

Green Sukuk in Brunei: Awareness Through FinTech Initiatives

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Abstract

Brunei Darussalam has shown its dedication in addressing climate change through several initiatives from establishing a particular council group to implementing a policy specifically addressing the issues of climate change. A financial product known as Green Sukuk which serves as an Islamic eco-friendly alternative to traditional investment addressing climate and environmental issues but faces obstacles in community awareness. FinTech, known to be an instrument to enhance financial services with technology, is significant in promoting Green Sukuk. Consequently, the concept of Green Sukuk needs to be familiarized and understood by all to build trust and encourage innovation in achieving a sustainable output which can be made possible through the realization of FinTech. FinTech streamline Green Sukuk issuance, enabling efficient processes and increasing accessibility through shariah-compliant platforms such as Islamic crowdfunding. However, the level of awareness and understanding of Green Sukuk in Brunei is slightly ambiguous since the issuance of Green Sukuk has yet to be practiced in Brunei. Apart from that, the incorporation of technology into the Islamic finance system in supporting Green Sukuk is still relatively new, creating the necessity to study how FinTech could narrow the gap between Islamic finance and sustainable investment strategies. The primary objective of this paper is to develop Green sukuk awareness among Bruneians, evaluate the potential of fintech platforms to develop its adoption as well as emphasizing the significant impacts of green sukuk in mitigating environmental issues. Thus, this paper will elaborate on the definition of Green Sukuk and its importance for sustainable finance. This paper will also determine and evaluate the FinTech platforms and solutions that facilitate investments in Green Sukuk. Therefore, this study adopts an exploratory approach primarily relying on secondary data to explore the potential and challenges of Green Sukuk in the local context. The study aims to develop strategies to promote Green Sukuk as a sustainable investment option aligned with Brunei's development goals. As a result, this initiative not only addresses funding gaps but also democratizes green movement and enables community engagement directly in sustainable investments which will foster public awareness and inclusivity in green finance initiatives contributing to climate goals. Also, promoting Green Sukuk through fintech could provide easy access for the community to take part towards a sustainable future and be environmentally responsible through this initiative. Besides, this study also supports economic diversification, a low-carbon economy, and aligns with Brunei's FinTech and regulatory sandbox policies, which encourage financial innovation and inclusivity.

Keywords

Green Sukuk, Fintech, Sustainable investment, Green finance, Awareness

Introduction

The study aims to provide in-depth insights into the role of Green Sukuk in Brunei, particularly focusing on how fintech platforms can enhance awareness of green sukuk among the public, fostering green sukuk adoption and contribute to environmental sustainability. The methodology involves conceptual paper writing, reviewing relevant study, news, and other digital resources, with the goal of educating the public on the significance of Green Sukuk and its role in sustainable finance. Despite several limitations such as secondary data reliance and the limited available

studies, this paper serves valuable insights on the potential of fintech to develop green finance in Brunei. This research is crucial for the country as it addresses the importance of effective green financing solutions while supporting broader global objectives related to climate change and economic sustainability. As a result, this approach is not only addressing funding gaps but also democratizes the green movement, empowering community engagement in sustainable investments. In addition, this approach also helps in enhancing public awareness and inclusivity in green finance while contributing to Brunei's Climate goals. In addition, integrating fintech platforms into the green sukuk industry may simplify community access to sustainable investment opportunities, supporting greater environmental accountability. This study also contributes to developing Brunei economic diversification and shifting to a green economy while aligning with Brunei's FinTech and regulatory sandbox initiatives, which aim to drive financial innovation and inclusivity.

