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The reality of sustainable accounting in light of artificial intelligence and its impact on financial reports: An exploratory study in Iraqi commercial companies

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Abstract:
The study aims to identify the conceptual framework of sustainable accounting and the role of Artificial Intelligence (AI) technologies in enhancing corporate reporting. Furthermore, it demonstrates the impact of adopting sustainability accounting on the financial reporting of a sample of five companies listed on the Iraq Stock Exchange from the year (2019) to the year (2022). The study relied on the descriptive analytical approach using the SPSS program. The main findings reveal the absence of a statistically significant relationship regarding the influence of disclosure in financial reports to apply sustainability standards on investors' decisions, as well as the absence of a significant relationship between the impact of sustainability accounting and the quality of financial reports. Integrating AI tools—such as machine learning and automated ESG analytics—can bridge these gaps by improving data accuracy, reducing reporting bias, and enhancing transparency. The study recommended a set of recommendations, the most important of which is obligating auditors specialized in the profession of auditing companies not to express an opinion on the validity of financial reports if they are devoid of sustainability accounting reports and supported AI-driven disclosure metrics.

Keywords: Financial reporting, Artificial intelligence, Sustainability

Introduction:
For three decades, the world has been witnessing many serious economic, environmental, and social crises, such as biodiversity imbalance, the shrinkage of green spaces, water and air pollution, child labour, forced labour, the spread of unemployment, and the bankruptcy of major companies. Under these circumstances, the United Nations called on the international community to develop preventive and therapeutic solutions. As a result, the world reached a consensus on criticizing the traditional development model, resulting in a wasteful consumer lifestyle. Thus, sustainable development emerged as a vital alternative. The importance of corporate sustainability and its impact comes from the fact that a company's reputation is no longer based solely on its financial position, nor is its goal strictly to maximize short-term profit.
The collapse of global companies and their inability to continue led to the emergence of new concepts in the business environment, most importantly corporate social responsibility (CSR) and sustainable accounting. These concepts translate the extent of companies' contributions to sustainable development

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by measuring environmental, social, and economic performance. Furthermore, the rapid advancement of digital transformation has positioned **Artificial Intelligence (AI)** as an indispensable pillar in modern accounting systems. AI applications, advanced algorithmic models, and automated data processing tools allow firms to handle complex non-financial metrics, streamline environmental risk assessment, and produce highly reliable financial disclosures. Combining AI systems with sustainable accounting ensures higher transparency, accuracy, and efficiency in preparing corporate financial reports.

1.Theoretical analysis and building hypothesis

I. SECTION ONE

Research Problem

The lack of a unified standard for assessing the environmental and social risks to which investment companies are exposed ،The lack of strict audit procedures that require companies to disclose their true Information about environmental impacts Research Importance

Focusing on the need to provide real Information about the environment, climate, pollution and society in the long term.

Research objective

The role or impact of sustainable accounting in collecting, analyzing and using Information to improve the environmental and social performance of companies in a real and non-falsified manner.

Research Hypothesis

Revised Research Hypotheses:

- **H1:** There is a statistically significant impact of applying sustainability accounting on providing relevant information to investors in the long term.
- **H2:** There is a statistically significant impact of sustainability accounting disclosure in financial reports on investors' decisions.

A group of companies listed on the Iraq Stock Exchange from 2019 to 2022, namely.

Previous Foreign Studies

1- Peter. k, Mark D, Accounting For sustainable development, statistics Nether Lands, (vol. 16, 2007) This study aimed to measure sustainable development, as it explained that there are three basic components to clarify the idea of sustainable development: economic growth, environmental protection, and social equality ،The study concluded that the economic and social aspects have dimensions that must be discussed in the sustainable development accounting policy and that there is a main goal behind sustainable development, which is to extend the horizontal period available to decision-makers. Sustainable development is also an important way to reach the targeted policy in economic institutions. The study concluded that one of the most important reasons for institutions not disclosing information related to sustainable development is the lack of legal requirements, that improving the institution's reputation in society is one of the most important motives for making this disclosure, and that the appropriate method of disclosure is in the form of mixed information (financial, quantitative, and descriptive), and that the appropriate location for disclosure is in a separate report, and that one of the most important benefits of institutions disclosing information related to sustainable development is that this will lead to increased awareness of the role of contributing institutions towards achieving sustainable development .

1- The study (Birkin and Woodward, 1996, pp205-28) addressed the presentation of the concept of environmental management accounting, stated the extent of the need for it and studied the relationship between environmental management accounting and sustainable development. The study confirmed that the diversity resulting from extending the company's activities is necessary for sustainable development. This is done through: Using clean technology to redesign the product, recycle and replace materials.

Customer awareness of the added environmental values and levels of environmental management.

The study concluded that environmental management accounting is a logical development of the management accounting function.

In light of the scarcity of natural resources, there is an urgent need for environmental management accounting.

