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Sharia financing behavior: The role of regret aversion, sharia financial literacy, and gender

Ana Mufidah[1+]
Elok Sri Utami[2]
Novi Puspitasari[3]
Intan Nurul Awwaliyah[4]

[1,2,3,4]*Faculty of Economics and Business, Jember University, Indonesia.*
[1]*Email:* mufidah.fe@unej.ac.id
[2]*Email:* elok_utami.feb@unej.ac.id
[3]*Email:* novipuspitasari@unej.ac.id
[4]*Email:* in.awwaliyah.feb@unej.ac.id

(+ Corresponding author)

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ABSTRACT

This research explores and assesses the impact of regret aversion, gender, and Sharia financial literacy on Sharia financing behavior and explores the impact of education and social environment on Sharia financial literacy. The participants are 400 with prior experience in utilizing Sharia financing, selected using the snowball sampling technique. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that Sharia financial literacy, gender, and regret aversion significantly influence Sharia financing behavior. Education does not have a direct impact while the social environment positively affects Sharia financial literacy. Sharia financial literacy, regret aversion, and gender are essential determinants of appropriate Sharia financing behavior. Psychological biases stemming from past experiences also influence Sharia financing decisions. A strong understanding of Sharia finance is crucial for financial institutions and policymakers. Adequate financial literacy empowers individuals to make well-informed choices and avoid misjudgments when selecting financing options that best suit their needs. The financial service providers must consider Sharia financial literacy, gender, and regret aversion. These factors significantly influence individuals' choices in Sharia financing. By considering these elements, it is likely to increase public interest in using Sharia financing and help improve their welfare.

Contribution/Originality: This research adds to the body of literature by empirically demonstrating the influence of Sharia financial literacy, gender, and regret aversion on individuals' decisions in choosing Sharia financing, statistically significant results. This study extends the analysis to Sharia financing behavior while previous research has primarily focused on investment decision-making behavior.

1. INTRODUCTION

Sharia financing is considered a healthy and ethical alternative for individuals seeking to fulfill their financial needs. Sharia financing stands out as an attractive choice among the diverse financing options provided by both conventional and Sharia-compliant financial institutions. The public must possess adequate financial knowledge to select the most suitable financing option that is beneficial and free from potential harm.

Financial literacy plays an essential role in a Muslim's life and serves as an essential element in making well-informed financial choices. It is also a valuable tool for future financial planning. According to Huston (2010), financial literacy pertains to people's ability to comprehend and apply personal economic data. It is considered a "human capital" component in financial transactions, enabling individuals to estimate lifelong benefits and engage in behaviors that enhance financial well-being.

Several indicators can be utilized to measure financial literacy including how individuals manage their income and expenses, handle financial obligations, and maintain savings for both immediate needs and long-term investments (Hilgert, Hogarth, & Beverly, 2003). Xiao (2008) defines financial behavior as any actions related to money management.

Sharia financial literacy can serve to close the divide between religious beliefs and everyday financial management. Rahim, Rashid, and Hamed (2016) define Islamic financial literacy as people's ability to apply financial expertise, skills and attitudes in handling monetary resources in compliance with Islamic principles. Similarly, Abdullah and Chong (2014) highlight the increasing global significance of Islamic finance. Previous studies have demonstrated that Sharia financial literacy significantly influences investment decisions (Abdeldayem, 2016; Hassan Al-Tamimi & Anood Bin Kalli, 2009; Janor, Yakob, Hashim, Zanariah, & Wel, 2016).

Islamic financial practices are carefully structured to adhere strictly to Sharia principles, including fundamental tenets and regulations. Sharia governance refers to a management system that ensures activities within Islamic financial institutions remain free from prohibited elements such as *riba*, *gharar*, and *maisir* (Mansori, Safari, & Mohd Ismail, 2020).

Another significant research focus in economic choices is the role of gender, particularly in risk-taking behavior. A prevailing body of research indicates that women generally exhibit greater risk aversion than men in financial management and decision-making (Bajtelsmit & Bernasek, 1996; Bannier & Neubert, 2016; Carr & Steele, 2010; Eckel & Grossman, 2008).

