

# GREEN BONDS IN INDONESIA: SYNERGY BETWEEN BANK INDONESIA AND OTORITAS JASA KEUANGAN

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## Abstract

Green bonds promoted by the World Bank have supported developing countries in to mitigate climate change. Indonesia is one county that has issued green bonds through *Bank Indonesia* and *Otoritas Jasa Keuangan* (the Indonesian financial services authority or OJK). The synergy between these institutions in issuing green bonds has contributed to their effectiveness. Thus, this research focuses on (1) regulation of green bonds by the world bank, (2) collaboration between Bank Indonesia and OJK *in* facing the future threat, and (3) the implementation of the World Bank's green bonds program in contributing to Indonesia's environmental programs. The research illustrates that the World Bank regulation of green bonds consists of soft law recommendations as guidance for countries' national laws. In their collaboration, BI and OJK are now focusing on developing a Sustainable Finance Instruments (SFI) to stimulate the growth of a green and sustainable economy. In Indonesia's Environmental Development, the OJK has complimented most of the World Bank's principles on green bonds regulation. However, the OJK needs to improve the principle of the green bonds-based project. This research is normative-descriptive, applying legal and conceptual approaches to addressing these issues problems.

**Keywords:** *Green Bonds; Bank Indonesia; Otoritas Jasa Keuangan*

## I. INTRODUCTION

Climate change has become the core issue of globalisation, especially for developing countries. Therefore, there is an urgency for projects that possibly eliminate poverty, hunger, and diseases, as well as increasing incomes for the populations of developing countries. The mentioned issues are impacts on temperature, precipitation, sea level, and natural disasters frequency in correlation with the weather, which cause jeopardises food and water supply.<sup>1</sup>

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<sup>1</sup> World Bank, "Development and Climate Change : A Strategic Framework for the World Bank Group - Technical Report" (Washington D. C., 2008).

Based on that, the World Bank established the idea of supporting developing countries and contributing to a global solution.<sup>2</sup> This effort is called World Bank Green Bonds, published in the Strategic Framework for Development and Climate Change in 2008.<sup>3</sup>

Green Bonds are a form of loan that offers fixed payment and an agreement to use the funding for a project, partially or fully. The bond is voluntary and could be organised by funding institutions, governments, and corporations. The specific nature of green bonds is that parties who provide the funding must ensure that the investment is an environmental-based project (green project) such as energy renewal, energy efficiency, carbon emission reduction, and many more.<sup>4</sup> Green bonds strengthens partnerships with each country's government and international organisations or agencies.<sup>5</sup> Previously, green bonds were first founded by the European Investment Bank (EIB) in 2007. Initially, green bonds did not have a significant publication existed. However, three years after the development of markets was launched and accompanied by the World Bank, the program of green bonds has been implemented in various countries.<sup>6</sup>

One of the main issues with sustainability that has received global and Indonesian attention is the impact of climate change on economic growth and the financial system. This has been demonstrated by Indonesia's commitment in the 2015 Paris Agreement to contribute to limiting global warming by not exceeding the two degrees Celsius threshold and trying not to exceed the 1.5 degrees Celsius maximum compared with the time before the industrial revolution. Indonesia is one of the countries that implemented green bonds programs. The main factor of the implementation is the natural resources in Indonesia that act as an asset and source of development funds.<sup>7</sup> This has severely exposed Indonesia to climate change since its funding is dependent on environmental quality.<sup>8</sup> In this respect, Bank Indonesia (BI), as the monetary

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<sup>2</sup> Frank Damerow, "Green Bonds: A Key Catalyst Within the Broader Subject of Climate Finance Post COP21," 2018, 113–43, [https://doi.org/10.1007/978-3-319-10118-7\\_6](https://doi.org/10.1007/978-3-319-10118-7_6).

<sup>3</sup> "What Are Green Bonds?," accessed December 21, 2021, <https://www.worldbank.org/en/topic/climatechange/brief/what-are-green-bonds>.

<sup>4</sup> Millet, T. 2018. *Green bonds: a Fresh Look at Financing Green Projects*. United Kingdom: Ernst & Young.

<sup>5</sup> The World Bank, "Realizing the World Bank Group's Knowledge Potential for Effective Development Solutions : A Strategic Framework" (Washington D. C., 2021).

<sup>6</sup> Dwi Elok Indriastuty, Pujianto, Antok Widiantoro, "Policy Direction and Regulation of Green Bonds in Indonesia," *Journal of Law, Policy and Globalization* 101 (2020), <https://doi.org/10.7176/JLPG/101-03>.

<sup>7</sup> Sri Nurhayati Qodriyatun, "Terbaikannya Lingkungan Hidup Dalam Pembangunan," *Info Singkat Kesejahteraan Sosial* 8, no. 24 (2016): 11–22.

