

# Tikrit Journal of Administrative and Economics Sciences مجلة تكريت للعلوم الإدارية والاقتصادية





## Auditing Sustainable Performance Using the Sustainable Value-Added Model: Applied to Banks Registered in the Stock Exchange

Hussein Ali Mohaisen\* A, Affaq Thanoon Ibrahem B, Ayad Abed Hameed A

<sup>A</sup> Control and Internal Audit Department, Mustansiriyah University,

<sup>B</sup> College of Administration and Economics, Tikrit University

#### Keywords:

Sustainable Development; Sustainable Performance Auditing; Sustainable Value Added.

#### ARTICLE INFO

#### Article history:

Received 08 Aug. 2022 Accepted 12 Oct. 2022 Available online 31 Mar. 2023

©2023 College of Administration and Economy, Tikrit University. THIS IS AN OPEN ACCESS ARTICLE UNDER THE CC BY LICENSE

http://creativecommons.org/licenses/by/4.0/



#### \*Corresponding author:

#### Hussein Ali Mohaisen

Control and Internal Audit Department, Mustansiriyah University



Abstract: Sustainability topics receive more especially in the current era of attention, globalization and rapid environmental changes and the effects of these changes on various business sectors and the need for these sectors to evaluate their performance on a continuous basis and achieve the desire of stakeholders. Whether internal or external, maximize their value achieved and improve their image towards their interest in sustainable development. The research aims at auditing the sustainable performance of the banking sector using one of the performance assessments means, a Sustainable Value-Added approach on a sample of banks listed in the stock market. Which disclose sustainability data in their announced reports and measure their efficiency for the three dimensions of sustainability (economic, social and environmental). The researchers reached at a number of conclusions, the most important of which was that all banks under discussion achieved economic and social efficiency. Only two banks have been able to achieve environmental efficiency due to the lack of adequate disclosure of these banks and the failure to take appropriate measures to reduce the environmental impact on the community. The study recommends the need for various business sectors to pay attention to all aspects of sustainability because of its significant impact on maximizing the value of the facility and preserving the available energies for future generations. In addition, banks' management should develop specific programs to develop the expertise and skills of internal auditors in the environmental and social field.

### تدقيق الاداء المستدام باستعمال نموذج القيمة المستدامة المضافة بالتطبيق على المصارف المسجلة بسوق الاوراق المالية

ایاد عبد حمید قسم الرقابة والتدقيق الجامعة المستنصرية

آفاق ذنون ابراهيم ير عبير الرقابة والتدقيق كلية الإدارة واقتصاد الجامعة المستنصرية جامعة تكريت

حسین علی محسن

تحظى مواضيع الاستدامة بمزيد من الاهتمام خصوصا في عصر العولمة الحالية والتغيرات البيئية المتسارعة وما تسببه هذه التغيرات من تأثيرات على مختلف قطاعات الاعمال وحاجة هذه القطاعات الى تقويم ادائها بصورة مستمرة وتحقيق رغبة اصحاب المصالح سواء أكانوا داخليين ام خارجيين وتعظيم قيمتها المتحققة لهم وتحسن صورتها تجاه اهتمامها بالتنمية المستدامة، ويهدف البحث الى تدقيق الاداء المستدام للقطاع المصرفي باستخدام احد ادوات تقييم الاداء وهو منهج القيمة المضافة المستدامة على عينة من المصارف المدرجة في سوق الأوراق المالية والتي تفصح عن بيانات الاستدامة في تقاريرها المعلنة وقياس كفاءتها لأبعاد الاستدامة الثلاث (الاقتصادية، الاجتماعية، البيئية)، وتوصل الباحثين الى عدد من الاستنتاجات كان اهمها أن جميع المصارف عينة الدراسة حققت الكفاءة الاقتصادية. وإن المصارف عينة الدراسة حققت الكفاءة الاجتماعية. و مصر فين فقط هي من تمكنت من تحقيق الكفاءة البيئية و السبب يعود الى عدم الافصاح الكافي لهذا المصرف وعدم اتخاذ التدابير المناسبة للحد من الاثار البيئية على المجتمع. وتوصيى الدراسة الى ضرورة اهتمام مختلف قطاعات الاعمال بجميع جوانب الاستدامة لما لها من أثر كبير على تعظيم قيمة المنشأة والحفاظ على الطاقات المتاحة للأجيال القادمة. بالإضافة الى ان على ادارة المصارف ان تضع برامج معينة لتطوير خبرات ومهارات المدققين الداخليين في المجال البيئي والاجتماعي.

الكلمات المفتاحية: التنمية المستدامة، تدقيق الاداء المستدام، القيمة المستدامة المضافة.

#### **Introduction:**

The interest in sustainable development practices in the wake of the economic collapses, financial crises and climate changes that the world has recently witnessed has increased, as evidenced in the document of the United Nations summit on sustainable development held from (25-27th) September 2015. Paragraph No. (54) referred to the importance of promoting economic growth and sustainable social and environmental practices (United Nations Conference on Sustainable Development, 2015) (Miliji, 2015). Many companies no longer rely on building their reputation on the philosophy of maximizing economic profit only. But have tended to disclose financial and non-financial information to inform stakeholders of the necessary information about performance (economic, environmental, social and governance) to properly assess their performance and determine

the fair value of an investment in shares and their ability to deal with risks. Which is reflected in improving the reputation and image of the company in the community and ensuring the sustainability of its profitability and competitive advantage (Silivia et al., 2014; Prayage et al., 2015).

