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The Contributing Factors to Sustainability Reporting in Iran's Banking Industry

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ABSTRACT

Purpose: Considering the influential role of banks in balancing the supply and demand for available financial resources, banks must disclose the social and environmental aspects of their financing activities in addition to the financial information disclosure requirements. The primary purpose of the research is to identify the factors influencing the formulation of the sustainability reporting framework in the banking industry.

Design/methodology/approach: The current research is descriptive-survey type. Meta-composite qualitative analysis and fuzzy Delphi method are the data collection tools. In meta-composite qualitative analysis, concepts and critical indicators of sustainability reporting in the banking industry were extracted and classified by reviewing the relevant literature and interviewing experts. In the second step of the research, the fuzzy Delphi method was employed to confirm the validity of the concepts and critical factors of sustainability reporting.

Findings: The most significant motivating factor for conducting this research is the lack of suffiecient academic studies that seek to aggregate different sustainability criteria and provide a multi-dimensional measure of sustainability for the banking industry. This research provides a comprehensive framework for sustainability reporting in the specific banking industry.

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1. Introduction

Sustainability reporting has been widely acknowledged as a crucial corporate sustainability practice and has recently received increasing attention from regulators, standard-setters, practitioners, and researchers. Sustainability reporting has become essential for organizations aiming to demonstrate their commitment to environmental, social, and governance (ESG) issues. This practice involves disclosing information on how companies manage their economic, environmental, and social impacts (Arkoh et al., 2024). Sustainability reporting disclosure is a familiar method among companies worldwide and has become essential for businesses (Amin-Chaudhry, 2016; Crane & Glozer, 2016), as well as environmental, social, and governance aspects in companies (Dhaliwal et al., 2014). Stakeholder pressure encourages companies to go beyond their annual financial reports and disclose non-financial information to their stakeholders, such as social, environmental, and governance issues. Today, there is a focus on other non-financial measures because, according to the evidence, integrating financial and nonfinancial information leads to a better understanding of the company's sustainability efforts (Atkins & Maroun, 2015).

An accountable financial industry can reduce the effects of weak institutions in society and diminish corruption. Economists measure corporate sustainability through the performance of companies concerning their social, environmental, and political impacts. Considering that the interaction between the economy and global financial markets affects sustainable development, financial institutions are essential because they balance the economy through the distribution of resources and capital, and their financial services support other units. It enables the economy to produce their products and services. Banks provide services such as banking facilities, issuing guarantees, and investing in various companies. Therefore, banks do not directly affect environmental and social characteristics but have an indirect effect by providing financial facilities and investment and making financing decisions. Examining the applicants for bank facilities can influence the decisions related to the design of operational projects and the perspectives of the activities they want to finance in the applicant company. As a result, information about the financial policies of those companies is essential for banks (Scholtens & Klooster, 2019).

Banks and financial institutions must report on the allocation of resources in their portfolios. Such reports not only enable investors and depositors to allocate their resources towards a sustainable society but also help develop systems in advance to achieve transparency for future legislation regarding sustainability. Furthermore, sustainable development requires significant investment in renewable energy, infrastructure that meets environmental standards, and green technologies. Researchers and professionals acknowledge that financial institutions are the most influential stakeholders in ecological changes. However, other stakeholders, such as legislators, financial managers, and policymakers, have criticized or overlooked this significant role. Financial institutions can identify green investments as an opportunity to improve the quality of their operations. For instance, banks can adjust their risk management methods by considering environmental risks (the risks involved in assessing granting facilities due to environmental obligations) to improve the decision-making process. Such techniques can also enhance investment advice to clients. According to the statement from the United Nations Environment Program (UNEP) (2017) regarding banks and sustainable development, the role of banks in terms of investments with environmental considerations, and specifically the financial institutions in "building a sustainable economy and life," is recognized. Since then, many banks have turned to expanding investment portfolios with environmental considerations, such as green stocks, green bonds, and green bank deposits. These portfolios finance projects to protect natural resources and promote business practices with ecological concerns. However, such investments are small compared to conventional banking portfolios (ElAlfy & Weber, 2019).

The financial development system in developing countries, especially those with governmental economic systems, is based on a bank-oriented approach. Hence, banks are the most critical source of financing for implementing public and private sector plans and projects. Banks have specific characteristics compared to other companies in other industries. In addition to presenting financial reports based on accounting standards, they must also follow the particular laws and regulations of the country where they operate (Haniffa & Hudaib, 2007). In addition, banks' business models differ from other companies' business models. Despite the limitations of reporting in banks, information transparency is essential in the banking industry because, based on the approach of the bank-oriented

financial development system, banks are considered the supportive arm of the government, and should be accountable to society just as governments are. The banking system plays an essential role in government policies and economic performance by providing public services to citizens in all industries and forms of business. The government's goals in providing public services to people depend on the financial resources the banking system provides (Mohammadian & Setaysh, 2018). As an intermediary, banks play an essential role in directing financial resources towards sustainable activities (Cerqueti et al., 2023), both through lending policies and investment strategies (Xia et al., 2023).

A combination of institutional, organizational, and technological factors influences sustainability reporting. The adoption of frameworks such as GRI and integrated reporting is crucial, though they need to be adapted to specific contexts. Effective sustainability reporting enhances transparency and governance, and positively impacts financial performance and risk management. However, challenges remain in standard settings and sector-specific applications, highlighting the need for conducting ongoing research and adaptation (Aprilia & Kustinah, 2024).

Considering the importance of the banks' role in the economy of Iran, especially the financing of economic enterprises, it is necessary to examine how to disseminate financial and non-financial information, considering the issue of accountability. If the strategic attitude of banking is shaped based on the sustainability model, the financial resources necessary for sustainable development will be provided. However, if sustainable banking is not given sufficient attention, the required financial resources for sustainable development will be limited, and the country will not progress in sustainable development. In Iran, despite banking reference laws, the Money and Credit Council approvals, as well as other banking laws, little attention is paid to discussing sustainability in the banking industry. Banks have obtained the guidelines set by professional institutions and international associations (such as GRI) for the banking industry and have developed a framework for bank sustainability reporting to provide stakeholders with valuable information by presenting a sustainability report. This helps to legitimize their activities as an economic enterprise in society.

