

Impact of green financial funding on improving the financial efficiency of a sample of companies listed on the Iraq stock exchange

Russell Shamkhi Mohan^{1*}, Asaad Munshid Muhammad²

¹Department of Financial and Banking Sciences, College of Administration and Economics, University of Babylon, Iraq; ihu82928@gmail.com; (R.S.M.)Bus.asaad.munshid@uobabylon.edu.iq (A.M.M) .

Abstract: The aim of this research is to identify the impact of green financing on financial efficiency by highlighting the importance of financing green activities in supporting the financial efficiency of banks. In this research, the authors adopted the descriptive analytical method and the statistical method, where (75) questionnaires were distributed to a research sample consisting of three banks: Al-Ahli Bank of Iraq, Middle East Bank, and North Bank. The questionnaires were transcribed and analyzed using Microsoft Excel. The research concluded that green financing contributes to financing sustainable activities and protecting the environment. The research also found that the interest in green financing enhances the efficiency of bank management in facing risks, while green financing has a weak impact on the performance and financial efficiency of banks. The research recommends that banks focus on sustainability and renewable energy sectors, increase investors' and customers' awareness of green activities, and emphasize the importance of green financing in achieving sustainable development.

Keywords: *Financing, Financial efficiency, Green financing.*

1. Introduction

The business environment has witnessed rapid and successive changes in the recent period, most notably industrial and technological advancements and excessive consumption of natural resources. These changes have led to environmental deterioration due to the massive consumption of water and energy, as well as the generation of solid waste. These issues have become tangible realities threatening present and future generations. Financial efficiency is one of the fundamental functions of companies and banks, allowing for identifying their financial and operational positions. Companies and banks cannot engage in any activity without financial resources, as they are different economic activities that involve obtaining and effectively managing funds to achieve their goals. The importance of the current research is evident in:

- Providing useful insights for Iraqi banks to understand the impact of green practices on financing compared to expected financial efficiency.
- Helping in understanding the nature of green loans and the necessary measures that banks should take to benefit from opportunities and overcome challenges.
- Alerting investors to future problems in the event of increased carbon emissions and how to avoid them through green financing.

The current research problem arises from answering the following questions: 1) Do banks significantly contribute to supporting green projects? and 2) Does green financing achieve a higher level of financial efficiency for banks?

In this context, the current study aims to determine the impact of green financing on improving the financial efficiency of banks, which leads to two other objectives, namely to assess the extent of the impact of green financing on enhancing the performance of banks and to assist decision-makers in

evaluating the potential success of bank managers through green financing in achieving the desired objectives and enhancing the financial efficiency of the bank.

2. Materials and Methods

Green financing requires modern strategies and integrated programs, and it contributes to enhancing the financial stability of countries by integrating sustainable development into decision-making processes directing financing towards green projects within the framework of investment aimed at achieving sustainable development goals. Investing in green projects is one of the most important areas where green financing is directed to serve environmental and social dimensions and achieve a balance between the stakeholders of banks.

2.1. The Research Hypotheses

1. The first main hypothesis: Is there a relationship between green financing and the financial efficiency of banks at a significant level of (0.05)?
2. The second main hypothesis: Is there a correlation between green financing and the financial efficiency of banks at a significance level of (0.05)?

2.2. Research Population and Sample

Banks listed on the Iraq Stock Exchange consist of three Iraqi banks (Al-Ahli Bank of Iraq, Middle East Bank, and North Bank), with a sample size of 75 employees and workers in these banks.

2.3. Green Financing and Financial Efficiency

2.3.1. The Concept of Green Financing

Green financing refers to both public and private investments that enhance environmental sustainability, where "green" symbolizes nature, life, vision, and growth. Therefore, it aims to promote economic growth and sustainable economic development for various investments in a healthy lifestyle manner (Mohd & Kaushal, 2018).

2.3.2. The Importance of Green Financing

The importance of green financing lies in the following (Zainab, 2022):

- 1- Green financing provides the necessary funding for investment in freshwater agriculture, fisheries, forestry, and protected areas, resulting in improved quality of farming and increased revenues from major crops over time.
- 2- Green financing works to enhance efficiency in the agriculture and industry sectors, reducing pressure on groundwater and surface water in both the short and long term.
- 3- Green financing contributes to reducing poverty rates by optimizing natural resources and ecological systems ensuring sustainable development by directly delivering benefits from natural capital to the poor.
- 4- It aims to provide and increase new jobs, especially in the agriculture, plants, energy, and transportation sectors.