<sup>8</sup> Samantha Jo Weisman, "Financing Climate Change: A Nonpecuniary Benefit of the Issuance of Municipal Green Bonds" (San Diego State University, 2021).

authority, has contributed to developing green and sustainable instruments to encourage green investment in Indonesia. BI continues to increase understanding and awareness of sustainable finance through relevant capacity building. This was raised in a virtual workshop with BI's theme "Sustainable Finance and Climate Change Impact," held from October 25 to 27, 2021. This series of workshops are expected to enrich the knowledge and understanding of all participants in continuing efforts to develop sustainable finance, including developing Green and Sustainable instruments for the Indonesian market. As of now, the closest Ministry of Finance Regulation on green bonds is Ministry of Finance Regulation No. 31/PMK.08/2018 concerning Sales of Retail Government Securities in the Prime Domestic Market.<sup>9</sup>

Additionally, Indonesia through Indonesia's Financial Services Authorities or OJK has a vision for environmental development evinced by the formation of a Roadmap for Sustainable Finance 2015-2019. The Roadmap for Sustainable Finance in Indonesia is defined as the full support from the financial services industry for sustainable development as a result of harmony between economic, social, and environmental importance.<sup>10</sup> Moreover, one of the steps to implementing sustainable finance in Indonesia is through green bonds inspired by the World Bank. By issuing green bonds as one of Indonesia's projects to balance environmental qualities with the economy as an indicator of the level of economic development, the author describes regulations of green bonds according to the World Bank and its implementation as an environmental development in Indonesia.<sup>11</sup>

There has been voluminous research discussing the green bonds, including but not limited to articles published by Abdul Syukur At-Tibasiy et al., who highlighted that Green mechanisms consist of determining the principal amount of Green Bonds, Green Bonds offering prices, Green Bond periods, Green Bond series and coupons, Green Bond ratings, Green Bond guarantees, Rights of Green Bondholders, General Meetings of Green Bond Holders (RUPO), the use of proceeds from the Green Bond public offerings, and an explanation regarding prioritised Environmental-Based Business Activities (KUBL) as well as reporting on the use of Green Bond funds, including but not limited to the method and place of settlement or payment. In other words, this research only elaborates on the general mechanism for issuance of green bond outside

<sup>9</sup> Tiza Yaniza et al., "Landasan Hukum Penerbitan Green Sukuk Di Indonesia," *Jurnal Pendidikan Kewarganegaraan Undhiksa* 10, no. 2 (2022): 415–423, <https://doi.org/10.23887/jpku.v10i2.47197>.

<sup>10</sup> Financial Service Authority, Road Map for Sustainable Finance in Indonesia, 2014.

<sup>11</sup> Yakovlev Igor A and Nikulina Svetlana I, "Indonesia's Strategy for Sustainable Finance," *Financial Journal*, no. 6 (2019): 83–95, <https://doi.org/10.31107/2075-1990-2019-6-83-95>.

of the legal mechanisms.<sup>12</sup> Other scholars have suggested that green bonds implementation in Indonesia remains complicated. OJK regulations have been established to address these issues, especially regarding environmentally sourced investments.<sup>13</sup> This research leans more on how the OJK regulates the green bonds. Yet this research has left room for understanding how the OJK as a supervising institution supplements the guidelines provided by the World Bank.

Based on this groundbreaking research, we can see that there is room to see the mechanism of green bond issuance and regulation from a legal perspective. Considering that green bonds are a marriage of economic and environmental aspects, it will be interesting to observe how the OJK as an oversight institution, and Bank Indonesia, as Indonesia's central bank, collaborate in regulating the issuance of these bonds. The problems posed in this research are: (1) regulation of green bonds by the World Bank; (2) collaboration between Bank Indonesia and OJK to anticipate and address threats, and (3) integration of the World Bank green bonds program into Indonesia's environmental program. The research is a normative descriptive research that applies legal and conceptual approach. The data in this research are secondary data consisting of primary, secondary, and tertiary legal materials.

## II. REGULATION OF GREEN BONDS BY THE WORLD BANK

Green bonds are defined as loans, the proceeds of are invested in environmentally friendly ways.<sup>14</sup> The goal of issuing green bonds public is specifically to support environmental projects. This makes green bonds different from other bonds.<sup>15</sup> The World Bank is an international organisation that influences the global economy. The primary purpose of the World Bank is to reduce extreme world poverty.<sup>16</sup> In 2012, the World Bank spent one quarter of its budget

<sup>12</sup> Abdul Syukur At-Tibasiy, Fadly Mane, and Indah Yuliana, "Mekanisme Green Bond Di Indonesia," *Jurnal Al-Amwal: Jurnal Ekonomi Dan Perbankan Syariah* 11, no. 2 (2019): 259–72, <https://doi.org/10.24235/amwal.v11i2.4698>.

<sup>13</sup> Kevin Sebastian Josua L . Tobing , Wenny Setiawati, "Investment di Pasar Modal Indonesia sebagai Instrumen Investasi Dalam Penerapan Sustainable Investment di Pasar Modal Indonesia," *Technology and Economics Law Journal Volume* 1, no. 1 (2022): 19–35, <https://scholarhub.ui.ac.id/telj/vol1/iss1/2>.

<sup>14</sup> ECLAC Washington Office, "The Rise of Green Bonds: Financing for Development in Latin America and the Caribbean" (Washington D.C., 2017).

<sup>15</sup> Sharath Voleti, "Green Bonds-A Catalyst for Municipal Action Against Climate Change and the Age-Old Problem of Municipal Fiscal Capacity?" (Windsor, 2019).