2. Theoretical Principles and Literature Review

Sustainability reporting is one of the most critical issues of the 21st century, prompting widespread adoption by companies worldwide. According to the KPMG Survey (2020), 80% of companies worldwide currently report on sustainability. The current scenario has given significant weight to the sustainability reporting (SR) both globally and in recent years (Darshi et al., 2023). Sustainability reporting is a significant issue for companies due to global awareness of sustainable development (Islam, 2020). Sustainability accounting and reporting have a long history of aiding managers in improving corporate sustainability and accountability. In 1920, financial and management accounting, along with costing, dominated business discourse. Following the Brundtland Committee report, environmental accounting expanded, and the committee proposed environmental strategies to achieve sustainable development (Brundtland, 1987). According to this report, sustainable development is a way to improve the current and future generations' quality of life and well-being. Specifically, the Brundtland Commission defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (Menteş, 2020). As a result, accountants began reporting to managers and external stakeholders about the company's environmental performance and its impacts.

Since stakeholders are mainly focused on generating profit rather than addressing social and environmental challenges, experts in the environmental field are skeptical about the foundations of environmental accounting (Gray & Bebbington, 2000). Technical issues in environmental accounting arise from the complexities of socio-ecological systems, which cannot be adequately captured within the current financial accounting frameworks regarding monetary components. In response to these limitations of environmental accounting, the "communication triangle" was introduced in 1994 by the English researcher, John Elkington. The communication triangle shifted the focus of company reporting, which until then had been dominated by financial aspects, towards the assessment of environmental and social performance. Gray (2001, 2006) emphasized that sustainability reporting examines economic, social, and environmental pillars separately. In contrast, there is a need for integration among these pillars to provide relevant and reliable information for corporate sustainability. Internal communication among these areas, viewed as interactive systems, should

provide meaningful and relevant information about sustainable performance and risks associated with the company's activities. Sustainability reporting can help a company achieve operational efficiency through cost reduction or increased sales due to improved company reputation. Finally, effective reporting can help investors and external stakeholders understand the company's vision, mission, and performance levels, thereby increasing the company's goodwill value (ElAlfy & Weber, 2019).

The Global Reporting Initiative guidelines are the most common sustainability reporting standards that enable stakeholders to examine a company's footprint in the global economy, environment, and society. The Global Reporting Initiative's reporting model promotes a system of standardized metrics that can be made available to anyone. Large, small, and medium organizations in different sectors are also motivated to engage in this reporting process (Sideri, 2021).

Banking plays an essential role in the economy of any country, and these financial institutions, as the leading economic institutions of any country, play a significant role in sustainable development (Weber, 2005). Paying attention to sustainability in the banking industry leads to its spread and promotion to other industries. The social and environmental effects of the bank are both internal and external. Internal effects are mostly related to the bank's internal processes, while external effects related to products and services can be provided. The environmental effects of this business on internal activities are highly insignificant compared to other industries. They are limited to energy, paper, and water consumption in the bank's internal processes. Still, the external environmental and social effects, formed by its products and services, are significant. Therefore, the bank's investments, loans, and other financial services indirectly affect environment and society. Today, banking regards sustainability as an additional lever of economic growth. Banks can stimulate sustainable development by directing their financial policy towards sustainable companies (Jeucken, 2010).

An accountable financial industry can mitigate the effects of weak societal institutions and curb corruption. Considering that the interaction between the economy and global financial markets affects sustainable development, the role of financial institutions are crucial. These institutions balance the economy due to the distribution of resources and capital, and their financial services enable other economic units to produce goods and services. However, due to the lack of specific standards and the absence of legal requirements, corporate social responsibility reports are difficult to compare, making it often impossible to evaluate the social performance of companies based on voluntary reportings. This issue also applies to the banking industry, which has complex and indirect interactions with both the environment and society (Scholtens & Klooster, 2019).

A comprehensive sustainability reporting framework in the banking industry encompasses various critical components that ensure transparency, accountability, and alignment with sustainability goals. These components are essential for banks to effectively communicate their social, economic, and environmental impacts. While these components are vital, some banks still struggle with effective implementation, highlighting the need for ongoing support and regulatory guidance to enhance sustainability practices in the industry (Najm Abed & Singh, 2024).

Stakeholders increasingly expect companies to disclose their impact on the environment and society by publishing detailed reports. This pressure from stakeholders is supported by researchers who argue that sustainability is vital for a company's survival and should be integrated into corporate strategy. Banks and other financial institutions face similar pressure from all stakeholders for greater transparency and disclosure of their activities (Menteş, 2020). Since the 2008 financial crisis, the banking industry has adopted principles to ensure that banks' business operations address economic goals as well as social and environmental issues (ElAlfy & Weber, 2019).

As financial intermediaries, banks perform critical financial functions in any economy. Although banks do not directly impact environmental and social characteristics, they have an indirect effect by providing financial facilities, investments, and financing decisions. Banks carry out a significant portion of the country's financing process. By examining applicants for bank facilities, banks can influence decisions related to the design of operational projects and the approach to the activities they wish to finance in the applicant company. Consequently, information about the financial policies of those companies is crucial for banks (Scholtens & Klooster, 2019).

The banking industry plays a decisive role in the economy as the main pillar of the country's monetary and financial market. Preparing sustainability reports for banks is more important than for other companies due to the significance of disclosing non-financial information, such as corporate

management details. Given the critical importance of banks in the economy and their vulnerability, they are subject to stricter regulations and supervision. Therefore, non-financial reporting and financial reporting are necessary for banks to address ambiguities and reduce information asymmetry (Mohammadian & Setayesh, 2018). The required financial resources for sustainable development will be provided if the strategic banking approach is based on the sustainability model. Conversely, if sustainable banking is neglected, the required financial resources for sustainable development will be limited, impeding the country's progress in sustainable development. Thus, the most important motivation for conducting this research is the lack of academic studies that aggregate different sustainability criteria and provide a multi-dimensional measure of sustainability for the banking industry. Additionally, this research aims to take the first step towards providing sustainability reports in the banking industry by offering a sustainability reporting framework. This framework helps organizations achieve their goals for measuring and improving their environmental and social impacts by specifying priorities.

