# GREEN BANKING PERFORMANCE MEASUREMENT ANALYSIS IN ISLAMIC BANKING WITH APPROACH MAQASHID SHARIA INDEX

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#### **ABSTRACT**

Green banking is a solution for the financial sector in dealing with environmental crises. In addition, banks that apply the concept of green banking minimize the carbon footprint generated in their operational activities. This study aims to develop a Green banking performance measurement model according to experts who are integrated with ESG based on maqashid sharia with the Analytical Network Process (ANP) method assisted by Delphi to scientifically conceptual framework. Best on the test result, the details of the model formed produce religious aspects (hifdzu ad-diin) in the destination cluster with the highest priority weight value of , in the main ESG (Environmental, Social, Governance) criteria cluster the environmental aspect has the highest priority weight value, in each sub-cluster the element criteria for natural resource conservation in sub-criterion E (Environmental), stakeholder awareness in sub-criterion S (Social) and elements of environmentally friendly policies in sub-criterion G (Governance) have the highest weight. The results of this study contribute to adding a reference source in measuring green banking performance in further research. As well as being a reference in this regard, especially regarding the measurement of green banking performance with the maqashid sharia concept framework and ESG (Environment, Social, Governance) in the realm of Islamic economics.

Keyword: Green Banking, Magashid Sharia, ESG, Analytic Network Process (ANP).

#### INTRODUCTION

The risk of climate change is a major problem that is currently facing the world (Henderson et al., 2017). In the literature review it is stated that the earth is experiencing global warming, this warming is solely caused by the industrialization process that continues to develop and human consumptive behaviour (Bradu et al., 2022; Richard, 2009). a study by the World Meteorological Organization (2022) explained that climate change confirms human habits as the main source of global warming from various human activities which indirectly increase greenhouse gas emissions thereby increasing the earth's temperature. An increase in the earth's temperature is a serious problem because it not only affects the earth's temperature but also changes the climate system which affects many aspects of changes in nature and human life such as examples of crop failure, extreme weather, and increasing disease outbreaks (Dietz et al., 2020).

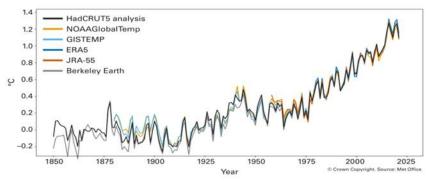


Figure 1. Earth's Temperatur Rise

In UU No 16 of 2016 concerning Ratification of the Paris Agreement to The United Nations Framework Convention on Climate Change it is explained that the

impacts of global climate change have received more attention from people around the world, including Indonesia. As an archipelagic country with abundant natural resources and biodiversity, Indonesia has a great opportunity to be affected by climate change, and has great potential to mitigate and adapt to the adverse effects of climate change (Undang-Undang RI, 2016). Lako (2015) added that over the past two decades environmental damage, global warming and climate change have become increasingly serious and horrific, having such a large negative impact on human survival that it has become a terrible ghost for the international community, environmental damage has not only caused an environmental crisis, but also social, economic, energy and resource crises, and other serious crises.



Figure 2. Annual Average Temperature Anomalies

At this stage the company holds social responsibility to related parties outside the management and owners of capital (Jayabal & Soundarya, 2016). Because as one of the economic instruments, the company is closely related to environmental influences, followed by increased awareness and sensitivity of the company's stakeholders, the concept of social responsibility automatically emerges and becomes an integral part of the company's survival in the future (Dewi, 2013). In the banking sector, the term green banking is known, which in principle is an effort to strengthen bank risk management, especially related to the environment and encourage banks to increase their environmentally friendly financing portfolios environmental performance (Sharmeen et al., 2019; Sood & Jalandhar, 2019; Tara et al., 2015). Budiantoro (2014) states that green banking is translated as a banking effort that prioritizes fulfilling sustainability in lending or its operational activities. According Julia & Kassim (2020) although banks are not directly classified as high contributors to environmental pollution such as the use of energy, water and other resources. However, banking cannot be separated from the problem of increasing environmental damage, with fund distribution activities in the form of loans or financing to bank customers which can trigger activities that have a direct impact on the environment (Bukhari et al., 2020).