Thus, the disclosure of financial, environmental and social information and data has become the method used by organizations that aim to continue primarily and reflect a positive image of their performance among the individuals dealing with them. The banking sector is considered one of the financial institutions that strive to occupy a prestigious place in society that qualifies them to maintain their continuity despite situations of financial failure (Al-Jabali, 2020).

Recently, companies have faced challenges that require a change in the disclosure strategy and the need to take immediate action to support the outputs of the financial accounting information system. By making improvements to current reports by enhancing the disclosure of nonfinancial information to achieve confidence in the information and improve its quality by developing. The form and content of financial reports by taking into account the sustainability dimension and the writing on the responsibilities of companies towards all things to demonstrate their efforts towards society and the environment in an ethical manner (Abu Al-Nil, 2019). Sustainable development is a requirement for all cultures of all components and members, and one of the issues always present in the discussions. One of the most critical contemporary issues where the concept of sustainable development is seen as a comprehensive concept that has many aspects of economic, social, political and environmental, and this is what made the development thought to develop from one period to another, indicating one of those aspects (Mohammed et al., 2021) (Scholes et al., 2002).

Regarding (Brozović et al, 2020) indicates that companies are increasingly adapting their activities within a more sustainable approach, due to strong sustainability requirements and implementing innovation in the form of new technologies and tools aimed at improving the environmental, social and economic impacts of companies.

The issue of the performance of business enterprises for community and environmental activities has received clear attention in recent years and is considered as an important element in the decision-making process instead of a comprehensive focus on the goal of maximizing accounting profit. Then, the evaluation of these enterprises depends on their profitability only and no longer depends on building their reputation on their financial position only. Modern concepts have emerged that help to create an environment capable of dealing with the rapid developments in the political, economic, technological and administrative aspects. In light of the above, social and environmental responsibility has become one of the basic practices as a key pillar of social responsibility through the protection of the environment, provided that the enterprises design and implement policies and produce products. That will achieve the optimal use of resources, preserve the environment and reduce the negative impact of the company (Ali et al., 2019) (Remsey, 2016).

This encourage the researchers to think about using the sustainable value-added model as a tool for auditing sustainable performance through use of model indicators, which include economic, social and environmental indicators. Then, using the value difference indicator to find out the levels of sustainable performance for the researched sample.

**Problem of the Study:** Banks are one of the most important economic units that are currently seeking to introduce the concept of sustainability in their objectives, strategy and business due to the growing role they play in the capital market, where they pool financial resources to be allocated to various projects and programs in multiple sectors of the economy. Thus, banks can directly or indirectly affect all economic sectors in the country. It can play a pivotal role in achieving the growth of economic performance, effective social contribution and environmental preservation. Or in an indirect contribution by allocating the financial resources available to them for sustainable projects so that their expected economic performance is good with the assistance of these projects to a constructive contribution to the community in addition to not harming these projects to the environment (Al Karim & Alam, 2013).

Therefore, the importance of sustainability reports for stakeholders lies in the framework of the fundamental role played by the accounting disclosure of these reports and the accounting information and financial or non-financial on the effects of the activities of environmental and social economic units in the face of the needs of these users so that they can make rational decisions. Thus, the market value of these economic units'

increases and the confidence of shareholders is enhanced. The problem of the research was that the traditional financial reports of banks no longer adequately reflect the multiple dimensions of the value of these banks at present, which led to an increased demand for financial and non-financial measures to assess the performance of the company and its impact on the environment and society. This led the researchers to think about auditing the sustainable performance of banks according to the model of sustainable value added.

Importance of the Study: The importance of the study is related to the importance of the objective value of sustainable development and its dimensions, as well as the importance of the report and the disclosure of its dimensions and key indices, which contributes to the statement of the effects of such dimensions on performance. The importance of research is reflected in the importance of the banking sector and its vital role in various fields. Especially when the audit of the sustainable performance of these banks according to the dimensions of sustainable development represented by the economic, social and environmental dimension, where this sector allows the service of the economy and the service of development to advance the realities of countries by not harming the available energies and preserving them for future generations.

Objective of the Study: The study aims at auditing the sustainable performance of the banking sector using one of the performance assessments tools, the model of sustainable value added on a sample of banks listed on the stock market. By highlighting the concept of sustainable development in the banking sector, sustainable performance and its indicators and defining its dimensions. Whether at the level of economic units or society in general. As well as indicating the role of the audit of sustainable performance in the follow-up and evaluation of compliance with legislation and regulations related to the protection of the environment, social and economic aspects and the achievement of social welfare through the use of the model of sustainable value added.

**The Study Hypothesis:** The study is based on the fundamental hypothesis that states: "the adoption of the model of sustainable value-added leads to the enhancement of the sustainable performance reports of these banks as well as their ability to raise the level of quality of sustainability reporting practices through the audit of the sustainable performance of banks".

