

Identify the Issuance Problem of Corporate Green Sukuk in Indonesia

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Abstract

Sustainable financing is one of the international issues that has been widely discussed due to the issue of climate change. Green sukuk is one of the sustainable financing instruments that are sharia-compliant. However, companies in Indonesia have not shown interest in issuing corporate green sukuk. Various problems and challenges faced by the company to be able to issue corporate green sukuk. The purpose of this study is to know the problem of issuing corporate green sukuk in Indonesia and the best solutions that can be used. The research method used is Analytic Network Process (ANP). In this study, respondents came from experts of corporate green sukuk problems. Total respondents of this research were 5 peoples who came from academia, company actors and regulators. The results show that the main problem in issuing corporate green sukuk is the lack of understanding from market participants. Meanwhile, in terms of solutions, the incentive provided by the government is the main solution to encourage the issuance of corporate green sukuk.

Keywords: Green Sukuk, Corporate Green Sukuk, Analytic Network Process (ANP), Sustainable Finance

Abstrak

Pembiayaan berkelanjutan merupakan salah satu isu internasional yang telah ramai dibicarakan karena masalah perubahan iklim. Green sukuk adalah salah satu instrumen pembiayaan berkelanjutan yang sesuai syariah. Namun perusahaan di Indonesia belum menunjukkan minatnya untuk menerbitkan green sukuk korporasi. Berbagai permasalahan dan tantangan dihadapi perusahaan untuk bisa menerbitkan green sukuk korporasi. Tujuan penelitian ini adalah melihat masalah penerbitan green sukuk korporasi di Indonesia beserta solusi terbaik yang bisa digunakan. Metode penelitian yang digunakan adalah Analitic Network Proses (ANP). Dalam penelitian ini menggunakan responden yang berasal dari pakar-pakar dalam bidang green sukuk korporasi. Total pakar yang digunakan sebanyak 5 orang yang berasal dari akademisi, pelaku perusahaan dan regulator. Hasil penelitian menunjukkan masalah utama dalam penerbitan green sukuk korporasi adalah minimnya pemahaman dari para pelaku pasar. Sedangkan dari sisi solusi, dorongan insentif yang diberikan pemerintah merupakan solusi utama untuk mendorong penerbitan green sukuk korporasi.

Kata kunci: Green Sukuk, Green Sukuk Korporasi, Analytic Network Process (ANP), Pembiayaan Berkelanjutan

Introduction

Issues related to sustainable financing have been discussed for a long time in Indonesia and also internationally since the issue of climate change emerged, and many countries have not been able to overcome them¹. According to Meo and Karim (2021), Sustainable financing is the best strategy to reduce CO2 emissions. Not only the state, companies or corporations can take a role in sustainable financing as a form of responsibility towards the environment. Companies do not only have responsibilities to shareholders, but also to wider parties, who are affected by the company's activities, such as society and the environment².

Green sukuk is one of the instruments in Islamic finance which includes sustainable financing instruments, which can be a new breakthrough in overcoming problems related to climate change³. Several studies have shown support for the presence of green sukuk⁴. There are also many studies that show its potential, especially those are sustainable⁵. Abubakar (2020) and other

¹ Sharon M Sumolang, "Disasters Repeatedly, Why Are You Still Ignorant of the Climate Crisis?" (Indonesia, 2021), <https://www.instagram.com/p/CSWQxCFhAq0/>

² vRowland Bismark Fernando Pasaribu, Dionysia Kowanda, and Akhmad Arief, "Pengungkapan Tanggung Jawab Sosial Korporat Pada Emiten Manufaktur Di Bursa Efek Indonesia," *Jurnal Riset Akuntansi Dan Keuangan* 13, no. 1 (August 14, 2017): 1, <https://doi.org/10.21460/jrak.2017.131.276>.

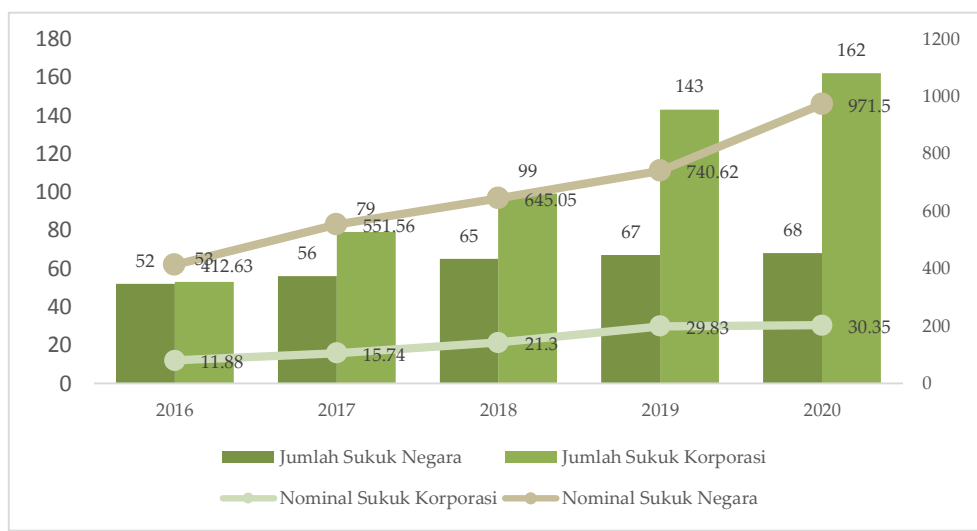
³ Ivan Rahmat Santoso and Fahrudin Zain Olilingo, "Green Sukuk Dan Tujuan Pembangunan Ekonomi Berkelanjutan: Peran Dalam Meningkatkan Mitigasi Terhadap Perubahan Iklim," 2019.

⁴ Donato Morea and Luigi Antonio Poggi, "An Innovative Model For the Sustainability of Investments in the Wind Energy Sector: The Use of Green Sukuk in an Italian Case Study," *International Journal of Energy Economics and Policy* 7, no. 2 (2017): 53–60; Santoso and Olilingo, "Green Sukuk Dan Tujuan Pembangunan Ekonomi Berkelanjutan: Peran Dalam Meningkatkan Mitigasi Terhadap Perubahan Iklim."

