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Behavioral Finance in Green Investment: Strengthening Islamic Ethical Norms for Sustainable Financial Decisions

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Abstract: The urgent need for sustainable economic practices has increased interest in green investment. However, understanding what drives individual decisions to invest in environmentally friendly instruments remains limited—especially in contexts influenced by religious values such as Islamic ethics. This study aims to investigate how behavioral finance factors—specifically risk perception, social norms, and environmental attitudes—alongside Islamic ethical principles, influence green investment decisions. Using a quantitative approach and structural equation modeling (SEM), data were collected from individual investors who align their financial choices with both environmental concern and Islamic values. The findings reveal that risk perception negatively affects green investment decisions, while social norms and environmental attitudes have a significant positive impact. Additionally, Islamic ethics reinforce these behavioral patterns by promoting principles such as avoiding harm (haram) and pursuing collective benefit (maslahah). The study concludes that psychological and ethical considerations jointly shape investor behavior in sustainable finance. These results not only contribute to the theoretical development of behavioral finance and Islamic economics but also provide practical implications for policymakers and financial institutions aiming to encourage ethical and sustainable investment behavior. This research highlights the need for integrated strategies that blend ethical values with behavioral insights to support green finance.

Keywords: Behavioral Finance, Green Investment, Islamic Ethics, Risk Perception, Social Norms, Environmental Attitude

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A. INTRODUCTION

Sustainable development has become a central focus globally, addressing the need to fulfill present requirements without compromising the future generations' ability to meet their needs (Brundtland Commission, 1987). A key component of achieving sustainable development involves the transition to a more environmentally responsible financial system, widely known as "green finance" (Schoenmaker & Schramade, 2019). Green finance refers to the use of financial tools and services to support projects and initiatives that bring environmental benefits, such as mitigating climate change, adapting to its impacts, and conserving natural resources (Minaeva & Solovyova, 2019; UNEP, 2016). The shift from investments in environmentally harmful assets, such as fossil fuels, toward more sustainable, low-carbon projects is increasingly urgent (Hachenberg & Schiereck, 2018; Widyawati, 2020). This shift is driven by a growing awareness of the adverse effects of unsustainable economic practices on the environment, climate, and natural resources (Schaltegger & Wagner, 2017).

The financial sector plays a vital role in fostering sustainable development by mobilizing capital and guiding investments toward ecologically sound economic activities (OECD, 2017). Instruments such as green bonds allow businesses and governments to secure long-term

funding for sustainable projects like renewable energy and energy-efficient transportation systems (Demirel & Yukhanaev, 2021; Hachenberg & Schiereck, 2018). Green loans also facilitate funding for companies that adopt sustainable business models (Gianfrate & Peri, 2019). Furthermore, green investment funds offer investors an opportunity to direct their funds towards conservation, energy efficiency, and climate-change mitigation projects (Braun & Zawalinska, 2020). These green financial instruments not only provide necessary financing but also promote environmentally friendly practices among businesses and other entities (Scholtens, 2017; Widyawati, 2020). Thus, green finance serves as a key pillar in achieving the global sustainable development goals (SDGs), especially those concerning climate change mitigation, the transition to clean energy, and environmental conservation (Alam et al., 2021; Gunawan et al., 2019).

Public awareness regarding environmental issues and corporate social responsibility has been a key driver of growing interest in green investments (Patten, 2002; Ruf et al., 2001). Stakeholders, including consumers and investors, are increasingly urging businesses to adopt more socially conscious and environmentally responsible practices (Dienes & Velte, 2016; Hahn et al., 2018). This growing demand has forced companies to integrate environmental, social, and governance (ESG) factors into their decision-making processes (Eccles et al., 2014; Krueger et al., 2020). Policies from governments worldwide, including tax incentives, emission trading schemes, and regulations promoting ESG disclosures, have also created a favorable environment for sustainable investments (Flammer, 2021; Zhao et al., 2020). These supportive policies, combined with pressure from stakeholders, have motivated investors to allocate capital to projects prioritizing sustainability (Riedl & Smeets, 2017; Hafenstein & Hachmeister, 2020).

However, a deeper understanding of the psychological factors that influence investor behavior in green investment decisions remains limited. This gap highlights the relevance of behavioral finance, a field that examines how psychological and cognitive factors influence financial decision-making (Barberis & Thaler, 2003; Shefrin, 2007). Previous studies indicate that emotions, perceptions, heuristics, and cognitive biases significantly impact investors' preferences and decisions regarding sustainable investments (Paetzold & Busch, 2014; Oehmke & Opp, 2020). Investors' preferences often diverge from traditional financial considerations, such as risk and return, when green or sustainable investments are involved (Nilsson, 2008; Riedl & Smeets, 2017). For instance, investors may place higher importance on environmental, social, and governance (ESG) factors even if it negatively impacts short-term financial returns (Muñoz et al., 2020; Dillenburg et al., 2003). Consequently, understanding the behavioral drivers such as risk perception, social norms, and attitudes toward the environment is crucial for promoting sustainable green investment (Dyllick & Muff, 2016; Rahim & Justice, 2015).