<sup>16</sup> Michael A. Clemens and Michael Kremer, "The New Role for the World Bank," *Journal of Economic Perspectives* 30, no. 1 (2016): 53–76, <https://www.jstor.org/stable/43710010>.

on scientific interests.<sup>17</sup> On the other hand, the Sustainable Development Goals (SDGs) measures countries' economic progress initiated by the United Nations (UN).<sup>18</sup> Therefore, the World Bank encourages developing countries to issue green bonds. This program should more accurately be identified as the World Bank Green Bonds. To understand the program's implementation in a country's economic system, this research firstly explains the regulation of green bonds by the World Bank, which is **divided into three subtitles: principles, processes, and regulations.**<sup>19</sup>

## II.A. PRINCIPLES OF GREEN BOND REGULATION BY THE WORLD BANK

Regulation of World Bank green bonds is soft law, more like guidance or recommendations. In issuance of green bonds, there are several things to take note of:

### II.A.1. Specific Criteria of Green Bonds

A project that is funded through green bonds has an “environmentally friendly” characteristic and is known as a green bonds project. In implementing green bonds project, a country must understand the criteria for issuance of green bonds, including the definition of green bonds. The World Bank has established examples of projects that complement the World Bank's objectives and examples of projects that implement these objectives.<sup>20</sup> Examples of projects that complement the world bank objectives are (1) installations using sun and wind energy, as well as funding for advanced technology to reduce greenhouse gas transmission, (2) building to reduce greenhouse gas emissions, (3) increasing efficiency of transportation, especially in fuel switching and massive vehicles, (4) waste management (methane emission) and building construction based on efficient energy, and (5) carbon reduction through reforestation. Examples of projects that implements other objectives are: (1)

<sup>17</sup> Doerte Doemeland and James Trevino, “An Index to Quantify an Individual's Scientific Research Output,” *Proceedings of the National Academy of Sciences of the United States of America*, no. 6851 (November 2014): 1–32, <https://doi.org/10.1073/PNAS.0507655102>.

<sup>18</sup> Clarence Tolliver, Alexander Ryota Keeley, and Shunsuke Managi, “Policy Targets behind Green Bonds for Renewable Energy: Do Climate Commitments Matter?,” *Technological Forecasting and Social Change* 157 (August 1, 2020), <https://doi.org/10.1016/j.techfore.2020.120051>.

<sup>19</sup> Shakizada Niyazbekova et al., “‘Green’ Bonds- A Tool for Financing ‘Green’ Projects in Countries ,” *XXII International Scientific Conference Energy Management of Municipal Facilities and Sustainable Energy Technologies* 244 (March 2021): 10060, <https://doi.org/10.1051/E3SCONF/202124410060>.

<sup>20</sup> Kim Ee Yeow and Sin Huei Ng, “The Impact of Green Bonds on Corporate Environmental and Financial Performance,” *Managerial Finance* 47, no. 10 (October 4, 2021): 1486–1510, <https://doi.org/10.1108/MF-09-2020-0481/FULL/XML>.

protection from floods, (2) enhancement of food safety and (3) sustainable development from reforestation. Project cycles funded by the World Bank follow six steps, including country partnerships, identification, preparation, appraisal, board approval, implementation and supervision, implementation and completion, and evaluation.<sup>21</sup>

### **II.A.2. Allocating Proceeds of Green Bonds**

Briefly, allocating a budget from green bonds is allocated to dedicated accounts. This budget is then invested according to the World Bank's liquidity conservative policy and used to support green bonds projects. Funding request for the project is given to projects that fulfilled requirements based on IBRD's procedure and policy.<sup>22</sup> There are multiple rounds of funding over several years. When funding pays green bonds projects, an amount from the particular account is allocated to a general loan every three months.

### **II.A.3. Project Review and Report**

The World Bank supervises the execution all planned projects, including green bonds projects. Country clients engage in development projects according to the project's agreement loan.<sup>23</sup> The oversight process consists of regular activities which involve mid-review in the progress of each project. The government and the World Bank oversee a project's implementation, progress, result, and impact through the Green Bond Newsletter and Impact Report to generate data for evaluation and final operational reference as expected.<sup>24</sup>

### **II.A.4. Project Review and Report**

Projects that comply with the Green Bond Program's requirements must be in synergy with the World Bank protection policy and other procedure that ensures a project's integrity.<sup>25</sup> The consistency is valued individually in each project through an independent review of 4% of all projects. The assessor is the World Bank in environmental, social, and finance management.<sup>26</sup>

<sup>21</sup> Josué Banga, "The Green Bond Market: A Potential Source of Climate Finance for Developing Countries," *Journal of Sustainable Finance & Investment* 9, no. 1 (January 2, 2018): 17–32, <https://doi.org/10.1080/20430795.2018.1498617>.

<sup>22</sup> ECLAC Washington Office, "The Rise of Green Bonds: Financing for Development in Latin America and the Caribbean."

<sup>23</sup> Rossitto and Nicolo', "Green Bonds: An Alternative Source of Financing in the Era of Climate Change," April 26, 2021, <http://dspace.unive.it/handle/10579/18879>.

<sup>24</sup> Christopher Kaminker, Christine Majowski, and Rory Sullivan, "Green Bonds-Ecosystem, Issuance, Process and Case Studies," 2018.

<sup>25</sup> Elena Kiseleva, "Green Bonds as a Tool for Sustainable Development on Emerging Markets," *SSRN Electronic Journal*, November 13, 2019, <https://doi.org/10.2139/SSRN.3677681>.

<sup>26</sup> *The World Bank Green Bond Process Implementation Guideline*

### **III. GREEN BONDS FROM BANK INDONESIA'S PERSPECTIVE**

The International Finance Corporation released data on the transition from the use of brown energy, or the use of energy sources that cause pollution, to green energy, which has the potential to bring green investment in Indonesia to USD 458 billion. Green financing policies encourage the financial industry players to finance sectors that have minimal environmental damage. As a macroprudential authority, Bank Indonesia encourages environmentally friendly financing, among other ways, by providing incentives for financing for environmentally friendly property and motorised vehicles, in the form of easing the loan-to-value ratio policy or financing-to-value credit/property financing, as well as loan advances/battery-based electric motor vehicle financing.<sup>27</sup>