Research Background

The Deputy Minister of Finance and Economy at the Brunei Economy Programme highlighted that Brunei is actively promoting green financing through initiatives like green sukuk to support renewable energy projects and the adoption of electric vehicles (EVs). The ASEAN Taxonomy for Sustainable Finance provides guidance to attract investments into these green projects. Furthermore, digital platforms such as DSTPay, ProgresifPAY, and Takaful Brunei Mobile, along with the National Digital Payment Hub (DPH), are driving the demand for convenient and low-cost financial services. These innovations are key to strengthening the fintech ecosystem, as highlighted in the 2020 "State of FinTech in Brunei Darussalam" white paper (Azahari, 2022). The event also associates industry leaders to explore regulatory framework and practical strategies to outgrow the Fintech sector. In the discussion, Haslina highlighted that Brunei Legacy Digital Gateway project is currently leading the industry on digital transformation initiative contributing to achieve ASEAN Digital Masterplan 2025 and the Bandar Seri Begawan Roadmap. In addition, Baiduri Bank CEO Ti Eng Hui said digitalization is developing the banking sector's efficiency for example by implementing robotic process automation and artificial intelligence. Carbon footprint could be reduced effectively by decreasing their computer server's usage from 300 to 20 through visualization of data centres. The panel also stated that green finance serves a significant role as Brunei's initiative to achieve its COP26 commitments and net-zero goals (Azahari, 2022).

Utilizing digital platforms could develop awareness among society, particularly platform users. In this digitalization era, this could be an efficient approach and effective engagement platform to

promote Green Sukuk awareness by addressing green sukuk, its benefits and its alignment with Wawasan Brunei 2035, sustainable development goals as well as maqasid shariah. This alternative is also aligned with Brunei Darussalam National Climate Change Policy, which emphasizes the importance of fostering awareness and educational development regarding sustainability initiatives in the country. Moreover, economic diversification is one of the key areas that is considered as an approach to a low carbon economy aligned with Wawasan Brunei 2035 aiming to promote security, sustainability and prosperity in the country's economy. As part of the Brunei Darussalam National Climate Change Policy, this approach also aims to decrease industry economic output contribution and upstream new industries that are independent from oil and gas activities (BCCS, 2020).

In addition, facilitating digital platforms such as Fintech would also potentially help in developing awareness which enhances community engagement allowing citizens to take part in green financial projects resulting in the increase of inclusivity in the financial sectors. The event of Brunei Economy Programme on August 12, 2022, also held a forum with a topic of "A Conversation on Accelerating Fintech and Green Finance in Brunei" which was organised by the ASEAN and APEC Business Advisory Councils of Brunei Darussalam in collaboration with the Ministry of Finance and Economy and the British High Commission in Brunei Darussalam, in partnership with Baiduri Bank. The forum aims to explore how Brunei can increase the use of the financial digital tools, raise awareness of sustainable finance as well as an initiative to connect global issues with Brunei (Azahari, 2022).

Based on a study conducted by Shaista et.al (2021), Bruneian has a high awareness regarding crowdfunding and green projects. In contrast, Bruneian has a very low familiarity level when it comes to crowdfunding platforms as well as climate change issues. Fintech solutions can facilitate green sukuk issuance such as through Islamic crowdfunding platforms that are aligned with shariah principles as well as enhancing financial inclusivity to green financing initiatives in Brunei. This paper aims to foster Green sukuk awareness among Bruneians, evaluate the potential of fintech platforms to develop its adoption as well as emphasizing the significant impacts of green sukuk in mitigating environmental issues. By drawing examples from successful fintech and Green Sukuk models in other countries, the study seeks to provide insights into how Brunei can further develop this instrument as a green financial initiative.

Literature Review

Definition of Green Sukuk

Green sukuk can be defined as a financial instrument that complies with the laws of Shariah whereby the proceeds from green sukuk are utilized to finance environmentally sustainable initiatives. The term sukuk in accordance with the Islamic Law refers to a bond that is free from the interest and yields rewards for investors through the pool of underlying assets in lieu of interest. Whereas the term Green referred to as sukuk adheres with the green bond criteria, also known as the framework and principles. Environmental projects, climate change adaptation, and mitigation are all funded by the proceeds of green bonds. Issued green sukuk are verified as green by the International Capital Market Association's (ICMA) Green Bond Principles (GBP). The ASEAN Green Bonds Standards of the ASEAN Capital Market Forum also play a role in classifying some of the green sukuk issuance. In addition to adhering to international green bond standards, such as the GBP and ASEAN Green Bonds Standards, countries issuing green sukuk such as Malaysia and Indonesia also conforms with their respective national frameworks namely the Sustainable and Responsible Investment (SRI) Sukuk Framework in Malaysia and the Green Bond and Green Sukuk Framework in Indonesia. (Azghaliyeva, n.d)