Several studies have been conducted on sustainability in banking. Najm Abed and Singh (2024) found that banks in Bharatiya utilize green accounting practices to assess, monitor, and report their environmental performance. These practices include greenhouse gas emissions, energy and water consumption, and waste production. The implementation of sustainability reporting frameworks, such as the Global Reporting Initiative (GRI) and the Principles for Responsible Banking (PRB), which provide criteria for disclosing environmental, social, and governance (ESG) information, is essential. Additionally, financial institutions may participate in environmental risk assessment and mitigation measures to identify and manage any possible environmental hazards associated to their operations and investments. Environmentally friendly accounting techniques allow Bharatiya banks to contribute to sustainable development objectives, while improving transparency and accountability in their business operations. Ghazinoori et al. (2024) demonstrated that both formal and informal institutional structures exist in Iran and that both types influence corporate social responsibility (CSR). Informal institutions (personal values, culture, religion, traditions, charity, and philanthropy) play a more explicit role than formal institutions (such as legal regulations and laws) in shaping CSR adoption policies and practices. The results indicate that, among institutions linked to CSR, formal and informal institutions are complementary and enhance each other in Iran. Nevertheless, informal institutions are more prominent in shaping CSR policies and practices than formal ones. Salehi and Bashirimanesh (2024) found that overconfidence and managerial myopia cause the disclosure of corporate social responsibility (CSR) to decrease. Managers' overconfidence and short-term attitudes lead to a decrease in the level of CSR activities of the companies and their disclosure. However, the existence of narcissism in managers and the presence of political ties within companies may lead to an increase in the disclosure of CSR. Further findings indicate that political connections may motivate narcissistic managers to increase CSR disclosure. However, the results document no significant impact of political ties on the relationship between managerial overconfidence and myopia with CSR involvement. Kurniawati and Purwaningsi (2024) found that financial stability, indicated by metrics such as return on equity (ROE), significantly influences the level of sustainability disclosures. Banks with stronger financial health are more likely to engage in comprehensive sustainability reporting. This stability allows banks to invest in sustainable practices, thereby improving their market competitiveness and investor trust. Aprilia and Kustinah (2024) found that board gender diversity negatively affects sustainability reporting, narcissism has no significant impact, and the intensity of audit committee meetings positively influences sustainability reports. Daryaei et al. (2024) indicated that accountability in companies listed on the Tehran Stock Exchange (TSE) has increased the use of conservative practices. Therefore, companies seeking corporate social responsibility (CSR) activities are more conservative in preparing and presenting financial reports. Furthermore, companies that engage in conservative practices to benefit stakeholders can better implement CSR activities to meet their stakeholder obligations. These results suggest a two-way relationship between CSR and accounting conservatism. Yusuf et al. (2024) demonstrated the pivotal role of syncing banking operations with intrinsically sustainable tenets of Islamic finance. This harmony can notably spur sustainable development, potentially drawing more investors and boosting the reputation of the Islamic banking domain. Ershadi et al. (2024) indicated that the three measures of corporate financial performance (return on assets, return on equity, and economic value added) are favorably affected by sustainability

reporting. Furthermore, companies with a sustainable approach to environmental, social, and governance issues build the trust and confidence of investors, creditors, and shareholders, leading to an increase in firm value and, ultimately, the improvement of corporate performance. Darshi et al. (2023) demonstrated that factors such as company size, profitability, leverage, and the presence of a sustainability committee significantly influence the quality of sustainability reporting. These elements ensure that reports are comprehensive and reflect the bank's commitment to sustainability. Galeone et al. (2023) argued that banks must supplement traditional financial reporting with non-financial disclosures, focusing on environmental, social, and governance (ESG) factors. This is crucial for promoting Corporate Social Responsibility (CSR) and sustainable economic development. Arianpoor et al. (2023) revealed that nonfinancial sustainability reporting (NFSR) affects enterprise value positively. In addition, environmental sustainability reporting (ESR) and social sustainability reporting (SSR) positively affect the enterprise value. However, governance sustainability reporting (GSR) does not affect the enterprise value. Management legitimate authority (MLA) affects the relationship between NFSR/ESR/SSR/GSR and enterprise value, resulting from the effect of MLA on firm-related information quality and transparency. Azadzanjani et al. (2023) found that the qualitative model of sustainability reporting (SR) in Iran's capital market included main variables such as management of the company's legal and regulatory environment in terms of leadership and governance requirements in SR, health and safety of human capital in human capital requirements of SR, stakeholders' performance disclosure of the most crucial company performance criteria in the stakeholders' performance of the management's interpretive report, the flexibility of the business model based on costs in the economic requirements of the business model and innovation in SR, customer welfare, presented based on the promotion of education and training in the social capital requirements of the SR, and the management of energy and fuel consumption in the environmental requirements of the SR. Ellili and Nobanee (2023) found that the sustainability disclosure levels of UAE banks are low and sustainability disclosure has a significant positive effect on bank performance. The research results will help the Central Bank of the UAE create a sustainability disclosure framework to improve the bank's transparency, reduce information asymmetry, and improve compliance with sustainability standards. Hosseini and Babaei (2023) presented a model for identifying the important elements of corporate sustainability reporting by emphasizing Islamic principles and values in terms of 17 components and 182 indicators and highlighted the importance of incorporating Islamic principles and values into completing the model elements. Baldissera (2023) emphasized that understanding the evolution of sustainability reporting in banking can guide future practices. A conceptual framework that incorporates historical trends can assist banks in navigating regulatory changes and identifying critical issues. Heller et al. (2023) found that banks face increasing pressure on ESG issues. New and evolving regulations require greater transparency and disclosure of ESG-related data as stakeholders and investors scrutinize these factors. This scrutiny has heightened the impact of investment decisions on climate and society. Hanisfy and Afgani (2023) identified the necessity of a structured measurement framework to assess sustainability practices. Such a framework aligns reporting with established standards and guidelines, facilitating impact evaluation and enhancing transparency. Schröder (2022) argued that the quality of nonfinancial reporting in mandatory reporting is lower than the average despite significant progress over the years and that the quality of banks' non-financial reporting is highly influenced by experience, format and the framework at the reporting level. Mazrae Farahani et al. (2022) stated in their conceptual model that sustainable banking practices include social sustainability, environmental sustainability, and ethical considerations. In the evolution of sustainable banking, there are other external factors such as profit maximization, social effects, and environmental effects. Veronica et al. (2022) found that the financial performance variable mediates the effect of intellectual capital on financial sustainability. It implies that the banking sector should pay attention to its intellectual capital, which improves financial performance and promotes business sustainability. Rezaei Pitenoei et al. (2022) found that audit committee gender diversity (ACGD) has a significant positive influence on the level of corporate social responsibility (CSR) disclosure. The finding is robust to alternative measures of ACGD, CSR disclosure, and endogeneity concern. Pourkhani Zakle Bari and Jahanshad (2021) highlighted the importance of the disclosure of non-financial information for legislators and standard setters. They also found that the company's location directly affects corporate sustainability disclosure from the social aspect; however, it does not affect the overall