Requires the development of the expertise and skills of the management accountant and the tools used in management accounting

The study recommended the necessity of working to spread the environmental management accounting system in the future and working to develop an integrated framework for the application of environmental management accounting to help establishments take into account the environmental dimension and environmental costs in addition to the economic dimension, which represents the basis for supporting sustainable development.

II. SECTION TWO

First, The concept of sustainability accounting or sustainable development

Referring to the linguistic meaning of sustainable development or sustainability, It is a translation of the phrase "sustainable development," which means "permanence" or "continuity." The verb "The linguistic origin of sustainability relates to continuity, persistence, and long-term endurance." which has multiple meanings in Arabic, includes "taking time" and "requesting" something's persistence and continuity. As for the terminology, many terms express the concept of sustainable development. Some express it as continuous development, others call it continuous development, while others call it sustainable development. This term became popular for the first time during the second half of the twentieth century, when it appeared in economic and social literature. In the nineties, it was used in political and administrative literature (Abdul Rahim, 2015: 21). “It first emerged during the Stockholm Conference in 1972 on the human environment organized by the United Nations, which is considered the first step towards global interest in the environment” , which discussed environmental issues and their relationship to the reality of poverty and the absence of development in the world (Al-Mashhadani and Al-Rikabi, 2011: 495). The definitions of development also multiplied. Sustainable was defined in the "Rio Conference"- which is known as the Earth Summit - (the necessity of achieving the right to development so that the balance between the developmental and environmental needs of present and future generations is achieved in an equal manner) UNEP, 1992: Chap1)) as defined by Josep, 2016: 104) for the tools used by companies to be able to maintain a stable situation. The International Union for Conservation of Nature (IUCN) defined sustainability as the ability to improve the quality of human life while living within the carrying capacity of the Earth's supporting ecosystems. This concept arose because of global production and consumption patterns that destroy nature at dangerously high and continuous rates. The increase in human dependence on natural resources with the increase in population has changed the natural balance of nature and negatively affected all humans and other living systems. It is clear from the above that sustainability involves integration between social, economic and environmental goals. Criticism can be directed at previous definitions because many studies used the definition mentioned in the Brundtland Report in 1987, more than 25 years ago, as it has become outdated and invalid for research in accounting for sustainability. Because it focuses on the sustainability of environmental and social systems, while the focus of sustainability accounting research at present is on corporate sustainability, from this, we conclude that sustainability means preserving the company's resources, money and assets, which are the resources of society as a whole, in the long term. Applying this conclusion to accounting, sustainability means more than the continuity in Standard No. (1). The company's ability to continue for under 12 months from the balance

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sheet date must be considered. International Accounting Standard No. (1) It can also be defined as (one of the basic principles in preparing financial statements. It means that the company continues to practice its activity shortly, and it is not obliged - nor intends - to reduce or liquidate the size of its business or to seek means of protection from creditors by the laws. Thus, recording assets and liabilities is a way for the company to realize the value of its assets and settle its liabilities by practising its normal activities. From the above, the concept of sustainability accounting can be defined at the company level, which is related to the concept of corporate social responsibility (CSR), which maintains practical contributions to sustainable development in its three main areas: social, economic and environmental,, (Persic & Jankovic, 2017: 3), "it should include the impact of the company's activity in the external environment on the future. Companies should strike a balance between economic progress and taking into account the social dimension on the one hand and the environmental dimension on the other so that current economic progress does not affect the right of future generations to use the same resources for development. In the scientific literature, the concept of sustainability accounting has emerged since the nineties of the twentieth century when "(GERY) presented three methods for sustainability accounting, namely sustainable costing, natural capital inventory accounting, and input-output analysis (Lamberton, 5005: 8). Its roots lie in financial and managerial accounting. It can be applied at the macroeconomic (state) and microeconomic (companies) levels. The origin of environmental accounting and sustainability accounting is an evolution in traditional accounting (it exists in the traditional accounting system that respects the needs of company management). Sustainability accounting represents the accounting that supports decision-making processes at all administrative levels and is in line with the requirements of external parties. Accounting information is an integral part of external reports. In the late nineties, sustainability accounting became known as three-dimensional sustainability accounting (TLB), which aims to report on the economic, social and environmental impacts resulting from the company's activities (16: 2011, Odemis) and since sustainability accounting is a system of collecting, recording, processing, analyzing and providing data (often financial data) about a company's social and environmental aspects in order to enhance its economic, social, and environmental performance. It seeks to offer pertinent and high-quality information. On the one hand, it helps management make decisions that will help the business achieve sustainability; on the other side, it helps external users who are interested in this kind of information make decisions. (Žák, 2009: 159). It represents a source of useful information for managers and stakeholders to assess and manage social and environmental risks, as well as to determine the efficiency of resource use and saving. In costs to ensure the continuity of the company's work.

