

# The Extent Of Awareness Regarding Green Financing Among Jordanian Commercial Banks From The Perspective Of Investment Department Managers

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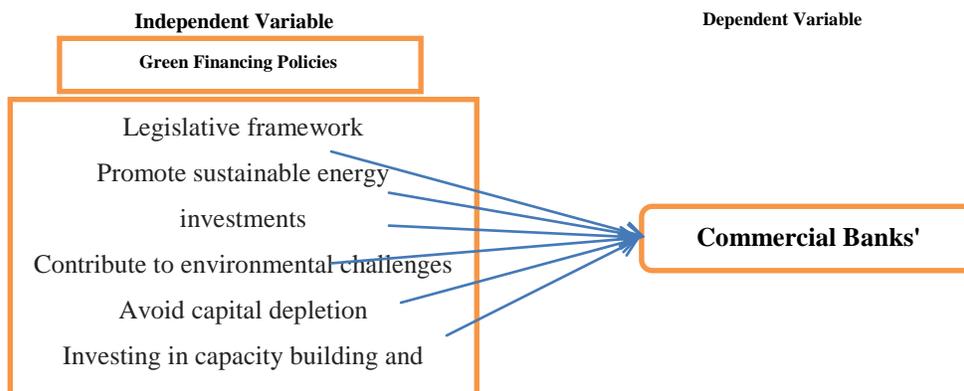
Chronicles	Abstract
	<p>Current study is an attempt to find out the awareness level of commercial banks in Jordan about the concept of green financing and the extent of the commercial banks' use of this type of financing. The current study relied on the quantitative methodology by distributing a questionnaire to (142) managers, leaders and employees in commercial banks in Jordan - (49) commercial bank.</p> <p>Results of the study proved that there is an acceptable level of awareness within the categories studied in banks about the concept of green financing and that there is an actual application for this type of finance within banks in Jordan.also, results indicated that the first and most important supporter of green financing in banks are the government, legislations and laws must be framed and oriented towards supporting foreign investment in environmental projects in addition to back up banks in its approaches to finance green investments.</p>

**Keywords:** Green Financing, Green Bonds, Green Economy, Green Banking, Sustainable, Sustainability, Development, Developing

## 1. INTRODUCTION

The past decade witnessed a significant transition of Arab countries towards a green economy (Baker et al, 2018). From almost zero in adopting green economy systems or a sustainable strategy, more than seven countries have developed such strategies or have included green economy and sustainability components in their plans (Li et al, 2015). Green strategies have been translated into a set of regulatory measures and incentives introduced in these countries to facilitate the transformation. This gave a strong signal to the private sector to increase investments in the green economy sectors, especially renewable energy, as according to Olomola and Adesugba (2015) which is evident in Morocco, Jordan and the UAE, where billions have been invested in solar and wind farms, Morocco is implementing a plan to generate more than half of its electricity from renewable resources by 2030. Mundaca and Richter (2015) argued that this shift has led to increased awareness and recognition of the real economic, social and environmental gains resultina from the transition to a green

and sustainable economy. This is reflected in the increase in employment opportunities created by green investments, efficient use of natural resources, competitiveness and access to markets. While Falcone and Sica (2019) saw that the economy can be diversified and revitalized by creating new activities and opportunities such as: renewable energy, new renewable water sources through wastewater treatment and reuse of treated and desalinated water, sustainable and organic agriculture, green industrial products, sustainable societies, green buildings, a green public transportation system, Ecotourism, along with integrated solid waste management systems that can generate energy, produce compost and reuse materials. Based on above argument, current study seeks to examine the extent of awareness regarding green financing among commercial banks in Jordan from the perspective of managers, leaders and employees within these banks. Following figure (1) explained the relationship between chosen variables and how hypotheses were developed:



**Figure (1): Study Model** (Falcone and Sica, 2019)

## 2. Main Hypothesis:

Commercial Banks in Jordan enjoy high level of green financing awareness through its banking operations Commercial banks in Jordan adopts a sound legislative framework that supports green financing Commercial banks in Jordan promote sustainable energy investments Commercial banks in Jordan contribute to environmental challenges Commercial banks in Jordan avoid capital depletion Commercial banks in Jordan invest in capacity building and training Commercial banks in Jordan give attention to rural development and poverty alleviation

