

DIGITALES ARCHIV

ZBW – Leibniz-Informationszentrum Wirtschaft
ZBW – Leibniz Information Centre for Economics

Patrisia, Dina; Abror, Abror; Dastgir, Shabbir et al.

Article

Generation Z's financial behaviour : the role of Islamic financial literacy

ISRA international journal of islamic finance

Provided in Cooperation with:

International Shari'ah Research Academy for Islamic Finance, Kuala Lumpur

Reference: Patrisia, Dina/Abror, Abror et. al. (2023). Generation Z's financial behaviour : the role of Islamic financial literacy. In: ISRA international journal of islamic finance 15 (2), S. 20 - 37.
<https://journal.inceif.edu.my/index.php/ijif/article/download/540/420/954>.
doi:10.55188/ijif.v15i2.540.

This Version is available at:

<http://hdl.handle.net/11159/703264>

Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/econis-archiv/>

Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte.



<https://zbw.eu/econis-archiv/termsofuse>

Terms of use:

This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence.

ZBW

Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Mitglied der

Leibniz
Leibniz-Gemeinschaft

GENERATION Z's FINANCIAL BEHAVIOUR: THE ROLE OF ISLAMIC FINANCIAL LITERACY

Dina Patrisia

*Department of Management, Universitas Negeri Padang, Padang, West Sumatra,
Indonesia*

Abror Abror

*Department of Management, Universitas Negeri Padang, Padang, West Sumatra,
Indonesia*

Shabbir Dastgir

*Department of Accounting, Finance and Economics, University of Huddersfield
Business School, Huddersfield, United Kingdom*

Rita Rahayu

*Department of Accounting, Universitas Andalas, Padang, West Sumatra,
Indonesia*

Received
7 June 2021

Revised
21 June 2021
3 January 2022
13 February 2023
23 March 2023

Accepted
31 March 2023

ABSTRACT

Purpose — This research aims to examine the effect of family communication patterns on Islamic financial literacy (IFL) and risk tolerance of Generation Z (Gen Z) in Indonesia. It also examines the link between IFL, risk tolerance and financial behaviour. Finally, it highlights the moderating impact of IFL on the link between risk tolerance and financial behaviour.

Design/Methodology/Approach — This study used Muslim members of Gen Z in West Sumatra Indonesia who were born between 1995 and 2001 as the population. This study collected 668 responses in two months. After some preliminary tests, such as missing value and normality test, it employed 571 usable responses as the sample. Purposive sampling was conducted and variance-based structural equation model-partial least square (SEM-PLS) was employed as the method for data analysis.

Findings — The results show that family communication patterns, both conformity and conversation orientation, positively and significantly influence IFL and risk tolerance. IFL has a positive and significant impact on risk tolerance and financial behaviour. Surprisingly, IFL also moderates the link between risk tolerance and financial behaviour positively and significantly. Finally, risk tolerance significantly affects financial behaviour.



**ISRA International
Journal of Islamic
Finance (IJIF)**
Vol. 15 • No. 2 • 2023
pp. 20-37

eISSN:
2289-4365

DOI:
doi.org/10.55188/
ijif.v15i2.540

© Dina Patrisia, Abror Abror, Shabbir Dastgir and Rita Rahayu. Published in ISRA International Journal of Islamic Finance by ISRA Research Management Centre, INCEIF University. This article is published under the Creative Commons Attribution License 4.0 (CC BY). Anyone may reproduce, distribute, translate and create derivative works of this article, subject to full attribution to the original publication and authors. The full terms of this licence are available at: <http://creativecommons.org/licenses/by/4.0/legalcode>

Originality/Value — This research makes three theoretical contributions. First, it provides a better understanding and a more complex model of the relationship between IFL with its antecedents such as family communication patterns and also with its consequences, including risk tolerance and financial behaviour. Second, it reveals that IFL affects Gen Z's financial behaviour significantly—an aspect which is neglected in previous research. Third, it has expanded the scope of prior studies by addressing IFL as a moderator of the link between risk tolerance and Gen Z's financial behaviour.

Research Limitations/Implications — Even though this study has carried out Harman's single-factor analysis to anticipate a common method bias, it faces the common method bias problem due to the cross-sectional nature of the study. Secondly, the study focuses on Gen Z, which means that most of the respondents are students and their financial behaviour is still affected by the decisions of their parents.