#### 2. Literature Review

2-1. Sustainable Development in the Banking Sector: Corporate sustainability can be defined as sustainability that maximizes the value of shareholders in the company through the adoption of opportunities and the management of risks resulting from economic, social and environmental activities. (Artiach et al., 2010) believes that the sustainability of enterprises means a business strategy that aims to use best practices in a way that contributes to achieving a balance between the needs of current and potential stakeholders. Accordingly, the sustainability performance of enterprises measures the extent to which these units integrate environmental, economic and social factors within their operations, and thus their impact on society and the facility.

Sustainability also includes the impact of the enterprise's activity on the external environment and the resulting implications for the future. The enterprise can be part of a more extensive socio-economic system, and its operations affect the surrounding society. Therefore, sustainability measures are concerned with the rate of consumption of the enterprise of economic and environmental resources, which requires the need to increase efficiency in the use of resources (Aras & Crowther, 2009). (Akisik & Gal., 2011) pointed out that sustainable development is a process that involves development in all aspects of human life and is concerned with resolving the conflict between multiple and competing goals, and includes the simultaneous achievement of both the economic or financial side, environmental quality, and social justice, this is known as the triangle rule with the technological factor.

The medium of sustainability is multifaceted, as it is described differently in many academic contexts. Nevertheless, the basic idea of all definitions of sustainability is that there is an interaction between three central systems: environmental, social and economic. The concept of sustainability gives new thinking to the banking sector, which recognizes the interdependence of economic, social and environmental systems, the connections between social and environmental challenges on the one hand, and the bank's growth and innovation on the other (Stankeviciene & Nikonorova, 2014).

The links between sustainable development and banking activities date back to the 1990s, when banks increasingly began integrating environmental requirements directly through their operational activities and indirectly through the products and the services they provide. The direct environmental impact of banks is measured by their consumption of utilities (Electricity, water, heat and natural gas), use of typical office supplies (Paper, ink). Generation of municipal waste and air pollution. The indirect environmental impact of banks results from the services provided to reduce environmental risks based on the identified threats (Korzeb & Samaniego, 2019).

Sustainability in banks stems from the idea that the bank cannot continue in isolation from society and therefore affects and is affected by the community. In the past decades, banks' interest in sustainability was weak. However, it gradually increased due to the positive impact on the bank in terms of achieving the targeted financial results and the quality of the bank's reputation (Krasodomska, 2015). Integrating sustainability into banking is an increasingly necessary but challenging issue facing financial institutions. This integration has taken two primary forms: the first form is socially and environmentally responsible initiatives (e.g. support for cultural events, charitable donations, recycling programs and improvements in energy efficiency). The second is the integration of environmental and social considerations in product design, mission and business strategies, e.g. (integrating environmental criteria into investment and lending strategies) (Korzeb & Samaniego, 2019), (Carlucci et al., 2018). Sustainable development is based on achieving the main objective of banking activity, i.e. creating value for shareholders while respecting the environment and social development. An essential component of sustainable development is protecting the environment; ensuring access to modern and sustainable energy; innovation development; use of new environmentally friendly production techniques and methods; improving conditions for enterprise development; and raising consumer awareness (Korzeb & Samaniego, 2019). The relationship between the banking sector and the environment includes developing new financial products that lead to unique profit opportunities and make them more competitive. However, this relationship also relates to how they manage, adapt and communicate their environmental strategies related to their ecological footprint, such as

the management and consumption of energy, materials and water (Evangelinos et al., 2009) (Al-Abedi et al., 2021). Although the banking sector is not considered a polluting sector, the volume of business and thus the increase in all banking activities are being weighed down by its environmental footprint. Banks' environmental and social responsibility has also led to green banking by adopting corresponding technology, processes and products that can make the environment friendlier and enhance sustainability (Stauropoulou & Sardianou, 2019), (Bhardwaj & Malhotra, 2013).

**2-2. Dimensions of Sustainability:** Recent years have seen the need for companies' sustainability reports as part of a regular business to meet the expectations of stakeholders, investors and society because of the increasing public concerns about these issues. To achieve their goals and desires, companies should meet the needs and desires of stakeholders and investors, whether current or potential and indicate the ability of these companies to link economic, social and environmental factors because each goal, according to the indicators related to them to achieve sustainable development (Al-Jabali, 2020). The dimensions of sustainability are as follows:

The Environmental Dimension: It is related to the information related to the impact of companies on the environment. And how it is measured and disclosed, and its goal is to improve the performance of companies in environmental sustainability in the long term through management systems in companies that can be considered as a new means in environmental sustainability (Peršić et al, 2017).

The Economic Dimension: This dimension reflects the effects of the bank's activities on economic systems at all levels, economic conditions and stakeholder variables. Thus, the impact of the economic dimension focuses on the economy in general (national, local and global) firstly and secondly on all parties associated with the company economically (Jaff et al., 2021).

**The Social Dimension**: It aims to achieve social justice in the distribution of resources, respect for human rights, the development of cultures and relations between business establishments and internal and external stakeholders (Dixit et al., 2019).

**2-3. Added sustainable value:** The sustainable development process must include a change in the exploitation of available resources, directing investments, technological development and institutional change in line with the present and future needs. Therefore, sustainable development has become one of the keys to successful strategic management and a means to achieve companies' economic, social and environmental goals (Zorio et al., 2013).