Green Sukuk in Brunei

Since 2016, the government of Brunei Darussalam has maintained a sukuk issuance program to develop Brunei's yield curve as a benchmark for corporate Sukuk, providing liquidity initiatives for financial institutions as well as supporting the growth of domestic capital market and Islamic finance infrastructure. Initially managed by the Brunei Darussalam Central Bank with full control and ownership of the Sukuk issuance process. However, the Sukuk issuance process was later centralized under a newly established Financing Office within the Ministry of Finance and Economy. Sukuk Financing Office is empowered to issue securities on behalf of the government and regulate operations. Its objectives include facilitating Shariah-compliant funding mechanism for government 's economic development plans, supporting fiscal and monetary policy coordination, coordinating and integrating sukuk issuance operation ensuring accountable and efficient securities issued, promoting the growth of Brunei's capital market and providing benchmarks for local corporate Sukuk pricing (MOFE, 2023).

Furthermore, Green Sukuk aimed at financing sustainable and environmentally friendly projects to address critical environmental issues including climate change, biodiversity loss, land degradation, and pollution. These instruments enable governments to raise funds from the capital

market to support green initiatives such as renewable energy, energy efficiency, waste management, sustainable transportation, and natural resource conservation. The development of Green Sukuk aligns with Sustainable Development Goals (SDGs). Therefore, Green sukuk has been adopted by countries like Malaysia, Indonesia, and the UAE as part of their initiatives to develop sustainable economic growth. In addition, Green sukuk helps to foster the private sectors to adopt eco-friendly practices as well as attracting environmentally conscious investors to invest in Green sukuk projects (Yulitasari et al., 2023).

As stated in the Quran, Al-Baqarah Verse 30:

وَإِذْ قَالَ رَبُّكَ لِلْمَلٰئِكَةِ اِنِّيْ جَاعِلٌ فِى الْاَرْضِ خَلِيْفَةً قَالُوْا اَنْتَ جَعَلُ فِيْهَا مَنْ يُّفْسِدُ فِيْهَا وَيَسْفِكُ الدِّمَآءَ وَنَحْنُ نُسَبِّحُ بِحَمْدِكَ وَنُقَدِّسُ لَكَ قَالْ اِنِّيْ اَعْلَمُ مَا لَا تَعْلَمُوْنَ ۝۳۰

From a Sharia economic perspective, investing in Green Sukuk fulfills the Islamic duty of environmental stewardship, reflecting the responsibility of Muslims as caliphs of Allah on earth to preserve and protect nature (Yulitasari et al., 2023).

Green Sukuk Issuance

Malaysia

The World Bank collaborated with a Technical Working Group with the Central Bank and Securities Commission of Malaysia as a strategy to investigate approaches to promote investments in sustainable or green projects by leveraging the role of Malaysia in Islamic finance in merging sukuk and green bond which results in addressing the country's demand for funding environmentally friendly projects. (World Bank, 2020) The first issuance of Green Sukuk in Malaysia was initiated by Tadau Energy Sdn Bhd on July 27, 2017 following the establishment of the Sustainable & Responsible Investment (SRI) Sukuk framework in 2014 which raised MYR 250 million (\$59 million) to fund a 50MW solar photovoltaic power facility in Sabah, Malaysia. The Shari'ah Advisory Council authorised the sukuk, which was issued in accordance with Malaysia's SRI sukuk structure including being awarded the highest accreditation from the Centre for International Climate and Environmental Research Oslo (CICERO). (World Bank, 2020) Consequently, Green SRI Sukuk has become a prevalent fundraising option in Malaysia. Malaysia plays a pioneering role in the largest sukuk market owning 35% of the world's outstanding sukuk outperforming Saudi Arabia and Indonesia reported by Dato' Seri Dr. Awang Adek Hussin, Chairman of the Securities Commission Malaysia. Hence, Malaysia maintains its position as the regional pioneer in SRI Sukuk following three SRI Sukuk worth RM2.2 billion filed with the SC by the end of October 2023. The nation also makes a substantial contribution, contributing 27% of the US\$41 billion in ASEAN Green, Social, and Sustainability bonds and sukuk issued. (Philips Mutual Berhad, 2023). Hence, the proceeds from the