## 3. Hypotheses Development

Government legislation Influences Banks' Adoption of green Marketing Falcone and Sica (2019) noted that while most governments fail to fulfill their environmental obligations and abandon their primary role in protecting their citizens from pollution and climate change, some of the most influential players in the global economy are leading the shift towards a clean, green and emissions-free world. Financial giants in Europe, China, Japan, the United States, Australia and elsewhere can see the risks and rewards looming, and they are not waiting for policymakers to indicate what to do (Park, 2018). The role of the government is important when looking at the idea from a different perspective. Organizations within developing countries can't adopt their own path in working, as well as they can't afford the financial consequences of playing alone in the field. From that point, it can be hypothesized that the legislative framework in the country plays a role in defining organizations' awareness regarding green financing (Ng, 2018).

## 4. Promote sustainable energy investments

Investment is one of the most important elements of green financing and is considered an important and effective vital component for achieving the process of economic and social development in countries that suffer economically Flaherty et al (2017). Investment is mainly related to the economy and is of great importance to countries because it contributes to increasing production, strengthening the economy, providing job opportunities and improving the standard of living and increases the local national product. In another meaning, unless the investment is oriented towards ecological and environmental causes it won't be considered as green financing; it will appear as traditional financing (Ng, 2018).

## 5. Contribute to environmental challenges

According to Ascensão et al (2018) green financing emerged in response to multiple crises and aims to achieve economic development through environmentally friendly projects and the use of new technologies in the field of renewable and clean energies, and calls for greening the existing sectors and changing unsustainable consumption patterns, which generates new job opportunities working to reduce poverty, as well as reduce Energy intensity, resource consumption and production. In this context, countries seek to develop a vision to launch a green economy and support green financing initiatives in financial institutions in order to ensure a smooth transition towards them, taking into account many basic axes such as the energy crisis and high prices of fossil fuels whose stocks

have become threatened with depletion, the economic crisis and investment Green as a means of economic recovery, and policies to mitigate greenhouse gas emissions, which led to the creation of a strong conviction for some countries of the need to develop a new model for sustainable development based on changing consumer behaviors and marketing models which included the adoption of green financing practices.

## 6. Avoid capital depletion

Green investments are often mixed with socially responsible investment, which are mainly investment activities focused on companies or projects committed to conserving natural resources, producing and exploring alternative energy sources, implementing fresh air and water projects, and other environmentally conscious business practices. In fact, finding alternative sources of energy is one of the things that can achieve many goals, such as rationalizing the consumption of fossil fuel energy in addition to rationalizing capital consumption. According to Kulsum and Huda (2018) When comparing the expenses of consuming an environmentally friendly housing unit and a traditional one, we find that the latter depends on waste, expenses and costs that are higher than those based on energy saving practices, which would deplete the capital, as well as to banks and financial institutions, the financing of projects Green is a successful way to help reduce the physical burden in addition to supporting the pillars of sustainable development.

## 7. Investing in capacity building and training

The attempts of countries to adopt green economy practices and green financing were a fundamental motivation for those countries to begin focusing on the existing competencies they have, in addition to many investments in the field of training and upgrading skills in order to create a generation fully aware of the principles of green financing, in addition to this, the involvement of Young generations in the fields of environmentally friendly projects that contribute to enhancing their expertise and competencies in the field of green investment and deepening the level of awareness of the concept of greening not at the local level but at the global level, from this point – as according to Owen et al (2018) – there appeared many governments that have invested in the fields of training, rehabilitation, innovation and scientific research, in addition to being guided and benefiting from Arab, regional and international experiences and pioneering initiatives in adopting the green economy system in the framework of sustainable development. Many governments have also worked to activate the role of the private sector in terms of effective community partnership in the governance of the technical and vocational education and training system to enhance the orientation towards a green economy.