Thus, including sustainability in the strategies and practices of the facility may increase the value of the facility by providing benefits in the long term. For example, reducing operational costs and risks, improving operational efficiency, growing reputation and branding, attracting and retaining customers, building a competitive advantage by innovating products and services, attracting and motivating employees, ensuring future access for the facility to capital markets and insurance services, and maintaining the license and social work. Sustainability works also support creating strong communities, healthy ecosystems, and economic value (Rasnick, 2013: 20).

The study of (Abdul Rahman & Amer, 2018) indicated that sustainable value is a balanced approach to performance in its financial, environmental and social dimensions. It also means that the sustainable value method achieves positive value for all stakeholders when evaluating the facility's strategic implementation by improving the facility's environmental and social performance, thus reducing both cost and risk, besides enhancing the facility's reputation. (Al-Saeed & Samir, 2009) indicate that the development of the business environment and its successive changes led to the development of the goal of maximizing the value of the enterprise, starting from merely achieving profits for shareholders to the necessity of maximizing the value achieved for them. The purpose expanded to include the need to achieve value for customers by working to achieve their satisfaction with the products or services of the facility and the end of maximizing the value to the stakeholders associated with the facility.

The study (Vladimirova, 2019) presents a new, practical tool and facilitation of a so-called sustainable value proposition generator, which has been developed and tested to support the development and communication of value propositions to multiple stakeholders. This means

it is based on a definition of sustainable value that includes environmental, social and economic forms of value and considers the stakeholders' positive and negative value perceptions.

A sustainable value proposition creator's primary objective is to support the value proposition's design and facilitate stakeholder participation. It mainly helps to understand the positive and negative aspects of stakeholder network value propositions, identify potential risks to key stakeholders so that timely action can be taken to address them, and identify opportunities for stakeholder engagement in the early stages of business model innovation (Mohaisen et al., 2021).

(Figge & Hahn, 2004) refer to the concept of sustainable value-added as the level of environmental and social impacts added by the activities and operations of the facility, expressed in monetary units. (Muller et al., 2012) explain that the added sustainable value is a measure of the facility's management's ability to efficiently use its economic, environmental and social resources to achieve value for the facility, and then the possibility of expressing that value in an integrated digital form.

- **2-4. Performance Auditing Sustainable:** The concept of performance auditing is an auditing process through which essential information and data about the performance of the entire facility are obtained by identifying the strengths and weaknesses in its activities, and in determining the validity of the institution's internal organization and reconsidering its drawn programs and policies (Al-Hassani, 2017). (Hossain, 2010) indicates that it is an independent audit that includes verification of three main elements:
- **\*** the economy of the institution.
- the efficiency of its operations.
- the effectiveness of the programs performed by that institution to strengthen the organization and make the necessary improvements to achieve its goals.

Performance auditing works to rationalize the human energy in the organization in the future by highlighting the successful elements and working on their development, as well as unproductive parts that need to be dispensed with or try to fix them to increase efficiency (Mohaisen et al., 2019). The performance audit process occupies the most significant importance in the work of the various units. This importance comes in that

it helps to detect deviations and analyze their causes, which helps to direct the supervision of senior management to the centres of responsibility that are needed and the main goal of the process of performance auditing is to improve and develop performance (Sakhil & Hadi, 2020).

The study (Al-Hassani, 2017), (Sakhil & Al-Hadi, 2020) (Al-Wardat., 2013) refer to the elements of performance auditing, which consists of four elements which are the economy and is intended to examine how resources are used to ensure that their cost is reduced to the lowest level while taking into account the appropriate quality of resources. The second element is efficiency, where the input and output elements are represented as high as possible, i.e. the inputs are as low as possible, and the outputs are as high as possible. The third element is effectiveness which means the extent to which the establishment achieves its objectives and performs its work and activities well. The last element is the environmental element. It is intended to examine the environmental performance of the economic unit to verify its effectiveness and compatibility with environmental instructions and plans and determine its effects on the establishment's performance.

2-5. The relationship between sustainable performance auditing and sustainable value-add model: The role of performance audit is manifested in improving sustainable development processes by focusing on verifying the efficiency of environmental management systems and the auditor's use of appropriate technical methods to examine all financial, economic and social aspects. As these aspects provide a series of analytical matters that can be used in assessing the situation, setting priorities and setting standards of adequacy. In addition, the audit of sustainable performance enables early identification of weaknesses and take an early preventive measure to ensure the preservation of sustainable development (Shariqi and Brahimi, 2017: 117).

The sustainable performance evaluation model is based on achieving a balance between the basic dimensions of sustainable development, through the integration between financial performance of the facility, environmental indicators for evaluating environmental performance and social indicators for evaluating social performance and trying to find common points among the three dimensions (Abdel- Fattah, 2019: 133).

