

DETERMINANTS OF GREEN SUKUK INVESTMENT IN INDONESIA

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ABSTRACT

The Green Sukuk initiative has paved the way for capital flows for sustainable future development. Green Sukuk is a successful national collaborative effort to address climate change. The conditions since the sukuk offering period have shown excess demand, indicating great interest from investors in the Green Sukuk market. The purpose of this paper is to discuss the importance of environmental motivation in investment considerations in the Indonesian Green Sukuk market. Using a literature review, it was concluded that when investing in the Green Sukuk market, investors still consider the features of Green Sukuk to be important, but they do not eliminate the consideration of profit factors.

Keywords: Green Sukuk, Investment, Indonesia

INTRODUCTION

Issues surrounding environmental conservation have become increasingly prominent in recent years, especially since Indonesia adopted the principle of synergy known as the Sustainable Development Goals (SDGs), whereby the concept of sustainable development became part of the 2015-2019 National Medium-Term Development Plan (Hadad, 2020). Climate change remains one of the pressing global issues that is in the spotlight for both developed and developing countries. The "United in Science" report by Science (Solekah et al., 2023). Advisors at the summit reaffirmed scientific findings that 2019 was one of the hottest years on record and that extreme weather events have hit populations around the world, from Western Europe, the United States, the Bahamas, to Australia and, of course, Indonesia. At the same time, the International Monetary Fund found that rising temperatures will cause a 20% loss in global Gross Domestic Product (GDP).

The Indonesian government understands that persistent and continuous efforts are necessary for climate action to produce the desired results. 'There is no better time to act than now' is an understatement. This is why, in addition to ratifying the Paris Agreement and submitting its NDC in previous years, Indonesia has made environmental development, disaster resilience, and climate change national priorities in its 2020-2024 National Medium-Term Development Plan (RPJMN) and established an Environmental Fund Management Agency (BPLDH) to increase transparency and optimize the use of environmental funds.

The Green Sukuk initiative has paved the way for capital flows for sustainable future development. Green Sukuk is a successful national collaborative effort to tackle climate change. It utilizes the results of climate investment budget marking mechanisms and channels across Green sectors with the most significant climate change impact and is in line with the Green Bond and Green Sukuk Framework. Investor appreciation for the 2018 Green Sukuk issuance saw it raise US\$1.25 billion and reach a wide range of investors, including conventional, Islamic, and Green investors. In fact, the issuance was oversubscribed, signaling growing market demand for sustainable and responsible investments. This issuance signifies Indonesia's ongoing commitment to climate action and its desire to be an active player in the growth of the capital market for Green and sustainable development financing. This provides strategic direction for domestic and international stakeholders and marks one of Indonesia's first efforts to leverage international private sector investment in support of national climate change targets. In 2019, Green sukuk were issued twice in the global institutional market and in the

domestic retail market respectively. Indonesia is proud that the domestic retail market issuance marks another milestone as the world's first retail Green sukuk. We are also pleased that this initiative has brought a total of eight awards from the global community, including Best Environmental, Social, and Governance from Asia Finance.

Green Sukuk Indonesia shows the potential to significantly increase public and private investment in adaptation and resilience building while also reducing carbon emissions. Recently, the Sukuk market has experienced massive growth, especially in most Islamic economies. Therefore, the most developed Sukuk market in the world is in Southeast Asia, where the Islamic financial industry has been developed throughout Malaysia, Indonesia, and Brunei (Reuters, 2020).

The development of the green sukuk market is quite interesting to study, as shown in Siswanto's (2018) research, which analyzed the price performance of green sukuk after the issuance date and found that the conditions during the offering period, where there was excess demand, did not always correlate with the performance after the green sukuk issuance period. The decline in the price of Indonesian green sukuk was caused by macroeconomic factors, so that a good image of green activities does not always attract investors directly. Environmental issues are not a major consideration for investors in purchasing green sukuk. The results of Siswanto's (2018) research are supported by previous studies by Said and Grassa (2013), Smoui and Mohsin (2017), Zanudin et al (2019), and Aman et al (2019), which show that macroeconomic factors such as GDP per capita, economic size, trade openness, and the percentage of Muslims have a positive influence on sukuk market growth. The financial crisis had a significant negative impact on sukuk market development because the number of sukuk issued in those years had decreased significantly. Basyariah et al (2021) also proved that GDP per capita and the rule of law have a significant influence on sukuk development.

Glavas' (2020) research found that climate-related regulations have a positive impact on investors' reactions to Green bond issuance announcements. Tolliver et al (2020) found that macroeconomic and other institutional factors drive the growth of Green bond issuance, which will finance climate and sustainability investments in the future. Aunt Thu et al (2020) revealed that legal infrastructure, official interest rates on green bonds, and economic stability are the most important factors directly affecting the expansion of the green bond market. Josue (2019) showed that it is not increasing climate awareness among investors that is hindering the green sukuk market in developing countries, but rather issues of minimum size and high transaction costs associated with green bond issuance. Pauline and de Mariz (2020) identify current barriers as being caused by the lack of scalability of the green bond market: a deficit of harmonized global standards; the risk of greenwashing; the perception of higher costs for issuers; a lack of supply of green bonds for investors; and the overall growth period of the market. Więckowska (2013) In the future, the most important determining factor for stimulating market growth will be the standardization of Green bonds, which is currently being developed.