sukuk can be utilized to fund suitable social and green projects that support the SDGs and as a result boost the socioeconomic development of the nation.

Based on the latest announcement of Budget 2024, the government also plays an important role in providing continuous support to providing SRI through which the government intends to extend tax deductions on the cost of issuing SRI sukuk until the year of evaluation 2027, as well as exempting tax for firms responsible in managing funds that tax exemption to fund management firms that oversee SRI funds. The support from the government in issuance of green sukuk entails the private sectors to consequently utilize green sukuk in raising funds for the sustainable development of the country (Philips Mutual Berhad, 2023).

Methods

This research employs an exploratory approach, primarily relying on secondary data to identify the potential and challenges of Green Sukuk in Brunei through Fintech initiatives. This study aims to address the theoretical dimensions and practical dimensions of Green Sukuk and Sustainable Fintech Solutions in order to establish the issuance of Green Sukuk in Brunei through Fintech initiatives.

Analysis and Discussion

Sustainable Fintech Solution

Brunei Darussalam's fintech ecosystem is rapidly growing, driven by the pandemic's push for digital adoption and government efforts to advance the digital economy in Brunei Darussalam. Jana Kapital has emerged as a key player of Brunei's Smart Nation agenda serving as the first Syariah-compliant peer-to-peer crowdfunding platform in the country, facilitating alternative financing for MSMEs and investment opportunities for the public through crowdfunding initiative as a solution to raise capital outside the traditional banking methods. Crowdfunding platforms such as Jana Kapital illustrate a practical method to enhance awareness among the society in Brunei by showcasing tangible impacts, supporting SME and gaining public confidence (Wasil,2022).

Applying the same approach for Green Sukuk may help in demonstrating how the funds can contribute to sustainable projects, encouraging more people to engage with environmentally friendly investments. Moreover, Jana Kapital offers a minimum investment of \$50, making it accessible for wider investors and promoting financial inclusion within the industry. This will not only

democratize investment opportunities for the public but also educate them on the importance of sustainable finance. Besides, efficient communication and transparency further build trust, empowering Bruneians to witness the way their investment drives real economic and environmental development. For instance, such platforms can make Green Sukuk more inclusive and approachable, paving the way for increased public engagement and developing Brunei's environmental and economic goals.

Environmental Issues

Brunei Darussalam encounters several critical environmental challenges which require urgent actions to mitigate the issues and ensure sustainable development and ecological preservation. Climate change poses a critical threat among the issues as Brunei is experiencing increased vulnerability to extreme weather events such as flash floods and prolonged dry seasons, which resulted in forest fires and habitat degradation. The Brunei government has addressed these issues through various initiatives such as the Paris Agreement and the establishment of the Brunei Climate Change Strategy (BCCS) in 2018. This aims to evaluate and mitigate the impacts of climate change on the nation's natural resources and overall quality of life (Julay et al., 2021).

The Ministry of Energy in the opening remarks of the Paris Agreement in 2016 mentioned that Brunei is still obligated to mitigate climate change even though Brunei is only contributing to 0.016% of the total global emissions. As an oil-producing country, Brunei consumes more energy than other countries, making the country a significant contributor to the progression of climate change. Additionally, Brunei has experienced various social and economic developments leading to higher consumption and operational activities. Consequently, Brunei has recorded the highest number of cars in Southeast Asia which results in the high carbon emissions (Julay et al., 2021). Besides that, water pollution is also a critical concern in Brunei, particularly as population growth and industrialization exert pressure on water resources. Brunei river serves as a primary source of drinking water hence faces pollution challenges from anthropogenic activities such as domestic waste and agricultural runoff. Effective management of these water resources is crucial to mitigate these issues and enhance sustainability (MDPI, 2024).