Thus, the indictor of the sustainable value added to the facility appeared in the accounting thought and can be relied upon to determine the added value of each facility in terms of measuring the extent to which environmental and social activities add an actual value to this facility. Then this indictor can be entered as a tool for auditing sustainable performance in order to reach a set of indictors that achieve the goals study from improving financial, environmental and social performance to sustainable performance and its impact on maximizing the value of the enterprise from the sustainable point of view. This would be through calculating the value difference that is relied upon as a reference measure to judge the efficiency of the use of its economic, environmental and social resources, and then make a comparison between the performance of the assessed facility and the reference facility. If the values are positive, this indicates that the efficiency of the concerned facility is superior to reference facility in using its resources, which reflects the improvement in the sustainable added value of the facility that is being evaluated. While, if the values are negative for any of these values, this indicates a lower efficiency of the assessed facility than the reference facility, which reflects a decline and regress in the sustainable added value of the assessed facility and negatively affects the value achieved for stockholders (Abdel-Fattah, 2019) (Figge & Hahn, 2004) (Muller et al., 2012).

The researchers agree with (Abdel-Fattah, 2019) study that the indictor of sustainable value added is characterized by its ability to transform non-financial quantitative data that express the performance of economic, environmental or social into figures with explanatory indications that express the extent to which the value of the sustainable enterprise has been improved. Thus, this indictor can be used to audit sustainable performance because the performance audit process aims to increase the efficiency of the facility, exploit the available resources and energies as well as increase effectiveness. Thus, it is possible to rely on the indictor of sustainable value added in achieving the objectives of the audit of sustainable performance and use of data in each of the economic, environment and social indicators to calculate the amount of realized value.

**3. Research Methodology and Data Collection:** The study aims to audit of sustainable performance by testing the model of sustainable value added in practice by conducting applied research and trying to apply the indices of the model in the process of auditing sustainable performance, where the study community includes some commercial banks listed in the stock market that disclose sustainability under detailed reports. The study also

analyzes the annual financial reports of three banks issued between (2016) and (2019).

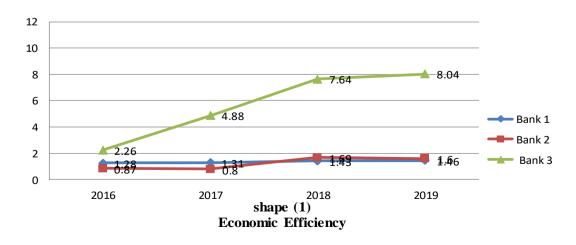
- **3-1.** Application of the Sustainable Value-Added Index to Sample Research Banks: This index, which appeared in the accounting thought, can be relied upon to determine the sustainable value added of each entity in terms of measuring the environmental and social activities of the value achieved for this entity (Abdel-Fattah, 2019). According to the index proposed by (Figge & Hahn, 2004) (Muller et al., 2012), which is based on the input of sustainable value-added, the sustainable value of the enterprise is calculated by:
- **3-1-1. Index of measuring the efficiency of the enterprise:** shows the efficiency of the enterprise in the use of its economic, environmental and social resources to achieve value for shareholders and is calculated in three sub-steps as follows:
- (A) Measuring Economic Efficiency: The following table shows the data on economic efficiency during the study sample period from (2016) to (2019) and is measured by the bank's rate of return on assets (Ali et al., 2019):

Rate of Return on Assets = bank's net profit / total assets), to express the efficiency of the use of economic resources:

Table (1): shows the return on assets i.e. economic efficiency

	2016	2017	2018	2019
Bank 1	1.28	1.31	1.43	1.46
Bank 2	0.87	0.80	1.69	1.60
Bank 3	2.26	4.88	7.64	8.04

The chart below shows the changing trend of return on assets, which represents (economic efficiency) during the study period:



The researchers will calculate the bank's reference efficiency index: which is relied on as a reference measure to judge the efficiency of the bank's sample study using their economic resources. It is clear from the table above that the return on assets, which represents the economic efficiency of bank 1 in (2016) amounted to (1.28) and the return on assets began to rise until it reached (1.31) in (2017) with a difference in value (0.03). The ratio of return on assets increased in (2018), running (1.43) and (0.12) compared to (2017), and in (2019), the return on assets was (1.46) and (0.03) compared to (2018).

The analysis of the bank's data 2 showed that the return on assets in (2016) amounted to (0.87) and decreased in 2017, when the bank achieved a return on its assets amounted to (0.80) with a difference in the value of capacity (0.07 -), that is, in (2017) it did not achieve economic efficiency in exploiting its economic resources. In (2018), it reached a return on its assets amounted to (1.69) with a difference in value from (2017) amounted to (0.89), and in (2019) it achieved a return on its assets as much as (1.60) with a difference of (0.09 -), which means that it did not achieve economic efficiency by exploiting its economic resources.

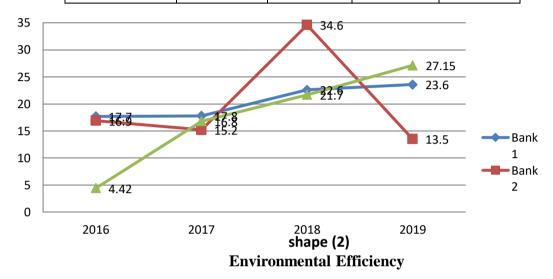
The analysis of Bank 3 Data shows that the return on assets in (2016) amounted to (2.26) and increased in (2017) to (4.88). The difference in value from (2016) amounted to (2.62) and also increased in (2018) with a difference in value from (2017) that amounted to (2.76). It grew in (2019) to (8.04), and a difference of value from (2018) amounted to (0.4). This data analysis of Bank 3 shows that the return on the assets of the bank increased during the period of the study sample, and this indicates that Bank 3 exploited its economic resources efficiently.