The basic goal of Islamic financial institutions, particularly banking, is consistency in the application of maqasid shariah, which means that all forms of activity refer to sharia noble values (Darmawan & Fasa, 2020; Mohammed & Razak, 2008). Green banking in this case has met the criteria of maqashid sharia where one of them is protecting oneself (hifdzu nafs), protecting offspring (hifdzu nasl), and protecting assets (hifdzu maal) (Aasa et al., 2016). The green banking dimension is in line with Islamic teachings so that it can be easily adopted and marketed by banks, especially Islamic banks that target Muslim consumers. The compatibility of green banking with maqashid sharia can play a major role in encouraging the growth of this important ideology for society, this compatibility includes protecting the soul, protecting offspring and protecting assets (Bukhari et al., 2019). Green banking in an Islamic perspective has a holistic view (Kunhibava et al., 2018). The mission of green banking

is mentioned several times in the Qur'an, for example in Surah Al-Qashash[77]. "...and do not do mischief on (the face of) the earth. Verily, Allah does not like those who do mischief". In addition, in Surah Al-Baqarah [60] it is also explained "...and do not roam the earth doing mischief" Bouteraa et al (2020) concluded that the theory of green banking from an Islamic point of view can be interpreted as an increase in human welfare in a balanced and sustainable manner both in the material (social, environmental, economic) and non-material (spiritual) dimensions by implementing a harmonious Islam. values. with sustainable development.

For that reason, the researcher is interested in studying the measurement of the implementation of green banking in Islamic banking with the maqashid sharia framework because this research is still limited, and most of the existing research has not touched and involved ESG aspects. Furthermore, the formulation of an index based on maqashid sharia to measure banking performance has been carried out quite a lot. however, it is still very general in nature and has not yet touched on the discussion of evaluating the application of green banking practices in more depth.

#### **METHOD**

This study uses the Analytic Network Process (ANP) method combined with Delphi to conceptualize the framework scientifically. ANP is one of the multiple Criteria Decision Making (MCDM) methods developed by Thomas L Saaty (2005) with the aim of developing relationships or relevance measurements and also to obtain priority scales on individual views. In this case looking for a priority scale of green banking performance in Islamic banking in supporting sustainability. In the ANP analysis, the first step that I have to do is create an ANP framework (model construction) to understand the problem obtained from the literature review, questionnaires, and indepth interviews (Ascarya, 2005). while the Delphi method uses a survey-based decision-making approach which is rarely used as a single method in a study. Delphi is used as a complement to other methods such as Delphi-ANP, one of them (Lisntone & Turoff, 2011).

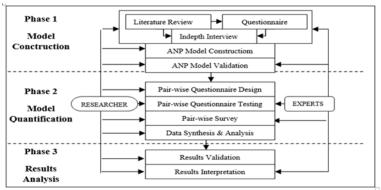


Figure 3. ANP Model Stages Source; Ascarya, 2016

This study uses the form of the ANP network, namely the general network. General network is a network that does not have a special form. This form of network can be very simple or very complex involving many clusters, dependencies, and feedback loops. After forming the ANP framework with a numerical scale.