corporate sustainability index or disclosure from the general, economic and environmental aspects. Dedu et al. (2021) argued that to promote and adopt a culture of sustainability and to ensure well-being, close cooperation between all sectors of the economy is required, along with a substantial policy nexus and coordination between micro and macro factors. Akhter et al. (2021) indicated that green banking practices positively affect financial performance. This research has identified where commercial banks are lagging in green banking practices and will help policymakers and regulators design and develop interventions to promote these poor areas of banking. Saxena et al. (2021) found that sustainability issues focused on by banks mainly include "environmental" and "social" considerations. However, the aspect of "governance" is still not considered by many. Prayoga and Siswantoro (2021) revealed that there have been increasing sustainability practices in Islamic banking; however, this practice needs to improve financial performance. These results support the urgent need for proper sustainability guidelines for Islamic banking, especially in Indonesia. Saha et al. (2020) indicated that size, age, and government ownership share in the banks affected social responsibility reporting costs and profitability. Age, government ownership share, and Islamic banks affected social responsibility reporting. Nobahar et al. (2021) found that total assets have a positive and significant relationship, and capital adequacy has a negative and significant relationship with bank stability. Therefore, banks with more assets are more inclined to participate in sustainability activities due to more appropriate financial resources and support of the company's brand and reputation for stakeholders. On the other hand, because of the misconception that sustainability is expensive and lacks tangible benefits for banks, they seldom participate in sustainability initiatives to bolster their capital adequacy ratio.

In general, sustainability reporting is the mechanism of choice that give birth to integrated reporting by reducing transaction costs and mortality rates of corporate social responsibility and the Global Reporting Initiative. Integrated reporting is an evolving integrated model for corporate social responsibility and global reporting initiatives. The following structure demonstrates the fundamental areas of sustainability reporting in the banking sector, ranging from central banking to ancillary and humanitarian activities (ElAlfy & Weber, 2019). Moreover, efforts are being made to achieve a suitable framework for sustainability reporting in the banking industry in Iran by considering banking laws in Iran.

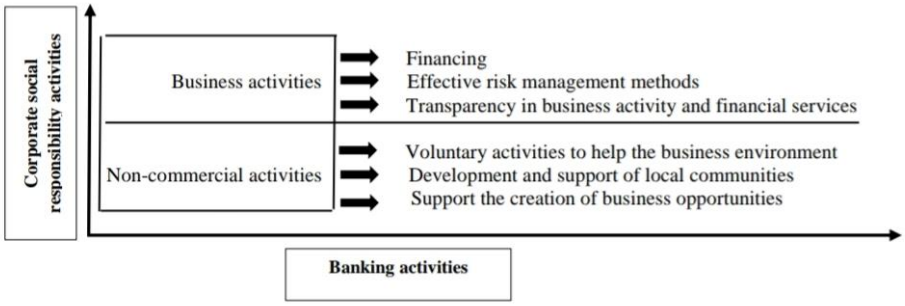

Fig. 1. The Conceptual Model of the Study

3. Research Methodology

The current research is of a descriptive survey type, and data collection tools include meta-composite qualitative analysis and expert questionnaires using the three-stage fuzzy Delphi method. The statistical population of the research includes managers active in the banking industry, academic staff members who are experts in the field of study, the non-random sampling method is selective (purposive sampling method, theoretical saturation criterion, and essential people sample technique), and 24 interviews were conducted. Excel 2019 and SPSS 26 statistical analysis software were used to analyze the observations and research data and investigate the simultaneous effect of general scales.

Additionally, when analyzing the demographic characteristics of the experts and taking into account the age of the respondents, we discovered that the largest age group among them falls within the 30 to 40 years old range. Moreover, examining the respondents' workplaces showed that most of them work with government organizations and ministries. The accounting field had the highest

number of experts, with assistant professors being the most prevalent in terms of scientific rank. Additionally, a majority of respondents held a doctorate degree. Lastly, examining executive positions and responsibilities revealed that most respondents were employed in the banking system.

4. Research Findings

This step validated the influential factors resulting from meta-synthesis qualitative analysis and expert interviews. Meta-synthesis is a type of qualitative study that examines the information and findings of other qualitative relevant studies. Meta-synthesis analysis requires that the researcher conduct an accurate and in-depth review to combine the findings of related qualitative studies. To achieve this goal, the Meta-Synthesis Model has been used based on the model proposed by Sandelowski and Barroso (2007).

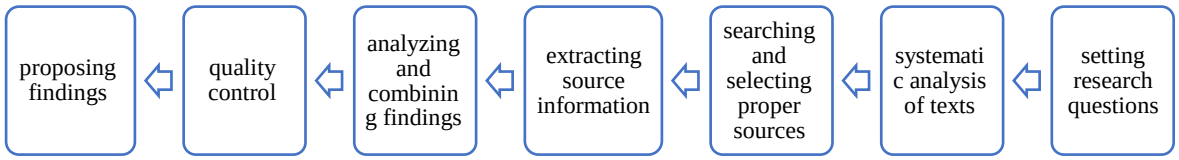

Fig. 2. The Seven-Step Meta-Synthesis Model (Adapted from Sandlowski & Barroso, 2007)

Step 1: Setting research questions

The initial step in a meta-synthesis involves formulating research questions. These questions are typically structured around four parameters: what, who, when, and how.

Step 2: Systematic analysis of texts

Secondary data, including all research on sustainability in the banking industry, were used to collect data. These included previous documents and records.

Step 3: Searching and selecting proper resources

During the search process, parameters such as title, abstract, content, and article details were considered, and articles irrelevant to the research question and objective were eliminated. The indicators were extracted through an extensive review of the literature in the field of sustainability reporting, including the global reporting initiative standards, the sustainability accounting standards, board standards, the task force on climate-related financial disclosures framework, and developed models and proposals presented in previous related studies, including Hosseini and Babaei (2023), Sijani and Barzesh (2017), Ellili and Nobanee (2023), Farook (2011), Luke and Olugbenga (2013), Pourkhani Zakle Bari and Jahanshad (2021), Abdi et al. (2020), Deyanti Delmi et al. (2016), Jan and Marimuthu (2015), Hassan and Harahap (2010), Smit and Van (2016), Carnevale and Mazzuca (2014), Gelmini (2017), Jan et al. (2018), Mohammad (2019), Nosratabadi et al. (2020), Menteş (2020), Islam (2020), Rehman et al. (2020), Saxena et al. (2021), Prayoga and Siswantoro (2021), Akhter et al. (2021), Hamid and Worthington (2021), Gellidon and Soenarno (2022), Abdullah and Haron (2022), Wijayanti and Setiawan (2022), Frias et al. (2014), Nor and Hashim (2014), Hashim et al. (2015), Kılıç and Kuzey (2017), Hidayah et al. (2019), Nilasakti and Falikhatun (2020), Maama (2021), Dedu et al. (2021), Malini (2022), Veronica et al. (2022), Budiman et al. (2022), Al Meraikhi and Nobanee (2021), Hendratno et al. (2022), and Mohamed Buallay et al. (2023).