## 8. Attention to rural development and poverty alleviation

As indicated previously, green financing is one of the practices of a green economy through which a state of sustainable development of resources and environment is achieved that reduces the level of unemployment and

poverty and this is done through two broad areas, the first of which is to help new generations to understand the principle of development Sustainable development and their incorporation into environmentally friendly projects to ensure the sustenance of their day. The second is that access to sustainable development entails preserving the environment and green areas for future generations to exploit in agriculture, which reduces the level of poverty as a result of the development of one of the main sectors in the state and its Agriculture sector. Accordingly, it can be said that building a green global economy and adopting the foundations of green financing in the context of sustainable development in order to eradicate poverty is a collective endeavor. It concerns the international community, the public and private sectors, civil society, local governments and other actors (Dawson et al, 2016)

## 9. Literature Review

### Green Economy

The United Nations program defines the concept of green economy as the economy that results in improvement in human welfare and social equality, while at the same time working to reduce environmental risks and conserve ecological resources. As for D'Amato et al (2017), green economy is the situation in which efforts are mobilized to reduce carbon emissions and high levels of resource efficiency through rationalization, in addition to adopting renewable energy foundations through public and private investments. Loiseau et al (2016) indicates that the concept of green economy is not considered a synonym for sustainable development in any way, but rather it is one of the methods through which sustainable development and economic reform are carried out.

### Banks

When talking about green financing, there appears the idea of green banks which according to Volz et al (2015) refer to financial institutions that use public financing to utilize it in clean energy financing. They are public or semi-public financing institutions that provide low-cost, long-term financial support for low-carbon clean energy projects by benefiting from public financing and by using different financial mechanisms to attract private investment, so that every dollar of public financing supports several dollars of private investment. Dörry and Schulz (2016) argued that with the difference from one country to another, the green banks can adopt a variety of structures, take advantage of the various public savings vessels, and create a variety of financial products. Banks may use financial instruments such as long-term loans and low-interest loans, revolving loan funds, insurance products (such as loan guarantees or loan loss reserves), low-cost public investments, or they may design new financial products.

**Cui and Huang (2018) stated that ultimately, all green banks have several common characteristics among them:**

- Stimulating demand by covering 100% of the initial costs through a mix of public and private financing. Benefiting from public funds by attracting more private investments towards clean energy markets and energy efficiency.

### Green Financing

As for green financing, D'Amato et al (2017) indicates, it is one of the tools of the green economy, through which financial institutions and banks support and finance projects related to the environment and energy and rationalize consumption or shift towards renewable energy. From another perspective, green financing according to Ng (2018) is the investments and loans that finance projects aimed at protecting the environment and conserving natural resources. In the context of growing environmental concerns, the focus is on green financing. According to the International Finance Corporation, loans earmarked for project financing in sectors focusing on green activities accounted for 15% of the total value of syndicated loans, with a value of \$ 1100 billion in 2014. Lalou (2015) stated that green financing is new financial pattern for integrating environmental protection with economic profits, with a focus on "green" and "financing", which are two controversial issues. Consequently, green financing is financing aimed at achieving economic growth by relying on reducing pollution and greenhouse gas emissions, in addition to reducing Waste volume and access to alternative energy sources are more environmentally friendly. Porfir'ev (2016) reported that green financing has echoed in Qatar, where a number of leading commercial banks have launched a housing loan program called "Green Mortgage", which aims to reward new real estate owners friendly to the environment at concessional rates of interest while extending the repayment period. In addition, Qatar Development Bank was the first to finance small and medium-sized companies operating in the agriculture, livestock and fisheries sector, with the aim of enabling local institutions and achieving self-sufficiency in the sector. Green Financing Requires Green

- Recycling public capital to expand green investment and not prejudice taxpayers' money.
- Reducing market deficiencies.
- Expanding clean energy solutions as quickly as possible, and maximizing clean electricity and efficiency gains earned for every dollar a country spends.

**Among the benefits of green financing as according to Spratt (2015) is:**

- Investments in equipment, systems or processes that lead to a significant improvement in energy performance in commercial operations
- Investments that encourage energy use from renewable sources
- Investments related to privately owned commercial buildings or related investments.

Acheampong (2016) argued that Green banks seek to achieve several goals, including increasing the use of clean energy, increasing the efficiency of using public funds, and directing mature private financial markets towards investing in clean energy. These banks seek to promote cheaper, cleaner and more reliable energy. However, Ilić et al (2018) presented the idea of those green banks may take different forms, there are generally three structures to consider: a) a green bank can be self-contained as a semi-independent entity, and this structure allows for the highest degree of flexibility and independence., b) for the green bank to be