Behavioral finance challenges the presumption that investors are always logical, which is a key premise in traditional finance. Various factors can lead to irrational financial behavior. Psychological biases like regret aversion have been identified as major contributors to financial decision-making errors (Alrabadi, 2018; Baker & Ricciardi, 2014; Jain, Walia, & Gupta, 2020; Jain, Khan, & Mishra, 2017; Mittal, 2018; Rafinda, Suroso, Purwaningtyas, & Mubaroq, 2024; Shafqat & Malik, 2021; Zahera & Bansal, 2018).

Previous studies have examined the impact of financial literacy, Sharia financial literacy, and psychological biases on investment decisions and various aspects of financial behavior, such as cash management, credit use, and savings habits. According to the Financial Services Authority (OJK) Jember (2023), the level of Sharia financial literacy and the utilization of Sharia financing in the region remain relatively low. Based on the gap in literature regarding the influence of Sharia financial literacy, psychological biases, particularly regret aversion, and gender on a specific financial behavior and Sharia financing behavior.

2. LITERATURE REVIEW

2.1. Theory of Behavioral Finance

2.1.1. Regret Aversion

The neoclassical economic and financial model posits that decision-makers possess complete information and exhibit unlimited cognitive capacity. However, behavioral finance theory explains how heuristics and cognitive biases influence financial decision-making. Bias is defined as a tendency that leads to systematic errors in judgment (Botoc, Mihancea, & Molcut, 2019; Chandra, 2016; Nouri, Motamedi, & Soltani, 2017). Some biases arise from specific heuristics which may lead to errors in financial decision-making. One notable example of behavioral bias is regret aversion.

2.2. Prospect Theory

Prospect theory, proposed by Kahneman and Tversky (1979) is founded on the principle of loss aversion, an uneven form of risk aversion in which individuals respond differently to gains and losses. Investment decisions are also affected by cognitive and emotional factors related to psychology (Barham, 2024; Shukla, Rushdi, & Katiyar, 2020; Zuraidah, Shabri, Faisal, & Sakir, 2024).

Regret aversion is a cognitive bias affecting how individuals respond to certain uncertain outcomes. When gains are certain, people tend to avoid risk. Conversely, they are more likely to take greater risks when faced with potential losses. This behavior suggests that individuals prioritize the assurance of avoiding losses over the unpredictability of potential losses (Benartzi & Thaler, 1995). A person's financial decisions are shaped by their past experiences, personal beliefs and individual preferences. The impact of regret aversion as a heuristic bias on investor decision-making has been widely studied (Alrabadi, 2018; Baker & Ricciardi, 2014; Jain et al., 2020; Jain et al., 2017; Mittal, 2018; Shafqat & Malik, 2021; Zahera & Bansal, 2018). The following text highlights the main points of the subject matter:

2.3. Sharia Financial Literacy

Sharia financial literacy is a fairly recent concept in financial literacy. There is no universally accepted definition of financial literacy in an Islamic context due to its recent emergence (Abdullah & Chong, 2014). Financial literacy is generally linked to knowledge. Research suggests this information significantly influences individual financial behavior (Antara, Musa, & Hassan, 2016; Baena-Rojas, Mackenzie-Torres, Cuesta-Giraldo, & Tabares, 2023). For example, Muslims use their financial knowledge to distinguish between halal and haram financial practices in accordance with Islamic law. Variations in financial literacy levels can result in different financial behaviors.

Information literacy (IL) plays a crucial role in education and should be incorporated into the curriculum at all higher education levels (Alagu & Thanuskodi, 2018; Appiah, 2023). Access to information can enhance financial literacy (Akhshik, Zerehsaz, & Dashti Garmi, 2023; Sugihartati, Wardhana, & Egalita, 2025) and information is also essential in policy-making (Asadian, Babalhavaeji, Matlabi, & Hariri, 2023).

2.4. Education and Social Environment on Sharia Financial Literacy

Financial literacy is a vital instrument for preventing financial difficulties (Maulina, Satria, Purnomo, & Suryanto, 2024). Various factors influence students' Sharia financial literacy, including gender, educational attainment, and financial attitudes (Abdullah, Sabar, & Abu, 2017). The findings of this research will offer meaningful insights for educational institutions in designing and implementing financial literacy programs. These programs should cover essential aspects, such as Islamic investment, credit management, financial planning, and Islamic insurance.