⁵ Suherman and Asfi Manzilati, "Identifikasi Potensi Penerbitan Green Sukuk Di Indonesia," *Jurnal Ilmiah Mahasiswa Fakultas Ekonomi Dan Bisnis* 5, no. 1 (2016): 1–21; Umar F Moghul and Samir Safar-Aly, "Green Sukuk: The Introduction of Islam 's Environmental Ethics to Contemporary Islamic Finance," *Georgetown International Environmental Law Review (GIELR)* 27, no. 1 (2015); Lastuti Abubakar and Tri Handayani, "Green Sukuk: Sustainable Financing Instruments for Infrastructure Development in Indonesia," in *Proceedings of the 1st Borobudur International Symposium on Humanities, Economics and Social Sciences (BIS-HESS 2019)* (Paris, France: Atlantis Press, 2020), 983–87, <https://doi.org/10.2991/assehr.k.200529.206>; Suherman, Iswan Noor, and Asfi Manzilati, "Identifikasi Potensi Pasar Green Sukuk Republik Indonesia," *Human Falah: Jurnal Ekonomi Dan Bisnis Islam* 6, no. 1 (2019): 37–53; Maurizka Alifia Risanti, Farouk Abdullah Alwyni, and Prameswara Samofa Nadya, "Peran Green Sukuk Dalam Mewujudkan Pembangunan Yang Berkelanjutan," *Prosiding Konferensi Nasional Ekonomi Manajemen Dan Akuntansi (KNEMA)* 1, no. 1 (2021); Happy Febrina Hariyani and Hendra Kusuma, "Green Sukuk-Based Project on Sustainable Waste Management in Indonesia," *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah* 12, no. 2 (2020): 165–78,

researchers show that green sukuk, whose trend seems to be increasing⁶, has potential in many ways. Both in supporting sustainable development⁷, providing business growth⁸, as an instrument for environmental waste management⁹, renewable energy¹⁰, even the main one can be an addition to the state budget which is always in deficit¹¹. Risanti (2020) said that the results of her research showed that green sukuk did play a role in supporting sustainable development¹². Several other studies discussing corporate green investment and sustainable financing show that green investment made by companies can provide additional benefits for companies¹³.

For the company itself, several investment instruments have been launched such as stocks, bonds or sukuk. PT. Indosat, Tbk. was the first company in Indonesia to



Sukuk Republik Indonesia.”

⁷ Abubakar and Handayani, “Green Sukuk: Sustainable Financing Instruments for Infrastructure Development in Indonesia.”

⁸ Moghul and Safar-Aly, “Green Sukuk: The Introduction of Islam ’ s Environmental Ethics to Contemporary Islamic Finance.”

⁹ Hariyani and Kusuma, “Green Sukuk-Based Project on Sustainable Waste Management in Indonesia.”

¹⁰ Azhgaliyeva, Kapoor, and Liu, “Green Bonds For Financing Renewable Energy And Energy Efficiency in South-East Asia: A Review of Policies.”

¹¹ Suherman and Manzilati, “Identifikasi Potensi Penerbitan Green Sukuk Di Indonesia.”

¹² Risanti, Alwyni, and Nadya, “Peran Green Sukuk Dalam Mewujudkan Pembangunan Yang Berkelanjutan.”

¹³ Naradipatya Pratanjana and Gumanti Oloan Simbolon, “Issuance of Green Bond For Sustainable Development of Peatlands,” *Sociae Polites* 21, no. 2 (December 9, 2020): 176–92, <https://doi.org/10.33541/sp.v21i3.2259>; Farhad Taghizadeh-Hesary, Naoyuki Yoshino, and Han Phoumin, “Analyzing the Characteristics of Green Bond Markets to Facilitate Green Finance in the Post-COVID-19 World,” *Sustainability* 13, no. 10 (May 20, 2021): 5719, <https://doi.org/10.3390/su13105719>; Morea and Poggi, “An Innovative Model For the Sustainability of Investments in the Wind Energy Sector: The Use of Green Sukuk in an Italian Case Study.”

issue corporate sukuk in 2002, while the state issued sukuk for the first time, known as State Sharia Securities (SBSN) 6 years later, namely in 2008¹⁴. Until 2021, there were 188 corporate sukuk with a total nominal value of 34.79 trillion rupiah¹⁵. The following figure is a comparison of the issuance of state and corporate bonds in Indonesia.

Figure 1. Comparison of Outstanding Sukuk in Indonesia



Source: OJK and DJPPR, 2016-2020 (processed by author)

From the figure, it can be seen that for a period of 5 years from 2016 to 2020, the nominal issuance of corporate sukuk was extremely lower than that of state bonds. This shows that the state is more aggressive than corporations in issuing sukuk.

Some of the challenges faced by corporations in issuing corporate sukuk include, such as the legal framework which is still not strong enough¹⁶, the legal framework which is still not strong enough, inflation and exchange rates which are also a consideration for corporate sukuk issuance¹⁷, problems of understanding from market players both issuers and investors¹⁸, to the condition

¹⁴ Ivan Hannoeriadi Ardiansyah and Deni Lubis, "Pengaruh Variabel Makroekonomi Terhadap Pertumbuhan Sukuk Korporasi Di Indonesia," *Al-Muzara'ah* 5, no. 1 (February 5, 2018): 51-68, <https://doi.org/10.29244/jam.5.1.51-68>.

¹⁵ OJK, "Statistik Sukuk November 2021" (Jakarta, 2021)

¹⁶ Divina Mahardika Dewi et al., "Tinjauan Sukuk Korporasi Di Indonesia Dari Perspektif Penawaran, Permintaan Dan Regulasi," *Journal of Business and Economics Research (JBE)* 1, no. 1 (2020): 11-16.

¹⁷ Rizki Abdillah and Sahabudin Sidiq, "Dampak Faktor Internal Dan Ekstrenal Terhadap Penerbitan Sukuk Korporasi Di Indonesia" (Universitas Islam Indonesia, 2018), <https://dspace.uui.ac.id/handle/123456789/8832>; Ardiansyah and Lubis, "Pengaruh Variabel Makroekonomi Terhadap Pertumbuhan Sukuk Korporasi Di Indonesia."

¹⁸ Erdinda Santoso and Rachma Indra Rini, "Analisis Pengaruh Marketing Mix Terhadap Minat Masyarakat Membeli Sukuk," *Al-Iqtishadiyah: Jurnal Ekonomi Syariah Dan Hukum Ekonomi Syariah* 6, no. 2 (2020): 86-98,

of the secondary market which not sufficiently liquid¹⁹ due to the behavior of sukuk owners who tend to hold ownership until maturity, resulting in low transaction volume of sukuk. It is very well realized how deep the sukuk market in Indonesia is and there is still a lot of homework to be done to stabilize and improve the state of corporate sukuk issuance in Indonesia.

From the existing corporate sukuk phenomenon, an even bigger challenge can be drawn in facing the issuance of corporate green sukuk. However, it cannot be denied that the embedding of 'green' creates a different image so that it can attract more attention from various groups. The state of the world that continues to experience climate change and global warming is common knowledge, so that individuals are starting to appear who are starting to look at programs related to environmental issues. Seeing the urgency of the need for funds for environmentally friendly projects, it is possible that green sukuk will be more in demand than ordinary sukuk. This can be a signal for investors to invest while supporting the improvement of the earth-while still getting a yield or profit from the investment.