2.3.3. Goals of Green Financing

Considering green financing as one of the prominent mechanisms and efforts of international bodies to transition to a green economy, it aims to identify a set of goals as follows (Miedviedkova & Borysenko, Varnalii, Cheberyako, 2021):

A. Social Level

- Achieving welfare and social justice, and improving lifestyle and social development.
- Reducing inequality in environmental care.

- Fair access to resources and meeting the needs of various members of society.

B. Economic Level

- Enhancing economic growth rate.
- Increasing income levels and providing employment opportunities.
- Attracting investment and establishing new economic activities.

C. Environmental Level

- Minimizing environmental risks.
- Improving resource and energy efficiency.
- Enhancing the environmental responsibilities of economic entities and reducing the burden on the ecosystem.

2.4. Green Financing Areas

Green financing targets the following areas (Abdul Qadir, 2018):

1. Renewable energy: solar and wind energy, biofuels, and this sector requires a shift from heavily investing in carbon-intensive energy sources to investing in clean energy.

2. Green buildings: transitioning to a green economy requires a focus on green architecture, using environmentally friendly materials, conserving water due to limited water resources, reducing electricity consumption despite increased demand, and ultimately reducing emissions that contribute to climate change. This long-term impact will encourage automatic transition to achieve sustainability and economic growth.

3. Sustainable transportation: sustainable transportation provides basic needs for individuals and communities in a safe and secure manner without causing harm to health, the environment, and future generations, and is the least polluting for air, water, and soil and emits less noise. It reduces greenhouse gas emissions, thus not negatively impacting the climate or contributing to global warming.

4. Water management: water is a crucial element of sustainable development, and water management is linked to irrigation, providing drinking water, health, and sanitation facilities. Estimates indicate that about half to two-thirds of water is wasted in surface irrigation. Green economy initiatives help collect rainwater, reuse it, desalinate seawater, generate energy from water, and reuse wastewater, all of which are aimed at preserving water resources.

5. Waste Management: It is the process of recycling waste to produce other products of lesser quality than the original product. This includes recycling paper, plastic, metal waste, and glass and recycling organic waste through aerobic and anaerobic fermentation, vermicomposting, and treating hazardous waste. Green waste management works to create jobs and provide unique investment opportunities in recycling, organic fertilizer production, and energy generation.

6. Sustainable Agriculture: There is a need to focus on the concept of green economy to green the agricultural sector, support rural livelihoods, integrate poverty reduction policies into development strategies, adapt new agricultural technologies to mitigate the impacts of climate change, and enhance development partnerships to address contemporary environmental challenges such as desertification, deforestation, unsustainable urban sprawl, soil erosion, and loss of biodiversity. This requires a common understanding of green growth and the development of a theoretical model, as well as the development of a set of indicators covering economic, environmental, and social welfare aspects.

2.5. The Concept of Financial Efficiency

Financial efficiency is a measure of the efficiency of a company's use of assets to generate revenue. Operational ratios such as profitability are used to measure efficiency, which means the ability to achieve profit from all company activities, and it shows the management's efficiency in achieving profit using all available resources in the market (Harward & Upton, 1991).

The concept of financial efficiency can be traced back to the Italian economist Vilfredo Pareto, who developed this concept to also refer to the efficient allocation of resources, while the inefficient allocation of resources represents inefficiency (Mohamed, 2006).

2.6. Dimensions of Financial Efficiency

These are as follows: (Wahba, 2007: 90)

First dimension: The efficiency in using available resources by controlling costs known as cost effectiveness.

Second dimension: The efficiency in allocating costs by seeking the best measure, known as efficiency of measures.

Third dimension: The efficiency in diversifying financial products through diversifying activities, known as scope efficiency.