**(B) Measuring Environmental Efficiency:** The following table shows the data on environmental efficiency during the study sample period from (2016) to (2019), and it is measured through (Abdel-Fattah, 2019), (Figge & Hahn, 2004), (Muller et al., 2012):

**Environmental Efficiency:** It divided the net profit by the amount of greenhouse gas emissions, showing that each dinar in the profit generated has caused a certain amount of harmful gas emissions.

Table (2): shows the measurement of the environmental efficiency of the study sample banks

	2016	2017	2018	2019
Bank 1	17.7	17.8	22.6	23.6
Bank 2	16.9	15.2	34.6	13.5
Bank 3	4.42	16.8	21.7	27.15



It is clear from the above table that the environmental efficiency of bank 1 in (2016) amounted to (17.7) and increased until it reached (17.8) in (2017). With a difference in the value of capacity (0.1) and increased in (2018) to (22.6) and a difference in weight (4.8) compared to (2017), and in (2019) amounted to (23.6) and a difference in value (1) compared to (2018).

The analysis of bank 2 data shows that the environmental efficiency in (2016) amounted to (16.9) and declined in (2017) where it achieved (15.2) value difference capacity (1.7-) that is, in (2017) bank 2 achieved environmental efficiency. In (2018), ecological efficiency amounted to (34.6), the value difference from (2017) amounted to (19.4), and in (2019) amounted to (13.5) and decreased from (2018) with a value difference of (21.1).

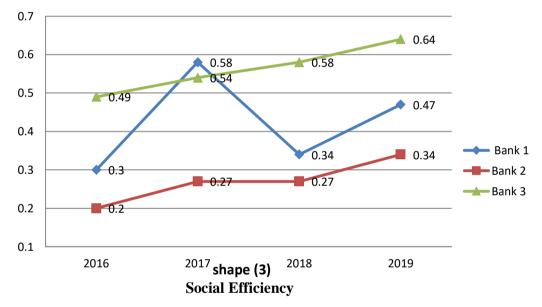
The analysis of Bank 3 Data shows that environmental efficiency in (2016) amounted to (4.42) and decreased in (2017) where it reached (16.8), with a difference in value from (2016) that amounted to (12.38), and also took a rise in (2018) where it amounted to (21.7) difference in value from (2017) amounted to (4.9). It rose in (2019) to (27.15), with a different matter from (2018) of (5.45).

(C) Measuring Social Efficiency: The following table shows the data on social efficiency during the study sample period from (2016) to (2019), and it is measured through the Community Contributions Index (Abdel-Fattah, 2019), (Figge & Hahn, 2004), (Muller et al., 2012).:

The community contributions = the amounts of donations and grants to community projects / the total social costs x 100 = %, as this index reflects the social efficiency of the bank and the extent of its support to the community.

	2016	2017	2018	2019
Bank 1	0.30	0.58	0.34	0. 47
Bank 2	0. 20	0. 27	0. 27	0.34
Bank 3	0.49	0.54	0.58	0.64

Table (3): shows the measurement of social efficiency



It is clear from Table No. (3) above that the social efficiency of bank 1 in (2016) amounted to (0.30) and it increased until it reached (0.58) in (2017). With a difference in the capacity of (0.28), and decreased in (2018) to reach (0.34) with a difference of (0.24) compared to (2017), and in (2019) it amounted to (0.47) with a difference of (0.13) compared to (2018).

By analyzing the data of bank 2, it was found that social efficiency in (2016) amounted to (0.20). It increased in (2017) to (0.27) with a difference of ability (0.07), and in (2018) it achieved (0.27), and in (2019) it amounted to (0.34) with a difference in value in (2018) which it was (0.07).

By analyzing the data of bank 3, it was found that social efficiency amounted to (0.49) in (2016) and increased in (2017) to (0.54), with a difference in value from (2016) that amounted to (0.05) and raised in (2018) as it reached (0.58) with a difference in value in (2017) which was (0.04). It rose in (2019) to (0.64), with a difference in value from (2018) that amounted to (0.06).

- **3-1-2.** Calculating the Difference in Value: In this indicator, researchers depend on (2016) as a base year, i.e. as a benchmark year, and compare it with (2019). Then, comparisons are made between the performance of the assessed facility and the reference facility using the three values below. If the values are positive (differences with positive values), this indicates superior efficiency. The concerned facility differs from the reference facility in the use of its resources, which reflects the improvement in the added sustainable value of the entity being evaluated. At the same time, if the differences are negative for any of those values. This indicates a lower efficiency of the entity being assessed than the reference entity, which reflects the decline and decreases in the sustainable added value of the enterprise under evaluation and negatively affects the realized value for stakeholders (Abdel-Fattah, 2019), (Figge & Hahn, 2004), (Muller et al., 2012). This is indicated below:
- (A) The Economic Value Difference = The difference between the economic efficiency of the bank being evaluated and the economic efficiency of the reference bank.