Based on the purpose of issuing green sukuk, which is to support sustainable development goals, investing in green sukuk is a form of support for development that prioritizes environmental preservation. However, in the initial issuance of Indonesian green sukuk in 2018, based on the results of Siswanto's (2018) research, investors considered profit factors to be more important than environmental preservation goals. Based on previous research results, there is a non-linear relationship between the purpose of issuing green sukuk and the investment motivation of investors. Therefore, this paper discusses the importance of environmental motivation in investment considerations in the Indonesian green sukuk market.

LITERATURE REVIEW

Planned Behavior Theory

According to Planned Behavior Theory, there are three variables that collectively lead to the formation of an individual's behavioral intention: (1) attitude, (2) subjective norm, and (3) perceived behavioral control (Ajzen, 1991). Attitude is defined as the extent to which a person has a positive or negative evaluation or judgment of the intention and behavior in question. Subjective norm describes the perceived social pressure from significant others to perform the behavior. Perceived behavioral control refers to whether the performance of the behavior is easy or difficult and under a person's control or not. The Theory of Planned Behavior (TPB) (Ajzen, 1991) is used in the discussion given its explanatory power in predicting environmentally friendly behavior (Kaiser and Gutscher, 2003). TPB argues that to predict an individual's behavior (e.g., I buy environmentally friendly products), one needs to measure that person's behavioral intention (e.g., I intend to buy environmentally friendly products). An individual's behavioral intention is influenced by their attitude toward an action (e.g., I like the idea of buying environmentally friendly products), the expectations of other important people in their life (e.g., other important people think I should buy environmentally friendly products), and their perceived ability to perform the action (e.g., whether I buy environmentally friendly products or not is entirely up to me). Individuals' perceived expectations and capabilities are referred to as subjective norms (SN) and perceived behavioral control (PBC), respectively. TPB has been used to predict and explain environmentally friendly behavior. Cheung et al. (1999) reported that attitudes, Subjective Norms, and Perceived Behavioral Control are all significant and important predictors of the intention to recycle used paper, accounting for more than 55% of the variance in behavioral intention. Since then, several other researchers (e.g., Kaiser and Gutscher, 2003; Maichum et al., 2016; Wu and Chen, 2014) have found that attitudes, subjective norms, and Perceived Behavioral Control predict the intention to engage in environmentally friendly behavior. Additionally, Fielding et al. (2008) incorporated the constructs of identity and general pro-environmental attitudes into the TPB and explained over 80% of the variance in the intention to engage in activism.

Green Sukuk

Sukuk is an abbreviation of certificate and is the plural form of sak, which means certificate in Arabic (Iqbal and Mirakhor, 2007). Sukuk is a financial instrument issued by sovereign entities or companies to finance various projects and has become very popular in the last two decades (McMillen, 2007). Green Sukuk is a sharia investment vehicle that funds environmentally friendly projects such as solar parks, biogas plants, and wind farms. The main objective behind the development of Green Sukuk is to address sharia issues that must protect the environment (Alam, Fethi, & Ariss, 2016). Alignment between Islamic ethics and environmental awareness is essential. The market shows great potential when environmental sustainability is combined with the Islamic capital market (Moghul & Safar-Aly, 2014). The issuance of Green Sukuk by the Government is almost the same as the issuance of other State Sukuk because State Sukuk is currently mostly used for financing State infrastructure. However, in the case of Green Sukuk, the infrastructure that will be used as the basis for the issuance of the sukuk (underlying assets) must meet Green infrastructure criteria. Infrastructure from the agricultural sector, such as the construction of reservoirs, irrigation, and hydroelectric power plants, has great potential to be categorized as green infrastructure because it supports more efficient water use (sustainable water management), reduces the use of groundwater for agriculture, and increases the use of non-fossil renewable energy.

Cakir and Raei (2007) and Safari and Ariff (2014) claim that Sukuk is quite different from conventional bonds in many aspects, including returns, price behavior, and risk mitigation benefits for investors. Similarly, Sukuk entitle investors to proportional ownership of the underlying assets in structured Sukuk financing, while bonds are merely debt instruments (Jamaldeen, 2012).

METHODS

This article uses a literature review by searching for theoretical references relevant to the case or problem found. According to Creswell, John. W. (2014), a literature review is a written summary of articles from journals, books, and other documents that describe theories and information, both past and present, organizing the literature into topics and documents as needed. The type of data used by the author in this study is data obtained from literature studies. Secondary data consists of documents and files discussing green sukuk. Data from online media comes from the Ministry of Finance and other relevant agencies, supported by articles and the latest information from the web.

