants on discovery Manipulation in Estimates Accounting	0 4
			5	5	5	16	49	%		
17	4.088 9	1.183 6	3	2	5	13	22	repetit ion	that Enhance Legislation And the laws Related With accountability Judicial Contribute in reduction Crimes Finance Resulting on Estimates Accounting	0 5
			7	5	11	29	49	%		
13	4	1.224 7	2	6	3	13	21	repetit ion	that Programs And applications Advanced in Accounting Judicial to	0 6
			5	13	7	29	47	%		

									improve quality Investigations Finance	
5	4.088 9	1.183 6	2	4	5	11	23	repetition	that cooperation between Entities Supervisory And accountants	0 7
			5	8	11	25	51	%	Judicial judges Contributes in Anti Crimes Finance Resulting on Estimates Accounting	
15	3.933 3	1.250 5	4	1	9	11	20	repetition	that Use techniques Intelligence Artificial	0 8
			8	2	20	25	44	%	It improves accuracy Reveal on Manipulation With estimates Accounting	
14	3.844 4	1.242 4	3	5	5	15	17	repetition	that Tools And methods current in Accounting	0 9
			7	11	11	33	38	%	Judicial Enough To combat Crimes Finance Resulting on EstimatesAccou nting	

24	4.222 2	1.042	1	3	5	12	24	repetition	Facing Challenges Great in Use Tools Available in Accounting Judicial disclosure on Manipulation With estimates Accounting.	1 0
			2	7	11	27	53	%		
18	4.288 9	1.120 5	3	1	2	13	26	repetition	Affect techniques Analysis Financial Advanced In a way big on Institutional capacity in a statement Estimates Accounting Misleading?	1 1
			7	2	4	29	58	%		
8	4.133 3	0.894 4	1	1	6	20	17	repetition	Contributes cooperation between Entities Supervisory And accountants Judicial judges in reduction Crimes Finance Resulting on Estimates Accounting?	1 2
			2	2	13	44	37	%		
25	4.333 3	0.904	1	1	4	15	24	repetition	Affect rules Data The big one And analytics Statistics In a	1 3
			2	2	9	33	53	%		

									way positive on a statement Manipulation With estimates Accounting?	
3	4.111 1	1.049 3	1	3	7	13	21	repetition	lead Challenges Use Tools Available in Accounting Judicial to impact negative on effectiveness Reveal on Manipulation With estimates Accounting?	1 4
			2	7	16	29	47	%		
21	4.111 1	1.112 4	1	6	1	16	21	repetition	Affect procedures Censorship Interior in Units Governmental in reduction Crimes Finance Resulting on Estimates Accounting?	1 5
			2	13	2	35	47	%		
	3.444 4	1.480 2	the total							

Source: Prepared by the researcher based on the outputs Costat

From the previous table it appears to us that the general arithmetic mean (3.4444(which indicates the degree of agreement in the workers' answers, with a standard deviation)1.4802) Which indicates that the answers are not widely dispersed around the value of the general arithmetic mean.