Table (4): shows the calculation of the economic value difference

	Bank 1	Bank 2	Bank 3
2016	1.28	0.87	2.26
2019	1.46	1.60	8.01
Value Difference	0.18	0.73	5.78

It is noted in Table No. (5) above that (Bank 1) achieved economic efficiency with a difference of a positive value of 0.18, that (Bank 2) also achieved economic efficiency with a difference of a positive value of 0.73, and also (Bank 3) achieved economic efficiency by a difference of a positive value of 5.87. That is, all the banks in the study sample achieved economic efficiency.

**(B) Environmental Value Difference** = The difference between the environmental efficiency of the facility being evaluated and the environmental efficiency of the reference facility.

Table (5): shows the calculation of the environmental value difference

	Bank 1	Bank 2	Bank 3
2016	17.7	16.9	4.42
2019	23.6	13.5	27.15
Value Difference	5.9	-3.4	22.73

It is noted in Table No. (5) above that (Bank 1) achieved environmental efficiency with a difference of a positive value of 5.9, that (Bank 2) did not achieve environmental efficiency as the difference in value amounted to -3.4. That (Bank 3) achieved environmental efficiency with a difference of a positive value of (-3.4), meaning that banks 1 and 3 achieved environmental efficiency, except for bank 2.

**(C)** Social Value Difference = The difference between the social efficiency of the facility being evaluated and the social efficiency of the reference facility.

Table (6): shows the calculation of the social value difference

	Bank 1	Bank 2	Bank 3
2016	0.30	0.20	0.49
2019	0.47	0.34	0.64
Value Difference	0.17	0.14	0.15

It is noted in Table No. (6) above that (Bank 1) achieved social efficiency with a difference of a positive value of 0.17, that (Bank 2) also achieved social efficiency with a difference of a positive value of 0.14. That (Bank 3) also achieved social efficiency with a difference of a positive value of 0.15, meaning that all banks in the study sample achieved social efficiency.

Finally, the researchers found in this study that the dimensions of sustainable development (economic dimension, social dimension, environmental dimension), which were measured according to the model of sustainable value-added, play a strategic role that must be evaluated. The efficiency of banks is multidimensional, and the process of auditing performance is built and directed incredibly to search for competition. Therefore, auditing of sustainable performance contributes to taking the necessary measures that lead to maximizing value and contributes to achieving the desired sustainable goals in addition to its function and role in the process of diagnosis, analysis and evaluation of the overall performance of the enterprise, which contributes to enhancing sustainable performance according to the dimensions of sustainable development.

Thus, the hypothesis of the study adopted by the researchers states that: "the adoption of the model of sustainable value-added leads to the enhancement of the sustainable performance reports of these banks as well as their ability to raise the level of quality of sustainability reporting practices through the audit of the sustainable performance of banks".

Conclusion: The rapid development of the business environment and the successive changes resulted in the development of the goal of maximizing the value of the establishment from the mere achievement of profits for shareholders to the need to maximize the value achieved for them. After which the goal expanded to include the need to achieve added value for customers by working to achieve their satisfaction with the products or services of the establishment and to maximize the value for the stakeholders associated with the establishment. The researchers found that a large part of the commercial banks listed in the stock market relies on the evaluation of financial performance only and neglect the economic and social aspects. The reason is the lack of legislation or laws obliging these banks to pay attention to sustainable development and disclose them adequately, as well as the stakeholders' awareness of the importance of revealing aspects of sustainability and the value added to the bank despite the global interest in them.

Another section implicitly discloses some aspects of sustainability to improve the bank's image in front of stakeholders without any strategy for sustainability adopted by senior management in banks. Banks do not have auditors who specialize in the environmental and social aspects; they only deal with the economic side.

**Acknowledgments:** The authors would like to thank Mustansiriyah university (www.uo mustansiriyah.edu.iq) Baghdad – Iraq for its support of the present work.

#### References

- 1. Abdel-Fattah, R. H., (2019), An analytical accounting study for the development of performance appraisal systems using sustainable development indicators. An applied study, PhD thesis, Faculty of Commerce, Cairo University, Egypt.
- 2. Abu Al-Nil, S. A., (2019), Accounting disclosure on the sustainability of the supply chain and its impact on financial performance. PhD thesis, Faculty of Commerce, Benha University.