2.7. Characteristics of Financial Efficiency

There are a set of characteristics that distinguish financial efficiency, varying with each economic company, and among these characteristics are (Yasmine, 2018):

1. Proper use of available resources, meaning financial efficiency, aims to benefit from all financial resources to achieve business objectives.
2. Financial efficiency improves productivity, aiming to achieve overall quality in the results obtained from the company's operational processes.
3. Focus on specific issues, contributing to avoiding mixing activities and reducing wasted time.
4. The ability to evaluate it, as financial efficiency accepts the evaluation of its success within the environment in which it exists in order to avoid possible errors and work on improving performance based on specific strategies.

2.8. Objectives of Financial Efficiency

Financial efficiency is measured for several purposes, including (Richard, 2001):

1. Incentive objective: Measuring financial efficiency motivates and encourages managers to achieve their goals by creating financial efficiency through compensation and penalty systems.
2. Informative objective: Measuring financial efficiency helps both managers and executives to choose their strategies and prioritize based on financial efficiency standards, as well as providing information. Identifying financial efficiency measurement standards is a great way to understand strategic choices, allowing for the reduction of conflicting objectives, especially in banks and their subsidiaries, due to geographical distance and the nature and specialization of each agency, in addition to strategic transformations. Measuring financial efficiency can create a kind of communication between bank employees and managers, informing all levels of the results achieved in the bank.
3. Directing objective: Good control requires measurement, and because measuring financial efficiency provides managers with information leading to sound decision-making, the measurement process allows for linking financial efficiency to control, ensuring the monitoring of strategic decision-making. Through the control process, we identify deviations between what is achieved and what is estimated. From the analysis, the authors understand the reasons for these deviations and, therefore, make the right decisions.

2.9. Types of Financial Efficiency

1. Relative Financial Efficiency: Relative financial efficiency is defined for decision-making units as the weighted sum of the outputs of a unit divided by the weighted sum of the inputs of the unit itself (Hassan, 2018). This means that it is a measure of efficiency, whether technical or specialized, for two or more institutions within the same sector, assuming the existence of professional specialization units for the companies under study. This means that these companies operate in the same sector and also in the

same specialization, and the process is carried out by comparing the same ratio in the use of production stages (Rania, 2020).

2. Structural Financial Efficiency: This type of efficiency aims to measure the industry's continued development and improvement based on its best companies (Zhu, 2020). The structural financial efficiency of an industry is measured by calculating the weighted average or the weighted efficiency rate of the technical efficiency of the companies that make up the industry, with the weighting by the quantity factor for each company within the industry, which represents the company's output to the industry's output. Therefore, the structural financial efficiency of the industry is the product of the technical efficiency of the companies multiplied by their quantity factors for the number of companies (Farrell, 1957).

Meanwhile, Forsund and Hjalmarsson argue that calculating the structural financial efficiency of the industry is done by taking the arithmetic average of inputs and outputs instead of the weighted average, which may be technically efficient but not economically efficient based on the assumption of non-homogeneous production for companies within the industry (Forsund & Hjalmarsson, 1979).

3. Results and Discussion

3.1. Statistical Analysis

The content of the topic aims to describe and diagnose research variables based on statistical procedures using Microsoft Excel to determine percentages, standard deviations, means, and coefficients of variation for each variable and dimension. The topic is divided as follows:

3.1.1. Green Financing

The results of the analysis of the green financing variable are listed in Table 1.

Table 1.

Analysis of the green financing variable.

Symbol	Alternative Response										Mean	Standard deviation	Coefficient of variation
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree				
	No.	%	No.	%	No.	%	No.	%	No.	%			
X1	49	33%	13	9%	10	7%	3	2%	0	0	4.44	0.87	0.2
X2	46	31%	12	8%	12	8%	5	3%	0	0	4.32	0.97	0.22
X3	45	30%	11	7%	9	6%	5	3%	5	3%	4.15	1.25	0.3
X4	12	8%	29	19%	27	18%	3	2%	4	3%	3.56	0.98	0.28
X5	24	16	5	3%	19	13%	17	11%	10	7%	3.21	1.44	0.45
X6	28	19%	27	18%	20	13%	0	0	0	0	4.11	0.79	0.19
X7	12	8%	9	6%	23	15%	18	12%	13	9%	2.85	1.29	0.45
X8	31	21%	15	10%	18	12%	4	3%	7	5%	3.79	1.29	0.34
X9	21	14%	15	10%	37	25%	2	1%	0	0	3.73	0.9	0.24
X10	26	17%	33	22%	13	9%	1	1%	2	1%	4.07	0.9	0.22
X11	27	18%	32	21%	11	7%	2	1%	3	2%	4.04	0.99	0.24
X12	21	14%	28	19%	5	3%	5	3%	16	11%	3.44	1.49	0.43
X13	21	14%	21	14%	13	9%	8	5%	12	8%	3.41	1.41	0.41
Average											3.78	1.12	0.31