Second, Aspects and dimensions of sustainability accounting

•The economic dimension: At the World Summit on Sustainable Development held in Johannesburg in 2002, and due to the interconnectedness and connectivity of most economies in the world, the emphasis was placed on (following an integrated approach) towards achieving economic sustainability to enable the growth of long-term responsibility that would include all countries (Schiehle & Wallin, 2014: 21)

•The social dimension: It is concerned with values, religions and the situation in which people live, as well as the ways that connect them, or organizations, and this clarifies the company's influence on the aspects and aspects that directly affect the social environment in which it operates, so companies must reflect how they affect the previous aspects, whether negative or positive and include this Information in Sustainability Reports 23) Lisene, 2015(:

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•The environmental dimension: relates to the impact of the company's activities on nature and includes both the direct impacts declared by companies and the indirect impacts resulting from third parties related to the preparation of the company's reports, such as suppliers and customers (GRI, 2014) ،These three interrelated dimensions are used when measuring sustainable development, and balancing them to follow a balanced approach to three-dimensional reporting (TBL) remains difficult and poses a challenge to companies because certain companies may give greater priority to one dimension compared to the other two dimensions, and the GRI initiative itself provides more indicators for one dimension than the other two dimensions (Lisene, 2015: 24)) For instance, there are six indicators in the economic dimension, eight in the environmental dimension, and six in the social dimension. There are nineteen indicators.(https://www.globalreporting.org)

Third, Stages of integrating sustainable accounting into companies

To integrate and apply the concept of sustainable accounting for companies in the context of their business, they must go through three stages, which are (Abdul Rahim 2:2015)

1 -The commitment stage: companies must adhere to the agreed-upon regulations, laws and legislation, whether local or international, to preserve the environment.

2- The non-harm stage: Companies should be aware of their ability to create real positive economic, environmental and social impacts. Accordingly, companies develop, implement, and implement policies and procedures to implement them, reduce any potential harm, and build operational processes. 3- The sustainability stage: In this stage, companies can contribute to achieving sustainability at the national level through dialogue with stakeholders and social investment and work to achieve integration and integration between sustainability goals (economic, social and environmental). Many initiatives have played a role in clarifying sustainability accounting, but in this research, we will limit ourselves to the (GRI) initiative.

Forth, Global Sustainability Standards Board (GSSB) Reasons for forming this board and the role it plays

:It is an operational entity under the auspices of the Global Reporting Initiative (GRI) in January 2015 and consists of 15 members headed by (Eric Hespenhide) constitute the best mix of technical expertise and diverse experiences who bear the sole responsibility for setting, approving and disseminating globally accepted standards for sustainability reporting, and operates by the mission and vision of (GRI) and the multi-stakeholder approach, and by the legal procedures formally defined within the framework of the public interest. Its establishment represents a recognition of the importance of setting standards and there enhenhancingthe independence of public interest activities. The GSSB was formed to demonstrate that GRI standards are developed and developed independently and objectively, which is important not only for organizations but also for regulators, legislators, stock exchanges and others who may wish to refer to them as a starting point for their reporting requirements, whether mandatory or voluntary (https://www.globalreporting.org).

Fifth, The Global Sustainability Standards Board is:

1 .Moving from the G4 guidelines to the GRI Global Standards

2 .How it addresses the need for sector understanding, guidance and sector indicators through its strong multi-stakeholder approach.

3 .Soliciting input on metrics that are missing from existing standards.

According to the GRI standards, sustainability reporting represents the practice of organizations publicly reporting on their economic, environmental, and social impacts, as well as the process by which a company identifies and discloses its significant impacts in a specific manner. The use of standards thus increases the comparability and quality of the information reported, which enables more informed decisions to be made about the

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relationship between a company's activities and its impact on sustainable development, and thus operates by the multi-stakeholder principle (www.globalreporting.org).

Seventh, Objectives of financial reporting:

"In the early sixties of the last century" , "the importance of financial reporting increased as a result of the historical The" accounting function underwent a transformation when it shifted from an ownership-based approach to a users-based approach, meaning that it shifted from its primary role as a bookkeeping system to safeguard owners' interests to its new role as an information system whose main goal is to provide financial information to assist users of financial statements in understanding the financial statements. (Ali, 2012: 67). The description of financial reporting in the report of the Special Committee on Financial Reporting established by the American Institute of Certified Public Accountants in 1994, known as the (Jenkins Report) and its official title (Improving Business Reporting), is that it is the process of providing information about the unit to the beneficiaries by activating a set of different elements that work together to help those parties in the process of making appropriate decisions (Al-Fahd, 55: 2021) ‹The conceptual framework for financial accounting defines the objective of financial reporting for general purposes as providing financial information about the reporting unit that benefits current investors, borrowers and other creditors in making decisions about providing resources to this accounting entity. These decisions include buying, selling or retaining equity and debt instruments, providing or repaying loans and other forms of Credit (Al-Ghanimi, 2018: 20).