PT Sarana Multi Infrastruktur (Persero) was the first company in 2018 to issue corporate green bonds in Indonesia, where prices continue to increase and carry less risk than conventional bonds²⁰. The Green Bonds issued by SMI at that time were allocated to 3 projects consisting of 2 projects in renewable energy and 1 project in environmentally friendly transportation. According to the published report, the total funds collected amounted to IDR 499,866,363,638, of which 36.3% of the funds were allocated to 2 renewable energy projects which succeeded in reducing greenhouse gas emissions by up to 121,087 tons of CO₂e, capable of producing 129,592 MWh of energy and increasing renewable energy capacity by 17.5 MW. Meanwhile, the environmentally friendly transportation project, which allocated 63.7% of the funds, was able to avoid greenhouse gas emissions of 72,841 tons of CO₂e and save energy of 2,775 TJ²¹.

Of course, companies not only don't want to take advantage of opportunities to issue corporate green sukuk²², but because there are so many problems that must be faced in issuing corporate green sukuk, one example is the large costs that must be prepared to issue corporate green sukuk in addition to the lack of literature related to green investment and the many obligations that are difficult

<https://doi.org/http://dx.doi.org/10.31602/al%20iqtishadiyah.v6i2.3244>; Miftahul Hasanah, "Implikasi Penerbitan Sukuk Terhadap Kinerja Keuangan Dan Kesejahteraan Karyawan (Studi Pada Bank Muamalat Indonesia)," *Indonesian Journal of Islamic Economics and Finance* 1, no. 1 (2018): 14–31, <http://jurnalpasca.iain-jember.ac.id/ejournal/index.php/IJIEF/article/view/24>.

¹⁹ Hasanah, "Implikasi Penerbitan Sukuk Terhadap Kinerja Keuangan Dan Kesejahteraan Karyawan (Studi Pada Bank Muamalat Indonesia)."

²⁰ Pratanjana and Simbolon, "Issuance of Green Bond For Sustainable Development of Peatlands."

²¹ PT. SMI, "Laporan Obligasi Berwawasan Lingkungan," vol. 2021 (Jakarta, 2022).

²² Nisha Prakash and Madhvi Sethi, "A Review of Innovative Bond Instruments For Sustainable Development in Asia," *International Journal of Innovation Science* ahead-of-p, no. ahead-of-print (January 1, 2021), <https://doi.org/10.1108/IJIS-10-2020-0213>.

for the corporation concerned to implement, such as the obligations to reuse, recycle and reduce²³.

Many studies have discussed sovereign green sukuk, but research discussing corporate green sukuk is still very advanced. Especially the discussion on the issue of green sukuk by corporations as a sustainable financing instrument. In fact, corporations have a great opportunity to participate in issuing green sukuk. Against this background, this research will try to see what the problems are and what are the solutions in issuing corporate green sukuk to support sustainable financing. This research will look at the problems from several aspects involved in issuing corporate green sukuk, namely the corporation itself, regulators and the government in Indonesia¹.

Methodology

This research is a qualitative research using the Analytic Network Process (ANP) method. ANP is a theory for measuring the relatively decreasing priority ratio of individual ratio scales which reflects the relative measurement of the influence of each element that interacts with each other related to control criteria²⁴. According to Ascarya and Masrifah (2014), ANP is a non-parametric and non-bayesian qualitative approach that is used to make decisions and how to treat these decisions without making assumptions regarding the independence of elements at each level, both higher and lower.

The population in this study are experts in the field of corporate green bonds and sustainable finance. Of the many experts, sampling will be carried out to determine the sample in the study. Sampling in qualitative research uses purposive sampling²⁵. Purposive sampling is a sampling technique with certain considerations and conditions²⁶.

The requirement for determining experts in this study are experts and masters in the field of corporate green sukuk. So the experts who will be selected in this study are Islamic economic experts who are directly involved in the world of Islamic capital markets, especially green sukuk. In the ANP method, the number of experts used is not a criterion for validity. The number of respondents is not the most important thing, but the competence and expertise of the

²³ Tia Yuliawati, Asni Mustika Rani, and Allya Roosallyn Assyofa, "Efektivitas Implementasi Green Financing Sebagai Alternatif Pembiayaan Berkelanjutan Bagi UMKM Sektor Industri Pengolahan Alas Kaki Di Kota Bandung," *Universitas Islam Bandung Repository*, 2017, <http://repository.unisba.ac.id/handle/123456789/18645>.

²⁴ Prind Triajeng Pungkasanti, "Penerapan Analytic Network Process (ANP) Sebagai Sistem Pendukung Keputusan Dalam Pemberian Reward Dosen" (Universitas Diponegoro Semarang, 2013).

²⁵ Lexy J Moleong, *Metodologi Penelitian Kualitatif*, Revisi (Bandung: Remaja Rosdakarya, 2017).

²⁶ Sugiyono Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D* (Bandung: Alfabeta, 2017).

respondents is more important²⁷. Various studies using the ANP method previously used a different number of experts Chung et al. (2016) used 12 experts²⁸, Guo (2020) used 10 experts²⁹, Liu (2020) used 9 experts³⁰, while Hariyani and Kusuma (2020) used 3 experts³¹. In the end, 5 experts will be used in this study as did Endri (2009) and Dewi (2011) who discuss issues related to the issuance of corporate sukuk in Indonesia³². The number 5 is considered the right number because it is not too little or too much. While the odd value is used to avoid answers that has the same weight if the respondent is faced with two choices.

For the stages of analysis using the ANP method, Ascarya and Masrifah (2014) divide it into 3 stages namely, model construction, model quantification and analysis of results. In this study, the model construction was compiled from the results of a literature survey of previous research to obtain research variables, and then validated the results of the literature survey to experts to obtain accurate data. From the results of the validation to the experts, they then compiled the ANP model in the form of a framework.

The model quantification stage is carried out by compiling and submitting a questionnaire to experts in the form of pairwise comparisons between elements and clusters to find out which elements have a greater influence and dominant than the others, and how big the difference is using a numerical scale 1-9 with the guidelines below³³.

²⁷ Ascarya, "Analytic Network Process (ANP): Pendekatan Baru Studi Kualitatif," in *Seminar Intern Program Magister Akuntansi Fakultas Ekonomi Di Universitas Trisakti* (Jakarta: Program Magister Akuntansi Fakultas Ekonomi Universitas Trisakti, 2005).

²⁸ Chih Chao Chung, Li Chung Chao, and Shi Jer Lou, "The Establishment Of a Green Supplier Selection and Guidance Mechanism with The ANP and IPA," *Sustainability (Switzerland)* 8, no. 3 (2016), <https://doi.org/10.3390/su8030259>.