From the table above, we notice that paragraph (X1) ("Do you think green finance is an important source for funding sustainable activities in banks") obtained the highest average score, reaching (4.44), with a standard deviation of (0.87) and a difference coefficient of (0.2). Green finance, which banks provide, is one of the main sources for achieving sustainable development in all sectors and industries. Paragraph (X2) ("Do you think banks' investment in green finance projects contributes to environmental protection") obtained the second highest average score, reaching (4.32), with a standard deviation of (0.97) and a difference coefficient of (0.22). The green finance provided by banks contributes to environmental protection through funding the production of environmentally friendly products and services or the use of equipment. Paragraph (X3) ("Do you think green finance increases the attractiveness of banks to investors interested in sustainability") obtained the third highest average score, reaching (4.15), with a standard deviation of (1.25) and a difference coefficient of (0.3). Banks that provide green finance are of interest to investors in sustainable development and environmental protection. Paragraph (X6) ("Do you think green finance strategy helps achieve sustainable development in the long term") obtained the fourth highest average score, reaching (4.11), with a standard deviation of (0.90) and a difference coefficient of (0.19). Banks' adoption of a green finance strategy helps achieve sustainable development by providing green loans to various sectors to reduce environmental impact. As for paragraph (X7) ("Do you think governments should encourage banks to increase their investments in green finance"), it obtained the lowest average score, reaching (2.85), with a standard deviation of (1.29) and a difference coefficient of (0.45). The green financing has been shown to have no role in improving the performance of banks or increasing bank profits. Paragraph (X13) ("Do you believe that green financing investments affect the financial profit level of banks?") obtained the third lowest average score, reaching (3.41) with a standard deviation of (1.41) and a coefficient of variation (0.41). Green financing investments do not significantly affect the level of bank profits, as banks invest in all sectors and the profit level depends on the quantity and quality of the investment. Paragraph (X12) ("Do you believe that green financing investments affect the capital structure of the bank?") obtained the fourth lowest average score, reaching (3.44) with a standard deviation of (1.49) and a coefficient of variation (0.43). It appears that investment in green financing does not significantly affect the capital structure or the budget of banks, but rather affects bank profits.

I. Financial Efficiency

Table 2 lists the obtained results from the analysis of the financial efficiency variable.

Table 2.
Financial Efficiency Variable Analysis.

Symbol	Alternative Response										Mean	Standard deviation	Coefficient of variation
	Strongly agree		Agree		Neutral		Disagree		Strongly disagree				
	No.	%	No.	%	No.	%	No.	%	No.	%			
X14	42	28%	8	5%	3	2%	14	9%	8	5%	3.83	1.51	0.39
X15	42	28%	9	6%	6	4%	15	10%	3	2%	3.96	1.34	0.34
X16	45	30%	11	7%	9	6%	5	3%	5	3%	4.15	1.25	0.3
X17	12	8%	28	19%	26	17%	4	3%	5	3%	3.51	1.04	0.3
X18	25	17%	7	5%	19	13%	16	11%	8	5%	3.33	1.4	0.42
X19	28	19%	27	18%	20	13%	0	0	0	0	4.11	0.79	0.19
X20	42	28%	14	9%	12	8%	2	1%	5	3%	4.15	1.19	0.29
X21	18	12%	15	10%	18	12%	12	8%	12	8%	3.2	1.39	0.43
X22	31	21%	15	10%	27	18%	2	1%	0	0	4	0.94	0.23
X23	181	12%	14	9%	18	12%	11	7%	14	9%	3.15	1.42	0.45
X24	15	10%	7	5%	20	13%	14	9%	19	13%	2.8	1.43	0.51
X25	25	17%	31	21%	5	3%	5	3%	9	6%	3.77	1.3	0.35
X26	23	15%	24	16%	13	9%	8	5%	7	5%	3.64	1.27	0.35
X27	21	14%	15	10%	37	25%	2	1%	0	0	3.73	0.9	0.24
Average											3.67	1.23	0.34