While most prior research has concentrated on financial factors, behavioral factors such as risk aversion and the influence of social norms have received less attention (Paetzold & Busch, 2014; Falconer et al., 2021). Even though some recent studies have begun to explore the behavioral dynamics of sustainable investments (Oehmke & Opp, 2020; Hartzmark & Sussman, 2019), more research is required to understand how cognitive biases, social

pressures, and individual environmental values shape investment decisions (Khan et al., 2021; Rahim & Justice, 2015). Therefore, this study aims to explore how these psychological factors combined with Islamic ethical norms influence green investment decisions. It is expected that this research will expand upon the existing literature, which largely focuses on financial metrics and investment characteristics. A better understanding of the psychological factors influencing investor behavior will allow policymakers, financial managers, and other stakeholders to design more effective strategies and regulations that promote the long-term adoption of sustainable green investments (Hartzmark & Sussman, 2019; Khan et al., 2021).

In conclusion, as the demand for sustainable investments grows, the integration of Islamic ethical norms which align with the principles of maslahah (public good) and moral obligation (haram/halal) can provide additional incentives for investors to engage in responsible green investments. Through this holistic approach, both behavioral finance and Islamic finance frameworks can serve as crucial guides for fostering sustainable investment practices worldwide.

B. LITERATURE REVIEW

1. Behavioral Finance

Behavioral finance is a field that examines how psychological and cognitive factors influence investor behavior and financial decision-making (Ricciardi & Simon, 2022; Meghani et al., 2022). It explores aspects such as emotions, perceptions, heuristics, and cognitive biases that shape investors' preferences, judgments, and actions, especially in the context of investment (Ullah et al., 2021; Joshi et al., 2022). Key psychological factors in behavioral finance include overconfidence, loss aversion, herding behavior, and confirmation bias (Prosad et al., 2021). This field provides insights into why investors often deviate from rational decision-making, a critical aspect that challenges the assumptions of perfect rationality in traditional finance (Meghani et al., 2022). The increasing importance of understanding investor behavior is pivotal in analyzing market phenomena and crafting better investment strategies (Meghani et al., 2022).

In the Islamic context, behavioral finance also incorporates religiosity, Islamic social norms, and ethical considerations that influence decision-making, adding a moral and ethical layer that transcends traditional financial factors. Investors' decisions are shaped not just by psychological biases but also by Islamic teachings, emphasizing halal investments and the avoiding of haram activities (Ali & Bilal, 2020).

2. Green Finance

Green finance refers to the use of financial instruments and services to support projects and activities that provide environmental benefits, such as mitigating climate change, adapting to its impacts, and conserving natural resources (Minaeva & Solovyova, 2019; UNEP, 2016). Key green finance instruments include green bonds, green loans, green investment funds, and green insurance products (Tolliver et al., 2020). These financial tools aim to direct capital towards projects that foster sustainability by addressing environmental concerns,

enhancing energy efficiency, and promoting renewable energy sources (Demirel & Yukhanaev, 2021; Hachenberg & Schiereck, 2018).

From an Islamic perspective, green finance aligns with the principles of responsibility, accountability, and environmental stewardship, all of which are core tenets of the Islamic worldview (*khalifah fil-ardh* and *maslahah*). Islamic finance, unlike conventional finance, prohibits harmful investments in sectors such as fossil fuels and supports investments that align with Shariah principles, ensuring that financial growth does not come at the expense of environmental sustainability and ethical behavior (Schoenmaker & Schramade, 2019).

3. Green Investment Decision

A green investment decision refers to an investor's decision to allocate funds to projects and assets that prioritize environmentally friendly practices, such as green sukuk, socially responsible investments (SRI), and investments in companies with high ESG ratings (Riedl & Smeets, 2017; Oehmke & Opp, 2020). Green investment decisions also involve limiting or avoiding investments in companies or industries that harm the environment, as well as applying ESG criteria in the investment decision-making process (Falconer et al., 2021; Dorfleitner et al., 2021).

In an Islamic context, green investment is consistent with the Islamic obligation to preserve the earth, encourage the use of resources in moderation, and avoid exploiting resources for selfish gain (*isrāf*) (Al-Qaradawi, 2018). Additionally, the use of green sukuk offers Sharia-compliant mechanisms for funding sustainable and ethical projects, such as renewable energy, which aligns with the Islamic values of equity and social justice (Rahim & Justice, 2015).