Step 4: Extracting source information

In this research, the information from the studies was categorized in a table. This table includes research identification information, key method information, and primary findings.

Step 5: Analyzing and combining findings

Initially, all factors extracted from the studies were viewed as identifiers. Subsequently, taking into account the significance of each, these identifiers were categorized based on similar concepts. The similar concepts were then grouped into explanatory categories to delineate the primary and secondary components of sustainability reporting indicators, forming the explanatory axes of the research.

Step 6: Quality Control

Credibility in qualitative research addresses concepts such as defensibility, believability, confirmability, and transferability of the research results. One of the indicators of credibility (reliability) in qualitative research is the evaluation of two or more documents in terms of reference to

a specific person (Sandelowski & Barroso, 2006). Maxqda software, which can handle binary codes, was used to calculate the kappa index and assess its reliability. A specific document was provided to one of the experts to assess the reliability of the meta-analysis. After evaluation, the kappa coefficient was calculated as 0.611. A kappa coefficient above 0.6 is desirable (Landis & Koch, 1977), indicating that the research results are reliable.

Step 7: proposing findings

In this meta-synthesis step, the findings of the previous steps are presented. By removing synonyms and repetitive indicators and, subsequently, categorizing the final set, fifty-two influential factors for sustainability reporting in the banking industry were identified.

The Delphi method was used to screen and identify the final factors. Delphi analysis relied on the input of 24 experts. Although experts use their mental skills and abilities to make comparisons, it should be noted that the traditional process of quantifying people's views cannot fully reflect the human thinking style. In other words, fuzzy sets are more compatible with linguistic and, sometimes, ambigious human explanations. Therefore, it is better to use fuzzy sets (using fuzzy numbers) to make long-term predictions and decisions in the real world (Kahraman et al., 2008). In this study, triangular fuzzy numbers have been used to represent the experts' perspectives. Experts' opinions about the importance of each factor have been collected using a 7-degree fuzzy spectrum.

Table 1. The Spectrum of Seven Fuzzy Degrees for the Evaluation of Factors

Linguistic variables	Fuzzy values	Triangular fuzzy equivalents
Totally unrelated	$\tilde{1}$	(0, 0, 0.1)
Highly irrelevant	$\tilde{2}$	(0, 0.1, 0.3)
Unrelated	$\tilde{3}$	(0.1, 0.3, 0.5)
Medium	$\tilde{4}$	(0.3, 0.5, 0.75)
Related	$\tilde{5}$	(0.5, 0.75, 0.9)
Highly relevant	$\tilde{6}$	(0.75, 0.9, 1)
Totally relevant	$\tilde{7}$	(0.9, 1, 1)

4.1. The First Round of Fuzzy Delphi Method

First, the opinions of the experts regarding the importance of each factor were collected, and the fuzziness of the scale listed in Table 1 was considered. Next, the opinions of the experts were gathered using various methods for aggregating respondent opinions. These aggregation methods encompass experimental approaches put forth by different researchers.

The fuzzy average method is used in this study.

$$F_{AVE} = \left(\left\{ \frac{\sum l}{n} \right\}, \left\{ \frac{\sum m}{n} \right\}, \left\{ \frac{\sum u}{n} \right\} \right) \quad (1)$$

The average of triangular and trapezoidal fuzzy numbers can typically be consolidated into a definitive value known as the corresponding best average through a process called de-fuzzification. In this study, the surface center method was employed for de-fuzzification in conjunction with the relationship introduced by Tzeng and Teng (1993).

$$DF_{ij} = \frac{\left[\left(u_{ij} - l_{ij} \right) + \left(m_{ij} - l_{ij} \right) \right]}{3} + l_{ij} \quad (2)$$

The fuzzy average and de-fuzzified output of values related to the factors are presented in Table 2. The de-fuzzification greater than 0.7 is acceptable, and any index with a score less than 0.7 is rejected (Wu & Fang, 2011).

The sub-factors of paying charity, providing facilities to employees, visiting holy places, increasing the value for the beneficiaries in terms of society, carrying out charitable and donation activities, and employing a significant number of local residents in key operational roles all fell below the established tolerance threshold. Some items were also added at the end of the first round, including "prioritizing funding for clean and non-polluting industries," "clear financial incentives for green investment," "investigation of financial health and continuity of green economic activity," "transparency of information and bank values and presentation of CSR reports," "determining the bank's short-term and

long-term strategies to help funding for green and social industries and businesses," "the influence of government in providing sustainable banking facilities," "reducing the strictures in granting facilities to these businesses," and "supporting people with creative and efficient ideas." Only items scoring above 0.7 were considered for inclusion in the second round.

4.2. The Second Round of the Fuzzy Delphi Method

Fuzzy Delphi method was again employed for the analysis of the remaining factors in the second round. At this stage, 54 factors were evaluated based on experts' opinions. The results of fuzzy Delphi in the second round are reported in Table 2.

In the second round, no factors were eliminated, signifying the end of the Delphi rounds.

4.3. The Third Round of the Fuzzy Delphi Method

Although no new factors were removed or added in the second round, one more round was conducted for further assurance. At this stage, 54 factors were re-evaluated based on experts' views. The results of fuzzy Delphi in the third round are reported in Table 2.