RESULTS

Green Sukuk Market in Indonesia

Indonesia debuted its first sovereign Green US dollar sukuk with an issuance by the Republic of Indonesia (ROI) on March 1, 2018, providing an opportunity to see how the security will appeal to environmentally and religiously conscious communities. The five-year, \$1.25 billion issue faced what was described as “exceptional demand” according to a banker working on the deal, leading to initial pricing discussions for the security—early talks about the initial public offering price—being tightened by 30 bps, and it was then offered at 109.5 bps above the US Treasury benchmark. According to the issuer, the sukuk was allocated among various investors, with 29% focused on green and 71% on non-environmental. ROI reported that 32% of its investor accounts were Islamic, generally domiciled in the Middle East and Malaysia. Of the remainder, 25% are based in Asia, 18% in Europe, 15% in the US, and 10% in Indonesia. (Ministry of Finance. 2021) Almost a year later, on February 20, 2019, Indonesia issued its second Green sukuk with a maturity of 5.5 years worth \$750.0 million. It was oversubscribed by nearly 3.8x, with the deal closing nearly 30 bps tighter than the initial price discussions, similar to its debut issuance. According to the report, the Green sukuk attracted strong demand, with 29% of buyers from the Middle East and Malaysia, 23% from the US, 22% from Europe, 10% from Indonesia, and 16% from other regions in Asia. Coinciding with the issuance of the Green sukuk was a conventional sukuk worth \$1.25 billion with a 10-year maturity (Ministry of Finance 2021).

The green sukuk market is clearly smaller than the green bond market. However, green sukuk issuers demonstrate all the characteristics of best practices related to voluntary guidelines and reporting. This is a good sign for communities seeking to integrate climate priorities with religious harmony. However, it appears that green sukuk investors may obtain different results based on issuer practices. It is reasonable to anticipate that US dollar green sukuk investors are in the best position to benefit from potential greenium attributes, while Malaysian ringgit green sukuk investors are unlikely to benefit, given regional cultural practices related to capital markets and Shariah-compliant structuring. Furthermore, the decline in foreign direct investment flows into Malaysia's local market is expected to exacerbate liquidity issues and attract fewer investors, especially for smaller issuances.

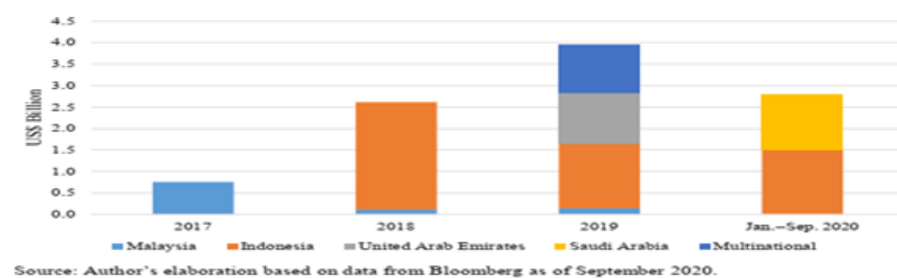


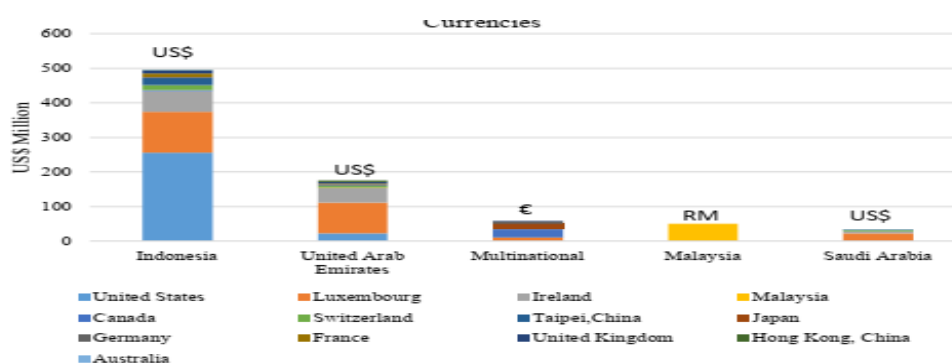
Figure 1. Green Sukuk Issuance Chart
 Source: Azhgaliyeva (2020)

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Figure 1. describes the first Green sharia bond, green sukuk was issued more than three years ago in June 2017. Since then, annual Green sukuk issuance has increased fivefold, reaching \$4 billion in 2019.

Investing involves risks, including the possible loss of principal. Generally, investments offering higher potential returns will have higher risks of loss. Stock prices fluctuate, sometimes rapidly and significantly, for various reasons that may affect individual companies, industries, or sectors. When interest rates rise, bond prices fall. When interest rates fall, bond prices rise. Bond fund prices will typically follow this pattern.

Table placement uses center alignment, with the title above the table head and the source below the table. Title writing uses Arial Bold 10 pt font. Writing the contents of the table using Arial 10 pt, single spacing. Table lines only use horizontal lines (no vertical lines) (Antonio, 2013).



Source: Author's elaboration based on data from Bloomberg as of September 2020.