- 3. Akisik, O., & Gal, G., (2011), Sustainability in businesses, corporate social responsibility, and accounting standards: An empirical study. International Journal of Accounting and Information Management, 19(3), 304-324.
- 4. Al Karim, R., & Alam, T., (2013), An evaluation of financial performance of private commercial banks in Bangladesh: Ratio analysis. Journal of Business Studies Quarterly, 5 (2), 65.
- 5. Al-Abedi, T. K., Mohaisen, H. A., & Saeed, H. S., (2021), Using Cost Schedules for Purposes of Control and Developing Strategical Planning under Applying Resource Planning Systems. Studies of Applied Economics, 39 (11).
- 6. Al-Hassani, W. H., (2017), A proposal for a unified report to audit sustainable development in Iraq, an applied research on some public sector institutions in Iraq.Al-Muthanna Journal of Administrative and Economic Sciences, 8 (2), 83-98.
- 7. Ali, Khalid Sabah., Mohaisen, Hussein Ali., Hameed, Ayad Abed., (2019), Joint Audit and the Financial Reporting Quality: Empirical Study on Iraqi Voluntary Joint Audits, International Journal of Innovation, Creativity and Change, 7 (8), (343-359).
- 8. Al-Jabali, W. S., (2020), The Impact of Using Financial Standards for Sustainability Accounting on Improving Accounting Disclosure and Enhancing Investors' Confidence (An Applied Study on Commercial Banks), Journal of Accounting Thought, 24 (2), 873-941.
- 9. Al-Wardat, K., (2013), The Guide to Internal Auditing in accordance with international tandards issued by AII. Al-Warraq Publishing and Distribution, Amman.
- 10. Aras, G., & Crowther, D., (2009), Corporate sustainability reporting: a study in disingenuity. Journal of business ethics, 87(1), 279-288.
- 11. Artiach, T., Lee, D., Nelson, D., & Walker, J., (2010), The determinants of corporate sustainability performance. Accounting & Finance, 50 (1), 31-51.
- 12. Bhardwaj, B. R., & Malhotra, A., (2013), Green banking strategies: sustainability through corporate entrepreneurship. Greener Journal of Business and Management Studies, 3(4), 180-193.
- 13. Brozović, D., D'Auria, A., & Tregua, M., (2020), Value Creation and Sustainability: Lessons from Leading Sustainability Firms. Sustainability, 12(11), 4450.
- 14. Carlucci, D., Ferreira, F. A., Schiuma, G., Jalali, M. S., & António, N. J., (2018), A holistic conception of sustainable banking: Adding value with fuzzy cognitive mapping. Technological and Economic Development of Economy, 24(4), 1303-1322.
- 15. Dixit, P., Al-Kake, F., & Ahmed, R. R., (2019), A critical review over the role of microfinance institution and its relevance in growing Indian economy. Russian Journal of Agricultural and Socio-Economic Sciences.
- 16. Evangelinos, K. I., Skouloudis, A., Nikolaou, I. E., & Leal Filho, W., (2009), An analysis of corporate social responsibility (CSR) and sustainability reporting assessment in the Greek banking sector. In Professionals' perspectives of corporate social responsibility (pp. 157-173). Springer, Berlin, Heidelberg.

- 17. Hossain, S., (2010), From Project Audit to Performance Audit: Evolution of Performance Auditing in Australia. IUP Journal of Accounting Research & Audit Practices, 9 (3).
- 18. Jaff, R., Al-Kake, F., & Hamawandy, N., (2021), The impact of the sustainable development dimensions on the quality of financial reports. Accounting, 7(2), 363-372.
- 19. Korzeb, Z., & Samaniego-Medina, R., (2019), Sustainability performance. A comparative analysis in the Polish banking sector. Sustainability, 11(3), 653.
- 20. Krasodomska, J., (2015), CSR disclosures in the banking industry. Empirical evidence from Poland, Social Responsibility Journal, Vol. 11 No. 3, 406-423.
- 21. Mohaisen, H. A., Ali, K. S., & Tbrahem, A. T., (2019), The Effect of Audit Rotation on the Audit Quality: Empirical Study on Iraq. Journal of Engineering and Applied Sciences, 14(13), 4553-4559.
- 22. Mohaisen, H.A., Al-Abedi, T.K., Saeed, H.S., (2021), The Impact of Accounting Disclosure According to Integrated Business Reports on the Value of the Company and the Cost of Capital: An Empirical Study in Iraq Stock Exchange, Webology, 18(Special Issue), pp. 328-351.
- 23. Mohammed, M. A., Al-Abedi, T. K., Flayyih, H. H., & Mohaisen, H. A., (2021), Internal Control Frameworks and Its Relation with Governance and Risk Management: An Analytical Study. Estudios de economía aplicada, 39(11), 18.
- 24. Peršić, M., Janković, S., & Krivačić, D., (2017), Sustainability accounting: upgrading corporate social responsibility. In the Dynamics of Corporate Social Responsibility (pp. 285-303). Springer, Cham.
- 25. Remsey, T. A., (2016), Analytical study of the role of accounting information systems in ensuring the continuity of the facility in light of social and environmental responsibility. Master's thesis, Faculty of Commerce, Beni Suef University.
- 26. Sakhil, A. & Hadi, S. A., (2020), A proposed model for auditing the performance of the electricity sector to achieve sustainable development. Journal of the University of Science City College, 12 (1), 79-100.
- 27. Scholes, K., Johnson, G., & Whittington, R., (2002), Exploring corporate strategy. Financial Times Prentice Hall.
- 28. Shariqi, Omar and Brahimi, Lubna, (2017), The Role of Environmental Auditing in Achieving Sustainable Development Goals, Journal of Development Studies and Research, Vol 4, no.1, 107-124.
- 29. Stankeviciene, J., & Nikonorova, M., (2014), Sustainable value creation in commercial banks during financial crisis. Procedia-Social and Behavioral Sciences, 110, 1197-1208.
- 30. Stauropoulou, A., & Sardianou, E., (2019), Understanding and Measuring Sustainability Performance in the Banking Sector. In IOP Conference Series: Earth and Environmental Science (Vol. 362, No. 1, p. 012128). IOP Publishing.
- 31. Zorio, A., García-Benau, M. A., & Sierra, L., (2013), Sustainability development and the quality of assurance reports: Empirical evidence. Business strategy and the environment, 22(7), 484-500.