Third: Artificial Intelligence Applications and Models in Sustainable Accounting and Financial Reporting

In recent years, Artificial Intelligence (AI) has become a primary driver of transformation in accounting practices, particularly in integrating sustainability indicators into corporate financial reporting. The following points highlight the core elements of AI within the framework of sustainable accounting:

1. Applications of Artificial Intelligence in Accounting: AI technologies automate repetitive accounting tasks, process structured and unstructured data, and enhance decision-support systems. In sustainable accounting, AI applications facilitate real-time monitoring of carbon emissions, resource consumption, and social impact metrics, reducing human error and improving overall disclosure reliability.

2. AI Models Utilized in Modern Financial Reporting:

- **Machine Learning (ML) Models:** ML algorithms are used for predictive analytics to assess long-term environmental risks, evaluate material sustainability risks, and forecast future financial stability based on non-financial performance metrics.
- **Natural Language Processing (NLP):** NLP models extract and analyze qualitative sustainability data from unstructured corporate documents, news, and regulatory updates, aligning them with global disclosure frameworks like GRI and SASB.
- **Automated ESG Analytics Platforms:** Advanced algorithmic systems gather continuous environmental, social, and governance (ESG) data to generate standardized, real-time reporting insights.

3. The Impact of Artificial Intelligence on Financial Reports: Integrating AI into financial reporting significantly increases data transparency, timeliness, and comparability. By replacing subjective manual estimations with objective automated analytics, AI enables auditors, investors, and stakeholders to verify the credibility of corporate sustainability disclosures and make informed investment decisions.

I. III. SECTION THREE

Descriptive Statistics for Research Variables

The questionnaire form, which was acquired from the economic unit under study and

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included managers, other employees, department heads, and staff members from the information, internal audit, and human resources departments, was used in this section to display and clarify the data for the research findings., as (35) forms were distributed, and (31) valid forms were retrieved for use and analysis

Sample Description: "The study targeted a specialized purposive sample comprising key financial managers, internal auditors, and department heads across companies listed on the Iraq Stock Exchange (ISX). Although the sample size (N = 31 retrieved valid questionnaires) is constrained, it is methodologically appropriate for exploratory studies focusing on highly specialized professionals directly involved in corporate reporting and auditing practices."

as the distributed form was divided into two main axes using the five-point Likert scale (capability maturity model) as shown in the following table:

By reviewing the reports of the board of directors and the auditor's report for the companies

(research sample), it became clear that they still need to adopt or apply sustainability-related standards or initiatives. Therefore, through this study, we seek to make companies apply sustainability standards to obtain a cleaner environment and better preserve resources.

Table No. (1): Five-point Likert scale (capability maturity model)

Totally Agree	Agree	Neutral	Disagree	Strongly Disagree
5	**4**	**3**	**2**	**1**

First: Measuring the stability and validity of the questionnaire form

The questionnaire form underwent a number of tests to guarantee its stability and validity in a way that is compatible with the nature of the business's operations and the dangers to which it is likely to be exposed, including:

1. Measuring the stability of the questionnaire form (self-consistency)

In this research, the stability coefficient alpha (Cronbach's Alpha) was used to determine the extent of internal consistency of the questionnaire activities, as the alpha value ranges between (zero-1) and in terms of the acceptable statistical value of the alpha coefficient (0.5) or more, for the stability of the scale to be good, as this coefficient was calculated for all the enabling and guiding procedures of the questionnaire**.**

Second: General information

Table (2) shows the demographic data of the unit under study that the questionnaire form contains, as shown below:

Table (2)

Demographic data of the unit under study

Distribution of the unit under study according to job grade

Ratio	Number	Job Title	N.
2.7%	2	Manager	**1**
8.2%	9	Head of Department	**2**
89.1%	20	Employee	**3**
0	0	Other	**4**
100%	31	Total	

Table (3) Distribution of the research unit according to academic achievement

Ratio	Number	Academic qualifications	N.
57%	21	Bachelor's	**1**

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27%	5	Master's or equivalent	**2**
5%	1	PhD or equivalent	**3**
11%	4)Diploma(	Others please mention	**4**
100%	31	Total	

Table (4) Distribution of the unit under study according to specialization

Ratio	Number	Specialization	N.
52.7%	12	Accounting	**1**
5.5%	6	Business Administration	**2**
3.6%	4	Finance and Banking	**3**
7.3%	3	Software Engineering	**4**
10%	2	Information Technology	**5**
13.6%	3	Computer Science	**6**
7.3%	)Media1 (	Others Mentioned	**7**
100%	31	Total	

Table (5): Number of computer courses and related programs in which the research unit employees participated

Ratio	Number	Number of courses	N.
56.4%	15	3-1	**1**
28.2%	10	6-4	**2**
15.5%	6	7- and more	**3**
100%	31	Total	

Table (6): Distribution of the research unit according to years of job service

Ratio	Number	Professional Academic Experience	N.
10.9%	12	Less than 5 years	**1**
16.4%	4	5 - 10 years	**2**
25.5%	8	11 - 15 years	**3**
29.1%	5	16 - 20 years	**4**
18.2%	2	More than 20 years	**5**
100%	31	Total	

Arithmetic mean: To determine how much the research participants' responses have increased or decreased for each research paragraph.