Figure 2. Demand for Green Sukuk across Issuing Countries and Currencies Chart
Source: Azhgaliyeva (2020)

The state treasury detailed that the volume of sukuk issuance was initially only Rp4.7 trillion in 2008. Meanwhile, as of June 2021, the total volume of sukuk issuance since the beginning has exceeded IDR 1,810.02 trillion, with outstanding reaching IDR 1,075.83 trillion. When compared to regular SBN issuance, state sukuk contributes around 20 to 30 percent of the issuance of government securities each year. (CNN, 2020) Most green sukuk issuers rely on international demand. Issuances in US dollars account for 80% of green sukuk issuances, followed by issuances denominated in euros (11%) and ringgit (10%). Green sukuk denominated in US dollars and euros attract international investors.

Green Sukuk Investment Decision

Investing in high-yield securities can be speculative. High-yield bonds may have low or no ratings and may be considered "junk bonds." Investing in foreign securities involves risks that are generally not associated with investing in U.S. securities. These risks include currency and market fluctuations, and political or social instability. Foreign investment risks are generally magnified in smaller, more volatile securities markets in developing countries. For tax-exempt municipal funds, taxation may depend on your state of residence and alternative minimum taxes may apply. These risks and other risks associated with specific funds are discussed in each mutual fund's prospectus and summary prospectus. Clicking on a fund name will take you to a more detailed page covering the fund's objectives, strategies, and risks.

Green Sukuk can be a viable solution to environmental problems and serve as a bridge between Islamic and conventional financial markets. Since those who invest in sukuk are mostly socially responsible, there is greater potential for Muslim-majority countries to develop the Green sukuk market because they are more compliant with Sharia principles and are also in line with the achievement of sustainable development goals

(SDGs). However, there is a scarcity of studies examining the issuance of Green sukuk. This study aims to examine the issuance of Green sukuk based on theoretical research analysis. The results of the study indicate that there is significant potential for Green sukuk to be offered in the market.

Demand for Green sukuk is represented mainly by investment advisors, banks, insurance companies, and sovereign wealth funds (in descending order) from 13 countries. Interestingly, sovereign investors in Green sukuk are almost all top sovereign investors in sukuk, which means that countries with high sukuk demand represent Green sukuk demand. Also, most Green sukuk investors are top investors in sukuk. Thus, Green sukuk with environmental objectives attract sukuk investors.

The Ministry of Finance (2020) conducted a study on the results of the issuance of Green Retail Sukuk ST006, one of which looked at the potential demand for green sukuk in the market. This study was also supplemented by a direct survey through the distribution of questionnaires. The research questionnaire included questions related to investment, particularly regarding green sukuk, such as knowledge related to the concept of sukuk and retail sukuk, the concept of ESG and SDGs investment, respondents' views on the monitoring and reporting of green sukuk, risks, and respondents' interest in purchasing green sukuk itself.

Based on the Figure 3, it can be seen that 143 respondents or 64% of the total respondents answered that they were interested in purchasing Green Retail Sukuk. Based on in-depth interviews with several potential investors, this interest is based on the condition that the majority of respondents agree that purchasing Green Retail Sukuk is part of supporting the government in preserving the environment. The following are the results of a descriptive analysis from the Ministry of Finance's research (2020) which shows investor interest in Green Sukuk based on environmental motives or the coupons offered. The 222 respondents used in this study were Indonesians who had previously made investments. Green retail sukuk ST-006 was offered from November 1-21, 2019, with a settlement date of November 28, 2019, and a return rate of 6.75% (floating with floor). The total purchase order volume for the ST-006 retail green sukuk was IDR 1,459,880,000,000 with a total of 7,735 investors. The following are the results of the descriptive analysis for the indicator of investor interest in purchasing green sukuk.

Based on Figure 4. can be seen that 143 respondents or 64% of the total respondents answered that they were interested in purchasing Green Retail Sukuk. Based on in-depth interviews with several potential investors, this interest is based on the condition that the majority of respondents agree that purchasing Green Retail Sukuk is part of supporting the government in preserving the environment. The following are the results of a descriptive analysis from the Ministry of Finance's research (2020) which shows investor interest in Green Sukuk based on environmental motives or the coupons offered. A total of 72 respondents, or 32.7% of the total respondents who answered neutrally, are a group that can also be targeted to increase the proportion of groups that are more focused on funded environmental projects than on the coupons provided. This condition can be supported by providing good education and socialization to this neutral group, so that they gain an understanding and can increase their awareness of the importance of investing in environmental projects.

The motivation for purchasing retail green sukuk by green investors is believed to stem from a desire to preserve the environment (Ministry of Finance, 2020). This motivation differs from that of rational investors in general, who are profit-oriented or solely focused on profit. Green investors with these characteristics tend to hold their securities until maturity, thereby reducing the dynamics of buying and selling in the secondary market (Castillejos-Petalcorin et al., 2020; Fender, 2019; Reichelt & Keenan, 2017).