Table 2. The Results of Screening Factors (First Round)

Main factors	Marginal factors	First round	Second round	Third round
Financing	Financial support for green investments	0.876	0.807	0.842
	Participation in the economic plans of the country	0.869	0.849	0.802
	Participation in international business	0.835	0.849	0.835
	Socially responsible investment	0.814	0.823	0.847
	Monitoring during the investment period	0.802	0.844	0.845
	Paying the loan	0.840	0.828	0.776
	Providing facilities based on bank contracts	0.852	0.859	0.828
	Charity payment, charity	0.522	Rejected	
	Customer validation	0.838	0.873	0.852
	Evaluation based on environmental indicators	0.842	0.845	0.828
	Providing facilities for employees	0.565	Rejected	
	Prioritizing funding for clean and non-polluting industries		0.809	0.813
	Clear financial incentives for green investment		0.838	0.831
Effective risk management methods	Development of monitoring methods for transparent reporting to stakeholders	0.858	0.831	0.816
	Review of rules, regulations and voluntary principles related to communication, industrial relations, and marketing	0.835	0.813	0.842
	Audits to implement risk assessment procedures	0.872	0.826	0.868
	Innovation and risk management in sustainable bank financing	0.847	0.833	0.854
	Attention to sustainability and CSR in company objectives	8.804	0.847	0.817
	Managers' strategies and commitment	0.824	0.830	0.838
	Estimating the level of credit risk	0.813	0.844	0.810
	Creating added value in products and services	0.842	0.845	0.858
	Investigating the financial health and continuity of green economic activity		0.845	0.840
Transparency in commercial activity and financial services	Participation of stakeholders in the decision-making process regarding CSR issues	0.828	0.817	0.824
	Designing an environmental charter in the industry	0.800	0.824	0.826
	Transparency in choosing investors and suppliers	0.823	0.856	0.819
	Measuring the sustainability performance of banks using tangible information and measurable indicators	0.868	0.800	0.851
	Increasing value for stakeholders in terms of society	0.412	Rejected	
	Establishment of the internal control system, effective reporting, and employing new technologies	0.838	0.869	0.833
	Ethics and full disclosure of sustainable development operations	0.863	0.816	0.814
	Introducing new banking services	0.828	0.838	0.837
	Climate-related financial disclosure	0.838	0.883	0.859
	Sustainability cost report	0.833	0.831	0.837
	Transparency of bank information and values and presentation of CSR reports		0.866	0.835

Table 2.

Main factors	Marginal factors	First round	Second round	Third round
Voluntary activities to help the business environment	Creating job opportunities with conditions suitable for decent work	0.852	0.826	0.792
	Development of infrastructure investments and supported services	0.838	0.880	0.876
	Carrying out charity and donation activities	0.594	Rejected	
	Energy	0.866	0.837	0.801
	Water	0.849	0.833	0.807
	Biodiversity	0.876	0.835	0.800
	Waste of resources	0.797	0.885	0.842
	Reducing resource consumption in bank processes	0.819	0.837	0.822
	Investment of banks to train employees	0.831	0.828	0.859
	Preserving the natural ecosystem for future generations	0.883	0.783	0.824
	The influence of government in providing sustainable banking facilities		0.800	0.868
	Determining the bank's short-term and long-term strategies to help funding for green and social industries and businesses		0.851	0.856
Development and support of local communities	Choosing environmentally appropriate operating procedures for waste management	0.772	0.826	0.863
	The proportion of senior management recruited from the local community in key operational roles	0.494	Rejected	
	Local community initiatives to improve access to financial services for unpriviledged people	0.838	0.835	0.823
	Supporting the health and safety of the community	0.819	0.824	0.854
	Establishing sustainability and social responsibility committees in banks	0.828	0.828	0.809
	Supporting women and children	0.806	0.835	0.823
	Supporting rural development projects	0.803	0.803	0.810
	Cooperation with universities and institutions dedicated to environmental causes	0.858	0.826	0.814
	Visiting holy shrines	0.590	Rejected	
	Reducing the strictures in granting facilities to these businesses		0.826	0.793
Supporting the creation of green business opportunities	Supporting businesses that produce environmentally friendly facilities and equipment	0.861	0.821	0.837
	Strategic decisions and financing for the launch of innovative sustainable products and services	0.904	0.817	0.819
	Creating new market opportunities through new environmental technologies and processes	0.844	0.838	0.824
	Establishing a communication bridge between sustainability and customers by banks	0.852	0.810	0.863
	Supporting people with creative and efficient ideas		0.840	0.839

4.4. The Conclusion of the Delphi Technique Rounds

No factors were eliminated in the second and third rounds, indicating the conclusion of the Delphi rounds. In general, one common approach to concluding the Delphi process is to compare the average scores from two consecutive rounds. If the difference between the scores in these two stages is less than a narrow threshold (0.2), the survey process is halted (Cheng & Lin, 2002).

Table 3. The Difference Between the Second-Round and the Third-Round Cut-Off Value

Main factors	Marginal factors	2nd round result	3rd round result	Difference	Result
Financing	Financial support for green investments	0.807	0.842	0.035	Settlement
	Participation in the economic plans of the country	0.849	0.802	0.047	Settlement
	Participation in international business	0.849	0.835	0.014	Settlement
	Socially responsible investment	0.823	0.847	0.024	Settlement
	Monitoring during the investment period	0.844	0.845	0.001	Settlement
	Paying loan	0.828	0.776	0.052	Settlement
	Providing facilities based on bank contracts	0.859	0.828	0.031	Settlement
	Customer validation	0.873	0.852	0.021	Settlement
	Evaluation based on environmental indicators	0.845	0.828	0.017	Settlement
	Prioritizing funding for clean and non-polluting industries	0.809	0.813	0.004	Settlement
	Clear financial incentives for green investment	0.838	0.831	0.007	Settlement

Table 3.