## RESULTS AND ANALYSIS A. Results

The framework for the green banking measurement model was built based on literature studies and expert interviews, as well as quantitative analysis through the super decision 3.20 application to determine the measurement weight values. The model is built based on the maqasid sharia framework that has been explained by Imam al-Ghazali. The following is an explanation of several aspects of maqashid sharia in the context of green banking:

#### 1. Hifdzu Ad-Diin

Hifdzu Ad-Din in the context of green banking has two dimensions including; sustainable governance policies and riba-free financing (Sartika & Ghofur, 2016). According to Julia & Kassim (2020) obedience to the law is under the protection of religion, and violation of the law is considered a violation of religion. Sustainable financial governance has become a legal product in many countries in the world including Bangladesh, Malaysia, Singapore, Vietnam, the Philippines and including Indonesia. Indonesia has effectively implemented green banking since the issuance of Financial Services Authority Regulation (POJK) No. 51 of 2017 concerning sustainable finance. As part of the government's steps to safeguard the benefit of the Indonesian nation, as well as implementing green banking is an obligation for a bank institution, especially Islamic banks.

Islamic banks in this case also have sharia-based business principles, this principle carries out all bank business activities free from usury (interest), gharar (uncertainty), and maysir (Julia & Kassim, 2020). In the context of the practice of implementing green banking all bank financing for the green sector must be free from usury. Thus, Islamic bank services with these principles can maintain public faith.

The results of the in -depth interviews with experts and experts, none of the experts or experts reject the order of the two elements above as part of maintaining religion (Hifdzu Ad-Diin). This provides a clear projection that the context of maintaining religion in the concept of green banking in Islamic banks is directly integrated with the ESG (Environmental, Social, Governance) principles, namely sustainable governance and riba -free financing.

#### 2. Hifdzu An-Nafs

The concept of green banking is a form of bank concern for environmental factors. Life protection is born from the bank's actions in realizing the risks and hazards that can threaten the environment due to business or organizational activities. It can also save investors from investment practices that damage the environment. In this case also the maturity of a bank in mitigating environmental risks from its business activities can provide protection from destructive industrial behavior. The measurement measure that is commonly used by the industrial world to see the success of business organizations in carrying out their environmental missions according to ESG principles is environmental risk management as assessed by Environmental Risk Assessment (ERA). This ERA technique is a process that identifies, analyzes, and evaluates risks and hazards that can threaten the environment due to business or organizational activities (Julia & Kassim, 2020).

Based on expert validation regarding the elements of environmental risk management, the experts agreed to make these elements a derivative of the soul aspect in the context of green banking.

#### 3. Hifdzu Al-Aql

The *al-aql* aspect concerns the role of the bank in protecting and maintaining the intellectual abilities of both employees and consumers. There are at least four ESG elements from the rational aspect of green banking in realizing maqashid sharia,

namely employee rights which include green education, environmentally friendly products and services, green events and work safety.

Employee rights (green education) is the best asset in maintaining and strengthening human reason in thinking. Environmentally friendly products and services operating in the green sector can develop the quality of green banking and broaden green banking insights to the public. The dynamics that occur in the financial sector also require banks to innovate in their products and services. Development of green banking by strengthening research related to green banking can improve the quality of green banking itself, one of which is work safety which is crucial for the comfort of employees.

#### 4. Hifdzu Al-Nasl

In the results of dept interviews with maqashid sharia experts on heredity aspects, it is assessed that banks have a role in maintaining and increasing their existence as companies that have a green banking mission so that the sustainability of a bank is expected. to be able to maintain the mission of green banking into the future. Islamic banks are responsible for activities, performance carried out, as well as green banking initiatives in future plans. This is also stated in OJK regulations which require every banking institution to provide sustainability reports (Green reporting) to the public (OJK 2017). That way, Islamic banks have a responsibility to maintain sustainability.

The development of the times and increasing public literacy with the digital world directly require Islamic banks to innovate in accelerating their services more efficiently. The digital banking system is able to provide benefits for Islamic banks to maintain their green banking mission by accelerating more effective and efficient services.