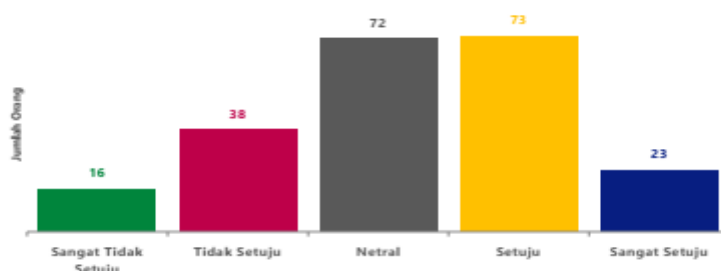


Figure 3. Indicators of investor interest in purchasing Green sukuk Chart
Source: The Ministry of Finance (2020)

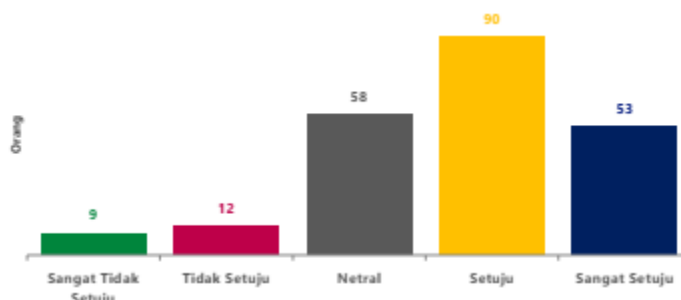


Figure 4. Indicator of investor interest in purchasing green sukuk Chart
Source: The Ministry of Finance (2020)

Research conducted by the Ministry of Finance (2020) is also supported by several previous studies, namely Duqi and Tamimi (2018), who conducted a survey of a sample of sukuk investors operating in the UAE Dubai Financial Market, showing that the most important factors behind the choice to invest in sukuk are religious beliefs, sukuk characteristics in terms of price, returns, liquidity, and risk. The most important concerns for investors are related to the relatively small size of the sukuk market, the reduced availability of information, and the general perception of higher risk associated with sukuk issuance in terms of credit, market, and liquidity risk.

According to a study conducted by El Qorchi (2005), the majority of sukuk investors hold their investments until maturity, which limits the secondary sukuk market. Similarly, in his thesis, Hassan (2012) states that Sukuk portfolios are riskier than conventional bonds. However, a study conducted in Malaysia by Mohamed et al. (2015) suggests that in terms of optimizing risk and return, Sukuk perform better than conventional bonds. A study conducted by Jobst, Kunzel, Mills, and Sy (2008) reports that demand for Sukuk has increased dramatically after the financial crisis, indicating that investors perceive Sukuk to be more ethical and stable than conventional finance.

The Theory of Planned Behavior in Green Sukuk Investment Decisions

The fundamental basis of this study is the belief in the use of Sukuk and the theory of planned behavior (TPB) used in this study. In the main model, attitudes toward the use of Sukuk, subjective norms regarding the use of Sukuk, perceived behavioral control, intention to use Sukuk, and actual use of Sukuk are used as the main antecedents. According to Ajzen, 1991, p.188, "the more favorable the attitude and subjective norm with respect to the behavior, and the greater the perceived behavioral control, the stronger the individual's intention to perform the behavior under consideration should be."

Research by Warsame and Ileri (2016) found that attitude has a significant and positive effect on behavior and intention to use Sukuk. Attitude influences investors' intention to

invest in Sukuk. Customers with a highly positive attitude towards the product have the greatest intention to invest in Sukuk. Religious beliefs influence individuals' attitudes toward using Islamic banking products and services (Abdul & Masood, 2012; Butt et al., 2011; Mansour et al., 2010; Metawa & Almossawi, 1998; Seliaman & Al-Turki, 2012).

Attitude

According to Ajzen and Fishbein (1988), attitude is the first determinant of behavioral intention in the TPB model, "which is the extent to which a person has an unfavorable evaluation of the behavior in question." In this study, the use of Sukuk is the behavior being investigated. Osahon (2011) reported that Kuwaitis are reluctant to adopt Islamic banking because it is "archaic, unworkable, and counterproductive to the well-being of free enterprise." The author further argues that Iran, a conservative Islamic country, has "removed the interest-free content from products by allowing Islamic banks to charge 4-8% interest on loans." Religious beliefs have also been reported to influence individuals' attitudes toward using Islamic banking products and services and are thus considered a major factor in the selection of Islamic banking institutions (Abdul & Masood, 2012; Kiprah & Worthington, 2008; Hegazy, 1995; Magd & McCoy, 2014; Omer, 1992). A study conducted by Faisal, Akhtar, and Rehman (2012) on awareness of Islamic banking products and services in India compared Muslims and non-Muslims and found that both had positive attitudes toward Islamic banking services. Religion and profitability influence the attitudes of Islamic bank customers in Bahrain (Metawa & Almossawi, 1998). A study on the Future of Islamic Banking in the Sultanate of Oman by Mubeen, Kulkarni, and Al Hussaini (2014) reported significant attitudes.