located within an existing government body, and c) the Green Bank can be merged with another large bank, as it can be established as a separate subsidiary. In another word, Lam and Law (2016) stated that Green Bank can obtain initial financing from several public sources. In both Connecticut and New York in the United States of America, existing state funds (systems usage fees) have been re-invested, and regional greenhouse gas initiative (RGGI) funds have also been used to provide seed capital to the green bank. Alternatively - as in Hawaii - the state can issue bonds to private investors; while Meltzer (2016) saw that Green banks can also obtain money from capital returns and the proceeds of commercial auctions and from private institutions, based on the state system and the legal system applied when establishing the green bank. It is rarely advised to use the new appropriations for the state's general budget, unless the feasibility of this in a particular country becomes clear. According to DuPont et al (2015), generally there are three phases for establishing a new state green bank. In the first stage, a stakeholder coalition (such as clean energy organizations, clean technology trade unions, environmental groups, and state agencies) forms the basis for supporting the green bank. This support is extremely important to meet legal requirements or achieve the organizational change required to establish a green bank in a manner consistent with the law. In the second phase, the Green Bank Foundation is established, including staff recruitment, capacity building, goal setting, market assessment and product development. In the final stage, the Green Bank actually begins obtaining customers and lending in partnerships with private investors, employing recycling funds to recapitalize the bank.

### Green Financing Practices

In order for banks and banking institutions to be more inclined towards green growth, many global official financial bodies have provided solutions for a bank or financial institution to be considered as (green) by providing services like banking services for individuals such as financing green housing and providing facilities for green mortgages in order to motivate individuals to adopt or buy renewable energy sources such as solar systems or those housing that enjoy energy and energy efficiency (Miroshnychenko et al, 2017). Also, banks can provide financing to convert a facility traditional residential to green house (SM Mahfuzur and Barua, 2016). Green banks also provide soft financing for green car loans that control pollution and green cards associated with environmental sustainability activities and provide credit discounts on them (Olomola and Adesugba, 2015). On the corporate level, he emphasized Meltzer (2016) that the banks that adopt green financing provide services to organizations and companies such as green bonds, which are fixed income bonds that finance investments with environmental or external environmental benefits and are an integral part of green financing and aim to help absorb External environmental factors and controlling risk perceptions in order to increase environmentally friendly investments (Wang et al, 2015). There is another type of green banking services that are provided to organizations and companies, which is green securitization bonds, that is, financial investment in a group of distinguished and emerging environmental securitization technologies such as purpose bonds and

wildlife and aquatic securitization bonds. As for Wang et al (2015), mentioned other services that include green investment capital, private equity, green indices, and credit and carbon commodities.

### Reality of Green Financing among Commercial Banks in Jordan

Jordanian and international banks are moving towards sustainable development and green financing in order to preserve the environment and the rights of future generations to a decent life. Roz (2019) stated on the importance of the shift towards green financing and the establishment of an independent department for sustainable development in each bank and the development of a training plan to spread awareness among workers about green financing and sound environmentally friendly practices with a view to encouraging them to implement those practices. In addition to that, banks in Jordan adopted a mechanism to develop and launch green products within the bank's current product package, and focus on supporting small and medium green projects and considering them among the bank's target groups. It also indicates that the growing desertification phenomenon is one of the most important drivers of adopting green financing, as the Arab region is losing vast areas of arable land, which negatively affects the reality of food security, especially with the increase in the rate of environmental pollution and climate change. Roz (2019) believes that green finance finds a growing interest in Jordan and Jordanian banks, especially through attention to environmental sustainability issues and the importance of mitigating the negative effects of climate change, preserving resources and using banking services in green financing, as it encourages the adoption of environmentally friendly practices and contributes to Reducing the negative effects of climate change in a way that rebalances global growth and enhances the role of sustainability as a future concept that carries growth opportunities for society, the environment and the entire business sector. In the United States, the government permits the creation of a green bank in the form of a company, where it can be a subsidiary of some government agency, or be created by renaming an existing body. They form the bank's capital by raising funds (Oyegunle and Weber, 2015). They assign him the task of providing financing - loans, guarantees, or debt purchase in advance - for clean energy projects. The goal is to provide financing at low interest rates and long recovery times. These conditions allow the installation of solar cells or energy efficiency measures in buildings where the owner does not pay any money in advance. The payoff comes from savings in the owner's energy costs over time (Andreeva et al, 2018).