²⁹ Handing Guo, Wanzhen Qiao, and Yuehong Zheng, "Effectiveness Evaluation of Financing Platform Operation of Buildings Energy Saving Transformation Using ANP-Fuzzy in China: An Empirical Study," *Sustainability (Switzerland)* 12, no. 7 (2020), <https://doi.org/10.3390/su12072826>.

³⁰ Perry C.Y. Liu, Huai Wei Lo, and James J.H. Liou, "A Combination of DEMATEL and BWM-Based ANP Methods For Exploring The Green Building Rating System In Taiwan," *Sustainability (Switzerland)* 12, no. 8 (2020): 3216, <https://doi.org/10.3390/SU12083216>.

³¹ Hariyani and Kusuma, "Green Sukuk-Based Project on Sustainable Waste Management in Indonesia."

³² Endri, "Permasalahan Pengembangan Sukuk Korporasi Di Indonesia Menggunakan Metode Analytical Network Process (ANP)," *Jurnal Keuangan Dan Perbankan* 13, no. 3 (2009): 359–72, <http://jurnal.unmer.ac.id/index.php/jkdp/article/view/1085>; Nila Dewi, "Mengurai Masalah Pengembangan Sukuk Korporasi," *Tazkia: Islamic Finance and Business Review* 6, no. 2 (2011).

³³ Thomas L. Saaty, "The Analytic Hierarchy and Analytic Network Processes for the Measurement of Intangible Criteria and for Decision-Making," in *Multiple Criteria Decision Analysis: State of the Art Surveys*, ed. Salvatore Greco, Matthias Ehrgott, and José Rui Figueira, vol. 233, International Series in Operations Research & Management Science (New York, NY: Springer New York, 2016), 363–419, https://doi.org/10.1007/978-1-4939-3094-4_10.

Table 1 Numerical and Verbal Rating Scale

Numerical Scale	Verbal Rating Scale
1	Equally important
3	Importance currently
5	Importance strong
7	Importance very strong
9	Very very important
2, 4, 6, 8	Intermediate value
Use vice versa for comparison backwards	

Source: Saaty, 2006 (processed by author)

In the last stage, all the results of ANP network processing based on respondents are put together. Then the data is processed by calculating the geometric mean and rater agreement. To add up the value of agreement between respondents, it is done by calculating the value of Kendall's Coefficient of Concordance and then interpreting the results of the geometric mean of all respondents. From the results search to literature earlier, was found variables that will used in this study. The variables are:

Table 2 Variables used in research

Aspect	Problem	Explanation	Solution	Explanation
Market players	Lack of Understanding and awareness ³⁴	Both from the side of investors who are still not aware of the importance of green investment, and also from the side of companies that are still not interested in green financing. In	Outreach and education ³⁵	Good outreach from the government by collaborating with all the ministers involved to generate interest and awareness from market players.

³⁴ Hariyani and Kusuma, "Green Sukuk-Based Project on Sustainable Waste Management in Indonesia"; S Nehal, "Green Sukuk—A Viable Global Financing Option for Climatic and Environmental Revolution (A Practical Instrument for the Development of Sustainable Energy Projects ...," *Journal of Socio-Economic and Religious Studies*, 2021, <http://jsers.org/index.php/jsers/article/view/23>; Prakash and Sethi, "A Review of Innovative Bond Instruments For Sustainable Development in Asia"; Yuliawati, Rani, and Assyofa, "Efektivitas Implementasi Green Financing Sebagai Alternatif Pembiayaan Berkelanjutan Bagi UMKM Sektor Industri Pengolahan Alas Kaki Di Kota Bandung"; Abubakar and Handayani, "Green Sukuk: Sustainable Financing Instruments for Infrastructure Development in Indonesia."

³⁵ Dalal Aassouli et al., *Green Sukuk, Energy Poverty, and Climate Change: A Roadmap for Sub-Saharan Africa*, *World Bank Policy Research Working Paper Series* (World Bank, Washington, DC, 2018), <https://doi.org/10.1596/1813-9450-8680>; Prakash and Sethi, "A Review of Innovative Bond Instruments For Sustainable Development in Asia"; Pratanjana and Simbolon, "Issuance of Green Bond For Sustainable Development of Peatlands"; Dragica Stojanović, "Green Bonds as an Instrument for Financing Renewable Energy Projects," in *The 4th Conference of Economics and Manajement* (Ljubljana, 2020); Dewi et al., "Tinjauan Sukuk Korporasi Di Indonesia Dari Perspektif Penawaran, Permintaan Dan Regulasi."

		addition to this, the understanding of the actors is still minimal about the financing scheme		
	Industries that label themselves as 'Green' ³⁶	Projects that label themselves as green projects respond to climate change in the world to attract public sympathy.	Corporate supervision ³⁷	The regulator responsible for this instrument must be more vigilant in supervising the progress of the project.
			Project evaluation and selection ³⁸	Regulators must also be more selective in passing projects that are truly green in order to prevent losses from various parties and create a bad green image for sukuk.
Product Characteristics	Limited variety of contracts ³⁹	Variations in contracts that are still difficult for companies to implement make companies reluctant to issue of green sukuk. Coupled with the complexity of the product from the green bond itself.	Socialization of corporate sukuk contracts ⁴⁰	Socialization related to contracts or types of sukuk that are appropriate and suitable for use by companies to issue green sukuk.
	Expensive administrative costs ⁴¹	The lack of public interest has caused the issuance	Global promotion ⁴²	Massive promotion globally is needed to attract investors so

³⁶ Raymond Ling Leh Bin et al., "Feasibility Of Green Bonds Issuance In Malaysia Towards Financing A Sustainable Future–A Conceptual Review Of Literatures," in *Global Conference on Business and Economics Research (GCBER)* (Selangor: econ.upm.edu.my, 2017).

³⁷ Bin et al.; Moghul and Safar-Aly, "Green Sukuk: The Introduction of Islam ' s Environmental Ethics to Contemporary Islamic Finance"; Morea and Poggi, "An Innovative Model For the Sustainability of Investments in the Wind Energy Sector: The Use of Green Sukuk in an Italian Case Study"; Yuliawati, Rani, and Assyofa, "Efektivitas Implementasi Green Financing Sebagai Alternatif Pembiayaan Berkelanjutan Bagi UMKM Sektor Industri Pengolahan Alas Kaki Di Kota Bandung."

³⁸ Abubakar and Handayani, "Green Sukuk: Sustainable Financing Instruments for Infrastructure Development in Indonesia"; Azhgaliyeva, Kapoor, and Liu, "Green Bonds For Financing Renewable Energy And Energy Efficiency in South-East Asia: A Review of Policies."

³⁹ Dewi et al., "Tinjauan Sukuk Korporasi Di Indonesia Dari Perspektif Penawaran, Permintaan Dan Regulasi."

⁴⁰ Dewi et al.