Subjective norms

Subjective norms are the second antecedent of behavioral intention. According to Ajzen and Fishbein (1988), "it is the influence of social pressure felt by individuals (normative beliefs) and weighted by (motivation to comply)". Normative beliefs represent the influence of social pressure to perform or not perform certain behaviors, while motivation to comply is an individual's motivation to comply with the expectations of others. According to Ramdhony's (2013) research, Muslims and non-Muslim bank customers believe that a combination of religious beliefs and benefits will motivate prospective customers to choose Islamic banking products and services. The author further notes that "third-party influence" plays a major role in the bank selection criteria for Muslims, where they tend to follow their peers and are more influenced by the media. This means that religious beliefs, peer influence, and the media are more likely to influence the use of Sukuk. Similarly, El-Halaby, and Hussainey (2023) studied the perceptions of users and non-users of Islamic banking services among bank customers in Malaysia and found that "the decision-making process of Islamic bank users is influenced by their spouses, friends, relatives, and their inherent religious motivations." A study by Bley and Kuehn (2004) among business students in the United Arab Emirates found that religious motivation is the primary preference in choosing Islamic banking services.

Perceived behavioral control

Perceived behavioral control is the third antecedent of behavioral intention (Ajzen & Fishbein, 1988). According to Ajzen (1991), perceived behavioral control refers to "people's perceptions of the ease or difficulty of performing the behavior in question." In the study, we stated that perceived behavioral control refers to investors' perceptions of the ease or difficulty of investing in Sukuk. In short, perceived behavioral control and behavioral intention can be used directly to predict behavioral achievement (Ajzen, 1991). In this context, the use of Sukuk was chosen as behavioral achievement. Ajzen (1991) argues that perceived behavioral control is only "realistic when a person has relatively little" information about the behavior. To attract more consumers to Islamic banking services, Lo and Leow (2014) state that it is important for "Islamic banks to understand" consumer behavior before converting them into customers.

The quality of customer service, product features, and adequate knowledge about the products and services offered by Islamic banking staff are key factors that determine the uptake of Islamic products by customers (Awan & Bukhari, 2011). Based on a study conducted in Pakistan by Butt et al. (2011), the limited branch network and inconvenient location of Islamic banks are the main drawbacks faced by non-users of Islamic banking products and services when choosing an Islamic bank. Similarly, Mansour, Abdelhamid, Masood, and Niazi (2010) conducted research in the UK and found that service costs attract customers regardless of their religious affiliation and demographics. Perceived behavioral control. Perceived behavioral control is the third antecedent of behavioral intention (Ajzen & Fishbein, 1988). According to Ajzen (1991), perceived behavioral control refers to "people's perceptions of the ease or difficulty of performing the behavior in question." In their study, Warsame and Ileri (2016) state that perceived behavioral control refers to investors' perceptions of the ease or difficulty of investing in Sukuk. In short, perceived behavioral control and behavioral intention can be used directly to predict behavioral achievement (Ajzen, 1991). In this context, the use of Sukuk was chosen as behavioral attainment. To ensure a realistic interpretation of perceived behavioral control, we only selected respondents who had knowledge about Sukuk, because Ajzen (1991) argued that perceived behavioral control is only "realistic when a person has relatively little" information about the behavior. To attract more consumers to Islamic banking services, Lo and Leow (2014) state that it is important for "Islamic banks to understand" consumer behavior before converting them into customers

CONCLUSION

Based on research conducted by both the government and individual researchers, it can be concluded that when investing in the green sukuk market, investors still consider green sukuk features to be important (based on green sukuk demand data, almost all of the top sukuk investors are countries, which means that countries with high sukuk demand represent green sukuk demand) However, this does not eliminate the consideration of profit factors (Azhgaliyeva, 2020, Ministry of Finance 2020, Duqi and Tamimi, 2018).

Investor behavior in investing in green sukuk is confirmed by the Theory of Planned Behavior, which asserts that perceived behavioral control contributes to predicting the intention to use sukuk. This shows that the main driving force behind the phenomenal growth of sukuk in recent years is the fact that it is a Shariah-compliant financial product that appeals to many investors due to its unique features. When investors are confident about the Sharia compliance of Sukuk, their level of uncertainty about this product decreases dramatically, driving an increase in perceived behavioral intention to use Sukuk. Interestingly, the study revealed that there is a significant relationship between subjective norms and behavioral intention. Furthermore, research by Warsame and Ileri (2016) has found that religious beliefs and the influence of peers, spouses, and friends.

REFERENCES

- Aman, Ameen Ullah, Asmadi Mohamed Naim and Mohamad Yazid Isa. 2019. What Determines Sukuk Market Development? New Theoretical Insights. *Global Review of Islamic Economics and Business*, Vol. 7, No. 1 (2019) 021-027 <https://doi.org/10.14421/grieb.2019.071-02>
- Alam.,N.,Fethi and Aris.R. 2016. Green Sukuk : An Inovation in Islamic capital Marke. In et al (Andrew Dosman) Ed. *Energy and Finance Sustainability in the Energy Industry*. Springer. <https://doi.org/10.20885/RISFE.vol3.iss2.art6>
- Anh Tu, Chuc, Tapan Sarker, and Ehsan Rasoulinezhad. 2020. "Factors Influencing the Green Bond Market Expansion: Evidence from a Multi-Dimensional Analysis" *Journal of Risk and Financial Management* 13, no. 6: 126. <https://doi.org/10.3390/jrfm13060126>
- Ajzen I (1991) The theory of planned behavior. *Organ Behav Hum Decis Process*