### Methods

Achieving main aim of current study was reached through depending on quantitative approach. Researcher utilized a questionnaire which was distributed on managers, leaders and officers of financial departments within commercial banks in Jordan (Jordanian and foreign). Study adopted a convenient sample of (220) individuals from all banks, after application process; researcher was able to retrieved total of (142) properly filled questionnaires referring to a response rate of 64.5% as statistically accepted. Through

Cronbach's alpha; the reliability test resulted in a value of (0.946) for all the items within the study, the alpha however resulted greater than 0.60 which indicated the tool consistency that enhanced its use in the study.

## Results and Discussion

Following section presented demographic results of sample characteristics according to their answers. Demographic variables of current study included (gender, age, education and experience).

### Demographic Results

Table (1): Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	95	66.9	66.9	66.9
	Female	47	33.1	33.1	100.0
	Total	142	100.0	100.0	

When going through sample characteristics according to gender, it was found out as in table (1) that majority of sample was males forming 66.9% of total sample compared

to females who formed 33.1% of total sample with frequency of 47 female.

Table (2): Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 – 30	25	17.6	17.6	17.6
	31-36	66	46.5	46.5	64.1
	37-42	33	23.2	23.2	87.3
	+43	18	12.7	12.7	100.0
	Total	142	100.0	100.0	

In table (2), study analysis indicated that 46.5% of sample was individuals within age range of 31.36 years old, compared to the least age range of 12.7% which was formed by individuals within age range of +43 years old.

This can indicated that majority of commercial banks employees in Jordan were within the young age who are aware of new trends in financing.

Table (3): Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	BA	96	67.6	67.6	67.6
	MA	44	31.0	31.0	98.6
	PhD	2	1.4	1.4	100.0
	Total	142	100.0	100.0	

On the same track, it was found out – as in table (3) – that majority of sample responded to questionnaire were individuals holding BA degree forming 67.6% of total

sample compared to least percentage of individuals holding a PhD degree of 1.4% of total sample.

Table (4): Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2-4	37	26.1	26.1	26.1
	5-7	54	38.0	38.0	64.1
	8-10	42	29.6	29.6	93.7
	+11	9	6.3	6.3	100.0
	Total	142	100.0	100.0	

The final demographic item appeared in table (4) which indicated that majority of sample had an experience of 5-7 years forming 38% of total sample, compared to least percentage of experience forming 6.3% of total sample which appeared to for individuals who had and experience of more than 11 years.

Questionnaire consisted of independent variable (Green Financing Policies) which included sub-variables of (Legislative framework, Contribute to environmental challenges, Promote sustainable energy investments, Avoid capital depletion, investing in capacity building and training, and Attention to rural development and poverty alleviation) and the independent variable of Awareness of green financing.

### Questionnaire Statements Results

Following section presented analysis of questionnaire statements' analysis according to study sample responses.

Table (5): Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Green Financing Policies					
Legislative framework					
There are important government legislation to stimulate shifts in consumption and investment patterns	142	1	5	3.56	1.257
Changes are being made in business practices with the participation of the public and private sectors	142	1	5	3.44	1.217
There is a lot of legislation driving green economic activity	142	1	5	3.43	1.132

More legislation is needed to remove barriers to green investment	142	1	5	3.35	1.156
<b>Promote sustainable energy investments</b>					
The bank promotes sustainable investments	142	1	5	3.35	1.045
One of the bank's goals is sustainability in the field of renewable energy	142	1	5	3.18	1.113
The bank is working on adopting measures to raise the efficiency of renewable energy	142	1	5	3.25	1.046
The bank is developing low carbon strategies to produce more environmentally friendly	142	1	5	3.20	1.026
<b>Contribute to environmental challenges</b>					
The bank finances projects that adopt environmental standards in construction	142	1	5	3.27	.945
The bank tackles the problem of solid waste	142	1	5	3.23	1.036
There are a lot of projects that invest in waste in an environmentally friendly manner	142	1	5	3.20	1.053
The bank finances green technology projects and facilitates their dissemination and acquisition	142	1	5	3.42	1.047
<b>Avoid capital depletion</b>					
The bank is developing new financing mechanisms to accelerate the spread of green technology	142	1	5	3.37	1.035
The bank supports efficient goods	142	1	5	3.51	1.195
The bank encourages non-waste and wasteful exchange and consumption	142	1	5	3.37	1.145
The Bank works to ensure that renewable resources and ecosystems are not degraded	142	1	5	3.64	1.074
<b>Investing in capacity building and training</b>					
There is a good seizure of green economic opportunities	142	1	5	3.57	1.027
The bank adopts flexible policies in dealing with energies	142	1	5	3.63	1.015
Young energies and entrepreneurship are among the bank's priorities	142	1	5	3.46	1.015
There is a comprehensive and good awareness of the concept of green financing among the bank's working personnel	142	1	5	3.76	.982
<b>Attention to rural development and poverty alleviation</b>					
Attention to rural development will contribute to poverty alleviation	142	1	5	3.45	1.022
Contributing to the countryside is a way to get involved in social responsibility	142	1	5	3.65	1.004
Attention to rural areas may help rationalize water consumption	142	1	5	3.66	1.003
The involvement of banks in the countryside as one of the green financing tools contributes to preventing pollution and preserving green spaces	142	1	5	3.49	1.077
<b>Awareness of green financing</b>					
I think green financing is an alternative to the disappointment of the global economic system	142	1	5	3.63	1.264
Green financing can provide solutions to multiple financial crises	142	1	5	3.49	1.236
Green financing may be seen as a way to avoid market collapses	142	1	5	3.51	1.159
The shift to green finance is an opportunity to confront the challenges posed by climate change	142	1	5	3.42	1.199
Green financing means moving to a low carbon economy, which will have a positive impact on the environment	142	1	5	3.43	1.113
Valid N (listwise)	142				