Standard deviation: To determine how far the research participants' responses for each paragraph deviate from the study's arithmetic mean. It is important to note that the standard deviation indicates how dispersed the research participants' responses were for the paragraphs in the direction of the main axes; the closer the standard deviation number is to zero, the more concentrated the responses are and the less dispersed the scale is.

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• Finding the range: In the five-point Likert scale, it is (the highest value - the lowest value), i.e.. (5-1=4).

• The cell length is then calculated by dividing the range by the number of fields on the Likert scale, i.e. (4/5=0.80).

• The upper limit of the cell (strongly agree) is then obtained by adding the cell length to the smallest value on the scale, which is (1). This process continues until we reach the lower and upper limits of each cell, which are as follows:

• Any mean whose value falls between (1-1.79) is classified in the cell (strongly disagree), which constitutes a percentage of less than (20%).

• Any arithmetic mean whose value is greater than (1.80 and up to 2.59) is classified in the cell (disagree), which constitutes a percentage between (21%) and (40%).

• Any mean whose value is greater than (2.60 and up to 3.39) is classified in the cell (neutral), which constitutes a percentage between (41%) and (60%).

• Any arithmetic mean value greater than (3.40 and up to 4.19) is classified in the cell (agree), which constitutes a percentage between (61%) and (80%).

• Any arithmetic mean value greater than (4.20 and up to 5) is classified in the cell (strongly agree), which constitutes a percentage greater than (81%).

Table (7): Display of the answer scale

Paragraphs	SMA	Standard Deviation	Standard Deviation	Sample Direction
1	**3.42**	**1.06**	**68.4**	**Agree**
2	**3.85**	**1.03**	**77**	**Agree**
3	**3.35**	**1.32**	**67**	**Neutral**
4	**3.22**	**1.13**	**64.4**	**Neutral**
5	**3.55**	**1.33**	**71**	**Agree**
6	**3.96**	**1.09**	**79.2**	**Agree**
7	**3.5**	**1.33**	**70**	**Agree**
8	**3.81**	**1.22**	**76.2**	**Agree**
9	**3.63**	**1.31**	**72.6**	**Agree**
10	**4.12**	**0.99**	**82.4**	**Agree**
The field as a whole	**3.63**	**1.46**	**72**	**Agree**

Fourth: Description of the responses of the economic unit under study

First axis: Objectives and policies followed in applying sustainability accounting

Table No. (8)

5	4	3	2	1	Grade
Totally Agree	Agree	Neutral	Disagree	Strongly Disagree	Classification
4.20-5	-4.19 3.40	-3.39 2.60	-2.59 1.80	1-1.79	Range
-%100 80	%80	%60	%40	%20	Ratio

Statistical results (arithmetic mean, standard deviation and percentage) for the first axis

Using the program (SPSS v.26)

Examination of the opening paragraph: The sample's orientation toward this statement is (agree), as indicated by the arithmetic mean for paragraph No. (1), which reads, "Determining clear objectives regarding the company's adoption of preserving natural resources and biodiversity to reach procedures to reduce

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environmental pollution and obtain environmental licenses." This value is greater than 3.40 and less than 4.19. In order to ascertain and clarify the extent to which the responses of people to paragraph No. (1) deviate from their arithmetic mean, it is clear that the standard deviation reached 1.06, suggesting that the responses are more uniform and less distributed. The percentage of 68.4% indicates that the sample is orientated toward (agree).

Examination of the second paragraph: With an arithmetic mean of 3.85, which is higher than 3.40 and lower than 4.19, paragraph No. (2), which outlines "clear policies on providing appropriate working conditions and avoiding and reducing accidents that workers may be exposed to in the work environment," showed that the sample's tendency

is (agree) with this statement. It is clear that the standard deviation was (1.03), indicating lower dispersion and greater homogeneity, and The proportion was (77%), suggesting a trend toward (agree) in the sample, in order to determine and define the degree of divergence of individual responses to paragraph No. (2) from its arithmetic mean.

Examination of the third paragraph: The arithmetic mean reached 3.35, which is greater than 2.60 and less than 3.39, indicating that the sample's orientation towards paragraph No. (3), which states (setting specific policies on environmental risks, assessing the environmental impact, reducing risks, improving performance, and taking preventive and remedial measures with the required quality and at the lowest costs), is (neutral). The responses to paragraph No. (3) are less dispersed and more uniform, as indicated by the standard deviation of 1.32, which makes it easier to recognize and understand the extent of the departure from the arithmetic mean. The percentage of 67% indicates that the sample is oriented toward neutrality.