From the above table, we notice that paragraphs (X16 and X20) (Do you think that financial efficiency increases banks' ability to provide financial services at reasonable rates) and (I believe that calculating and analyzing financial efficiency indicators helps in making sound investment decisions) respectively obtained the highest mean, reaching (4.15) arithmetic mean, (1.25) standard deviation, and (0.3) difference coefficient, and (4.15) arithmetic mean, (1.19) standard deviation, and (0.29) difference coefficient, respectively. Analyzing financial efficiency indicators leads to evaluating the financial position in banks, helping them to make sound decisions and also providing distinctive services at reasonable rates. Paragraph (X19) (Do you think that financial efficiency contributes to improving risk management procedures within the bank) obtained the second highest arithmetic mean, reaching (4.11) and standard deviation (0.79) and difference coefficient (0.19) as financial efficiency leads to improving risk management procedures by analyzing financial efficiency, which indicates the degree of risk the bank is exposed to, helping in managing those risks. Paragraph (X22) (Do you think that financial efficiency contributes to increasing banks' ability to expand and grow in the market) obtained the third highest arithmetic mean, reaching (4) and standard deviation (0.94) and difference coefficient (0.23), indicating that financial efficiency of banks plays a major role in expanding in the market by providing distinctive services, helping to attract customers to financially efficient banks. Paragraph (X15) (Do you think that achieving high financial efficiency contributes to attracting more customers and deposits) obtained the fourth highest arithmetic mean, reaching (3.96) and standard deviation (1.34) and difference coefficient (0.34). Good financial efficiency works to attract more customers from customers to banks and attract deposits to banks, which affects the bank's position in the market. As for paragraph (X24) ("Do you think that the demand for green finance increases the efficiency of bank risk management?"), it obtained the lowest average score, reaching (2.8), with a standard deviation of (1.43) and a difference coefficient of (0.51). The demand for green finance, or lack thereof, weakens the efficiency of bank risk management. Paragraph (X23) ("Do you believe that financial efficiency enhances banks' ability to absorb changes and innovations in the financial sector?") obtained the second lowest average score, reaching (3.15), with a standard deviation of (1.42) and a difference coefficient of (0.45). Financial efficiency does not play a role in innovations and changes that occur in banks; rather, innovations and changes depend on various factors, including the size of the bank, internal and external conditions of the banks, and financial crises. Paragraph (X21) ("Do you think that financial efficiency plays an important role in protecting banks from economic fluctuations and crises?") obtained the third lowest average score, reaching (3.2), with a standard deviation of (1.39) and a difference coefficient of (0.43). Financial efficiency does not have a role in protecting banks from economic fluctuations and crises, as economic fluctuations and financial crises directly or indirectly affect the performance of banks. Paragraph (X18) ("Do you think that financial efficiency contributes to reducing financing costs and increasing profits for banks?") obtained the fourth lowest average score, reaching (3.33), with a standard deviation of (1.4) and a difference coefficient of (0.42). Financial efficiency significantly impacts financing costs or increasing profits, as banks work to reduce costs by attracting more customers.

3.2. Testing Research Hypotheses

In light of the results obtained from the analysis of the questionnaire axes, the research hypotheses will be tested as follows:

3.2.1. Testing the First Main Hypothesis

First main hypothesis: Is there a relationship between green financing and the financial efficiency of banks at a significance level of (0.05)?

From which the following sub-hypotheses branch out:

H₀: There is no relationship between green financing and the financial efficiency of banks at a significance level of (0.05).

H₁: There is a relationship between green financing and the financial efficiency of banks at a significance level of (0.05).

Table 3.

Analysis of the first hypothesis to show the impact of green financing on the financial efficiency of banks.