Research by Yoshihiko Kadoya and Khan (2020) concludes that male participants exhibited greater degrees of financial literacy than female participants. This finding is endorsed by earlier research (Atkinson & Messy, 2012; Kadoya & Khan, 2017; Lusardi, Mitchell, & Curto, 2010; Sekita, 2011). Education also plays a crucial role in forming financial literacy as evidenced by research conducted by Lusardi et al. (2010) and Razen, Huber, Hueber, Kirchler, and Stefan (2021).

Population characteristics like age, ethnicity, academic attainment, familial background, parental impact, and religious beliefs significantly impact financial literacy. Lusardi et al. (2010) found variations in financial literacy levels based on gender, race, income, employment status, education, and socioeconomic background. However, teacher gender and domicile do not influence financial knowledge, behavior or attitudes (Wagner & Walstad, 2023). Factors such as age, gender, education level, residence, monthly expenses, and relationship status all contribute to differences in Sharia financial literacy (Setyawati & Suroso, 2016). Social and demographic factors also play a vital role in Sharia financial literacy. Hassan Al-Tamimi and Anood Bin Kalli (2009) discovered that sex and level of education substantially impact financial literacy among investors in Saudi Arabia. Their study also highlighted a strong relationship between financial literacy and investment choices. Entrepreneurial choice-making is influenced by a person's knowledge and capability to leverage familial and external resources. Entrepreneurs rely on external social networks to acquire information, access financial and labor resources, and enhance their business legitimacy (Aldrich & Cliff, 2003; Granovetter, 1985; Greve & Salaff, 2003).

2.5. Gender

Significant differences exist in the capital allocation strategies of men and women (Stendardi, Graham, & Reilly, 2006) which has implications for financial advisors and institutions providing financial services. Previous research demonstrates that women are typically more risk-averse than men and prefer conservative investment options (Embrey & Fox, 1997; Harris & Jenkins, 2006; Sung & Hanna, 1996). Men and women also differ in their financial choice-making processes (Jaiswal & Kamil, 2012; Kusá, Danechová, Findra, & Sabo, 2014; Ligocká, 2020; Mata, 2021; Walczak & Pieńkowska-Kamieniecka, 2018). Based on the literature, the following hypotheses are proposed:

H_1: Education influences Sharia financial literacy.

H_2: The social environment influences Sharia financial literacy.

H_3: Sharia financial literacy affects Sharia financing behavior.

H_4: Gender affects Sharia financing behavior.

H_5: Regret aversion affects Sharia financing behavior.

3. RESEARCH METHODOLOGY

3.1. Population and Sample

This study focuses on Muslim individuals in Jember Regency who have experience using Sharia financing. 400 participants were selected using the snowball sampling method. This technique was applied because the exact population of Sharia financing users is unknown, necessitating a non-probability sampling approach where one of the techniques is snowball sampling. The sampling process began by identifying individuals who had used Sharia financing and then obtaining recommendations from them regarding other individuals with similar experiences who were willing to participate as respondents. Data were collected using questionnaires distributed to participants. The minimum sample size recommended for the PLS-SEM model is ten times the number of arrows leading to the latent variable (Hair, Hult, Ringle, & Sarstedt, 2017). Accordingly, this study requires a minimum of 110 respondents. Data were successfully collected from 400 participants by leveraging insights from knowledgeable sources regarding individuals who have utilized Sharia financing and could serve as respondents.

3.2. Conceptual Framework of the Research

Figure 1 illustrates that Sharia financial literacy, gender, and regret aversion are variables that influence Sharia financing behavior. The variables affecting Sharia financial literacy include education and social environment.

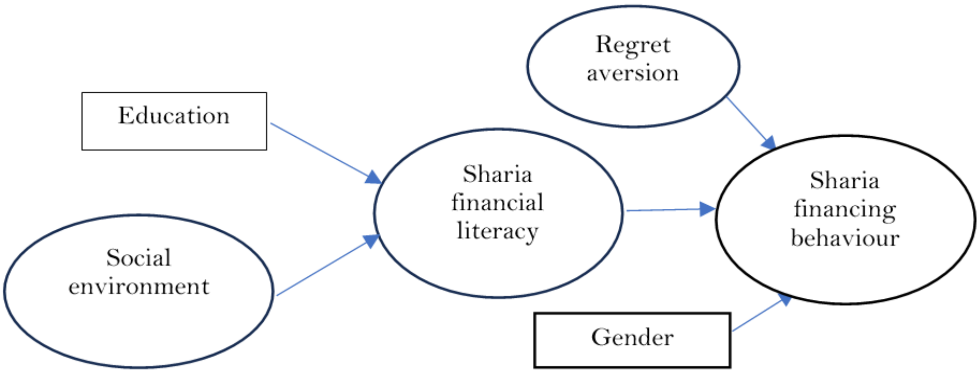

Figure 1. Research model

3.3. Definition of Research Variables

Sharia financing behavior refers to actions in selecting financing that align with Sharia principles. Sharia financial literacy pertains to an individual's knowledge of Sharia financing. This concept is measured by assessing participants' understanding of Sharia financing.