Main factors	Marginal factors	2nd round result	3rd round result	Difference	Result
Effective risk management methods	Development of monitoring methods to improve the transparency of reporting to stakeholders	0.831	0.816	0.015	Settlement
	Review of rules, regulations and voluntary principles related to communication, industrial relations, and marketing	0.813	0.842	0.029	Settlement
	Audits to implement risk assessment procedures	0.826	0.868	0.042	Settlement
	Innovation and risk management in sustainable bank financing	0.833	0.854	0.021	Settlement
	Attention to sustainability and CSR in company objectives	0.847	0.817	0.030	Settlement
	Managers' strategies and commitment	0.830	0.838	0.008	Settlement
	Estimating the level of credit risk	0.844	0.810	0.034	Settlement
	Creating added value in products and services	0.845	0.858	0.013	Settlement
	Investigating the financial health and continuity of green economic activity	0.845	0.840	0.005	Settlement
Transparency in commercial activity and financial services	Participation of stakeholders in the decision-making process regarding CSR issues	0.817	0.824	0.007	Settlement
	Designing an environmental charter in the industry	0.824	0.826	0.002	Settlement
	Transparency in choosing investors and suppliers	0.856	0.819	0.037	Settlement
	Measuring the sustainability performance of banks using tangible information and measurable indicators	0.800	0.851	0.051	Settlement
	Establishment of the internal control system, effective reporting, and employing new technologies	0.869	0.833	0.036	Settlement
	Ethics and full disclosure of sustainable development operations	0.816	0.814	0.002	Settlement
	Introducing new banking services	0.838	0.837	0.001	Settlement
	Climate-related financial disclosure	0.883	0.859	0.024	Settlement
	Sustainability cost report	0.831	0.837	0.006	Settlement
	Transparency of bank information and values and presentation of CSR reports	0.866	0.835	0.031	Settlement
Voluntary activities to help the business environment	Creating job opportunities with conditions suitable for decent work	0.826	0.792	0.034	Settlement
	Development of infrastructure investments and supported services	0.880	0.876	0.004	Settlement
	Energy	0.837	0.801	0.036	Settlement
	Water	0.833	0.807	0.026	Settlement
	Biodiversity	0.835	0.800	0.035	Settlement
	Waste of resources	0.885	0.842	0.043	Settlement
	Reducing resource consumption in bank processes	0.837	0.822	0.015	Settlement
	Investment of banks to train employees	0.828	0.859	0.031	Settlement
	Preserving the natural ecosystem for future generations	0.783	0.824	0.041	Settlement
	The influence of government in providing sustainable banking facilities	0.800	0.868	0.068	Settlement
	Determining the bank's short-term and long-term strategies to help funding for green and social industries and businesses	0.851	0.856	0.005	Settlement
Development and support of local communities	Choosing environmentally appropriate operating procedures for waste management	0.826	0.863	0.037	Settlement
	Local community initiatives to improve access to financial services for unprivileged people	0.835	0.823	0.012	Settlement
	Supporting the health and safety of the community	0.824	0.854	0.030	Settlement
	Establishing sustainability and social responsibility committees in banks	0.828	0.809	0.019	Settlement
	Supporting women and children	0.835	0.823	0.012	Settlement
	Supporting rural development projects	0.803	0.810	0.007	Settlement
	Cooperation with universities and institutions dedicated to environmental causes	0.826	0.814	0.012	Settlement
	Reducing the strictures in granting facilities to these businesses	0.826	0.793	0.033	Settlement
Supporting the creation of green business opportunities	Supporting businesses that produce environmentally friendly facilities and equipment	0.792	0.785	0.007	Settlement
	Strategic decisions and financing for the launch of innovative sustainable products and services	0.760	0.767	0.007	Settlement
	Creating new market opportunities through new environmental technologies and processes	0.781	0.764	0.017	Settlement
	Establishing a communication bridge between sustainability and customers by banks	0.747	0.792	0.045	Settlement
	Supporting people with creative and efficient ideas	0.840	0.839	0.001	Settlement

The results in Table 3 indicate that the difference is smaller than 0.2 in all cases, so the Delphi rounds can be concluded. As a result, the key factors affecting the sustainability reporting framework were determined. This established the basis for formulating a conceptual framework for sustainability reporting within Iran's banking sector, as illustrated in Figure 3.

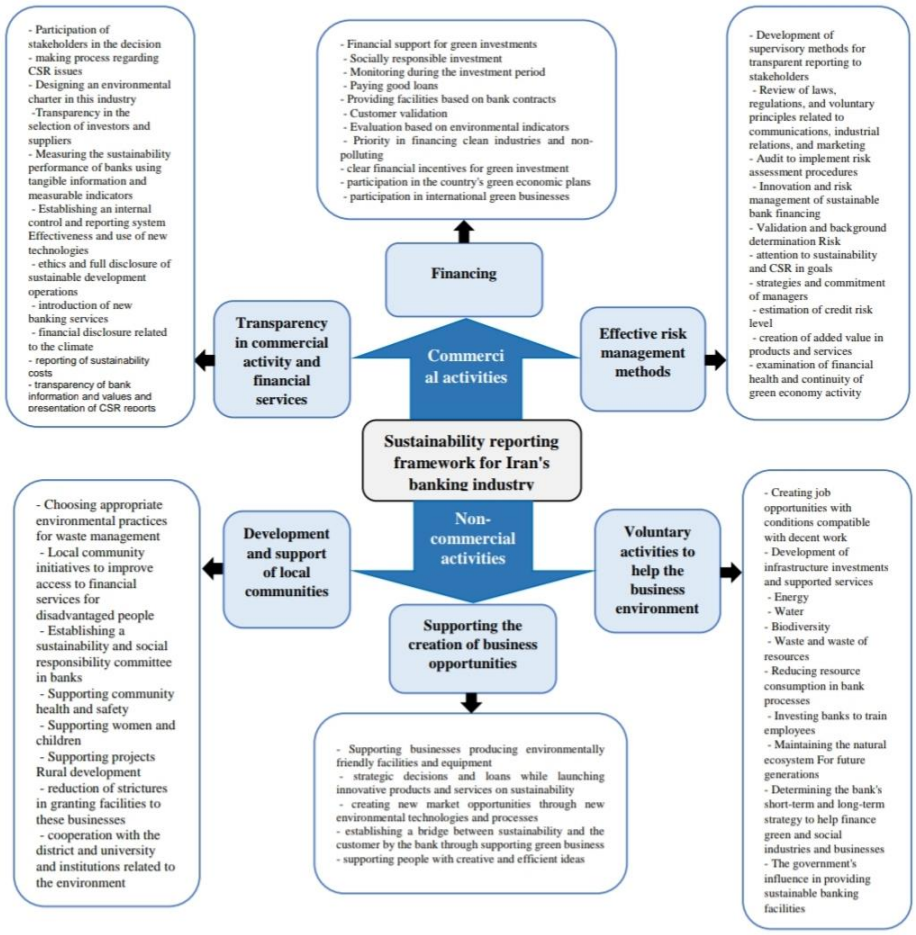

Fig. 3. The Conceptual Framework of Sustainability Reporting in Iran's Banking Industry

5. Discussion and Conclusion

As a prominent financial and economic institution, the banking industry has wide-ranging effects on society and the environment. Banks should be encouraged to publish sustainability reports regardless of their size and market share. This practice will lead to better governance through increased transparency and accountability in the banking sector. Considering banks' importance and balancing role in the economy, they can lead society towards sustainable development if they prioritize sustainability. The current research aims to identify the factors affecting sustainability reporting, proposing a conceptual framework for sustainability reporting in Iran's banking industry. In implementing this research, based on the meta-synthesis method, the relevant studies were reviewed, and the studies incompatible with the research questions and purpose were removed. Finally, after four steps of refinement, 34 studies were selected for data analysis. The information from the selected studies was extracted and classified in the next step. In the implementation of this step, the number of repetitions of sustainability reporting concepts and factors was also considered, and essential items were selected based on their frequency. In the second step of the research, to screen and identify the critical factors of sustainability reporting, the fuzzy Delphi method was used based on the opinion of experts in 3 rounds. Finally, 54 factors affecting the sustainability reporting framework in the banking industry were approved. Factors identified based on similarity were classified into six components: financing, effective risk management methods, transparency in commercial activity and financial

services, voluntary activities to help the business environment, supporting the creation of green business opportunities, and the development and support of local communities. Finally, the first three components were categorized under the dimension of the bank's commercial activities, while the latter three were categorized under the dimension of the bank's non-commercial activities.