#### 5. Hifdzu Al-Maal

The fundamental activity of the bank is to circulate money from depositors to financing customers for the welfare of society. Banks through green financing have a green economy mission (Julia & Kassim, 2020). Property protection in the green banking aspect focuses the money managed by the bank on the green sector, thus indirectly changing industry behavior so that it conforms to green criteria as a financing requirement. If quoting from POJK No. 51 of 2017 there are 12 categories of sustainable business activities including the following:

- Renewable energy
- Energy efficiency
- Pollution prevention and control
- Management of living natural resources and sustainable land use
- Conservation of terrestrial and aquatic biodiversity
- Environmentally friendly transportation
- Sustainable management of water and wastewater
- Climate change adaptation
- Products that can reduce the use of resources and produce less pollution (ecoefficient)
- Environmentally sound buildings that meet standards or certifications that are recognized nationally, regionally and internationally
- Business activities and/or other activities that are environmentally sound 23

 Micro, Small and Medium Enterprises (MSMEs) Activities Based on the 12 criteria for a sustainable business above, a detailed explanation of each point is contained in the implementation of POJK No.51 of 2017.

### **B.** Analysis

The basic activity of a bank is to circulate money from depositors to customers through financing for the welfare of society. Banks with green financing have a green economy mission. Maqashid sharia has a mission to protect assets, in the context of financial institutions, assets are fundamental tools that generate profits for banks and service benefits for customers (Julia & Kassim, 2020).

The scope of green banking focuses on money managed by banks to the green sector. Green banking sees that the earth's condition is getting worse and worse in quality since the massive actions of industry players to make the most profit. The mission of maqashid sharia in the aspect of assets changes industrial behavior indirectly following the bank's financing policy which selects industry players.

Table 1. ANP Result													
	Res 1	Res 2	Res 3	Res 4	Res 5	Res 6	Res 7						
Cluster Maqashid Sharia (Goals)													
Hifdzu An-Nafs	0.22	0.23	0.22	0.22 (R2)	0.22 (R2)	0.23 (R2)	0.22 (R2)						
	(R2)	(R2)	(R2)										
Hifdzu Al-Aql	0.15	0.14	0.13	0.15 (R3)	0.15 (R3)	0.14 (R3)	0.13 (R3)						
	(R3)	(R3)	(R3)										
Hifdzu Ad-Din	0.41	0.47	0.49	0.41 (R1)	0.41 (R1)	0.47 (R1)	0.49 (R1)						
	(R1)	(R1)	(R1)										
Hifdzu An-Nasl	0.11	0.08	0.08	0.11 (R4)	0.11 (R4)	0.08 (R4)	0.08 (R4)						
	(R4)	(R4)	(R4)										
Hifdzu Al-Maal	0.08	0.06	0.05	0.08 (R5)	0.08 (R5)	0.06 (R5)	0.05 (R5)						
	(R5)	(R5)	(R5)										
	Res 1	Res 2	Res 3	Res 4	Res 5	Res 6	Res 7						
	C l u s t e r ESG (Criteria)												
Environmental	0.51	0.52	0.52	0.51 (R1)	0.51 (R1)	0.52 (R1)	0.52 (R1)						
	(R1)	(R1)	(R1)										
Social	0.27	0.27	0.27	0.27 (R2)	0.27 (R2)	0.26 (R2)	0.26 (R2)						
	(R2)	(R2)	(R2)										
Governance	0.21	0.20	0.20	0.21 (R3)	0.21 (R3)	0.20 (R3)	0.20 (R3)						
	(R3)	(R3)	(R3)										
	Res 1	Res 2	Res 3	Res 4	Res 5	Res 6	Res 7						
		Cluster		a Element E (E	nvironmental	)							
Natural	0.39	0.44	0.45	0.53 (R1)	0.39 (R1)	0.44 (R1)	0.45 (R1)						
Resources	(R1)	(R1)	(R1)										
Conservation													
Energy	0.16	0.14	0.13	0.14 (R3)	0.16 (R3)	0.14 (R3)	0.13 (R3)						
Consumption	(R3)	(R3)	(R3)										
Green Building	0.29	0.29	0.29	0.11 (R4)	0.29 (R2)	0.29 (R2)	0.29 (R2)						
	(R2)	(R2)	(R2)										
Green Product	0.15	0.11	0.11	0.20 (R2)	0.15 (R4)	0.11 (R4)	0.11 (R4)						
& Service	(R4)	(R4)	(R4)										
	Res 1	Res 2	Res 3	Res 4	Res 5	Res 6	Res 7						
C I u s t e r Sub-Criteria Element S (Social)													
Employee	0.14	0.11	0.11	0.20 (R4)	0.14 (R4)	0.11 (R4)	0.11 (R4)						
rights	(R4)	(R4)	(R4)										
Stakeholder	0.34	0.39	0.40	0.30 (R1)	0.34 (R1)	0.39 (R1)	0.41 (R1)						
Awareness	(R1)	(R1)	(R1)										