⁴¹ Bin et al., "Feasibility Of Green Bonds Issuance In Malaysia Towards Financing A Sustainable Future–A Conceptual Review Of Literatures"; Morea and Poggi, "An Innovative Model For the Sustainability of Investments in the Wind Energy Sector: The Use of Green Sukuk in an Italian Case Study"; Stojanović, "Green Bonds as an Instrument for Financing Renewable Energy Projects"; Serena Fatica and Roberto Panzica, "Green Bonds as a Tool Against Climate Change?," *Business Strategy and the Environment* 30, no. 5 (July 19, 2021): 2688–2701, <https://doi.org/10.1002/bse.2771>; Nehal, "Green Sukuk–A Viable Global Financing Option for Climatic and Environmental Revolution (A Practical Instrument for the Development of Sustainable Energy Projects ..."; Taghizadeh-Hesary, Yoshino, and Phoumin, "Analyzing the

Identify the Issuance Problem of Corporate Green Sukuk in Indonesia

		administration costs to swell but minimal demand. In addition, this small demand causes the funds to be collected to be small while the needs to be financed for green projects are quite large.		that this expensive admin fee will be covered by the large number of investor requests.
Regulation	The absence of standard regulations ⁴³	<i>green actors financing</i> to the extent that the boundaries of what projects include <i>green</i> projects that can be funded with <i>green</i> sukuk have not been clearly laid down.	Revision of laws and regulations ⁴⁴	Revision of legislation related to <i>green</i> sukuk as well as clarifying existing laws so that there is no confusion or mixing between <i>green</i> sukuk and <i>green</i> bonds or other investment instruments. This is to make it easier for market players,

Characteristics of Green Bond Markets to Facilitate Green Finance in the Post-COVID-19 World”; Shakizada Niyazbekova et al., “Green Bonds a Tool For Financing Green Projects in Countries,” ed. V. Breskich and S. Uvarova, *E3S Web of Conferences* 244 (March 19, 2021): 10060, <https://doi.org/10.1051/e3sconf/202124410060>.

⁴² U Berdiyev, “Towards Green Economy: Green Bonds,” *International Finance and Accounting*, 2020, <https://uzjournals.edu.uz/interfinance/vol2020/iss4/22/>; Bin et al., “Feasibility Of Green Bonds Issuance In Malaysia Towards Financing A Sustainable Future–A Conceptual Review Of Literatures”; Prakash and Sethi, “A Review of Innovative Bond Instruments For Sustainable Development in Asia”; Aassouli et al., *Green Sukuk, Energy Poverty, and Climate Change: A Roadmap for Sub-Saharan Africa*; Evita Meilani, “Studi Kelayakan Pengembangan Energi Baru Terbarukan Di Sektor Pembangkit Listrik Tenaga Air Pada PT. Indonesia Power Melalui Pembiayaan Green Sukuk” (Universitas Brawijaya, 2017).

⁴³ Morea and Poggi, “An Innovative Model For the Sustainability of Investments in the Wind Energy Sector: The Use of Green Sukuk in an Italian Case Study”; Stojanović, “Green Bonds as an Instrument for Financing Renewable Energy Projects”; Azhgaliyeva, Kapoor, and Liu, “Green Bonds For Financing Renewable Energy And Energy Efficiency in South-East Asia: A Review of Policies”; C T Brahim and K Rezzig, “The Contribution of Green Islamic Sukuk to The Promotion of Sustainable Development Objectives-Opportunities and Challenges,” *مجلة الاقتصاد الجديد* 9 (2018), <https://www.asjp.cerist.dz/en/article/60503>; Dewi et al., “Tinjauan Sukuk Korporasi Di Indonesia Dari Perspektif Penawaran, Permintaan Dan Regulasi”; Suherman, Noor, and Manzilati, “Identifikasi Potensi Pasar Green Sukuk Republik Indonesia”; Abubakar and Handayani, “Green Sukuk: Sustainable Financing Instruments for Infrastructure Development in Indonesia.”

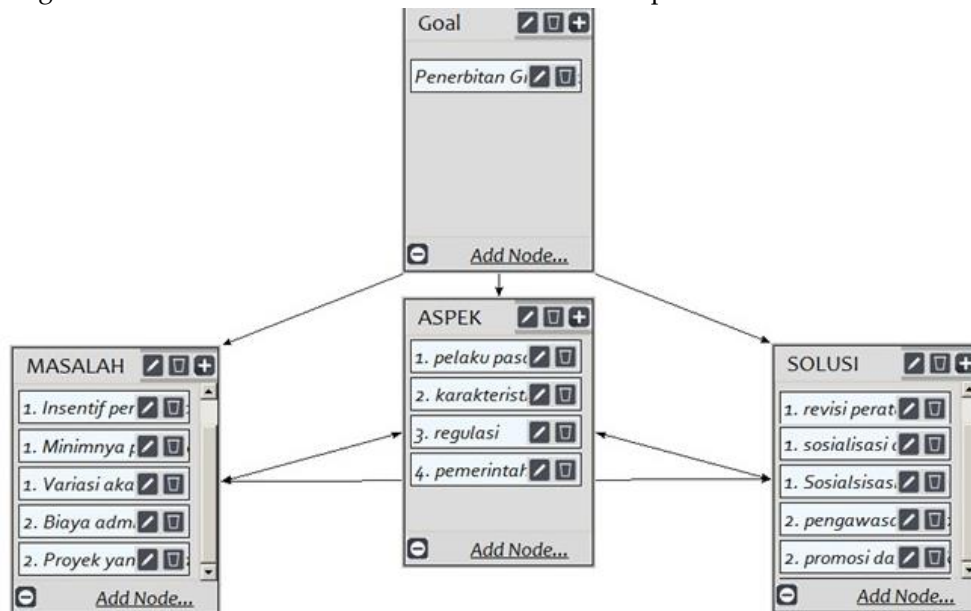
⁴⁴ Aassouli et al., *Green Sukuk, Energy Poverty, and Climate Change: A Roadmap for Sub-Saharan Africa*; Abubakar and Handayani, “Green Sukuk: Sustainable Financing Instruments for Infrastructure Development in Indonesia”; Bin et al., “Feasibility Of Green Bonds Issuance In Malaysia Towards Financing A Sustainable Future–A Conceptual Review Of Literatures”; Fatica and Panzica, “Green Bonds as a Tool Against Climate Change?”; Moghul and Safar-Aly, “Green Sukuk : The Introduction of Islam ’ s Environmental Ethics to Contemporary Islamic Finance”; Morea and Poggi, “An Innovative Model For the Sustainability of Investments in the Wind Energy Sector: The Use of Green Sukuk in an Italian Case Study”; Prakash and Sethi, “A Review of Innovative Bond Instruments For Sustainable Development in Asia”; Stojanović, “Green Bonds as an Instrument for Financing Renewable Energy Projects”; Taghizadeh-Hesary, Yoshino, and Phoumin, “Analyzing the Characteristics of Green Bond Markets to Facilitate Green Finance in the Post-COVID-19 World.”

				especially from the issuer side, so that they are encouraged to issue <i>green</i> sukuk. In making this regulation, of course, there must be collaboration from all ministers or stakeholders involved in <i>green</i> sukuk, both from the minister of finance, the minister of environment and the minister of social welfare.
Government	Incentive ⁴⁵	There is still a lack of incentives provided by the government as a form of support to companies.	Incentive push ⁴⁶	The existence of incentive assistance from the government for industries that apply <i>green</i> sukuk will motivate issuers to remain consistent in issuing <i>green</i> sukuk.