Table (5) presented mean and standard deviation of questionnaire statements as according to respondents' answers; it was seen through analysis that all respondents had a positive attitude towards statements of questionnaire considering that all statements scored higher than mean of scale 3.00 and was seen to be statistically positive.

As in table (6) below, it was also seen that respondents' attitude towards variables of study appeared to be also positive given that all variables chosen in current study scored higher than mean of scale 3.00 which is statistically a positive result.

Table (6): Descriptive Statistics of Variables

	N	Minimum	Maximum	Mean	Std. Deviation
Legislative Framework	142	1.00	5.00	3.4454	1.01326
Promote sustainable energy investments	142	1.25	5.00	3.2412	.88847
Contribute to environmental challenges	142	1.25	5.00	3.2799	.83501
Avoid capital depletion	142	1.00	5.00	3.4701	.90089
Investing in capacity building and training	142	1.00	5.00	3.6039	.86205
Attention to rural development and poverty alleviation	142	1.00	5.00	3.5651	.79486

Awareness of green financing	142	1.00	5.00	3.4944	.99807
Valid N (listwise)	142				

Hypothesis testing:

Study hypotheses were tested depending on ANOVA and coefficients tests, following are results of hypotheses testing as according to SPSS results.

H: Commercial Banks in Jordan enjoy high level of green financing awareness through its banking operations

Table (7): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.933 <sup>a</sup>	.870	.865	.36718

Table (8): ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	122.254	6	20.376	151.127	.000 <sup>b</sup>
	Residual	18.201	135	.135		
	Total	140.455	141			

Table (9): Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.363	.165		2.206	.029
	Legislative	.868	.040	.881	21.887	.000
	energy	.157	.053	.140	2.953	.004
	environmental	-.007	.056	-.006	-.123	.902
	depletion	-.077	.053	-.070	-1.466	.145
	capacity	.020	.054	.018	.373	.710
	rural	-.042	.055	-.034	-.773	.441

Above hypothesis was tested using Multiple regression analysis which scored an R value of 0.933 and an F value of 151.127 as the value of t at 0.05 significant at (0.05). This confirmed that independent variable and dependent

variables are correlated and that means commercial Banks in Jordan enjoy high level of green financing awareness through its banking operations.

H1: Commercial banks in Jordan adopts a sound legislative framework that supports green financing

Table (10): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.927 <sup>a</sup>	.859	.858	.37572

Table (11): ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	120.692	1	120.692	854.949	.000 <sup>b</sup>
	Residual	19.764	140	.141		
	Total	140.455	141			

Table (12): Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.348	.112		3.108	.002
	Legislative	.913	.031	.927	29.240	.000

Above hypothesis was tested using linear regression analysis which scored an R value of 0.927 and an F value of 854.949 as the value of t at 0.05 significant at (0.05). This confirmed that independent variable and dependent

variables are correlated and that means Commercial banks in Jordan adopts a sound legislative framework that supports green financing.