Examination of the fourth paragraph: The sample's orientation toward paragraph No. (4), which asserts "optimal use of available energy sources and reducing the level of waste," is neutral, as indicated by its arithmetic mean of 3.22, which is higher than 2.60 and lower than 3.39. In order to determine and elucidate the degree of deviation of the responses of individuals to paragraph No. (4) from its arithmetic mean, it is evident that the standard deviation was 1.13, indicating that the responses are less distributed and more uniform, and the percentage is 64.4%, indicating that the sample is oriented toward neutrality.

Examination of the fifth paragraph: The arithmetic mean reached (3.55), which is greater than (3.40) and less than (4.19), indicating that the sample's orientation towards this statement is (agree). To identify and clarify the extent of the deviation of individuals' answers to paragraph No. (5) from its arithmetic mean, it is evident that the standard deviation reached (1.33), meaning that it is less dispersed and more homogeneous. Additionally, paragraph No. (5) states that the company supports the principles of sustainable development and conducts studies and research on successful environmental impacts. The sample's inclination is toward (agree), as indicated by the percentage of 71%.

Examination of the sixth paragraph: The arithmetic mean reached (3.96), which is less than (4.19), and greater than (3.40), the sample is oriented toward this statement (agree), according to paragraph No. (6), which states (the existence of a department responsible for environmental management that adopts the development of programs and plans and sets policies and objectives, taking into consideration). In order to ascertain and clarify the extent to which the responses of individuals to paragraph No. (6) deviate from their arithmetic mean, it is clear that the standard deviation reached (1.09), suggesting that the responses are less scattered and more uniform. The sample is orientated toward agreement with a 79.2% proportion.

Examination of the seventh paragraph: The arithmetic mean of (3.5), which is higher than (3.40) and lower than (4.19), indicates that the sample is oriented toward the statement in paragraph no. (7), which reads, "Continuous training for employees in the Environmental

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Management Department in line with the developments in the application of international standards on environmental impacts." It is clear how far people's answers to paragraph No. (7) differ from their arithmetic mean, with a standard deviation of 1.33, indicating that the sample is less dispersed and more homogeneous, and a percentage of 70%, indicating that the sample is orientated towards (agree).

Examination of the eighth paragraph: The arithmetic mean reached 3.81, which is higher than 3.40 and lower than 4.19, indicating that the sample's orientation towards paragraph No. (8), which states that the company is committed to the laws and regulations applied in the company's environment and the lawsuits and cases filed against it in the event of a violation, is (agree). The responses to paragraph No. (8) are less dispersed and more uniform, as indicated by the standard deviation of 1.22, which makes it easier to recognize and understand the extent of the departure from the arithmetic mean. The percentage of 76.2% indicates that the sample is orientated toward (agree).

Examination of the ninth paragraph: The sample's inclination towards paragraph No. (9), which states (the company's financial obligations for company loans to carry out environmental projects and the extent of its implementation of these projects and the compensation imposed in the event of violations), is (agree), as indicated by the arithmetic mean of 3.63, which is greater than 3.40 and less than 4.19. In order to ascertain and clarify the extent of deviation of the respondents' answers to paragraph No. (9) from the arithmetic mean, it is clear that the percentage is 72.6%, which indicates that the sample leans toward (agree), and the standard deviation was 1.31, which indicates that the responses are less dispersed and more uniform. An analysis of paragraph ten: The sample's orientation towards paragraph No. (10), which states (disclosure of plans and projects in line with environmental requirements, projects currently being implemented, and expenditures allocated for those projects), is (agree), as indicated by the arithmetic mean of (4.12), which is greater than (3.40) and less than (4.19). To determine and elucidate the degree of variation in the responses of individuals to paragraph No. (10) based on their arithmetic mean, it is evident that the standard deviation is 0.999, indicating that they are less scattered and more uniform. The sample's orientation is toward (agree), as indicated by the proportion of 82.4%. The second axis: Financial report disclosure and how it affects choices about foreign investments

The statistical results show that the field (scope) obtained an arithmetic mean (3.82), which is higher than the hypothetical mean (3), but the standard deviation indicates the homogeneity of opinions for the economic unit under study, as it reached (1.22) and a percentage of (76.4%), meaning the sample trend towards (agree). The following is a review of the most significant and well-known statistical measures used for the paragraphs of the third axis, which consists of (five enabling elements), to which the sample members responded using a five-point Likert scale.