Distance	R correlation	Coefficient determination R ²	F value	T value	Significance level Sig.
			Calculated		
The impact of green finance on Bank financial efficiency	0.191	0.037	0.682	14.184	0.42

The above table shows that the correlation coefficient was (0.191), which confirms a weak impact between green financing and financial efficiency. The determination coefficient was (0.037), meaning that the independent variable (green financing) explains 3.7% of the variance in the dependent variable (financial efficiency). The significance level was (0.42), indicating that it is greater than the significance level (0.05).

This means rejecting the alternative hypothesis (H1) based on the existence of an impact relationship between green financing and financial efficiency for banks at a significance level of (0.05), and accepting the validity of the null hypothesis (H0) based on the absence of an impact relationship between green financing and financial efficiency for banks at a significance level of (0.05).

3.2.2. The Second Main Hypothesis Test

Second main hypothesis: Is there a relationship between green financing and the financial efficiency of banks at a significance level of (0.05)?

From which the following sub-hypotheses branch out

H₀: There is no relationship between green financing and the financial efficiency of banks at a significance level of (0.05).

H₁: There is a relationship between green financing and the financial efficiency of banks at a significance level of (0.05).

Table 4.

Analysis of the second hypothesis to show the relationship between green financing and the financial efficiency of banks.

Distance	R correlation	Coefficient determination R ²	F value	T value	Significance level Sig.
			Calculated		
The impact of green finance on Bank financial efficiency	0.031	0.001	0.017	12.697	0.898

Through the above table, it is evident that the correlation coefficient was (0.031), confirming a weak correlation between green financing and financial efficiency. The determination coefficient was (0.001), meaning that the independent variable (green financing) explains 0.1% of the variance in the dependent variable (financial efficiency). The significance level was (0.898), indicating that it is greater than the significance level (0.05).

This means rejecting the alternative hypothesis (H1) based on the existence of a correlation between green financing and financial efficiency for banks at a significance level of (0.05), and accepting the validity of the null hypothesis (H0) based on the absence of a correlation between green financing and financial efficiency for banks at a significance level of (0.05).

The absence of a correlation or impact between green financing also has economic reasons, including that banks in Iraq are still in the early stages of operating in this system because the green

financing system is new and the banks' operations (advances or loans) are largely consumptive, so the initiative for green financing is very limited by the banks.

4. Conclusion and Recommendations

4.1. Conclusion

1. Green financing provided by banks contributes to funding sustainability-focused activities, aiming to achieve sustainable development and environmental protection.
2. Green financing helps achieve sustainable development in the long term by attracting investors interested in sustainability and environmental protection.
3. Governments encourage supporting investments in green financing to achieve sustainability.
4. Providing green financing has a weak impact on banks' performance, resulting in a minor contribution to profit increase and minimal effect on capital.
5. Financial efficiency of banks helps attract more customers and deposits by offering financial services at suitable rates.

4.2. Recommendations

1. Increase awareness and culture of the community, investors, customers, and even banks in green financial activities, and emphasize the importance of green financing for sustainable development projects in Iraq.
2. Iraqi banks should seek to enter global markets to invest in and finance green bonds if they are not available in the Iraqi securities market, and they should benefit from the experiences of advanced banks in green finance.
3. Banks should highlight projects that focus on sustainable infrastructure and financing, as well as activities that provide renewable energy.
4. Urging the central bank to emphasize the importance of preparing regulatory guidelines for Iraqi banks in a manner that requires them to consider sustainable development goals by practising activities according to the best banking practices, with a specific timeline for implementation stages, international standards, and forming a task force composed of officials responsible for green finance and sustainable development in their institutions.
5. Encouraging banks to support sustainable development projects, renewable energy, and environmentally friendly technology.

Acknowledgements:

The authors would like to thank the Department of Financial and Banking Sciences staff at the University of Babylon for their support in distributing the questionnaires.