For this reason, Green sukuk may contribute to Brunei's initiatives towards achieving sustainable development goals through specific investments that address these environmental issues. For instance, green sukuk plays a significant role in providing funding initiatives that enhance sustainability such as water quality through improved waste management systems and

implementation of green infrastructure projects. This approach not only aligns with Brunei's national climate policies but also fosters a more resilient and sustainable future for its citizens.

Contribution of Green Sukuk in Brunei

The issuance of Green Sukuk in Brunei can provide funding that complies with Shariah particularly for green projects including sustainable agriculture, energy-efficient infrastructure, and renewable energy. Consequently, Brunei can reduce its dependence on petrol and oil by diversifying its economy due to these projects. Other than that, the combination of issuance of Green Sukuk with FinTech Solution may bolster the expansion of sustainable finance in Brunei Darussalam. Green sukuk can aid Brunei's attempts to mitigate climate change, lower carbon emissions, and protect its abundant biodiversity by allocating funding to environmentally beneficial initiatives. Therefore, the government of Brunei Darussalam plays an important role in providing support and promotion towards the issuance of Green Sukuk through FinTech solutions as it brings about many potential benefits for the socioeconomic development of Brunei Darussalam as well as fostering the public to contribute to a sustainable environment.

Furthermore, Green sukuk has the potential to improve Brunei's standing as a pioneer in cutting-edge Islamic financial products and boost its standing in the international market as a country with a robust Islamic finance framework further complementing the pillars of philosophy of Brunei Darussalam. The issuance of Green Sukuk can give rise to long term economic resilience through investments in green technology and infrastructure which can indirectly boost employment, stimulate economic activity, and facilitate knowledge transfer.

Policy Involved

The development of Green Sukuk in Brunei is strongly supported by several policies with the goal of developing sustainable finance and mitigating environmental issues. Brunei National Climate Change Policy describes the country's obligations in lowering carbon emissions and improving carbon mitigation through various approaches. The policies establish challenging goals such as planting over 500,000 new trees by 2035 and enhancing renewable energy shares to at least 30% of the total power generation mix. Meanwhile, green sukuk objectives are aligned with these goals, aiming to utilize funds for initiatives that contribute to climate resilience and environmental sustainability (BCCS,2020).

In addition, Brunei's green sukuk requires a well-defined regulatory framework to ensure transparency and accountability in the allocation of funds raised through these financial instruments. This framework features guidelines on how green sukuk should be utilized for environmentally friendly projects, such as renewable energy installations and waste management systems. This regulatory framework may help to foster investor confidence and encourage participation from both domestic and international markets (Risanti et al., 2023).

Furthermore, Brunei's broader economic diversification strategy under "Wawasan 2035", reflects the country's dedication to a green economy as it highlights the significant environmental, social, and governance (ESG) factors into economic planning and investment decisions. Brunei's government recognizes that addressing infrastructure readiness, funding gaps, and skills development are required, in addition to financial investments in shifting into a green economy country. Therefore, Brunei anticipates developing sustainable economic growth while simultaneously addressing pressing environmental issues (ARUP,2024).

These policies demonstrate the country's strategic approaches to Green Sukuk as a strong financial instrument. Brunei aims to drive environmental preservation, mitigate climate change and promote sustainable economic resilience by implementing sustainable development objectives with Islamic finance principles. These initiatives encourage Brunei's commitment to global sustainability goals as well as developing its position as a country that encourages innovative green finance solutions within the ASEAN region. Through these efforts, Brunei is paving the way for a robust framework that bridges economic growth and ecological stewardship, ensuring a sustainable future for generations to come.