4. Perceived Risk of Green Investment

Perceived risk refers to the investor's assessment of the uncertainties and risks associated with green financial instruments. These risks can include financial risks (e.g., liquidity risk, volatility), market risks (e.g., regulatory risks), and reputational risks related to the environmental performance of the investments (Rieger et al., 2015; Nagy & Sawicki, 2022). While higher perceived risks in green investments can deter investors, particularly in conventional markets, Islamic investors often consider the ethical and long-term environmental benefits, potentially reducing their risk perception in favor of investing in Shariah-compliant green instruments (Dorfleitner & Utz, 2021).

In Islamic finance, the concept of risk is balanced by the principle of Tawakkul (trust in Allah after taking the necessary actions), which can influence how Muslim investors assess risk in green investment decisions. Thus, perceived risk in Islamic green finance is not solely viewed through the traditional financial lens but is also shaped by ethical considerations and religious duties to support sustainable practices (*maslahah*).

5. Social Norms Related to Green Investment

Social norms refer to the social pressures or expectations that influence an investor's decision-making process regarding environmentally friendly investments (Rahim & Justice,

2015; Khan et al., 2021). These social norms are shaped by reference groups such as family, colleagues, and the broader society. Investors are increasingly influenced by the growing awareness of sustainable investment norms and the expectation of ethical responsibility toward the environment, driven by organizations such as NGOs and environmental advocates (Nilsson, 2008; Jansson & Biel, 2011).

In Islamic finance, social norms around sustainable investment are also influenced by Islamic ethical codes, where acting in accordance with social norms is not just a societal expectation but also a religious duty (*fard kifayah*). By adopting socially responsible investment practices, Muslim investors fulfill their ethical obligations to society and the environment, which in turn strengthens social bonds and collective responsibility (Bassen et al., 2019; Kücher et al., 2020).

6. Attitude Toward the Environment

Attitude toward the environment reflects an investor's evaluation of environmental issues and their willingness to prioritize sustainability in their investment choices (Dyllick & Muff, 2016; Muñoz et al., 2020). A positive attitude is influenced by personal values, environmental awareness, and the perceived impact of economic activities on the environment (Kücher et al., 2020). Investors who are more aware of environmental issues and their role in mitigating climate change are more likely to allocate funds to green financial instruments.

In Islam, a positive attitude toward the environment aligns with the Islamic principle of environmental stewardship and the belief that humans are caretakers (*khalīfah*) of the earth. This perspective leads to an intrinsic motivation to make responsible decisions that safeguard natural resources for future generations (Al-Qaradawi, 2018). It is also supported by the concept of balancing human needs with nature's limits (mizan).

7. Theoretical Framework

The traditional finance model assumes rational decision-making based on risk and return. However, behavioral finance challenges this paradigm, recognizing that psychological and cognitive biases influence investment behavior (Ricciardi & Simon, 2000; Shefrin, 2000). In the realm of green investment, investors often deviate from rationality, placing greater emphasis on environmental, social, and governance (ESG) factors (Riedl & Smeets, 2017; Wins & Zwergel, 2016).

Given the growing importance of green investment in achieving a sustainable economy, understanding the psychological drivers behind investor preferences is crucial. Past studies show that factors such as risk perception, social norms, and attitudes toward the environment shape **green** investment decisions (Barone et al., 2021; Cupák et al., 2021). However, more research is needed to understand the specific behavioral dynamics in the context of Islamic green finance, particularly regarding the impact of religiosity and Islamic social responsibility in shaping investment decisions. By integrating behavioral finance with Islamic ethical principles, this research aims to provide new insights into how Muslim investors approach green investment. It will explore how religiosity and Islamic ethical norms influence investment behavior, providing valuable contributions to policymakers, financial managers,

and other stakeholders in promoting sustainable green investments in the Islamic finance sector.

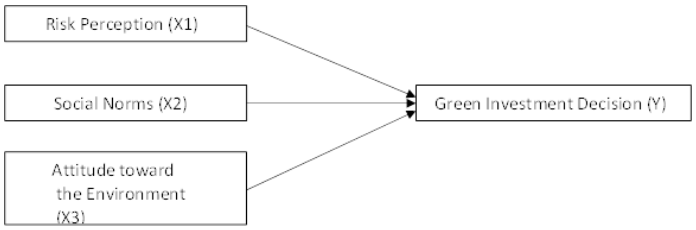

Figure 1. Conceptual Framework

8. Hypotesis

a. Investors' low perceived risk toward green investment, when aligned with Islamic principles of environmental stewardship (*khalifah*), will increase their tendency to make decisions to invest in environmentally responsible instruments.
b. Social norms that support sustainable and Sharia-compliant investment practices will encourage Muslim investors to be more inclined to choose green investment options in accordance with Islamic ethical values.
c. Investors' positive attitudes toward environmental issues, rooted in the Islamic worldview of maintaining balance (mizan) and protecting the earth (hifz al-bi'ah), will increase their propensity to engage in green or sustainability-oriented investment behavior.