H2: Commercial banks in Jordan promote sustainable energy investments

Table (13): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.626 <sup>a</sup>	.391	.387	.78142

Table (14): ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	54.968	1	54.968	90.020	.000 <sup>b</sup>
	Residual	85.487	140	.611		

Total	140.455	141		
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Table (15): Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.217	.249		4.889	.000
	energy	.703	.074	.626	9.488	.000

Above hypothesis was tested using linear regression analysis which scored an R value of 0.626 and an F value of 90.02 as the value of t at 0.05 significant at (0.05). This

confirmed that independent variable and dependent variables are correlated and that means commercial banks in Jordan promote sustainable energy investments.

### H3: Commercial banks in Jordan contribute to environmental challenges

Table (16): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.402 <sup>a</sup>	.161	.155	.91728

Table (17): ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.660	1	22.660	26.932	.000 <sup>b</sup>
	Residual	117.795	140	.841		
	Total	140.455	141			

Table (18): Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.920	.313		6.132	.000
	environmental	.480	.093	.402	5.190	.000

Above hypothesis was tested using linear regression analysis which scored an R value of 0.402 and an F value of 26.932 as the value of t at 0.05 significant at (0.05).

This confirmed that independent variable and dependent variables are correlated and that means commercial banks in Jordan contribute to environmental challenges.

### H4: Commercial banks in Jordan avoid capital depletion

Table (19): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.345 <sup>a</sup>	.119	.113	.93995

Table (20): ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.765	1	16.765	18.976	.000 <sup>b</sup>
	Residual	123.690	140	.884		
	Total	140.455	141			

Table (21): Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.166	.315		6.878	.000
	depletion	.383	.088	.345	4.356	.000

Above hypothesis was tested using linear regression analysis which scored an R value of 0.345 and an F value of 18.976 as the value of t at 0.05 significant at (0.05). This

confirmed that independent variable and dependent variables are correlated and that means commercial banks in Jordan avoid capital depletion.

### H5: Commercial banks in Jordan invest in capacity building and training

Table (22): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.354 <sup>a</sup>	.125	.119	.93688

Table (23): ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.571	1	17.571	20.018	.000 <sup>b</sup>

Residual	122.884	140	.878
Total	140.455	141	

Table (24): Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.019	.339		5.953	.000
	capacity	.410	.092	.354	4.474	.000

Above hypothesis was tested using linear regression analysis which scored an R value of 0.354 and an F value of 20.018 as the value of t at 0.05 significant at (0.05). This

confirmed that independent variable and dependent variables are correlated and that means commercial banks in Jordan invest in capacity building and training.

H6: Commercial banks in Jordan give attention to rural development and poverty alleviation

Table (25): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.408 <sup>a</sup>	.167	.161	.91431

Table (26): ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.420	1	23.420	28.016	.000 <sup>b</sup>
	Residual	117.035	140	.836		
	Total	140.455	141			

Table (27): Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.666	.354		4.710	.000
	rural	.513	.097	.408	5.293	.000

Above hypothesis was tested using linear regression analysis which scored an R value of 0.408 and an F value of 28.016 as the value of t at 0.05 significant at (0.05). This confirmed that independent variable and dependent variables are correlated and that means commercial banks in Jordan give attention to rural development and poverty alleviation Taking a look at results of current study; it can be seen that all previously hypothesized ideas were accepted and it was confirmed that commercial banks in Jordan do have a high level of awareness regarding green financing. Results of study appeared to be as follows:

- Commercial Banks in Jordan enjoy high level of green financing awareness through its banking operations this appeared through an R value of 0.933
- Commercial banks in Jordan in an environment of good legislative framework that supports green financing scoring an R value of .927
- Commercial banks in Jordan promote sustainable energy investments with an R value of 0.626 for the variable
- Commercial banks in Jordan contribute to environmental challenges with a moderately low R value of 0.402
- Commercial banks in Jordan avoid capital depletion scoring an R value of 0.345
- Commercial banks in Jordan invest in capacity building and training with an R value of 0.354
- Commercial banks in Jordan give attention to rural development and poverty alleviation scoring an R value of 0.408