Copyright:

© 2024 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

References

- [1] Hassan Miftah, The Impact of Market Structure on Banking Efficiency: a Sample Study of Commercial Banks, Case of Algeria, Doctoral Thesis, Faculty of Economic and Commercial Sciences and Management Sciences, University of Mohamed Khider Biskra, Algeria, 2018.
- [2] Rania Nouraldin Osman Mohamed, The Role of Financial Analysis and Planning Methods in Measuring and Evaluating Financial Efficiency and Management in Telecommunication Companies, International Journal for Publishing Scientific Studies, Volume 5, Issue 1, 2020.
- [3] Zeinab Hamdi and Asmaa Selka, Green Financing Projects as a New Trend towards the Green Environment, Journal of Economics for Legal and Economic Studies, Volume 9, 2020.
- [4] Abdelkader Hafay and Rahima Shuhum, Green Islamic Finance and its Role in Sustainable Development (Malaysian Green Islamic Bonds as a Model), Journal of Economic Notebooks, 2018.

- [5] Mourad Hawary and Omar Elhaj Saeed, *Leasing Finance: Concepts and Foundations*, Dar Kounouz Al-Ma'arifah for Printing, Publishing and Distribution, Jordan, 2012.
- [6] Mourad Hawary and Faisal Rashad, *Measuring the Efficiency of Islamic and Traditional Banks in Algeria*, University Center of Ghardaia, Algeria, 2011.
- [7] Wahbah Al-Zuhaili, *Contemporary Banking Transactions*, Dar Al-Fikr for Publishing and Distribution, Damascus, 2007.
- [8] Yasmina Arag, *Evaluating the Efficiency of Algerian Banks Using the Envelope Data Analysis Method: A Case Study of Banks Operating in Algeria*, Master's Thesis, University of Oum El Bouaghi, Algeria, 2018.
- [9] Farrell M. J. (1957), "The Measurement of Productive Efficiency", *Journal of the Royal Statistical Society Series A, General*.
- [10] Richard O & Zerbe Jr, *Economic efficiency in law and economics*, Edward Elgar Publishing, USA, 2001.

Appendix.

Used questionnaire.

Expressions	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1- Do you believe that green financing is an important source for sustainable activities in banks?					
2- Do you believe that banks investing in green financing projects contribute to environmental protection					
3- Does green financing increase the attractiveness of banks to investors interested in sustainability?					
4- Does commitment to green financing contribute to enhancing the reputation and technology of banks among the public?					
5- Can green financing contribute to improving the performance and profitability of banks?					
6- Do you believe that green financing strategies help achieve long-term sustainable development?					
7-Do you believe that governments should encourage banks to increase their investments in green financing?					
8- Do you believe that there is a positive relationship between adopting green financing in banks and increasing profitability?					
9-Can investing in green financing projects improve the profitability level of banks?					
10- Do you believe that green financing enhances the ability of banks to address future environmental and economic challenges?					
11- Do banks suffer from increased expenses as a result of implementing green financing investments?					
12- Do you believe that green financing investments affect the capital structure of banks?					

<p>13- Do you believe that green financing investments affect the financial profitability level of banks?</p> <p>14. I believe that financial efficiency is a crucial factor in the success and sustainability of banks.</p> <p>15. I think that achieving high financial efficiency contributes to attracting more customers and deposits.</p> <p>16. Do you think that financial efficiency increases banks' ability to provide financial services at competitive prices?</p> <p>17. I believe that a higher level of financial efficiency enhances customers' and investors' confidence in the bank.</p> <p>18. Do you think that financial efficiency contributes to reducing financing costs and increasing profits for banks?</p> <p>19. Do you think that financial efficiency contributes to improving risk management procedures within banks?</p> <p>20. Do you believe that calculating and analyzing financial efficiency indicators helps in making sound investment decisions?</p> <p>21. Do you think that financial efficiency plays an important role in protecting banks from economic fluctuations and crises?</p> <p>22. Do you think that financial efficiency contributes to increasing banks' ability to expand and grow in the market?</p> <p>23. Do you believe that financial efficiency enhances banks' ability to adapt to changes and innovations in the financial sector?</p> <p>24. Do you think that the demand for green financing increases the efficiency of banks in managing their risks?</p> <p>25. Do you think that improving the efficiency of capital utilization through green financing can affect banks' ability to expand and grow?</p> <p>26. Do you think that achieving a balance between green financing and financial efficiency can contribute to enhancing the sustainability of banks' operations?</p> <p>27. Do you think that there is a relationship between adopting green financing and improving the efficiency of financial risk management in banks?</p>					
--	--	--	--	--	--