Bank Indonesia's environmental policy is consistent with the Sustainable Finance Instrument (SFI). SFI can offer improvement in three ways. First, the significance of developing green financial tools and investments to achieve inclusive and sustainable economic growth. This can be a source of fresh growth, job expansion, and support for the 2030 Paris Agreement targets. The importance of creating an ecosystem of sustainable financial instruments is a secondary consideration. This can be accomplished with the support of all relevant parties through incentive and disincentive policies, including the construction of resilient infrastructure, and the inclusion of other critical elements such as green definitions, verification services, green certification bodies, and providers of green ratings. Bank Indonesia and the government can contribute to the development of green ecosystems in Indonesia through policies and support for green financial instruments, green and inclusive financing for MSMEs, and sustainable sharia economy and finance. Third, capacity-building initiatives and continued technical assistance are critical for expanding all parties' awareness and experiences. The success of SFI development is determined by strong collaboration, cohesion, and mutual support among all stakeholders.<sup>28</sup> Alternative sustainable instruments are available on the international market, including green bonds, sustainable bonds, sustainable linked bonds, and money market instruments such as negotiable certificates of deposit and convertible instruments. There is also a key performance indicator linked to derivative instruments, all of which integrate green, social, and sustainable aspects.

As the monetary, macroprudential, and payment system authority, Bank Indonesia has an increased role in mitigating climate threats. It has promulgated

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<sup>27</sup> Bank Indonesia, "BI Kembangkan Instrumen Pasar Keuangan Hijau Untuk Dorong Pembiayaan Ekonomi," Pers Conference, 2021, [https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp\\_2327321.aspx](https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_2327321.aspx).

<sup>28</sup> Bank Indonesia, "Bersama Mendorong Instrumen Keuangan Berkelanjutan," Pers Conference, 2022, [https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp\\_245922.aspx](https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_245922.aspx).

environmentally friendly policies, including on the monetary policy side, through adopting Sustainable and Responsible Investments (SRI) in foreign exchange management and backing environmentally friendly green bond instruments. Green SUKUK in monetary operations and on the payment system policy encourages the acceleration of the digital financial economy that contributes to environmental sustainability. Funds derived from ending applications for eligible green projects will be held in cash at Bank Indonesia in the government's general account.

The application of green banking principles is contained in PBI No.8/21/PBI/2006 and Bank Indonesia circular letter No.8/22/DPbS. Article 10 of PBI No.8/21/PBI/2006 states that the assessment of business prospects includes several assessments of the components. In point e of Article 10, it is stated that one of the criteria in the assessment of business prospects is the efforts made by customers in the context of preserving the environment. The proceeds of Green Bonds and Green SUKUK shall be credited designated accounts of the relevant ministries upon request for funding for an entire project. Regulation No. 24/6 /PADG/2022 on the Implementation of Macprudential Inclusive Financing Ratio for Conventional Commercial Banks, Sharia Commercial Banks, and Sharia Business Units regulates members of the Board of Governors. Examples of Inclusive Financing Securities are intended for development purposes or sustainable finance with projects located in Indonesia include securities in the form of:

- a. Sustainable bonds or sustainable SUKUK, including green or social bonds or SUKUK;
- b. Cash *waqf* linked to SUKUK; and/or
- c. Green mutual funds

Internationally, Bank Indonesia supports the presence of the Asian Green Bond Fund, launched by the Bank for International Settlements (BIS), a cooperative organisation among central banks. The Asian Green Bond Fund is one of the Asian Consultative Council (ACC) initiatives supporting green investment programs in the Asia Pacific region. The existence of the Asian Green Bond Fund expands investment opportunities for central banks in Asia and outside the region by offering securities with investment-grade criteria and meeting international green standards. The funding focuses on support for environmentally friendly projects in various sectors, such as renewable energy and energy efficiency in Asia Pacific region. The initiative to establish the Asian Green Bond Fund demonstrates the commitment of central banks in the Asia Pacific region to increase the availability of green financial instruments, which is also in line with one of the priority agendas of the financial pathway in the Indonesian Presidency at the G20 in 2022. The Asian Green Bond



Fund initiative is BIS's genuine commitment to providing green investment alternatives for central banks globally.

#### **IV. COLLABORATIVE BETWEEN BANK INDONESIA AND OTORITAS JASA KEUANGAN IN ADDRESSING FUTURE THREATS**

Initially, Bank Indonesia (BI) was responsible for banking regulation and supervision. The role of supervising banks shall be conducted by an independent financial sector supervisory agency formed under specific legislation, according to Article 34 paragraph (2) of Law No. 23 of 1999 concerning Bank Indonesia. However, since the enactment of Law Number 21 of 2011 on the OJK (UU OJK), the duty of financial supervision has mainly been moved from BI to OJK. The transfer of the banking supervision function to the Financial Serv is intended to strengthen Bank Indonesia's focus on carrying out its authority as a monetary agency and payment system oversight according to its founding laws.<sup>29</sup> Consequently, these two institutions are inextricably linked. Coordination between OJK and Bank Indonesia is continuously being followed to ensure that each institution's aims, and financial system stability are accomplished. The Financial Services Authority was established under Article 34 of the Bank Indonesia Law, based on financial reform concepts including independence, integration, and the prevention of conflicts of interest.<sup>30</sup>

Article 39 of the OJK Law stipulates that these two institutions can collaborate in supervisory arrangements in the banking sector. The arrangement includes the obligation to meet bank minimum capitalisation requirements, an integrated banking information system, policies for receiving funds from abroad, foreign exchange funds, foreign commercial loans, banking products, derivative transactions, and other bank transactions. Furthermore, these two organisations play an equal role in supporting government monetary policies to enhance Indonesia's economic stability. In general, these are interdependent and synergistic institutions that take the following forms:<sup>31</sup>

A. OJK collaborates with BI in the development of banking supervisory legislation. The combination of these institutions' competencies is capable of developing an ideal banking regulatory system. In developing banking policies or regulations, the shared views of BI and OJK results in a resilient financial system to cope with all scenarios.