C. METHODS

This study aims to analyze the influence of behavioral finance factors and Islamic ethical norms on green investment decisions among Muslim investors. A quantitative approach with an associative research design is employed. Data is collected through a closed-ended questionnaire using a five-point Likert scale, targeting individual Muslim investors who have invested in environmentally responsible financial instruments that comply with Islamic principles such as green sukuk, sharia-compliant green mutual funds, or other sustainable investment products aligned with Islamic ethics.

The population of this research consists of Muslim investors affiliated with Islamic financial communities such as the Masyarakat Ekonomi Syariah (MES) and the Komunitas Saham Syariah Indonesia (KSSI). These communities actively promote financial literacy, ethical investing, and sharia-compliant investment practices. While the total number of active members is estimated at around 1,240, the exact number of individuals specifically engaged in green investment remains uncertain. To address this, a preliminary survey was conducted involving approximately 50–100 community members. The results indicated that about 35% of respondents are involved in green investments that adhere to Islamic values.

Based on this proportion and applying a 10% margin of error, the minimum required sample size is determined to be 62 respondents. The research instrument undergoes a validation process through an assessment of the measurement model (outer model), which

includes tests for convergent validity, discriminant validity, and reliability to ensure accuracy and consistency.

Data analysis is conducted using Structural Equation Modeling - Partial Least Squares (SEM-PLS) with the aid of SmartPLS version 4.0. The evaluation consists of two stages: the outer model and the inner model. In the inner model, the analysis focuses on determining the significance and strength of the relationships between latent variables, particularly assessing how behavioral finance dimensions and Islamic ethical norms influence Muslim investors' decisions to pursue green investments.

D. RESULTS AND DISCUSSION

1. Respondent Characteristics

This study investigates how behavioral finance factors and Islamic ethical values shape the green investment decisions of Muslim investors. To gain a well-rounded understanding, a survey was conducted with 62 individual Muslim investors affiliated with Islamic financial communities such as Masyarakat Ekonomi Syariah (MES) and Komunitas Saham Syariah Indonesia (KSSI). These respondents had prior experience investing in environmentally responsible financial instruments that are compliant with Islamic principles, such as green sukuk and sharia-compliant mutual funds. Demographic information was collected to outline the profile of respondents engaged in Islamic-based green investments. Table 1 provides a summary of the respondents' characteristics by gender, age group, education level, occupation, and monthly income.

Table 1. Respondent Characteristics

Characteristic	Majority of Respondents	Percentage
Gender	Male	55%
Age	25–34 years old	35%
Highest Education	Bachelor's Degree	50%
Occupation	Private Sector Employees	40%
Monthly Income	IDR 5–10 million	40%

Based on the demographic data, the majority of respondents are male (55%) and fall within the 25–34 age group (35%). Most hold a bachelor's degree (50%), are employed in the private sector (40%), and earn a monthly income ranging between IDR 5 to 10 million (40%). This profile reflects that Muslim green investors are predominantly well-educated young professionals from the middle-income bracket. These findings suggest that there is growing environmental and ethical investment awareness among Muslim millennials and young adults. Their engagement in sharia-compliant green investments not only reflects financial prudence but also a desire to align investment choices with religious values and environmental responsibility.

2. Descriptive Statistics of Variables

To better understand what drives Muslim investors in making green investment decisions, this study adopts the three-box method to categorize the core variables: risk

perception (X1), social norms (X2), attitude toward the environment (X3), and green investment decisions (Y). These variables are rooted in behavioral finance perspectives and Islamic ethical values, which jointly shape investment behavior in environmentally conscious directions. The analysis results are presented in Table 2.