REFERENSI

- Federal Office of Financial Supervision. (2022). Annual report. Baghdad: Federal Financial Supervision Bureau.
- Alaa Hussein Alwan Al-Shafi'i. (December, 2020). The role of internal audit in reducing administrative and financial corruption, an applied study in the General Authority for Taxes. *Al-Reyadah Journal of Finance and Business*, 1(2), pp. 60-72.
- Federal Integrity Commission. (2023). Annual report. Baghdad: Federal Integrity Commission.
- Albrecht, W. S., Albrecht, C. C., & Albrecht, C. O. (2008). *Fraud Examination*. Cengage Learning. ISBN: 9780324377668.
- Albrecht, W. S., Albrecht, C. O., Albrecht, C. C., & Zimbelman, M. F. (2016). *Fraud Examination*. Cengage Learning. ISBN: 9781337619670.
- Alles, M. G. (2015). Drivers of the Use and Facilitators and Obstacles of the Evolution of Big Data by the Audit Profession. *Accounting Horizons*, 29(2), 439-449. DOI: 10.2308/acch-51067.
- Bologna, J. G., & Lindquist, R. J. (1995). *Fraud Auditing and Forensic Accounting: New Tools and Techniques*. John Wiley & Sons. ISBN: 9780471575257.
- Brazel, J. F., Jones, K. L., & Zimbelman, M. F. (2009). Using Nonfinancial Measures to Assess Fraud Risk. *Journal of Accounting Research*, 47(5), 1135-1166. DOI: 10.1111/j.1475-679X.2009.00350.x.
- Carnes, K. C., & Gierlasinski, N. J. (2001). Forensic Accounting Skills: Will Supply Finally Catch Up to Demand?. *Managerial Auditing Journal*, 16(6), 378-382. DOI: 10.1108/02686900110395514.
- Central Bank of Iraq. (2021). Annual Report. Baghdad: Central Bank of Iraq. Retrieved from <https://cbi.iq/>
- Coderre, D. (2009). *Computer-Aided Fraud Prevention and Detection: A Step-by-Step Guide*. John Wiley & Sons. DOI: 10.1002/9781118258040.
- Crumbley, D. L., Heitger, L. E., & Smith, G. S. (2017). *Forensic and Investigative Accounting*. CCH Incorporated. ISBN: 9780808044544.
- Dechow, P. M., Ge, W., & Schrand, C. M. (2010). Understanding quality earnings: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, 50(2-3), 344-401. DOI: 10.1016/j.jacceco.2010.09.001.
- Golden, T. W., Skalak, S. L., & Clayton, M. M. (2006). *A Guide to Forensic Accounting Investigation*. John Wiley & Sons. ISBN: 9780471788732

- Hopwood, W. S., Leiner, J. J., & Young, G. R. (2012). *Forensic Accounting and Fraud Examination*. McGraw-Hill Education. ISBN: 9780078136665.
- Integrity Commission of Iraq. (2021). *Annual Report on Anti-Corruption Efforts*. Baghdad: Integrity Commission of Iraq. Retrieved from <https://nazaha.iq/>
- Iraqi Federal Board of Supreme Audit. (2020). *Annual Report on Public Financial Management*. Baghdad: Iraqi Federal Board of Supreme Audit. Retrieved from <http://www.fbsa.gov.iq/>
- Iraqi Legal Database. (1992). *Law on Auditing No. 19 of 1992*. Baghdad: Iraqi Legal Database. Retrieved from <http://www.iraqlid.iq/>
- Iraqi Legal Database. (1997). *Company Law No. 21 of 1997 (Amendments included)*. Baghdad: Iraqi Legal Database. Retrieved from <http://www.iraqlid.iq/>
- Iraqi Legal Database. (2015). *Anti-Money Laundering and Counter-Terrorism Financing Law No. 39 of 2015*. Baghdad: Iraqi Legal Database. Retrieved from <http://www.iraqlid.iq/>
- Kothari, A., & Lester, W. (2020). *The Wirecard Scandal: How Germany's Fintech Star Faced a Billion-Euro Fraud*. *Financial Times*.
- Munter, P. (2021). *Lessons from the Wirecard Fraud: Implications for Auditors and Financial Professionals*. *Journal of Accountancy*. DOI: 10.2308/jofa-2020-060.
- Penman, S. H. (2013). *Financial Statement Analysis and Security Valuation*. McGraw-Hill Education. ISBN: 9780078025310.
- Ramaswamy, V. (2005). *Corporate Governance and the Forensic Accountant*. *The CPA Journal*, 75(3), 68-70.
- Rezaee, Z. (2002). *Forensic Accounting Practices: Education and Certification*. *Journal of Forensic Accounting*, 3(1), 207-226.
- Skoda, M. (2017). *Accounting Estimates and Their Importance in Financial Reporting*. *Journal of Accounting and Economics*, 63(1), 79-90. DOI: 10.1016/j.jacceco.2017.10.005.
- Wells, J. T. (2013). *Principles of Fraud Examination*. John Wiley & Sons. ISBN: 9781118922347.
- Zysman, A. (2001). *Forensic Accounting Demystified*. *Canadian Institute of Chartered Accountants*, 11(3), 1-10.