Taking a look at analysis tables and SPSS results which indicated descriptive statistics of variables and hypotheses;

it can be seen that the legislative framework appeared to be one of the most influential aspects that plays a role in defining bank's awareness of green financing. Here, the legislative framework must be updated to ensure that obstacles to investment are overcome and completed in the shortest possible time, especially in the case of green financing policies that facilitate procedures for obtaining licenses for the beginning of investment activity in addition to reducing levels of taxes so as not to affect the income of companies and their profits and decrease the value of their investments. Results of study indicated, according to the responses that the Arab region faces four main environmental challenges resulting from climate change which are a) energy security, b) food security, c) water security and d) desertification and degradation of agricultural land quality. Consequently, the greatest achievement of the concept of sustainable development was achieved in the success of the United Nations Summit for Sustainable Development held in September 2015 in New York in adopting a new ambitious plan for sustainable development during which 193 world leaders announced their commitment to 17 goals in order to achieve 3 exceptional achievements in the next 15 years represented In: eliminating a thousand Act and combat inequality and cooperation to mitigate the negative impacts of climate change. It was also prevailed from the results of study that there is a trend among commercial banks in Jordan towards supporting renewable energy projects and environmentally friendly technology, especially from rural areas, in addition, those banks have worked to change lighting systems in all its branches to energy-efficient lighting systems and support the spread Solar cells systems and encouraging institutions and individuals by providing the necessary

financing and continuing the continuous efforts in the field of green financing from its part as banking sectors because of its vital role in achieving sustainability and green banking and work to integrate goals and policies between banks and relevant authorities What contributes to the achievement of sustainable development goals until 2030. It has also been proven through analysis of the study data that commercial banks in Jordan are highly aware of the principles of green financing derived from the green economy and sustainable development, and this has been proven through commercial banks in Jordan seeking to implement sustainable development goals as defined by the United Nations in its plan in addition to identifying problems and propose sustainable solutions that would support green financing projects, resources and mechanisms to obtain financing through cooperation with financial experts and researchers in addition to universities and specialized international bodies including the World Bank, the United Nations Environment Program and the OECD, the European Bank for Reconstruction and Development and the OPEC Fund for International Development.

### Conclusion and Recommendations

Current study aimed at examining the level of awareness regarding green financing within commercial banks in Jordan. Results of study indicated a good level of awareness and understanding regarding green financing which appeared through responses and indicated the adoption of green financing for green projects within banks. These results appeared based on high response rate of items referring to high level of awareness regarding green financing among bank personnel scoring a mean of 3.76 and the fact that most banks assured that they are adopting flexible policies in dealing with energies scoring a mean of 3.63 which is higher than mean of scale 3.00. In addition to that, it was seen through results that most banks in Jordan support projects and finance investments that gives attention to rural development and poverty alleviation as an approach to adopting green financing practices. In conclusion, and by referring to the results of the above study, the shift to green financing is no longer an option for the Jordanian banking sector, but rather the only solution to ensure the continuation of sustainable development, and if this shift imposes restrictions and involves risks, it also opens new opportunities. It is also worth noting that the most important obstacles that slow down the transition to green financing in Jordan are usually climate change and energy in addition to the different standards of the green economy with the aging of years, except for increased consumption and difficulty in sustaining food security. Study also highlighted the main and most important driver of green financing within Jordanian environment which is the governmental legislations. In that sense, banks are restricted to laws and regulations issued by the government, in order to proper in the field of green financing; there is a need to review and redesign government policies to stimulate shifts in production, consumption and investment patterns. For example, the government should adopt a long-term energy plan and set a goal that is to meet 20% of the electrical needs, for example, from renewable energy sources and support for environmentally friendly foreign investments in addition to

providing the facilities required for banks to finance massive environmental and development projects.

### Current study recommended the following:

- It is necessary for various countries to establish and operate green banks to finance clean energy as they shift away from coal towards achieving their standards for renewable energy. Green banks can double financing resources dozens of times, and they can also help create jobs in the renewable energy sector.
- The necessity of developing the extent of awareness of individuals and institutions in the concept of green economy in order to increase awareness of the concept of green financing, in addition to recommending a re-examination of government policies related to water management, energy efficiency and a green economy, which would modify price support mechanisms to contribute to rationalization of consumption and thus Reaching a state of total green financing.
- The need to compel banks, through the Central Bank of Jordan, to take into account sustainable development goals and green financing through the practice of various banking activities with a specific timetable for the stages of application in accordance with best practices and international standards.
- Forming a working group whose members will be responsible for green financing and sustainable development, to meet periodically to discuss what has been achieved in the field of green financing and sustainable development, identify challenges and exchange experiences and prepare future strategies and goals.

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