Table 2. Descriptive Analysis of Variables

Variable	Index Value	Percentage	Category
Risk Perception (X1)	17.6	28.4%	Low
Social Norms (X2)	45.0	72.6%	Medium
Attitude Toward the Environment (X3)	56.4	91.0%	High
Green Investment Decision (Y)	57.5	92.7%	High

As shown in Table 2, investors' risk perception related to green investment is relatively low (index 17.6 or 28.4%), suggesting that many Muslim investors do not view green investment as a high-risk activity. From a behavioral finance standpoint, this reflects a cognitive evaluation where potential losses are not strongly emphasized thus opening greater opportunities for sustainable choices. Moreover, this aligns with Islamic principles that encourage investment in sectors that promote public benefit (maslahah) and avoid harm (mafsadah). Social norms (X2) scored 45.0 (72.6%), indicating a moderate to strong influence. These norms likely reflect collective Islamic values that emphasize environmental stewardship (khalifah) and social responsibility (ukhuwwah), which can motivate individuals to consider not just personal gain, but also ethical and community well-being in their financial decisions. Additionally, the attitude toward the environment (X3) is highly positive, with an index of 56.4 (91.0%), showing that environmental awareness is deeply rooted among respondents. This reflects both a behavioral disposition and an alignment with Islamic teachings on preserving the Earth (hifz al-bi'ah).

Overall, green investment decisions (Y) are in the high category, with an index of 57.5 (92.7%), indicating a strong willingness to engage in environmentally responsible investing. This decision-making appears to be positively influenced by a blend of behavioral finance factors—such as risk perception and personal attitude and Islamic ethical norms that value sustainability, responsibility, and ethical conduct in financial matters.

3. Outer Model (Measurement Model) Analysis

To evaluate the outer model in this study, which investigates how behavioral finance factors and Islamic ethical norms shape green investment decisions among Muslim investors, two key assessments were conducted: (1) validity testing including convergent and discriminant validity and (2) reliability testing, including Cronbach's alpha and composite reliability. The convergent validity was examined through the loading factor values for each indicator. As shown in Table 3 below, all outer loading values exceed the minimum threshold of 0.700, indicating that each item reliably measures its intended construct.

Table 3. Loading Factor Values

Variable	Indicator	Outer Loading	Rule of Thumb	Criteria

Risk Perception (X1)	RP1	0.831	≥ 0.700	Meets Convergent Validity
	RP2	0.772	≥ 0.700	Meets Convergent Validity
	RP3	0.723	≥ 0.700	Meets Convergent Validity
	RP4	0.721	≥ 0.700	Meets Convergent Validity
Social Norms (X2)	SN1	0.861	≥ 0.700	Meets Convergent Validity
	SN2	0.812	≥ 0.700	Meets Convergent Validity
	SN3	0.790	≥ 0.700	Meets Convergent Validity
	SN4	0.756	≥ 0.700	Meets Convergent Validity
Attitude toward the Environment (X3)	AE1	0.849	≥ 0.700	Meets Convergent Validity
	AE2	0.808	≥ 0.700	Meets Convergent Validity
	AE3	0.838	≥ 0.700	Meets Convergent Validity
	AE4	0.793	≥ 0.700	Meets Convergent Validity
Green Investment Decision (Y)	ID1	0.852	≥ 0.700	Meets Convergent Validity
	ID2	0.813	≥ 0.700	Meets Convergent Validity
	ID3	0.807	≥ 0.700	Meets Convergent Validity
	ID4	0.751	≥ 0.700	Meets Convergent Validity

To ensure discriminant validity, the cross-loading analysis was conducted. Table 4 summarizes the results. Each indicator shows a higher loading on its corresponding construct than on other constructs, confirming that the variables are empirically distinct from one another. This reinforces the structural validity of the theoretical model, particularly in capturing the nuanced roles of Islamic ethical norms and behavioral perceptions in green investing.

Table 4. Cross-Loading Values

Indicator	Risk Perception (X1)	Social Norms (X2)	Attitude Toward Environment (X3)	Investment Decision (Y)
RP1	0.858	0.852	0.831	0.849

RP2	0.813	0.808	0.772	0.809
RP3	0.838	0.820	0.780	0.815
RP4	0.793	0.781	0.743	0.769
SN1	0.849	0.858	0.831	0.852
SN2	0.808	0.813	0.772	0.809
SN3	0.807	0.819	0.770	0.801
SN4	0.741	0.752	0.721	0.751
AE1	0.849	0.852	0.858	0.831
AE2	0.808	0.772	0.813	0.809
AE3	0.732	0.753	0.767	0.745
AE4	0.741	0.751	0.752	0.721
ID1	0.840	0.849	0.833	0.861
ID2	0.804	0.811	0.774	0.812
ID3	0.790	0.792	0.753	0.804
ID4	0.741	0.751	0.720	0.756

These findings validate that the model effectively captures the multifaceted drivers of green investment decisions among Muslim investors, integrating psychological biases, societal influences, environmental values, and ethical principles rooted in Islamic finance. The outer model analysis in this study assesses how well the measurement indicators reflect the latent variables that represent behavioral finance factors and Islamic ethical norms in influencing Muslim investors' decisions to invest in green assets. The analysis focuses on convergent validity, discriminant validity (as proxied by Average Variance Extracted or AVE), and reliability (as proxied by Cronbach's Alpha and Composite Reliability).