Green Events	0.22	0.21	0.20	0.27 (R2)	0.22 (R3)	0.21 (R3)	0.20 (R3)				
	(R3)	(R3)	(R3)								
Workplace	0.28	0.27	0.27	0.21(R3)	0.28 (R2)	0.27 (R2)	0.26 (R2)				
Safety	(R2)	(R2)	(R2)								
	Res 1	Res 2	Res 3	Res 4	Res 5	Res 6	Res 7				
C l u s t e r Sub-Criteria Element G (Governance)											
Natural	0.18	0.17	0.16	0.18 (R3)	0.18 (R3)	0.17 (R3)	0.16 (R3)				
Resource	(R3)	(R3)	(R3)								
Green Policy	0.29	0.31	0.34	0.28 (R1)	0.29 (R1)	0.31 (R1)	0.34 (R1)				
Formulation	(R1)	(R1)	(R1)								
Green Audit	0.16	0.16	0.15	0.16 (R4)	0.16 (R4)	0.16 (R4)	0.15 (R4)				
	(R4)	(R4)	(R4)								
Green	0.14	0.13	0.12	0.13 (R5)	0.14 (R5)	0.13 (R5)	0.12 (R5)				
Reporting	(R5)	(R5)	(R5)								
Environmental	0.21	0.20	0.20	0.23 (R2)	0.21 (R2)	0.20 (R2)	0.20 (R2)				
& Risk	(R2)	(R2)	(R2)								
Management											

Source; Processing Data Super Decision 3.20

### C. Quantification ANP Model

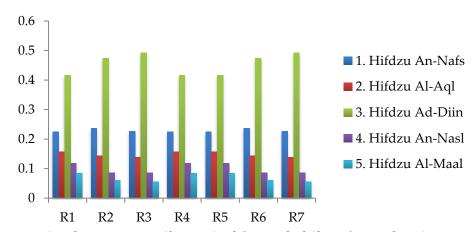


Figure 4. Synthesis Priority Cluster Goal (Maqashid Sharia) Based on Average Value

The graphic data above explains the level of priority for cluster objectives (Maqashid Syariah) which shows that of all respondents the most dominant cluster objective is the aspect of Religion (hifdzu ad-diin) with an average value of 0.50. Furthermore, the soul aspect (hifdzu an-nafs) is 0.23, the mind aspect (hifdzu al-aql) is 0.18, the heredity aspect (hifdzu an-nasl) is 0.12, and finally the wealth aspect (hifdzu al-maal) with an average value of 0.09. This shows the high level of approval and disapproval of respondents with the ratings generated in the data above.

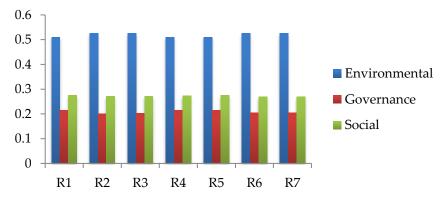


Figure 5. Result Synthesis Cluster Main Criteria (ESG)

All respondents from the graphic data above can explain the priority of respondents who are more dominant in determining environmental elements to be the most important elements in implementing the green banking concept so that they become priorities with an average value of 0.52. Next is the social element with an average value of 0.29 and finally the governance element with an average value of 0.21. The results of the validation obtained the average value of respondents agreeing and being satisfied with the resulting numbers.