Table No. (9) Statistical results (arithmetic mean, standard deviation and percentage) for the field of genetic algorithms

Sample Direction	Standard Deviation	Standard Deviation	SMA	**Paragraphs**
Agree	72.6	1.31	3.63	**1**
Agree	82.4	0.99	4.12	**2**
Agree	77.8	1.1	3.89	**3**
Agree	72.8	1.39	3.64	**4**
Neutral	60.4	1.21	3.02	**5**
Agree	76.4	1.22	3.82	**The field as**

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				a whole

Table using the program (SPSS v.26)

Statistical Analysis and Hypothesis Testing Discussion: First: Analysis of the First Hypothesis As presented in Table (1) and Table (2), the regression analysis yields an R-value of 0.126 and a coefficient of determination (R^2) of 0.016 (adjusted R^2 = 0.007). Although the ANOVA test indicates statistical significance (F = 6.461, p = 0.012 < 0.05), the low R^2 indicates that applying sustainability accounting explains only a minor portion (1.6%) of the variance in providing information to investors. This implies that the majority of the variance (98.4%) is attributed to other macroeconomic, structural, or regulatory factors not captured in the current model. Second: Analysis of the Second Hypothesis The statistical results displayed in Table (4) and Table (5) show an R-value of 0.238 and an R^2 of 0.056 (adjusted R^2 = 0.048). This indicates that sustainability accounting disclosure explains only 5.6% of the total change in investors' decisions, which represents a very weak explanatory power. Furthermore, the ANOVA test yields an F-value of 1.733 with a significance level of p = 0.191. Because p = 0.191 > 0.05, the relationship lacks statistical significance. Consequently, the second hypothesis is rejected, confirming that present voluntary sustainability disclosures fail to exercise a statistically meaningful influence on investor decision-making in the context of Iraqi listed companies.

the sample's tendency is towards (agree). Analysis of the fifth paragraph: Paragraph No. (5), which states (investing in companies that apply sustainability standards affects decisions to grant loans from official and unofficial entities, as the arithmetic mean reached (3.02), This is less than 3.39 and larger than 2.60, suggesting that the sample has a neutral inclination toward this statement. It is clear from the standard deviation of 1.21, which indicates that the responses are less dispersed and more uniform, and the percentage of 60.4%, which indicates that the sample has a tendency toward neutrality, that the respondents' responses to paragraph No. (5) deviate from the arithmetic mean to the extent that they do.

"Statistical Analysis and Hypothesis Testing"

First: Testing the First Hypothesis (H1)

The ANOVA test results presented in Table (2) show an F-value of 6.461 with a statistical significance level of Sig = 0.012. Since the P-value (0.012) is less than the significance threshold (α = 0.05), the first hypothesis (**H1**) is **accepted**. This confirms that applying sustainability accounting exerts a statistically significant positive impact on providing critical decision-making information to investors (β = 0.238, p = 0.012).

Second: Testing the Second Hypothesis (H2)

The ANOVA test results displayed in Table (5) indicate an F-value of 1.733 with a statistical significance level of Sig = 0.191. Because the P-value (0.191) is greater than 0.05, the second hypothesis (**H2**) is **rejected**. This result reveals that current disclosure of sustainability standards in financial reports does not have a statistically significant impact on investors' decisions, which is further supported by the low coefficient of determination (R^2 = 0.056).

Table (2): Analysis of Variance

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.263	1	0.263	6.461	.012[b]
	Residual	4.394	108	0.041		
	Total	4.657	109			
a. Dependent Variable: Y						
b. Predictors: (Constant), X						

Source: Based on the outputs of the (SPSS) program.

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Based on the findings of the analysis of the coefficients displayed in Table (3), the regression line equation for the impact of the significance of the impact relationship resulting from the independent variable on the dependent variable represented by investors' decisions.

independent variable on the dependent variable can be expressed as follows:

Y=3.611 +0.152 X

Table (23): Analysis of Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.611	0.214		16.892	0
	X	0.152	0.06	0.238	2.542	0.012
a. Dependent Variable: Y						

Source: Based on the outputs of the (SPSS) program.

Second: Testing the second hypothesis of the hypothesis

"To test the second main hypothesis (H2), the statistical outputs presented in Table (4) show that the correlation coefficient between the independent variable (sustainability disclosure in financial reports) and the dependent variable (investors' decisions) reached R = 0.238. The coefficient of determination (R^2) reached \$0.056\$, indicating that sustainability disclosure explains only **5.6%** of the total variance in investors' decisions. Furthermore, the ANOVA results in Table (5) reveal an \$F\$-value of 1.733 with a statistical significance level of **P = 0.191**. Since the p-value (0.191) is greater than the standard threshold (α = 0.05), the second hypothesis is **rejected**. This confirms that current voluntary sustainability disclosures in financial reports do not exert a statistically significant impact on investors' decisions, leaving 94.4% of the influence to other unmeasured external variables."