<sup>29</sup> Sudikno Mertokusumo, *Bank Indonesia Dan Otoritas Jasa Keuangan Dalam Perspektif Hukum, Cahaya Atma Pustaka* (Yogyakarta, 2014).

<sup>30</sup> Otoritas Jasa Keuangan, "Otoritas Jasa Keuangan," 2018, <https://www.ojk.go.id/id/Pages/FAQ-otoritas-jasa-keuangan.aspx>.

<sup>31</sup> Mertokusumo, *Bank Indonesia Dan Otoritas Jasa Keuangan Dalam Perspektif Hukum*.

- B. BI and OJK work together to exchange financial information. By merging their information systems, BI and OJK are able to more conveniently access banking information given by each institution at any time. Strategic information owned by each organisation and easy access substantially aid task implementation effectiveness.
- C. BI and OJK continue to have reciprocal partnerships in bank oversight. Under specific situations, BI performs special bank inspections after consulting with OJK. On the other hand, if OJK identifies that a specific bank is undergoing deteriorating conditions, OJK will promptly notify BI. This mutual collaboration is exceptionally beneficial in predicting the unfavorable systemic impact of a banking crisis. With this collaboration, immediate action can be taken.

In addition to financial oversight, the two organisations' collaboration is required to develop economic financing methods. Since 2015, the whole economic sphere has begun to focus on independent national growth and environmental preservation concerns.<sup>32</sup> The underlying impact of environmental change substantially impacts a country's economic viability. In this context, essential state financial entities such as BI and OJK are concerned with the natural environment concerns. Their function as financial intermediaries and agents of economic stability drives them to develop strategic and adaptable strategies to address climate change.<sup>33</sup> Through sustainable finance initiatives, BI and OJK must be able to foster collaboration among many stakeholders to adapt to and mitigate climate change. The relationship between the two financial institutions is founded on the belief that responsible economic growth is essential for achieving long-term development goals. The transition to sustainable development must transform business actors' mindsets that corporate operations would be fairer and more sustainable if they consider social, environmental, and governance aspects.<sup>34</sup>

In this regard, OJK established an appropriate framework known as the Sustainable Finance Roadmap Phase I for 2015-2019 and Phase II for 2021-

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<sup>32</sup> Dewa Putra Krishna Mahardika, "Meninjau Peran Akuntan Dalam Menanggulangi Isu Perubahan Iklim," *Jurnal Akuntansi Multiparadigma* 11, no. 3 (2020): 581–99, <https://doi.org/10.21776/ub.jamal.2020.11.3.33>.

<sup>33</sup> Yudisaputra Betaubun, Yunus Husein, and Aad Nurdin, "Koordinasi Antara Otoritas Jasa Keuangan Dan Bank Indonesia Dalam Pengaturan Dan Pengawasan Perbankan Di Indonesia," *Fakultas Hukum Universitas Indonesia*, no. 1 (2014).

<sup>34</sup> Lely Savitri Dewi, "Peranan Perbankan Dalam Mendukung Green Economy Melalui Program Green Financing," in *Strategi Pengembangan Kinerja Koperasi Dan UMKM* (Bandung, 2020), 161–68.

2025.<sup>35</sup> The Phase I roadmap outlines the main form of collaboration played by the OJK and supported by BI, which aims to increase the understanding and capacity of financial services sector players to move towards a low-carbon economy.<sup>36</sup> Conversely, Roadmap phase II targets building a green mindset, applying environmental, social, and governance issues, implementing simple programs, offering innovative financial goods and services, and initiating a national campaign for sustainable finance. Furthermore, BI and OJK are now focusing on developing a Sustainable Finance Instrument (SFI) to stimulate the growth of a green and sustainable economy.<sup>37</sup> Collaboration between the government and the authority is essential for improving the ecosystem continuously. The goal is to maintain the continuity of SFI in the market in the long term.<sup>38</sup>

SFI's performance demonstrates that Bank Indonesia and OJK are dedicated to a sustainable financial market ecology. In the future, financial institutions, and the government, as well as BI and OJK, will be increasingly active in supporting financial instruments that consider environmental, social, and governance (ESG) concerns.<sup>39</sup> The needs of establishing financial tools and green investments to enable sustainable and equitable economic growth is the first of three key factors for improving the performance of SFI development. Second, BI and OJK emphasise the importance of creating an ecosystem of long-term financial products by establishing cooperation among all relevant parties through incentive and disincentive policies, the construction of resilient infrastructure, and the inclusion of other critical elements such as green taxonomy, verification services, green certification bodies, and providers of green ratings.<sup>40</sup> Third, capacity building activities and ongoing technical support are crucial in raising the awareness and experience of all parties.

<sup>35</sup> OJK, "Roadmap Keuangan Berkelanjutan Tahap II (2021 – 2025)," *Otoritas Jasa Keuangan 2* (2021): 21, <https://www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Documents/Pages/Roadmap-Kuangan-Berkelanjutan-Tahap-II-%282021-2025%29/Roadmap%20Keuangan%20Berkelanjutan%20Tahap%20II%20-%282021-2025%29.pdf%0Ahttps://www.ojk.go.id/berita-dan-kegiatan/publikasi/Pages/Roadm>.