The social environment is defined as the surroundings in which an individual is situated, including the family environment, social circles, and the broader community engaged in Sharia finance. Education refers to an individual's level of academic attainment, ranging from basic education (primary and junior high school) to upper secondary education (senior high school) and higher education (university).

In this study, gender is synonymous with "sex" and is categorized as either male or female. Regret aversion is a cognitive bias that influences choice-making according to the certainty of gains and losses.

3.4. Measurements

The measurement of Sharia financial literacy variables is conducted using several indicators with true or false responses for each statement based on the findings of Antara et al. (2016). Three indicators of social environment variables are derived from (Ajzen & Fishbein, 2010; Balushi, Locke, & Boulanouar, 2018).

The Sharia financing behavior variable is measured by assessing the frequency with which the subject has used Sharia financing (Ajzen & Fishbein, 2010). On the other hand, the regret aversion variable is evaluated using two statement items with responses scored as follows: yes (3), sometimes (2), and no (1) adapted from (Kisaka, 2015).

The education variable is categorized into the following three groups: the first group comprises basic education, including primary and junior high school. The second group consists of upper secondary education, including senior high school. The third group represents higher education, referring to university education. The primary education group is coded as 1, the senior high school group as 2, and the higher education (university) group as 3. The gender variable is coded as 1 for women and 2 for men.

The analysis tool employed in this investigation is PLS-SEM to evaluate the cause-and-effect relationships between latent variables within the study framework. Additionally, it can be utilized to examine models with multiple independent and dependent variables simultaneously (Hair et al., 2017).

3.5. Structural Model Assessment

The evaluation of the structural model, particularly the outer model is conducted by assessing the validity and reliability of the construct (variable) items. The outer loadings value must be ≥ 0.70. If the outer loadings value falls between 0.40 and 0.70, further analysis is required. Indicators with outer loadings < 0.40 are removed (Hair et al., 2017).

This research model is reflective. In a reflective measurement model, a high outer loading indicates that the indicator is strongly associated with the related construct. Composite reliability (CR) assesses how well the indicators measure their respective latent constructs. Meanwhile, the validity of the research indicators is evaluated by examining the Average Variance Extracted (AVE) value. The internal model is assessed by analyzing the p-value.

4. DISCUSSION OF THE RESULTS

4.1. Results

4.1.1. Structural Model Assessment

Table 1 presents the outer model of constructs and indicators used to measure these constructs along with their outer loadings, CR, and AVE values.

Table 1. Validity and reliability model

Constructs and indicators	Outer loading	CR	AVE
Sharia financial literacy		0.842	0.520
SFL1: The methods used in Sharia finance avoid transactions that contain usury (true/false).	0.807		
SFL2: Gharar pertains to uncertainty, and fraud, which are not allowed in Sharia finance (true/false).	0.606		
SFL3: Sharia financial institutions can invest with you according to the profit-sharing method (Mudharabah)(true/ false).	0.778		
SFL4: Sharia financial institutions provide a method of trade finance called Murabahah (true/false).	0.800		
SFL5: Sharia financial institutions lend money based on the profit-sharing method (Musyarakah) (true/false).	0.580		
Social Environment		0.857	0.667
SE1: Most of my family have used Sharia financing at Sharia financial institutions available in Jember (true = 7 and not true = 1).	0.807		
SE2: Most of my friends have used Sharia financing at Sharia financial institutions available in Jember (true = 7 and not true = 1).	0.850		
SE3: People who are important in my life (favor = 7 and do not favor = 1) encourage me to use Sharia financing.	0.793		
Education	1.000	1.000	1.000
The primary education group is coded as 1.			
The upper secondary education group is coded as 2.			
The higher education (university) group is coded as 3.			
Sharia financing behavior	1.000	1.000	1.000
How many times have you used Sharia financing?			
Gender	1.000	1.000	1.000
Women coded as 1.			
Men coded as 2.			
Regret Aversion		0.851	0.741
RA2: I am not confident in using the same financing service that previously harmed me (yes, sometimes and no).	0.815		
RA3: Financing that has harmed me is a consideration when making financing decisions in the future (yes, sometimes and no).	0.904		