Limitations

The realization of Green Sukuk through FinTech to fund the sustainable development projects in Brunei has the potential to completely transform sustainable finance. However, there are a number of obstacles in establishing the issuance of Green Sukuk through Fintech: The issuance of Green Sukuk in Brunei Darussalam may faces regulatory challenges whereby the issuance of Green sukuk must adhere to both Shariah laws and green finance guidelines which may lead to complexity in dual compliance and demand for specific fintech solutions. Other than that, the fintech infrastructure in Brunei is still in its infancy, which could make it more difficult to issue, administer, and track green sukuk effectively. The process in issuance of green sukuk requires transparency and automation which utilizes the use of blockchain and digital ecosystem which is

still considered as inadequate in Brunei. Furthermore, the initial issuance of green sukuk through Fintech in Brunei entails high cost especially in adopting advanced fintech solutions which can be an obstacles for small issuers in Brunei Darussalam.

Conclusion

In conclusion, this study has emphasized the significant potential of Green Sukuk in Brunei as an instrument to enhance sustainable development growth, environmental preservation and economic diversification. The study highlights the significance of raising public awareness and developing community engagement in sustainable finance by leveraging fintech into the Green Sukuk ecosystem in Brunei Darussalam. Despite several limitations, the study provides valuable insights into the enhancement of accessibility and adoption of Green Sukuk through digital solutions contributing to Brunei's climate goals and supporting the nation's transition towards a low-carbon economy. Taking successful examples from other countries, the research suggests that fintech serves a crucial role in bridging funding gaps and democratizing access to green finance facilitating the public to actively participate in green investments initiatives. Other than that, Brunei's green finance initiatives are aligned with national policies, such as the National Climate Change Policy and Wawasan 2035, which further underscores the country's commitment and contribution to fostering a sustainable and resilient future. The findings from this research are crucial not only for supporting and advancing green finance in Brunei but also for contributing to global efforts towards climate change mitigation and economic sustainability.

References

- Abdul Hai Julay, Hafiizh Hashim, 2021. Stratsea: Brunei's Path Towards Mitigating the Climate Change and the Whole of Nation Approach. Retrieved from: <https://stratsea.com/bruneis-path-towards-mitigating-the-climate-change-and-the-whole-of-nation-approach/>
- Arup. (2024). Foreign, Commonwealth & Development Office: UK – Brunei Green Economy Framework Committee.
- Azhgaliyeva, D. (n.d). Green Islamic Bonds. Asian Development Bank Institute. <https://www.adb.org/sites/default/files/institutional-document/691951/ado2021bn-green-islamic-bonds.pdf>
- Brunei Climate Change Secretariat (BCCS), 2020. Brunei Darussalam National Council on Climate Change: Brunei Darussalam National Climate Change Policy.
- Lis Yulitasari, Novita Tresiana, Evi Ekawati, 2023. Development Of State Green Sukuk as A Government Effort to Realize a Green Environment. Vol 10, No 1: Januari 2023:1-8, ISSN: 2580-3565. Dinar, Journal Ekonomi & Kewangan Islam.
- Onifade, O., Shamsuddin, N., Jin, J. L. Z., Lai, D. T. C., & Gödeke, S. H. (2024). Assessment of Pollution Status in Brunei River Using Water Quality Indices, Brunei Darussalam. *Water*, 16(17), 2439. <https://doi.org/10.3390/w16172439>
- Phillips Mutual Berhad. (2023). Malaysia's Progress in Green Sukuk. <https://www.phillipmutual.com/wp-content/uploads/2023/12/Malaysias-Progress-in-Green-Sukuk.pdf>
- The World Bank, 2020. Helping Malaysia Develop the Green Sukuk Market. <https://thedocs.worldbank.org/en/doc/21c2fb7dfb189f10a0503004757b03f4-0340012022/original/Case-Study-Malaysia-Green-Sukuk-Market-Development.pdf>
- Wardi Wasil, 2022. Brunei's premier independent business news: Jana Kapital: Paving financial options for startups, MSMEs. Retrieved from: <https://thebruneian.news/2022/11/14/jana-kapital-paving-financial-options-for-startups-msmes/>