<sup>36</sup> Otoritas Jasa Keuangan, "Otoritas Jasa Keuangan." 2018, <https://www.ojk.go.id/id/Pages/FAQ-otoritas-jasa-keuangan.aspx>.

<sup>37</sup> Neneng Hayati, Erwin Yulianto, and Safdinal, "Peranan Keuangan Berkelanjutan Pada Industri Perbankan Dalam Mendukung Sustainable Development Goals," *Jurnal Akuntansi Bisnis Dan Ekonomi* 6, no. 1 (2020): 173–90.

<sup>38</sup> OJK, *Integrasi Lingkungan Sosial Dan Tata Kelola Bagi Bank: Panduan Untuk Memulai Implementasi* (Jakarta: Otoritas Jasa Keuangan, 2015).

<sup>39</sup> Bank Indonesia, "BI Kembangkan Instrumen Pasar Keuangan Hijau Untuk Dorong Pembiayaan Ekonomi," Pers Conference, 2021, [https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp\\_2327321.aspx](https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_2327321.aspx).

<sup>40</sup> Bank Indonesia, "BI Kembangkan Instrumen Pasar Keuangan Hijau Untuk Dorong Pembiayaan Ekonomi," Pers Conference, 2021, [https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp\\_2327321.aspx](https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_2327321.aspx).

By implementing legislation and providing help for green money market instruments, green and inclusive financing for MSMEs, and sustainable sharia economy and finance, Bank Indonesia and the government will contribute to the development of green ecosystems in Indonesia. The success of SFI expansion will be determined by strong teamwork, coherence, and mutual support of all stakeholders.<sup>41</sup>

Bank Indonesia actively organises a series of events involving international actors to assess alternative sustainable instruments available in the international market to achieve the goal of developing green financing. Green bonds, sustainable bonds, and sustainable linked bonds are examples of these products, as are money market instruments such as negotiable certificates of deposit and reports. As previously described, there is a Key Performance Indicator linked to derivative instruments, all of which goods incorporate green, social, and sustainable characteristics. Through this series of activities, OJK emphasised its support for adopting SFI through the Indonesia Green Taxonomy and the regulatory framework for carbon exchange. Moreover, from the banking perspective, it outlines the strategy for implementing SFI through the issuance of bonds and sustainable financing through money to support green projects and the MSMEs market.<sup>42</sup> According to these concrete movements, BI and OJK share a strong partnership due to two institutions. Although these are independent entities, they are linked in one function: to maximise their role in sustaining the Indonesian state's economic stability.

## **V. IMPLEMENTATION OF WORLD BANK GREEN BONDS PROGRAM IN INDONESIA'S ENVIRONMENTAL PROGRAM**

The environmental development program has a definition of processing natural resources to improve community welfare.<sup>43</sup> On August 8, 2016, Indonesia's Financial Services Authority, or OJK, signed a Letter of Intent (LoI) with the United Nations Development Program (UNDP) Indonesia. The LoI is the first step in the OJK and UNDP agreement on preparing a Memorandum of Understanding (MoU) to achieve Sustainable Development Goals (SDGs) in Indonesia through the role of financial service institutions. Then in January

<sup>41</sup> Bank Indonesia, "Bersama Mendorong Instrumen Keuangan Berkelanjutan Bank Indonesia, "Bersama Mendorong Instrumen Keuangan Berkelanjutan," Pers Conference, 2022, [https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp\\_245922.aspx](https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_245922.aspx).

<sup>42</sup> Bank Indonesia, "BI Kembangkan Instrumen Pasar Keuangan Hijau Untuk Dorong Pembiayaan Ekonomi," Pers Conference, 2021, [https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp\\_2327321.aspx](https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_2327321.aspx).

<sup>43</sup> Ahmad Jazuli, "Dinamika Hukum Lingkungan Hidup Dan Sumber Daya Alam Dalam Rangka Pembangunan Berkelanjutan," *Jurnal Rechtsvinding* 4, no. 2 (2015).

2018, OJK, the Indonesian Ministry of Finance, and the World Bank held a technical workshop on green bonds. The workshop studied the regulatory framework and guidelines regarding the implementation of green bonds in Indonesia as well as aligning regional and global standards, guidance on the process of applying green bonds, and a case study of Malaysia in issuing its first green SUKUK<sup>44</sup> in June 2017.

In accordance with Indonesia's Long-Term Development Plan or *Rencana Pembangunan Jangka Panjang* (RPJP) 2005-2025, namely realising a preserved and sustainable Indonesia, among others, through the sustainable economic use of natural resources and the environment, as well as Indonesia's commitment in supporting climate change adaptation efforts, the OJK issued a regulation on Environmentally Friendly Debt Effects (Green Bonds). The issuance of this regulation is one of the implementations of sustainable economic development as stated in the Sustainable Finance Roadmap in Indonesia.<sup>45</sup> The roadmap focuses on increasing the supply of environmentally friendly funding, increasing demand for environmentally friendly financial products, and increasing supervision and coordination of implementing sustainable finance. The issuance of these regulations is expected to be alternative financing in the capital market.<sup>46</sup>

RPJP 2005-2025 consists of the Sustainable Finance Roadmap in Indonesia 2015-2019 by the Financial Services Authority. The roadmap emphasises sustainable development from both internal and external environmental aspects.<sup>47</sup> One way to do this is through developing green bonds, which were applied in the study of developing green bonds by the OJK in 2016, then Indonesia has OJK Regulation No. 60/POJK.04/2017 concerning Publication and Requirements for Green Bonds. Moreover, Indonesia also received a second opinion from the Center of International Climate Research (CICERO) regarding implementing green bonds in Indonesia.<sup>48</sup>

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<sup>44</sup> *Green Sukuk* is an Islamic financial instrument is similar to conventional bonds and shares characteristics. (Godlewski et al. 2013).