Table 5. Outer Model Analysis Results

Latent Variable	**AVE**	**Cronbach's Alpha**	**Composite Reliability**
Risk Perception (X1)	0.699	0.928	0.942
Social Norms (X2)	0.682	0.906	0.928
Attitude toward the Environment (X3)	0.700	0.937	0.949
Green Investment Decision (Y)	0.681	0.906	0.927

According to Hair et al. (2017), convergent validity is achieved when indicator loadings are greater than 0.70 and the AVE exceeds 0.50. As shown in the previous loading factor table and Table 5 above, all constructs meet these requirements. Therefore, no indicators were removed from the model, and all latent variables demonstrate sufficient convergent validity.

In terms of discriminant validity, each construct's AVE is higher than the squared correlations with other constructs, and the cross-loading values show that each indicator loads highest on its associated construct. This confirms that all latent variables are empirically distinct and measure different conceptual domains, aligning well with the theoretical framework that blends behavioral finance concepts and Islamic ethical values. From a reliability perspective, Cronbach's Alpha and Composite Reliability values for each construct are above the threshold of 0.70 (Latan, 2015), indicating strong internal consistency. This

means that the measurement items consistently represent the intended constructs, and the instrument used is statistically reliable.

4. Inner Model Analysis

The inner model assesses the relationships between exogenous latent variables—risk perception, social norms, and environmental attitude—and the endogenous latent variable, green investment decisions. This analysis includes: (1) model fit, (2) R-Square (coefficient of determination), (3) path coefficients and significance, (4) effect size (f^2), and (5) overall model goodness of fit. According to Haryono (2016), a well-fitting model should be based on strong outer model values, which this study has achieved. The inner model results also demonstrate high predictive power, as seen in the R-Square values.

Table 6. R-Square

Endogenous Variable	R Square	R Square Adjusted
Green Investment Decision (Y)	0.947	0.945

The R-Square value of 0.947 indicates that 94.7% of the variance in Muslim investors' green investment decisions can be explained by the combined influence of risk perception, social norms, and attitudes toward the environment. Only 5.3% of the variation is explained by other factors not included in this model, which highlights the model's strong explanatory power. The path coefficients provide insight into the direction and strength of the influence of each exogenous variable on green investment decisions.

Table 7. Path Coefficient

Predictor Variable	Path Coefficient (→ Y)
Risk Perception (X1)	-0.256
Social Norms (X2)	0.487
Attitude toward the Environment (X3)	0.299

These results reveal that risk perception has a negative effect on green investment decisions ($\beta = -0.256$), meaning that the less risk investors perceive, the more likely they are to choose green investments. In contrast, both social norms ($\beta = 0.487$) and attitudes toward the environment ($\beta = 0.299$) have a positive effect, indicating that cultural and ethical influences, along with environmental awareness, significantly increase the likelihood of green investing behavior. Taken together, the model confirms that psychological and sociocultural factors, including risk aversion, collective norms, and pro-environmental values, play a critical role in shaping ethical and sustainable investment decisions within the Muslim investor community. Significance testing is conducted to evaluate the research hypotheses and examine the partial direct effects between the exogenous latent variables (risk perception, social norms, and environmental attitude) and the endogenous latent variable (green investment decision). In Partial Least Squares (PLS) analysis, this testing is performed through a bootstrapping procedure, which is particularly effective for addressing non-normality in research data (Hamidi & Anwar, 2019). The significance test results for each direct relationship in the structural model are summarized in Table 8.

Table 8. Path Coefficients and Significance (Bootstrapping Results)

Path	Original Sample	Sample Mean	Std. Deviation	T-Statistic	P-Value
Risk Perception (X1) → Green Investment Decision (Y)	-0.255	0.237	0.090	2.830	0.005
Social Norms (X2) → Green Investment Decision (Y)	0.487	0.432	0.134	3.633	0.000
Environmental Attitude (X3) → Green Investment Decision (Y)	0.299	0.361	0.133	2.246	0.025