Table 1 presents the values of composite reliability (CR), Average Variance Extracted (AVE), and outer loadings. CR is used to assess the reliability of the research instrument where a CR value > 0.70 is considered acceptable while values between 0.60 and 0.70 are still tolerable. The AVE value should be > 0.50 (Hair, Ringle, & Sarstedt, 2011; Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). Outer loading values between 0.40 and 0.70 were evaluated for deletion. If an indicator is removed, it should enhance composite reliability and AVE (Hair et al., 2017). In this study, SFL5 was retained. According to Table 1, the outer loadings, composite reliability, and AVE values satisfy the prescribed threshold criteria, confirming the validity and reliability of the measurement indicators. The next stage of structural model evaluation involves examining the p-values as shown in Table 2.

Table 2. Hypothesis test results

Relationship between variables	P-values	Results	Decision
EDU -> SFL	0.465	Not significant	H_0 accepted
Gender -> FB	0.022**	Significant	H_0 rejected
Regret -> FB	0.045**	Significant	H_0 rejected
SE -> SFL	0.000***	Significant	H_0 rejected
SFL -> FB	0.000***	Significant	H_0 rejected

Note: P < 0.10; ** p < 0.01; *** p < 0.001.

Table 2 shows that education (EDU) does not statistically affect Sharia financial literacy (SFL) as shown by a p-value of 0.465. In contrast, gender, regret aversion (REGRET), and SFL exhibit statistically significant effects on Sharia financing behavior (FB) with p-values of 0.022, 0.045, and 0.000, respectively. Furthermore, the social environment (SE) significantly influences SFL because a p-value of 0.000. The following section discusses these findings:

4.2. Discussion

4.2.1. Education and Sharia Financial Literacy

The study's findings show that education does not exert a substantial effect on Sharia financial literacy. An elevated degree of formal education is not necessarily correlate with a thorough comprehension of Sharia finance. Instead, financial literacy is more influenced by experience, access to information, and the social environment.

Many perceive Sharia finance as complicated or exclusive to certain groups. Consequently, the motivation to learn about it tends to be low among individuals with higher education levels. The lack of proactive dissemination efforts by Sharia financial institutions and the government further exacerbates this issue. Formal education systems do not always incorporate Sharia finance into their curricula. Even individuals with advanced education may have limited understanding if they lack direct exposure to Sharia monetary instruments, including Sharia banking, coverage or investments.

Various Sharia-related studies, whether conducted in person or through platforms like television, radio, and social media contribute to increasing public knowledge, including financial literacy in the context of Sharia. Individuals can enhance their understanding without relying solely on formal education at primary, secondary, or tertiary levels by utilizing these platforms. These results are related to previous studies, which suggest formal education does not necessarily influence financial knowledge (Fernandes, Lynch Jr, & Netemeyer, 2014; Mandell & Klein, 2009).

4.2.2. The Social Environment and Sharia Financial Literacy

The findings indicate that the social environment significantly affects Sharia financial literacy. The social environment encompasses interactions within families, friendships, and communities, particularly with individuals who have experience using Sharia financial products. The religious knowledge of family members and significant others also plays a vital role in influencing a person's understanding of Sharia finance.

If a person's immediate environment, including relatives, peers, or close companions possesses a thorough comprehension of Sharia finance, they have a higher chance to share their knowledge, thereby improving financial literacy within their social circle. Consequently, enhancing Sharia financial awareness at the community level is essential. A shared understanding within the social environment facilitates the spreading Sharia financial knowledge through social interactions. These findings are supported by previous research (Koonce, Mimura, Mauldin, Rupured, & Jordan, 2008; Lusardi et al., 2010).

4.2.3. Sharia Financial Literacy and Sharia Financing Behavior

The results indicate that Sharia financial literacy significantly affects Sharia financing behavior. In this study, Sharia financial literacy from a person knowledge of Sharia finance. Financial literacy is particularly important for Muslims, as it helps them navigate financial decisions while adhering to Sharia principles, thereby avoiding financial difficulties.