<sup>45</sup> Dina Azhgaliyeva, 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 and Investment* 10, no. 2 (April 2019): 113–40, <https://doi.org/10.1080/20430795.2019.1704160>.

<sup>46</sup> EY, "Future Wave: The Growth of Green Bonds in Indonesia &middle dot; PDF FileSource (Current Market Value): The Green Bonds Database, as at 11/12/2017 In Response to the Sustainability and Development" (PT Ernst & Young Indonesia, 2017).

<sup>47</sup> Otoritas Jasa Keuangan, "Master Plan Sektor Jasa Keuangan Indonesia 2015 - 2019" (Jakarta, 2016).

<sup>48</sup> Otoritas Jasa Keuangan 2018. *Prospektus: PT SAR ANA MULTI INFRASTRUKTUR*

### V.A. Research Report on Green Bonds Development in Indonesia

In 2016, the OJK issued a report on developing green bonds in Indonesia through a Forum Discussion Group (FGD). Then, the results of the discussion resulted in carrying out the development of Green Bonds in Indonesia. There are several analysis results of relevant aspects in implementing the development of green bonds in Indonesia as follows.<sup>49</sup>

**Table 1**  
**Analysis Result of Relevant Aspect in Green Bonds Development in Indonesia**

No.	Aspect	Insight
1.	The Environmental Development Process Criteria.	Renewable energy, energy efficiency, control and prevention of pollution, sustainable management of biological natural resources, terrestrial and aquatic biodiversity conservation, clean transportation, sustainable water management, climate change adaptation, and efficiency of environmental products.
2.	Assessment of environmental development projects.	The assessment can be submitted to an external party, or the regulator can carry out a self-assessment project, which is funded through green bonds.
3.	Environmental development companies.	Refers to the criteria used in the Sustainable and Responsible Investment Stock Index (SRI KEHATI) or collaboration with the ministry.
4.	Sustainability reports.	The preparation of a continuous report is an obligation that issuers and financial service institutions must bear.
5.	Rating system for green bonds.	The mechanism for rating securities on green bonds can be carried out with further consideration by the technical directorate within the OJK.
6.	Analysis of dissemination and education concerning green bonds.	Dissemination and education are carried out continuously to people who have been discussing environmental issues, such as global warming, climate change, etc.
7.	Analysis of incentives and rewards to environmental development countries.	Incentives are awarded for reducing costs, increasing environmental investment capacity, and promoting transparency and stability in financial markets.

### III.B. Implementation of the World Bank Green Bonds in Indonesia

After analysing the exposure to the assessment report on green bonds in Indonesia and the OJK regulations regarding green bonds, this research addresses implementation of the World Bank green bonds in Indonesia by comparing the principles of World Bank green bonds' development.<sup>50</sup> According to CICERO and OJK regulations through the following tables:

<sup>49</sup> Otoritas Jasa Keuangan, "Laporan Kajian Pengembangan Green Bond di Indonesia," 2016.

<sup>50</sup> Dwi Elok Indriastuty, Pujianto, Antok Widiantoro, "Policy Direction and Regulation of Green Bonds in Indonesia," *Journal of Law, Policy and Globalization* 101 (2020), <https://doi.org/10.7176/JLPG/101-03>.

**Table 2**  
**Implementation of the World Bank Green Bonds in Indonesia**

No.	Recommendation or Guidance from the World Bank	The World Bank	Indonesia <sup>52</sup>
1.	Specific criteria or green bonds definition.	1) Installations using solar and wind power. 2) Financing sophisticated technology that leads to reduction of greenhouse gas (GHG) emissions. 3) Rehabilitation of plants and facilities to reduce GHG emissions. 4) Transportation efficiency, especially waste management, and 5) Carbon reduction through reforestation	New fossil fueled power generation capacity, large-scale hydropower, and nuclear-related assets do not qualify. Fossil fueled infrastructure is also excluded from eligibility for energy efficiency projects.
2.	Steps for selecting projects that meet the requirements for financing through the issuance of green bonds.	Country partnership, identification, preparation, appraisal, board approval, implementation, and Supervision of implementation, completion, and evaluation	Mitigation or adaptation activities are then screened based on the criteria outlined in the Green Bond and Green SUKUK framework. Under Indonesian law, all projects must also comply with AMDAL <sup>53</sup> . regulations, which require environmental clearance before being implemented
3.	Allocation of green bonds finance must follow liquidity policies.	For green bonds projects, an appropriate amount of a particular account is allocated to the general loan at least once every three months.	The Ministry of Finance manages the process for the allocation of proceeds from each issuance of green bonds.
4.	Supervision and reporting of projects must demonstrate the progress, results, and impacts of the projects' funds.	The monitoring process consists of regular reports by the implementing government agency on project activities, including a mid-review report of the project progress.	The Ministry of Finance of the Republic of Indonesia will prepare and issue a Green Bonds Report annually regarding the allocation and impact of using the proceeds from each Green Bonds in circulation.
5.	The green bonds requirements must be fulfilled by reviewing financed projects through the green bonds.	Project level reviews are carried out by specialists in environmental, social, and financial management.	—

CICERO is an independent institution that is obligated to review whether a green bonds implementation is following a country's structure (Indonesia). Compared with recommendations from the World Bank green bonds principles,

<sup>1</sup> Analisis Dampak Lingkungan or Analysis of the Impact on the Environment.