As presented in Table 8, all three behavioral constructs significantly influence Muslim investors' decisions to invest in green assets:

a. Risk Perception (X1) has a significant negative effect on green investment decisions, with a path coefficient of -0.255, t-statistic of 2.830, and p-value of 0.005 (< 0.05). This finding supports the idea that when investors perceive green investments as less risky, they are more likely to engage in them. In the context of Islamic investing, reduced financial risk may also align with the ethical principle of *avoiding gharar* (excessive uncertainty).
b. Social Norms (X2) show a strong and significant positive effect ($\beta = 0.487$, $p < 0.001$), emphasizing that the collective values and behaviors within the investor's social or religious community play a critical role. This suggests that when green investments are socially encouraged—especially in communities that prioritize environmental stewardship from an Islamic ethical perspective—Muslim investors are more inclined to participate.
c. Attitude toward the Environment (X3) also has a significant positive influence ($\beta = 0.299$, $p = 0.025$). This confirms that a personal commitment to environmental preservation, which resonates strongly with Islamic teachings on *khalifah* (stewardship of the Earth), motivates investors to favor environmentally responsible financial decisions.

Overall, these findings highlight how both psychological constructs (risk perception, environmental attitude) and social-cultural elements (norms and values rooted in religious and ethical frameworks) contribute meaningfully to green investment behavior in a Muslim investor context. This supports the integration of behavioral finance and Islamic ethics in understanding sustainable financial choices. Based on Table 8, the regression equation for the direct effects model can be formulated as follows:

$$\text{Green Investment Decision (Y)} = -0.255 \times \text{Risk Perception (X1)} + 0.487 \times \text{Social Norms (X2)} + 0.299 \times \text{Environmental Attitude (X3)} + e$$

This equation reveals the following:

a. A 1-unit decrease in risk perception leads to a 0.255 unit increase in green investment decisions. This supports the notion that as Muslim investors perceive lower risk—financial or ethical—they are more likely to engage in green investment instruments.

b. A 1-unit increase in social norms leads to a 0.487 unit increase in green investment decisions. This reflects the strong role of Islamic social values and collective behavior in shaping sustainable financial choices.
c. A 1-unit increase in attitudes toward the environment leads to a 0.299 unit increase in green investment decisions, consistent with the ethical principle of *khalifah* (stewardship of the Earth) in Islam.

5. F-Square (Effect Size)

The F-Square (f^2) statistic measures the effect size of each exogenous variable on the endogenous construct. According to Haryono (2016), f^2 values are interpreted as:

a. 0.02–0.15: small effect,
b. 0.15–0.35: moderate effect,
c. 0.35: large effect.

Table 9. F-Square Values

Exogenous Variable	Green Investment Decision (Y)
Risk Perception (X1)	0.455
Social Norms (X2)	1.071
Environmental Attitude (X3)	0.328

Based on Table 9:

a. Risk Perception (X1) has a strong effect ($f^2 = 0.455$), indicating its substantial role in shaping green investment preferences, especially relevant when perceived risks contradict Islamic risk-averse principles.
b. Social Norms (X2) exert a very strong effect ($f^2 = 1.071$), highlighting how religious and social influences such as peer behavior, community expectations, and religious leadership can significantly impact green investment behavior.
c. Environmental Attitude (X3) shows a moderate effect ($f^2 = 0.328$), underscoring that while personal concern for the environment matters, it is slightly less influential than broader social or risk-based considerations.

These results suggest that while all three behavioral factors are important, social norms rooted in Islamic ethical frameworks have the most powerful influence on Muslim investors' decision-making regarding green investment instruments.

6. Goodness of Fit (GoF)

The Goodness of Fit (GoF) index evaluates the overall predictive power of the model by combining the quality of the measurement model (average AVE) and the structural model (average R-Square). GoF is interpreted as:

a. 0.00–0.24: low fit,
b. 0.25–0.37: moderate fit,
c. 0.38–1.00: high fit.

Table 10. Goodness of Fit

Average AVE	R-Square	GoF	Category
0.695	0.947	0.811	High

The calculated GoF value of 0.811 clearly falls within the high category, indicating that the model provides an excellent fit to the data. This suggests that the combination of behavioral finance constructs and Islamic ethical norms used in this research effectively explains Muslim investors' decisions to participate in green investments.

Based on the results of the data analysis, it was found that risk perception (X1) has a significant negative influence on green investment decisions (Y). This indicates that the lower the perceived risk by investors, the greater their tendency to invest in green or environmentally friendly instruments. In the context of Islamic ethics, this tendency can be understood through the concept of tawakkul (reliance on God) and maslahah (public interest), which may encourage Muslim investors to see green investment not merely as a financial decision, but also as a moral responsibility. This is consistent with Weber et al. (2022), who found that lower risk perception correlates with a higher preference for sustainable investment. In Islamic terms, investors may reinterpret "risk" as an opportunity to achieve both financial and spiritual returns.