Result and Discussion

Respondents in this study consisted of 5 (five) experts in research problems. Based on a literature review and interviews with respondents, the feedback network for research on corporate green sukuk issuance in Indonesia in Super Decisions is as follows:

Figure 2. Research Feedback Network Issuance of Corporate Green Sukuk in Indonesia



⁴⁵ Morea and Poggi, "An Innovative Model For the Sustainability of Investments in the Wind Energy Sector: The Use of Green Sukuk in an Italian Case Study."

⁴⁶ Pratanjana and Simbolon, "Issuance of Green Bond For Sustainable Development of Peatlands."

The results of data processing using Super Decision software and Microsoft Excel obtained results in tabular form as follows:

Table 3. Answer Data Processing Results Whole Research Respondents

ASPECT	GM	PRIORITY
Government	0.057522	1
Regulation	0.056005	2
Market Participants	0.045314	3
Product Characteristics	0.034492	4
PROBLEM		
The lack of understanding	0.039126	1
Absence of incentives	0.032528	2
The absence of standard regulations	0.029993	3
Projects that label themselves as 'Green' projects	0.026904	4
Cost Expensive administration	0.023365	5
Limited contract variations	0.018922	6
SOLUTION		
Incentives from the government	0.049483	1
Outreach and education	0.032531	2
Revision of laws and regulations	0.025531	3
Socialization of corporate sukuk contracts	0.021965	4
Project evaluation and selection	0.021176	5
Global promotion	0.017134	6
Corporate supervision	0.017078	7

The research results will be described per cluster in this study. In terms of aspects of corporate green sukuk issuance. The value of each aspect in the figure above is the Aspect of Market Players with a value of 0.045314, Product Characteristics with a value of 0.034492, then Regulation with a value of 0.056005 and Government with a value of 0.057522. So the priority aspect in issuing corporate green sukuk is the Government and followed by Regulations.

Subsequent results in terms of the Issue of Corporate Green Sukuk issuance, the mean geometric value is obtained from the lack of understanding of 0.039126, while from the criteria for projects that label themselves as 'Green' projects of 0.026904. Then from the limited contract variations of 0.018922 and expensive administrative costs of 0.023365. From the problem of the absence of standard regulations with a mean geometric value of 0.029993. And from the problem of the absence of incentives of 0.032528.

Of all the problems, the lack of understanding of market players is the priority problem in issuing corporate green sukuk, then followed by the absence

of incentives from the government and in third position there is the problem of the absence of standard regulations.

In terms of solutions, it was found that solutions for incentives from the government had the highest priority with a score of 0.049483, followed by outreach and education with a score of 0.03253. Furthermore, in the third position there is a revision of laws and regulations with a value of 0.032531. The fourth position and so on sequentially are socialization of corporate sukuk contracts with a value of 0.021965, project evaluation and selection with a value of 0.021176, global promotion with a value of 0.017134 and the last position is corporate supervision with a value of 0.07078.

The answers of the questionnaire submitted to all respondents then calculated the value of the rater agreement. Kendall's Coefficient Concordance is a tool used in determining the rater agreement. The results obtained are as follows:

Table 4. The P-Value of the Rater Agreement

CLUSTER	RATER AGREEMENT	P-VALUE
Aspect	0.116504854	0.6264096
Problem	0.125283019	0.6796320
Solution	0.210764675	0.3880030

From these results, the value of W which is between $0 < W < 1$ means that there are no respondents who as a whole do not agree or unanimously agree. The p-value of all clusters is above 1%, 5% or 10% which means that there is no significant agreement from all respondents in each cluster.

Problems Issuance of Corporate Green Sukuk

The priority problem in issuing corporate green sukuk is the lack of understanding of market players. Good understanding of sukuk products in general, to the advantages and benefits of sukuk and green sukuk, of course. In terms of issuers or companies, there are still many who do not understand green sukuk products up to the publishing steps.

The condition of a company without green sukuk that is still doing fine, of course, makes the company not glance at or try to find out about green sukuk in depth. Not to mention knowing the problems related to the sukuk product itself, makes companies even less interested in knowing more about green sukuk. This is in line with the findings of Abubakar and Handayani (2020) who said that the understanding of green sukuk is a crucial issue in Indonesia, both in terms of issuers, companies and even regulators. According to him, this lack of understanding will have an impact on the success of issuing corporate green sukuk.

The second priority is from the government aspect, namely the lack of incentives from the government for companies issuing green sukuk. One of the

problems companies are reluctant to issue corporate green sukuk is because the costs incurred to issue corporate green sukuk are quite high. No assistance from the government makes companies even more reluctant to issue corporate green sukuk. According to Morea and Poggi (2017), incentives from the government will really help overcome the relatively large cost of green sukuk, so that companies will be motivated to issue green sukuk.

The third priority problem is there are no standard regulations from a regulatory aspect. There are no standard regulations governing the issuance of green sukuk by corporations, making corporations reluctant to issue green sukuk. An example is the obligation to have an SPV in issuing green sukuk. While in Indonesia there are no regulations governing the establishment of SPV by companies. If a company wants to establish an SPV, then the company must choose the form of the SPV, whether it is a foundation, institution or firm and so on, which are permanent in nature. While the SPV itself is basically needed only to issue sukuk which is as old as the sukuk itself. Even though you can make other companies as SPV, this problem will return to the problem of the costs involved being quite expensive.

Corporate Green Sukuk Issuance Solution

Incentive encouragement is the main solution in issuing corporate green sukuk originating from the government aspect. Even though the incentive problem cluster is not the first priority, the incentive encouragement solution is the first solution. This shows that incentives from the government can be very helpful and motivate companies to study and understand corporate green sukuk. Incentives from the government will certainly assist the government in overcoming the problem of the expensive cost of issuing green sukuk.

The second solution is outreach and education. Seeing the previous results regarding the first priority problem, the second priority solution is more lively and deeper outreach and education to all market participants, both from the company and investor perspective. Of course, carrying out this socialization and education requires the integrity of many parties, both from the perspective of regulators, government and academics. It is hoped that with a good understanding of market participants, the green sukuk market will deepen and continue to grow, so that green sukuk instruments can be truly useful for solving environmental problems, in addition to receiving investment benefits.