- 50(2):179–211. (PMID: 10.1016/0749-5978(91)90020-T)
- Aren S, Zengin AN (2016) Influence of financial literacy and risk perception on choice of investment. *Procedia Soc Behav Sci* 235:656–663. (PMID: <https://doi.org/10.1016/j.sbspro.2016.11.047>)
- Akhtar F, Das N (2018) Predictors of investment intention in Indian stock markets: extending the theory of planned behaviour. *Int J Bank Mark* 37(1):97–119. (PMID: <https://doi.org/10.1108/IJBM-08-2017-0167>)
- Azmat, Saad, Skully, Michael, & Brown, Kym. (2014). The Shariah compliance challenge in Islamic bond markets. *Pacific-Basin Finance Journal*, 28, 47-57. <https://doi.org/10.1016/j.pacfin.2013.11.003>
- Azhgaliyeva, Dina. 2020. Green Islamic Bonds. *Asian Development Outlook 2021*
- Cheung, S.F., Chan, D.K.-S., Wong, Z.S.-Y., 1999. Reexamining the theory of planned behavior in understanding wastepaper recycling. *Environ. Behav.* 31 (5), 587–612. <http://dx.doi.org/10.1177/00139169921972254>
- Choi D, Kim KJ (2019) Influences of environmental and hedonic motivations on intention to purchase green products: an extension of the theory of planned behavior. *Sustain Prod Consum* 18:145–155. (PMID: <https://doi.org/10.1016/j.spc.2019.02.001>)
- Castillejos-Petalcorin, C., Park, D., Puongsophol, K., Tian, S., & Yamadera, S. (2020). Green Local Currency Bonds and Infrastructure Finance in ASEAN+3. In B. Susantono, D. Park, & S. Tian (Eds.), *Infrastructure Financing in Asia*. Asian Development Bank. https://doi.org/10.1142/9789811215124_0008
- DuPont Carolyn M., Levitt J.N., Bilmes L.J. 2015. Green Bonds and Land Conservation: The Evolution of a New Financing Tool. Working paper series. Harvard University. <https://research.hks.harvard.edu/publications/workingpapers/Index.aspx>, diakses 7 Oktober 2016
- El-Halaby, Sherif and Hussainey, Khaled. Perceptions Of Stakeholders And Non-Customers Towards Accountabilities Practices Of Islamic Banks: Evidence From Multiple Contexts. *MSA-Management science journal*. Volume: 2, Issue: 2, Year: 2023, pp.1-38 <https://doi.org/10.21608/msamsj.2023.183998.1004>
- El Qorchi, Mohammed. (2005). Islamic finance gears up. *Finance and Development*, 42(4), 46.
- Fielding, K.S., McDonald, R., Louis, W.R., 2008. Theory of planned behaviour, identity and intentions to engage in environmental activism. *J. Environ. Psychol.* 28 (4), 318–326. <http://dx.doi.org/10.1016/j.jenvp.2008.03.003>
- Fender, I. and V. S. (2019). Green bonds: the reserve management perspective. *BIS Quarterly Review*, September 2019, 49–63. https://www.bis.org/publ/qtrpdf/r_qt1909f.pdf
- Glavas. Dejan. 2020. Green regulation and stock price reaction to green bond issuance. In *Finance* Volume 41, Issue 1, 2020, pages 7 to 51 <https://doi.org/10.3917/fina.411.0007>
- Gait, W. (2008), “An empirical survey of individual customer, business firms and financial institution attitudes towards islamic methods of finance”, *International Journal of Social Economics*, Vol. 35 No. 11, pp. 783-808
- Hadad Ismid, 2020, Pembangunan Ekonomi Versus Lingkungan: Siapa Yang Mesti Menang?. Diakses <https://madaniberkelanjutan.id/2020/06/28/pembangunan-ekonomi-versus-lingkungan-siapa-yang-mesti-menang#>
- Hassan, Khalid Abbasher. (2012). Comparison between Sukuk and conventional bonds: Value at risk approach. University of Westminster, September.
- Josué Banga (2019) The green bond market: a potential source of climate finance for developing countries, *Journal of Sustainable Finance & Investment*, 9:1, 17-32, To link to this article: <https://doi.org/10.1080/20430795.2018.1498617>
- Kaiser, F.G., Gutscher, H., 2003. The proposition of a general version of the theory of planned behavior: Predicting ecological behavior. *J. Appl. Soc. Psychol.* 33 (3), 586–603. <http://dx.doi.org/10.1111/j.1559-1816.2003.tb01914.x>
- Kemenkeu. 2021. Green Sukuk Allocation And Impact Report May 2021. Kementerian Keuangan Indonesia.