A strong understanding of Sharia finance enables individuals to select financing options that comply with Islamic principles, like the prohibition of *riba* (usury), *maisir* (speculation), and *gharar* (excessive uncertainty). These principles contribute to public confidence in Sharia financial products. Therefore, a community's financial literacy serves a vital function in fostering trust and encouraging the use of Sharia-compliant financial services.

This finding aligns with previous studies i.e., Alagu and Thanuskodi (2018), Antara et al. (2016) and Appiah (2023) which highlight the function of information in enhancing financial knowledge (Akhshik et al., 2023; Asadian et al., 2023; Maulina et al., 2024; Sugihartati et al., 2025).

4.2.4. Gender and Sharia Financing Behavior

Gender is a social and cultural construct that defines the roles, behaviors, expressions, and identities of individuals as men or women. The results of this investigation indicate that gender exerts a notable influence on Sharia financing behavior. This suggests that men and women exhibit different financial behaviors, particularly in the context of Sharia-compliant financing.

Men and women differ in their financial decision-making processes, a factor that should be considered by financial advisors and institutions offering financial products and services. Previous research suggests that women generally exhibit greater risk aversion compared to men leading them to make more conservative financial decisions. This tendency also applies to their financing choices.

Muslims, women are more likely to opt for Sharia-compliant financing, as it aligns with their religious values and provides them with a sense of security. These findings align with prior research (Embrey & Fox, 1997; Harris & Jenkins, 2006; Jaiswal & Kamil, 2012; Kusá et al., 2014; Mata, 2021; Stendardi et al., 2006; Sung & Hanna, 1996; Walczak & Pieńkowska-Kamieniecka, 2018).

4.2.5. Regret Aversion and Sharia Financing Behavior

Regret aversion is a mental bias where people respond differently to the certainty of gains and drawbacks. When presented with guaranteed benefits, they tend to avoid risk. The results of this research suggest that regret aversion plays a part in shaping Sharia financing behavior.

Participants expressed reluctance to engage in financing options that had previously resulted in financial losses. Additionally, they considered past negative experiences when making new financing decisions. This suggests that prior financial setbacks influence future financing choices with individuals seeking to avoid similar regrets.

Regret aversion serves as a key psychological factor in financial decision-making, including selecting Sharia-compliant financing. In practice, individuals make judgments and choices based on past experiences, personal beliefs, and risk perceptions. These findings are supported by previous research (Alrabadi, 2018; Baker & Ricciardi, 2014; Jain et al., 2020; Jain et al., 2017; Mittal, 2018; Shafqat & Malik, 2021; Zahera & Bansal, 2018).

5. CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

5.1. Conclusion

This research reveals that psychological bias, particularly regret aversion is an essential component that individuals consider when making financial decisions, especially in relation to financing, including Sharia financing. This finding provides valuable insights for financial institutions, particularly Sharia financial institutions in understanding and accommodating individuals' preferences when selecting financing options that suit their needs.

Sharia financial literacy is a crucial factor for Sharia financial providers and policymakers to consider. Strong financial knowledge empowers individuals to make well-informed choices and avoid mistakes in selecting appropriate financing options. Additionally, improving financial literacy is expected to enhance public access to Sharia finance contributing to the overall growth of the Sharia financial sector.

Gender is another factor influencing financial decision-making. Women are usually more vigilant towards risk financial choices than men. As a result, women participants generally more inclined to choose Sharia financing, as it offers greater confidence in its benefits, comfort, and security.

The societal context has a major influence on shaping a person's Sharia financial literacy. A community with a strong understanding of Sharia finance can support individuals in enhancing their financial knowledge through social interactions. This is particularly relevant in Jember, where most of the population is Muslim.

The results of this research suggest the extent of a person's position of education does not necessarily affect their Sharia financial literacy because Sharia financial knowledge can be acquired through various religious studies conducted via television, radio, or social media. Furthermore, religious discussions and activities in daily community life serve as alternative avenues for individuals to enhance their understanding of Sharia finance, even without formal education.

5.2. Limitations and Future Research

One limitation of this research is the exclusive focus on Muslim participants. Future research should include non-Muslim participants, considering that Sharia financing is available to the entire community regardless of religious background. Additionally, future studies could explore other psychological biases that influence behavior in Sharia financing beyond regret aversion.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
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