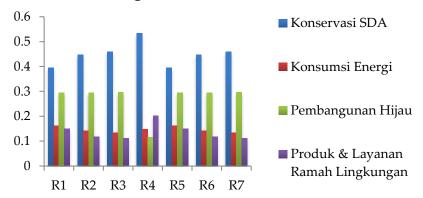


Figure 6. Result Synthesis Cluster Sub-Criteria E (Environmental) Based on Average Value
The results of the average value obtained from the respondents as a whole can
be seen in the graph above showing the element of natural resource conservation as
the element that gets the highest average value of 0,51, then there is green development
with an average percentage value of 0,30. Next is the energy consumption element of
0,15 and finally environmentally green products & services with a percentage value of
0,19. At this stage all respondents agree and accept the resulting numbers.

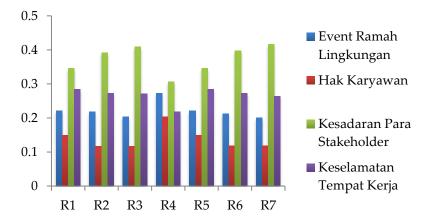


Figure 7. Result Synthesis Cluster Sub-Criteria S (Social) Based on Average Value
The graph above explains the average value of the S (Social) sub-criteria cluster,
the highest average score is in the element of stakeholder awareness with a value of
0.41, followed by the element of work safety with an average value of 0.29, so there is
an element of friendly events environment with an average value of 0.26 and elements
of employee rights with an average value of 0.20. From the overall results of the
respondents agree with the weight of the resulting average value.

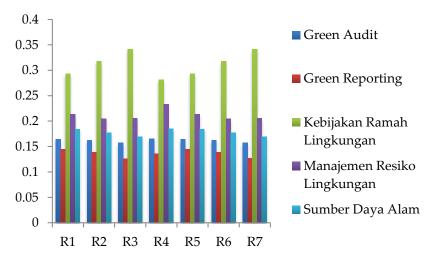


Figure 8. Result Sintesis Sub-Criteria G (Governance) Based on Average Value

The graphic data above produces the average value of each element included in the sub-criteria cluster G (Governance) based on the agreement of all respondents with the following results; environmental policy elements rank first with an average value of 0.35, then elements of environmental risk management with a value of 0.25, then elements of natural resources with an average value of 0.18, green audits with an average value of 0, 16 and reporting green with an average value of 0.14. All respondents agree with the resulting value.

#### **CONCLUSION**

Based on the results of research research it can be concluded as follows: a). Based on the literature study it was concluded that the concept of green banking integrated with ESG (Environmental, Social, Governance) aspects within the Magashid Syariah framework has 3 dimensions from ESG aspects and 4 elements from each of these dimensions. Green banking is part of the tauhid guidance that every Muslim must obey and obey Allah Subhanahu wa ta'ala, including obedience in protecting the environment. In addition, green banking is also part of the role of humans as caliphs on earth, namely the role in maintaining the balance of nature upon the mandate that God has entrusted to humans. b). The green banking measurement model that is integrated with ESG is based on the magasid sharia framework from the perspective of Imam Al-Ghazali covering the protection of religion, life, mind, lineage and property. Based on literature studies and in-depth interviews with experts related to green banking aspects in magashid sharia, the religious aspect (hifdzu ad-diin) is produced in the destination cluster with the highest priority weight value (0.46), in the criteria cluster (ESG) environmental aspects have a weight value the highest priority (0.52), for each cluster sub-criteria elements of natural resource conservation in sub-criteria E (0.43), stakeholder awareness in sub-criteria S (0.35) and elements of environmentally friendly policies in sub-criteria G (0.31).

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