Regulatory revision is the third priority. Regulators are expected to be able to revise and strengthen all laws and regulations regarding corporate green sukuk. But of course the good revision of regulations will work well if stakeholders or regulators have a good understanding of corporate green sukuk, considering that the main problem with issuing corporate green sukuk is the lack of understanding which also includes the understanding of regulators.

Seeing that socialization solutions are the second priority even though understanding problems are the first priority, and incentive-driven solutions are the first priority even though incentive problems are the second priority, it can be concluded that costs are also again become a solution to overcoming the main

problem. This is because, to carry out outreach and education, support costs are still needed.

Conclusion

Based on the results and discussion of the research in the previous chapter, it can be concluded that the main problem with companies' reluctance to issue corporate green bonds is the lack of understanding from market participants. Even though the aspect of Market Actors is in third place, problems from market players are priority issues that must be addressed immediately. While the priority solution from the answers of all respondents is the Incentive Drive from the Government aspect. The Government aspect is also the aspect with the highest priority. Even though the problem of incentives is not the first problem, encouragement of incentives is the first solution, because providing education to overcome the first problem also requires costs, one of which can come from encouraging government incentives.

References

- Al-Qur'an Translation, Ministry of Religion of the Republic of Indonesia
- Aassouli, Dalal, Mehmet Asutay, Mahmoud Mohieldin, and Tochukwu Chiara Nwokike. *Green Sukuk, Energy Poverty, and Climate Change: A Roadmap for Sub-Saharan Africa. World Bank Policy Research Working Paper Series*. World Bank, Washington, DC, 2018. <https://doi.org/10.1596/1813-9450-8680>.
- Abdillah, Rizki, and Sahabudin Sidiq. "Dampak Faktor Internal Dan Ekstrenal Terhadap Penerbitan Sukuk Korporasi Di Indonesia." Universitas Islam Indonesia, 2018. <https://dspace.uui.ac.id/handle/123456789/8832>.
- Abubakar, Lastuti, and Tri Handayani. "Green Sukuk: Sustainable Financing Instruments for Infrastructure Development in Indonesia." In *Proceedings of the 1st Borobudur International Symposium on Humanities, Economics and Social Sciences (BIS-HESS 2019)*, 983–87. Paris, France: Atlantis Press, 2020. <https://doi.org/10.2991/assehr.k.200529.206>.
- Ardiansyah, Ivan Hannoeriadi, and Deni Lubis. "Pengaruh Variabel Makroekonomi Terhadap Pertumbuhan Sukuk Korporasi Di Indonesia." *Al-Muzara'ah* 5, no. 1 (February 5, 2018): 51–68. <https://doi.org/10.29244/jam.5.1.51-68>.
- Ascarya. "Analytic Network Process (ANP): Pendekatan Baru Studi Kualitatif." In *Seminar Intern Program Magister Akuntansi Fakultas Ekonomi Di Universitas Trisakti*. Jakarta: Program Magister Akuntansi Fakultas Ekonomi Universitas Trisakti, 2005.
- Ascarya, and Atika Masrifah. "Aplikasi Analytic Network Process Menggunakan SuperDecision 2.2.6." *Unpublished*, 2014, 1–7.
- Azhgaliyeva, Dina, Anant Kapoor, and Yang Liu. "Green Bonds For Financing Renewable Energy And Energy Efficiency in South-East Asia: A Review of Policies." *Journal of Sustainable Finance & Investment* 10, no. 2 (April 2, 2020): 113–40. <https://doi.org/10.1080/20430795.2019.1704160>.

- Berdiyev, U. "Towards Green Economy: Green Bonds." *International Finance and Accounting*, 2020. <https://uzjournals.edu.uz/interfinance/vol2020/iss4/22/>.
- Bin, Raymond Ling Leh, Siti Nurhidayah Mohd Roslen, Salizatul Aizah Ibrahim, Lee Sin Yee, and Tung Soon Theam. "Feasibility Of Green Bonds Issuance In Malaysia Towards Financing A Sustainable Future–A Conceptual Review Of Literatures." In *Global Conference on Business and Economics Research (GCBER)*. Selangor: econ.upm.edu.my, 2017.
- Brahim, C T, and K Rezzig. "The Contribution of Green Islamic Sukuk to The Promotion of Sustainable Development Objectives-Opportunities and Challenges." *مجلة الاقتصاد الجديد* 9 (2018). <https://www.asjp.cerist.dz/en/article/60503>.
- Chung, Chih Chao, Li Chung Chao, and Shi Jer Lou. "The Establishment Of a Green Supplier Selection and Guidance Mechanism with The ANP and IPA." *Sustainability (Switzerland)* 8, no. 3 (2016). <https://doi.org/10.3390/su8030259>.
- Dewi, Divina Mahardika, Lucky Nugroho, Citra Sukmadilaga, and Tettet Fitijanti. "Tinjauan Sukuk Korporasi Di Indonesia Dari Perspektif Penawaran, Permintaan Dan Regulasi." *Journal of Business and Economics Research (JBE)* 1, no. 1 (2020): 11–16.
- Dewi, Nila. "Mengurai Masalah Pengembangan Sukuk Korporasi." *Tazkia: Islamic Finance and Business Review* 6, no. 2 (2011).
- Endri. "Permasalahan Pengembangan Sukuk Korporasi Di Indonesia Menggunakan Metode Analytical Network Process (ANP)." *Jurnal Keuangan Dan Perbankan* 13, no. 3 (2009): 359–72. <http://jurnal.unmer.ac.id/index.php/jkdp/article/view/1085>.
- Fatica, Serena, and Roberto Panzica. "Green Bonds as a Tool Against Climate Change?" *Business Strategy and the Environment* 30, no. 5 (July 19, 2021): 2688–2701. <https://doi.org/10.1002/bse.2771>.
- Guo, Handing, Wanzhen Qiao, and Yuehong Zheng. "Effectiveness Evaluation of Financing Platform Operation of Buildings Energy Saving Transformation Using ANP-Fuzzy in China: An Empirical Study." *Sustainability (Switzerland)* 12, no. 7 (2020). <https://doi.org/10.3390/su12072826>.
- Hariyani, Happy Febrina, and Hendra Kusuma. "Green Sukuk-Based Project on Sustainable Waste Management in Indonesia." *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah* 12, no. 2 (2020): 165–78. <https://doi.org/10.15408/aiq.v12i2.15129>.
- Hasanah, Miftahul. "Implikasi Penerbitan Sukuk Terhadap Kinerja Keuangan Dan Kesejahteraan Karyawan (Studi Pada Bank Muamalat Indonesia)." *Indonesian Journal of Islamic Economics and Finance* 1, no. 1 (2018): 14–31. <http://jurnalpasca.iain-jember.ac.id/ejournal/index.php/IJIEF/article/view/24>.
- Liu, Perry C.Y., Huai Wei Lo, and James J.H. Liou. "A Combination of DEMATEL and BWM-Based ANP Methods For Exploring The Green Building Rating System In Taiwan." *Sustainability (Switzerland)* 12, no. 8