it can be seen that CICERO's second opinion for implementing green bonds in Indonesia is pursuant to the World Bank's guidelines. This research looks further into the World Bank green bonds application in Indonesia according to the Regulation of Indonesia's Financial Services Authority (OJK) No.60/POJK.04/2017 concerning Issuance and Requirements for Green Bonds through the following table:

**Table 3**  
**Implementing World Bank Green Bonds in Indonesia based on OJK Regulation No. 60/POJK.04/2017**

No.	Recommendation or Guidance from the World Bank	The World Bank	OJK Regulation No. 60/POJK/2017
1.	Specific criteria or green bonds definition.	6) Installations using solar and wind power. 7) Financing sophisticated technology that realizes the reduction of greenhouse gas (GHG) emissions. 8) Rehabilitation of plants and facilities to reduce GHG emissions. 9) Transportation efficiency, especially waste management, and 10) Carbon reduction through reforestation	Article 4 <sup>54</sup>
2.	Steps for selecting projects that meet the requirements for financing through the issuance of green bonds.	Country partnership, identification, preparation, appraisal, board approval, implementation, and Supervision of implementation, completion, and evaluation	-
3.	Allocation of green bonds finance must follow liquidity policies.	For green bonds projects, an appropriate amount of a particular account is allocated to the general loan at least once every three months.	Article 11 <sup>55</sup>
4.	Supervision and reporting of projects must demonstrate the progress, results, and impacts of the projects' funds.	The monitoring process consists of regular reports by the implementing government agency on project activities, including a mid-review report of the project progress.	Article 10 <sup>56</sup>

<sup>54</sup> (1) renewable energy, (2) energy efficiency, (3) pollution prevention and control, (4) management of biological natural resources and sustainable land use, (5) conservation of terrestrial and aquatic biodiversity, (6) environmentally-friendly transportation, sustainable water, and wastewater management, (7) climate change adaptation, (8) products that reduce resource use and produce less pollution (eco-efficient), (9) environmentally friendly buildings that meet standards or certifications that are widely recognised national, regional, or international; and (10) business activities and other activities with environmental insight.

<sup>55</sup> Issuers are required to manage the process from the Public Offering of green bonds to submit reports on the use of proceeds from the Public Offering as regulated in the Financial Services Authority Regulation regarding reports on the realisation of the use of proceeds from a Public Offering.

<sup>56</sup> Issuers report the results of reviews conducted by environmentalists periodically once 1 (one) year and every material change occurs.



**Table 3**  
**Implementing World Bank Green Bonds in Indonesia based on OJK Regulation**  
**No. 60/POJK.04/2017 (Continued)**

No.	Recommendation or Guidance from the World Bank	The World Bank	OJK Regulation No. 60/POJK/2017
5.	The green bonds requirement must be fulfilled by reviewing financed projects through the green bonds.	Project level reviews are carried out by Bank specialists in environmental, social, and financial management.	Article 2 <sup>57</sup>

OJK ensures all activities in financial services are carried out in a transparent, accountable, and fair manner. These objectives are seen in the regulations attached to table 1.4. In addition, the table above shows that OJK Regulation No. 60/POJK.04/2017 concerning Issuance and Requirements for Green Bonds does not mention 1 (one) out of 5 (five) recommendations by the World Bank. However, overall, OJK regulations are in line with the recommendations or guidelines of the World Bank green bonds. The direction of SFI adoption in Indonesia is seen through OJK's support for implementing SFI through the Indonesia Green Taxonomy and regulatory framework related to carbon exchange. From the banking side, it is important to convey the strategy in implementing SFI by issuing bonds and sustainable financing by using funds to finance green projects and the MSMEs market. In addition, there was a presentation by representatives of the Indonesia Stock Exchange (IDX) regarding the landscape and capital market initiatives to support the SFI ecosystem, including developing a green and sustainable index.

## VI. CONCLUDING REMARKS

Based on its discussions, the research concludes that The World Bank regulation on green bonds consist of 5 (five) soft law recommendations, which is: (a) Specific criteria of green bonds/ definition of green bonds, (b) selecting projects based on funding by the World Bank green bonds, (c) allocating proceeds of green bonds, (d) project review and reporting, (e) ensuring implementation.

BI and OJK are now focusing on developing a Sustainable Finance Instrument (SFI) to stimulate the growth of a green and sustainable economy. Bank Indonesia and OJK are committed to a sustainable financial market

<sup>57</sup> Opinions or assessments from environmental experts according to their competence in business activities or other activities financed by the issuance of Green Bonds.

ecosystem, as evidenced by SFI's performance. In the future, a collaboration between financial institutions and the government, as well as BI and OJK, will be more active in supporting financing and financial market instruments that incorporate environmental, social, and governance (ESG) concerns into account.

The Implementation of the World Bank Green Bonds Program in Indonesia's Environmental Development is contained in PBI No.8/21/PBI/2006, Bank Indonesia circular letter No.8/22/DPbS, and Regulation of Members of the Board of Governors No. 24/6 /PADG/2022 on Regulation for Implementation of Macroprudential Inclusive Financing Ratio for Conventional Commercial Banks, Sharia Commercial Banks, and Sharia Business Units. Thus, Bank Indonesia encourages environmentally friendly financing, among others, by providing incentives for financing the environmentally friendly property and motorised vehicles. Whereas for OJK, it is seen through OJK Regulation No.60/POJK.04/2017 concerning Publication and Requirements for Environmental Development Effects (Green Bonds). This regulation regulates and determines the types of environmentally friendly activities, standards, processes, and requirements that issuers must comply with or meet in implementing Green Bonds in Indonesia.

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