Meanwhile, social norms (X2) and attitudes toward the environment (X3) have a significant positive influence on green investment decisions (Y). The stronger the influence of social norms, and the more positive the investors' attitudes toward the environment, the more inclined they are to choose green investments. These results are in line with the Theory of Planned Behavior Ajzen (1991), which states that individuals' behavior is shaped by their perception of social pressure and subjective norms. In Islamic communities, where environmental stewardship is seen as a communal obligation (fard kifayah), these social norms are amplified, encouraging environmentally responsible financial behavior. Research by Doran & Larwood (2022) similarly emphasized the role of the social environment in forming normative beliefs about green investments.

Regarding attitudes toward the environment, the positive relationship with green investment is supported by the Value-Belief-Norm (VBN) Theory Stern et al. (1999), which explains that individuals with strong environmental values and beliefs are more likely to act sustainably. In the Islamic worldview, caring for nature is not only a value but a religious duty rooted in the principle of khalifah (stewardship of the Earth). This was also supported by Litvine & Whelan (2023), who highlighted the importance of environmental concern as a psychological driver for sustainable investment behavior.

The negative effect of risk perception is further explained by Prospect Theory Kahneman & Tversky (1979), which suggests that individuals tend to avoid perceived high-risk choices. Investors with low perceived risk may view green investments as both low-threat and high-impact, thus more desirable. In Islamic ethics, this decision-making process is further enriched

by the pursuit of barakah (blessing), which can make perceived risk more tolerable when investments are aligned with ethical and environmental principles.

This study thus provides empirical evidence that strengthens our understanding of the psychological and ethical determinants of green investment decisions, particularly among Muslim investors. By using a structural equation modeling approach, the study reveals that risk perception, social norms, and environmental attitudes when framed within Islamic ethical principles significantly shape investment behavior. These findings contribute to the behavioral finance literature by incorporating the role of religious values, and offer practical implications for financial institutions and policymakers in developing Sharia-compliant green investment products. Promoting awareness of Islamic environmental ethics, enhancing community support, and reducing perceived investment risk may collectively support the transition toward a greener, ethically guided financial system.

E. CONCLUSIONS AND SUGGESTIONS

This study has explored how green investment decisions are shaped not only by rational economic considerations but also by psychological perceptions and deeply held ethical values especially those grounded in Islamic principles. The findings highlight that investors are not merely profit-seeking actors but individuals influenced by their perceptions of risk, their social environment, and their moral compass.

Firstly, risk perception was found to have a significant negative influence on green investment decisions. The lower the perceived risk, the more likely investors are to allocate their funds into environmentally friendly assets. This behavior aligns with Islamic ethical values, particularly the principle of *tawakkul* placing trust in Allah after exerting effort and the pursuit of *maslahah* or public benefit. These values encourage investors to look beyond short-term gains and consider the long-term welfare of society and the environment.

Secondly, social norms showed a strong positive effect on green investment choices. This suggests that encouragement from family, friends, religious communities, and society at large plays a vital role in guiding investors toward more responsible and sustainable decisions. In the context of Islamic ethics, values such as *ukhuwah* (brotherhood) and *amar ma'ruf nahi munkar* (enjoining good and forbidding wrong) reinforce the importance of collective responsibility and mutual encouragement in choosing actions that serve the greater good including financial choices.

Thirdly, attitudes toward the environment were also found to significantly influence investment behavior. Investors with positive environmental attitudes tend to perceive green investments as more aligned with their personal values and beliefs. This aligns with the Islamic view of humans as *khalifah* (stewards) on Earth, entrusted with the duty to protect and preserve nature. Such attitudes are not only compatible with sustainable finance but are deeply rooted in religious teachings that emphasize harmony between humans and their environment.

From a practical standpoint, these findings provide several insights for stakeholders. For policymakers and financial institutions, it is crucial to design green investment products that

minimize perceived risks and clearly communicate their ethical and environmental benefits. Incorporating Islamic financial principles could further attract investors seeking not just returns but also alignment with their spiritual and moral beliefs. For educators and community leaders, it is important to foster awareness about the environmental impact of financial decisions. Promoting discussions around ethical investing within Islamic education and community forums can strengthen the moral motivation to support sustainable finance. Lastly, for future researchers, this study opens avenues to further explore the intersection between behavioral finance and religious ethics in various socio-cultural contexts. More qualitative investigations could enrich our understanding of the values and narratives that guide sustainable investment choices among Muslim investors. In conclusion, this study underscores that green investing is not just a financial choice it is a reflection of one's values, beliefs, and sense of responsibility toward the planet and future generations. Bridging behavioral finance with Islamic ethics offers a promising path for promoting more mindful and morally grounded investment behavior in the modern world.

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