- (2020): 3216. <https://doi.org/10.3390/SU12083216>.
- Meilani, Evita. "Studi Kelayakan Pengembangan Energi Baru Terbarukan Di Sektor Pembangkit Listrik Tenaga Air Pada PT. Indonesia Power Melalui Pembiayaan Green Sukuk." Universitas Brawijaya, 2017.
- Moghul, Umar F, and Samir Safar-Aly. "Green Sukuk : The Introduction of Islam ' s Environmental Ethics to Contemporary Islamic Finance." *Georgetown International Environmental Law Review (GIELR)* 27, no. 1 (2015).
- Moleong, Lexy J. *Metodologi Penelitian Kualitatif*. Revisi. Bandung: Remaja Rosdakarya, 2017.
- Morea, Donato, and Luigi Antonio Poggi. "An Innovative Model For the Sustainability of Investments in the Wind Energy Sector: The Use of Green Sukuk in an Italian Case Study." *International Journal of Energy Economics and Policy* 7, no. 2 (2017): 53–60.
- Nehal, S. "Green Sukuk–A Viable Global Financing Option for Climatic and Environmental Revolution (A Practical Instrument for the Development of Sustainable Energy Projects" *Journal of Socio-Economic and Religious Studies*, 2021. <http://jsers.org/index.php/jsers/article/view/23>.
- Niyazbekova, Shakizada, Luiza Moldashbayeva, Seyit Kerimkhulle, Nurdin Dzholdoshev, Tamara Dzholdosheva, and Madina Serikova. "Green Bonds a Tool For Financing Green Projects in Countries." Edited by V. Breskich and S. Uvarova. *E3S Web of Conferences* 244 (March 19, 2021): 10060. <https://doi.org/10.1051/e3sconf/202124410060>.
- OJK. "Statistik Sukuk November 2021." Jakarta, 2021.
- Pasaribu, Rowland Bismark Fernando, Dionysia Kowanda, and Akhmad Arief. "Pengungkapan Tanggung Jawab Sosial Korporat Pada Emiten Manufaktur Di Bursa Efek Indonesia." *Jurnal Riset Akuntansi Dan Keuangan* 13, no. 1 (August 14, 2017): 1. <https://doi.org/10.21460/jrak.2017.131.276>.
- Prakash, Nisha, and Madhvi Sethi. "A Review of Innovative Bond Instruments For Sustainable Development in Asia." *International Journal of Innovation Science* ahead-of-p, no. ahead-of-print (January 1, 2021). <https://doi.org/10.1108/IJIS-10-2020-0213>.
- Pratanjana, Naradipatya, and Gumanti Oloan Simbolon. "Issuance of Green Bond For Sustainable Development of Peatlands." *Sociae Polites* 21, no. 2 (December 9, 2020): 176–92. <https://doi.org/10.33541/sp.v21i3.2259>.
- PT. SMI. "Laporan Obligasi Berwawasan Lingkungan." Vol. 2021. Jakarta, 2022.
- Pungkasanti, Prind Triajeng. "Penerapan Analytic Network Process (ANP) Sebagai Sistem Pendukung Keputusan Dalam Pemberian Reward Dosen." Universitas Diponegoro Semarang, 2013.
- Risanti, Maurizka Alifia, Farouk Abdullah Alwyni, and Prameswara Samofa Nadya. "Peran Green Sukuk Dalam Mewujudkan Pembangunan Yang Berkelanjutan." *Prosiding Konferensi Nasional Ekonomi Manajemen Dan Akuntansi (KNEMA)* 1, no. 1 (2021).
- Saaty, Thomas L. "The Analytic Hierarchy and Analytic Network Processes for the Measurement of Intangible Criteria and for Decision-Making." In

- Multiple Criteria Decision Analysis: State of the Art Surveys*, edited by Salvatore Greco, Matthias Ehrgott, and José Rui Figueira, 233:363–419. International Series in Operations Research & Management Science. New York, NY: Springer New York, 2016. https://doi.org/10.1007/978-1-4939-3094-4_10.
- Santoso, Erdinda, and Rachma Indra Rini. "Analisis Pengaruh Marketing Mix Terhadap Minat Masyarakat Membeli Sukuk." *Al-Iqtishadiyah: Jurnal Ekonomi Syariah Dan Hukum Ekonomi Syariah* 6, no. 2 (2020): 86–98. <https://doi.org/http://dx.doi.org/10.31602/al%20iqtishadiyah.v6i2.3244>.
- Santoso, Ivan Rahmat, and Fahrudin Zain Olilingo. "Green Sukuk Dan Tujuan Pembangunan Ekonomi Berkelanjutan: Peran Dalam Meningkatkan Mitigasi Terhadap Perubahan Iklim," 2019.
- Stojanović, Dragica. "Green Bonds as an Instrument for Financing Renewable Energy Projects." In *The 4th Conference of Economics and Manajement*. Ljubljana, 2020.
- Sugiyono, Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*. Bandung: Alfabeta, 2017.
- Suherman, and Asfi Manzilati. "Identifikasi Potensi Penerbitan Green Sukuk Di Indonesia." *Jurnal Ilmiah Mahasiswa Fakultas Ekonomi Dan Bisnis* 5, no. 1 (2016): 1–21.
- Suherman, Iswan Noor, and Asfi Manzilati. "Identifikasi Potensi Pasar Green Sukuk Republik Indonesia." *Human Falah: Jurnal Ekonomi Dan Bisnis Islam* 6, no. 1 (2019): 37–53.
- Sumolang, Sharon M. "Bencana Bertubi-Tubi, Kok Masih Cuek Sama Krisis Iklim?" Indonesia, 2021. <https://www.instagram.com/p/CSWQxCFhAq0/>.
- Taghizadeh-Hesary, Farhad, Naoyuki Yoshino, and Han Phoumin. "Analyzing the Characteristics of Green Bond Markets to Facilitate Green Finance in the Post-COVID-19 World." *Sustainability* 13, no. 10 (May 20, 2021): 5719. <https://doi.org/10.3390/su13105719>.
- Yuliawati, Tia, Asni Mustika Rani, and Allya Roosallyn Assyofa. "Efektivitas Implementasi Green Financing Sebagai Alternatif Pembiayaan Berkelanjutan Bagi UMKM Sektor Industri Pengolahan Alas Kaki Di Kota Bandung." *Universitas Islam Bandung Repository*, 2017. <http://repository.unisba.ac.id/handle/123456789/18645>.