Considering the benefits of disclosing the sustainability report, such as increasing the bank's reputation and brand, increasing the long-term trust of stakeholders, improving the well-being and loyalty of employees, protecting natural resources, etc., banks tend to disclose both their non-financial information and financial information. Banks must provide detailed information about their performance in sustainability and society, including environmental impacts. This information can provide reassurance to investors, customers, regulatory bodies, and society, helping banks maintain their performance. Given the crucial and harmonizing role of banks in the economy, a shift towards sustainability by banks could pave the way for societal progress towards sustainable development.

The findings of this study are compatible with the study conducted by ElAlfy and Weber (2019), as both have investigated sustainability reporting based on commercial and non-commercial activities of banks and presented their model considering all aspects of sustainability. The positive point of the research, which distinguishes it from other studies, is the direct connection of the indicators with banks' activities, making them more understandable.

Developing sustainability reporting indicators tailored to the banking industry's specific activities is crucial, given the sector's role in funding and influencing economic activities. Crafting activity-based sustainability indicators in banking goes beyond regulatory compliance; it involves actively contributing to sustainable development. These indicators enable banks to measure and manage their indirect impacts, promote transparency, and guide the economy toward more sustainable practices. As banks align their strategies and portfolios with sustainability objectives, they help shift global capital toward socially and environmentally responsible outcomes.

Banks can better align their sustainability efforts with their business strategies by focusing on both commercial and non-commercial activities. This approach helps them understand how core operations drive sustainability while non-core activities bolster reputation and stakeholder's trust. Tailored sustainability reporting indicators provide transparent insights into the effects of financial activities on sustainable development, helping stakeholders—including customers, investors, and regulators—understand the bank's role in addressing climate risks and social responsibility. Custom indicators allow stakeholders to assess banks' contributions to sustainability goals, such as the United Nations Sustainable Development Goals (SDGs), and offer detailed information on their backing of sectors including renewable energy, affordable housing, and sustainable agriculture.

Financial institutions that successfully incorporate and disclose sustainability metrics related to their operations can set themselves apart from their rivals. In a sector that is placing greater emphasis on sustainability, this distinctive feature can provide significant competitive benefits, particularly as customers and collaborators are increasingly looking for banks that are dedicated to sustainable growth.

The distinguishing feature of the present study is the comprehensive examination of the dimensions of sustainability (economic, environmental, social, and governance) based on the types of activities of banks. Saxena et al. (2021) indicated that the sustainability issues attended to by banks mainly include environmental and social considerations, while still many do not consider the governance aspect. Islam (2020) investigated the environmental aspect of sustainability reporting in Bangladeshi banks. Ellili and Nobanee (2017) only mentioned the environmental dimension in terms of two levels of disclosures related to energy and natural resources of the environment. Some studies also only discussed the components of bank sustainability without framing them in the form of dimensions, including Sugianto and Harapan (2017), who mentioned nine components including strategy and vision, characteristics of the board of directors, products and services, zakat and charity, attention to public interests, debtors and society, Shariah supervisory board, environment, and, finally, current and future guidelines addressing the needs of Muslims. Nusratabadi et al. (2020) indicated the main components of a bank's sustainability, including suggested value, core competencies, financial aspects, business processes, target customers, resources, technology, customer connectors, and partner network.

6. Practical Implications

The findings of this research identify the factors influencing the movement toward sustainability reporting. Therefore, the results can be utilized by institutions such as banks, government agencies, audit organizations, the Tehran Stock Exchange, the Iranian Certified Public Accountants Society, and other entities related to reporting and sustainability. The first point related to sustainable development is informing the public and society about its numerous benefits. In this regard, it is recommended that the government and relevant institutions disseminate this information through social media, especially national media. As the culture of sustainability spreads, various industries will align with this culture and strive to publish sustainability reports voluntarily. The general recommendation based on the findings of this research is that these institutions should collaborate to identify the main institution responsible for sustainability. Subsequently, the conceptual framework, standards, and sustainability principles should be officially compiled and adapted to the country. Furthermore, the institution and the authority accountable for evaluating sustainability reports should be identified.

1. The Central Bank of IRI can employ the results obtained from this research. This institution should formulate appropriate requirements for the country's banking system to initiate and disclose activities related to sustainable development.
2. Based on the results obtained, the current laws and regulations can change to emphasize the importance of sustainability reporting, and the basic requirements for submitting sustainability reports by banks can be implemented.
3. It is suggested that legislators and experts in Islamic banking system are encouraged to familiarize themselves with international laws and standards regarding sustainable Islamic reporting to compile and present these standards within the country.
4. The Securities and Exchange Organization, as an institution supervising the financial markets, can evaluate the disclosure of various aspects of sustainability for banks and incorporate these evaluations into the calculation of the disclosure quality index for member companies (which this organization determines for stock member companies). Ultimately, this will improve stakeholders' responsiveness and help them make better decisions.
5. It is suggested that the Iranian Association of Certified Public Accountants prepares its partners and managers for the assurance and audit of sustainability reporting by holding training courses.

The lack of sufficient scientific support and localized knowledge about sustainability reporting in the banking industry, as well as the lack of access to an appropriate number of experts in the banking industry to conduct interviews, specifically financial managers in banks, are among the limitations of this study. Considering the existing limitations, future researchers are advised to undertake the following:

1. Studies can be done to conceptualize the issue of sustainability reporting in the banking industry from a theoretical point of view and consider the methods of implementing sustainability reporting model from an operational point of view.
2. Future research can assess the extent to which banks disclose their sustainability practices using the framework's components and analyze the interrelationships among them.
3. Future researchers should design the conceptual framework of sustainability reporting for other industries to identify the primary audiences of sustainability reporting, their information requirements, qualitative features, goals, elements, and components of sustainability reporting.
4. Future researchers can attempt to verify the feasibility and implementation of these indicators in Iran by considering the standards of the Global Reporting Initiative and sustainability reporting.

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