- Mohamed, Hisham Hanifa, Masih, Mansur, & Bacha, Obiyathulla I. (2015). Why do issuers issue Sukuk or conventional bond? Evidence from Malaysian listed firms using partial adjustment models. *Pacific-Basin Finance Journal*, 34, 233-252 <https://doi.org/10.1016/j.pacfin.2015.02.004> .
- Maichum, K., Parichatnon, S., Peng, K.-C., 2016. Application of the extended theory of planned behavior model to investigate purchase intention of green products among Thai consumers. *Sustainability* (10), 1077 <https://doi.org/10.3390/su8101077>
- Moghul.,U.E and Safar Aly. S.H.K.2014. Green Sukuk The Introduction Of Islam's environment ethics to contemporry Islamic Finance. *GEO.,Intl* <https://ssrn.com/abstract=2580864>
- Nuhbatul Basyariah, H. Kusuma, Ibnu Qizam . 2021. Determinants of Sukuk Market Development: Macroeconomic Stability and Institutional Approach. *Journal of Asian Finance, Economics and Business* Vol. 8 . No. 2 <https://doi.org/10.13106/jafeb.2021.vol8.no2.0201> .
- Tolliver. Clarence, Alexander Ryota Keeley, Shunsuke Managi,2020. Drivers of green bond market growth: The importance of Nationally Determined Contributions to the Paris Agreement and implications for sustainability, *Journal of Cleaner Production*, Volume 244,2020, 118643, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2019.118643> .
- Pauline Deschryver, and de Mariz, Frederic, 2020. What Future for the Green Bond Market? How Can Policymakers, Companies, and Investors Unlock the Potential of the Green Bond Market? (March 24, 2020). *Journal of Risk and Financial Management*, 2020, 13, 61; Doi:10.3390/jrfm13030061, Available at SSRN: <https://ssrn.com/abstract=3565933>
- Karina, Luthfia Ayu. 2019. Peluang dan tantangan perkembangan green sukuk di Indonesia. *Conference on Islamic Management, Accounting, and Economics (CIMAIE) Proceeding*. Vol. 2, 2019, 259-265.
- Qi X, Ploeger A (2019) Explaining consumers' intentions towards purchasing green food in Qingdao, China: the amendment and extension of the theory of planned behavior. *Appetite* 133:414–422. (PMID: <https://doi.org/10.1016/j.appet.2018.12.004>
- Reichelt, H., & Keenan, C. (2017). The Green Bond Market: 10 years later and looking ahead. <http://pubdocs.worldbank.org/en/554231525378003380/publicationpensionfundserviccegreenbonds201712-rev.p>
- Solekah, N. A., Ratnasari, K., & Hirmawan, A. P. (2023). Prediction of Green Purchase Intention for Electric Vehicles: A Theory of Planned Behavior Approach. *Jurnal Minds: Manajemen Ide Dan Inspirasi*, 10(2), 297–320. <https://doi.org/10.24252/minds.v10i2.40772>
- Sri Rahayu Hijrah HATI, Elevita Y, Muhammad Budi Prasetyo, Tengku Ezni Balqiah And Arga Hanantosri. 2019. Green Sukuk Potential in Attracting Global and Domestic Investor to Support Sustainable Development. 34th IBIMA Conference: 13-14 November 2019, Madrid, Spain. ISBN: 978-0-9998551-3-3
- Suherman dan Manzilati A. 2017. Identifikasi Potensi Penerbitan Green Sukuk Di Indonesia. *Jurnal Ilmiah Mahasiswa FEB UB*. Vol 5 . No. 1 <https://jimfeb.ub.ac.id/index.php/jimfeb/article/view/3561>
- Su, Meiling.2014. Can green Bonds Help Air Pollution Mitigation in China? Potential and Challenges.Thesis diterbitkan. Sweden: IIIIEE, Lund University <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=7861078&fileId=7861122>
- Said, Ali and Rihab Grassa. 2013. The Determinants of Sukuk Market Development: Does Macroeconomic Factors Influence the Construction of Certain Structure of Sukuk? *Journal of Applied Finance & Banking*, vol. 3, no. 5, 2013, 251-267 <https://doi.org/10.13106/jafeb.2021.vol8.no2.0201>
- Smaoui, Houcem & Mohsin Khawaja. 2017 The Determinants of Sukuk Market Development, *Emerging Markets Finance and Trade*, 53:7, 1501-1518, <https://doi.org/10.1080/1540496X.2016.1224175>

- Tao, Jacqueline Yujia. 2016. Utilising Green Bonds for Financing Renewable Energy Projects in Developing Asian Countries. ERIA Research Project Report 2014-27, Jakarta: ERIA, pp.343- 381.
- Wu, S.-I., Chen, J.-Y., 2014. A model of green consumption behavior constructed by the theory of planned behavior. *Int. J. Market. Stud.* 6 (5), 119. <https://doi.org/10.5539/ijms.v6n5p119>
- Więckowska, M. (2013). The role bonds in financing climate resilient economy. *Copernican Journal of Finance & Accounting*, 2(1), 153–167. <https://doi.org/10.12775/CJFA.2013.011>
- Walid, Hegazy. (2005). Fatwas and the fate of Islamic finance: A critique of the practice of fatwa in contemporary Islamic financial markets. *Islamic finance: Current legal and regulatory issues*, 133-149.
- Warsame, M.H., Ireri, E.M., Does the theory of planned Behaviour (TPB) matter in Sukuk investment decisions?. *Journal of Behavioral and Experimental Finance* (2016), <http://dx.doi.org/10.1016/j.jbef.2016.10.002>