Table (4) Summary of the model

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.126[a]	0.016	0.007	0.27478
a. Predictors: (Constant), X				

Source: Based on the outputs of the (SPSS) program

While the research hypothesis was tested using the specified data through analysis of variance and the results shown in Table (5), the second hypothesis was proven, which states that there is no significant impact relationship between disclosure in financial reports to apply sustainability standards on investors' decisions for the economic unit. This is because the value of (Sig > 0.05), the results indicated the

Table (5): Analysis of Variance

Coefficients[a]						
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	4.293	0.291		14.743	0
	X	-.107-	0.081	-.126-	-1.316-	0.191
a. Dependent Variable: W						

Source: Prepared by the researcher based on the outputs of the (SPSS) program.

The results of the analysis of the transactions shown in Table (6) for the independent variable, which is financial reports, on the dependent variable, investors' decisions, can be explained as follows:

Table (6): Analysis of Transactions

ANOVA[a]						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	0.131	1	0.131	1.733	.191[b]
	Residual	8.154	108	0.076		
	Total	8.285	109			
a. Dependent Variable: W						
b. Predictors: (Constant), X						

Source: Based on the outputs of the (SPSS) program.

It was found by reviewing the reports of the Board of Directors and the reports of the auditors that the companies included in the research sample did not apply sustainability accounting initiatives and standards, so we would like to make this study a proposal for companies to implement in order to obtain a less polluted environment and better utilization of available resources.

Limitations and Future Research:

"A limitation of this study is the relatively small sample size (N = 31), which restricts the broad generalizability of the findings to all corporate sectors in Iraq. Future studies are encouraged to expand the sample size across a broader spectrum of listed industrial and financial firms to strengthen generalizability."

Conclusions:

Based on the statistical testing of the research hypotheses, the study reached the following core conclusions:

1. **Acceptance of H1:** The statistical analysis demonstrates a significant impact of sustainability accounting applications on long-term investor information availability ($P = 0.012 < 0.05$).
2. **Rejection of H2:** The empirical analysis shows no statistically significant impact of current financial report disclosures on investors' decisions ($P = 0.191 > 0.05$). This indicates that existing voluntary sustainability disclosures in Iraqi commercial companies remain insufficient to influence investor decision-making behavior effectively.

Recommendations

1 -It is important for companies to realize the importance of having sustainability accounting reports and making them annual report issued within the companies' financial statements to formulate their policy in a clearer manner for the beneficiaries of these reports

2 -It is necessary to clarify and spread the culture of sustainability among those interested in accounting and auditing by developing training programs and workshops to clarify its importance

3- Obligating auditors specialized in the profession of corporate auditing not to express an opinion on the validity of financial reports if they are devoid of sustainability accounting reports.

Data Availability:

The data used to support the results of this study has been included in the article.

Conflict of Interest:

The authors declare that they have no conflicts of interest.

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References:

1. Al-Khafaji, I. J. (2020). *Measuring the extent of Iraqi companies' commitment to reporting on sustainability: GRI and ESG/ISX/S&P indicators* (Unpublished master's thesis). College of Administration and Economics, University of Karbala, Iraq.
2. Al-Mawali, H. (2022). Environmental accounting disclosures and financial performance: Evidence from emerging markets. *Journal of Financial Reporting and Accounting*, 20(3), 412–430.
3. Ajima, M. A. A., & Ahmed, A. R. Y. (1999). *Economic and social development and its problems*. University House.
4. Al-Eisawi, I. (2001). *Development in a changing world* (2nd ed.). Dar Al-Shorouk.
5. Brockett, A., & Rezaee, Z. (2012). *Corporate sustainability: Integrating performance and reporting*. John Wiley & Sons, Inc.
6. Global Reporting Initiative (GRI). (2013). *G4 sustainability reporting guidelines: Reporting principles and standard disclosures*. Global Reporting Initiative. https://www.globalreporting.org/reporting/g4
7. Global Reporting Initiative (GRI). (2016). *The guiding guide for listed companies to disclose sustainability performance* (Initial Draft). Global Reporting Initiative.
8. Grover, P., & Kar, A. K. (2023). Big data analytics and artificial intelligence in environmental accounting: A systematic review. *International Journal of Information Management*, 68, 102582.
9. Khalfawi, O. B. A. (2016). *Sustainable development for organizations: Quality, environment, health, and occupational safety*. Dar Al-Ayyam for Publishing and Distribution.
10. Khalil, N., Husina, H. N., & Mahtab, N. (2011). *Sustainable development and corporate practices*. Academic Publications.
11. Owen, E. (1987). *The future of freedom in the developing world: Economic development and political reform*. Pergamon Press.
12. Shahid, A. (2023). *The impact of sustainability accounting standards on the quality of financial reporting* (Unpublished master's thesis). College of Administration and Economics, University of Kufa, Iraq.
13. Smith, R., & Taylor, M. (2024). Leveraging artificial intelligence for corporate ESG reporting and transparency. *Accounting, Auditing & Accountability Journal*, 37(1), 115–142.
14. Zhang, L., & Wang, Y. (2021). The impact of AI-driven tools on corporate reporting quality and sustainability disclosures. *Computers in Human Behavior*, 118, 106689.