Practical Implications — This study has some contributions for decision makers such as Otoritas Jasa Keuangan (Financial Services Authority) and management of Islamic banks and financial institutions. First, to increase Gen Z's IFL, the decision makers have to educate the parents using the two-way communication orientation method. Second, the financial behaviour of Gen Z is influenced by financial literacy and risk tolerance; hence, decision makers such as the government and society have to educate Gen Z on IFL and inform them about financial risks which influence their risk tolerance when conducting financial activities.

Keywords — Family communication patterns, Financial behaviour, Generation Z, Islamic financial literacy, Risk tolerance

Article Classification — Research paper

INTRODUCTION

Indonesia has one of the largest Muslim populations in the world, but its Islamic financial assets are only USD99 billion compared to Malaysia whose assets have already grown to USD570 billion as at 2019 (Capital, 2021). According to Yumna (2019), Islamic banking assets have been increasing constantly in the last few years. However, one of the challenges of developing the Indonesian Shari'ah economy is the low level of Islamic financial literacy (IFL) in the community (KPPN/BPPN, 2018). Low IFL may affect financial behaviour, such as savings, credit management, investments and insurance.

A survey by Otoritas Jasa Keuangan (OJK) revealed that the percentage of Indonesia's population who are Islamically financially literate was only 8.93 per cent in 2019 (OJK, 2017; Puspaningtyas, 2019). This percentage is far below conventional financial literacy which stood at 37.72 per cent (Puspaningtyas, 2019; OJK, 2019). This factor influences the index of public access to Islamic financial products and services (i.e., Islamic financial inclusion). According to the data, the percentage of public access to products and services of Islamic financial institutions (IFIs) was only 9 per cent (Puspaningtyas, 2019). Hence, it is a plausible reason why the Islamic finance industry's market share in 2019 was only 8.69 per cent of the total financial industry in Indonesia (ICD-Refinitiv, 2019).

One means of improving the Islamic economy market share in Indonesia is by educating people in positive financial behaviour from an Islamic finance perspective. It starts with increasing the financial literacy of the community, especially the younger generation (Grohmann, 2018). The younger generation is generally technology literate. On the one hand, they are potential Islamic economic actors in the retail banking sector and are the key factor for the Islamic economy's growth in Indonesia (Tan, 2018; Abror *et al.*, 2021). On the other hand, the younger generation has insufficient financial knowledge to improve their future financial prosperity; hence, they require an increase in IFL (Hanson & Olson, 2018).

Generation Z (Gen Z) is a young generation who was born between 1995 and 2001 (Broadbent *et al.*, 2017). Based on available data, Gen Z's population in Indonesia is 75.49 million, representing 27.94 per cent of the total population (Idris, 2021). In addition, in the research context of Indonesia they have a strong commitment to religion (Broadbent *et al.*, 2017; Abror *et al.*, 2019). Therefore, to achieve the objective of increasing the Shari'ah economy, it is important that Gen Z partakes in Islamic financial activities as they are generally good in technology and strongly committed to religion.

The financial literacy of Gen Z is influenced by several factors (Hanson & Olson, 2018). Previous studies highlighted the factors that influence financial literacy and financial behaviour, such as communication patterns in the family (Jorgensen & Savla, 2010; Hanson & Olson, 2018), the role of financial literacy on the customer's tolerance of risk (Bannier & Neubert, 2016; Zhu, 2019a), the influence of financial literacy on financial behaviour (Grohmann, 2018) and investment behaviour (Aren & Zengin, 2016; Arum *et al.*, 2018). For example, Zhu (2019a) argues that direct parental teaching influences financial behaviour, and Grohmann (2018) asserts that financial literacy leads to financial behaviour. However, the studies have not addressed these variables in a more complex research model. In addition, these studies focused on conventional financial literacy rather than IFL. Hence, studies in the IFL context were neglected. Besides,

financial literacy for Muslim customers is an emerging topic, especially in Muslim-majority countries such as Indonesia (Ali *et al.*, 2020).

Therefore, this study examines the effect of family communication patterns on IFL and risk tolerance, the role of IFL on risk tolerance, and the effect of IFL and risk tolerance on financial behaviour. It also examines the moderating role of IFL on the link between risk tolerance and financial behaviour, which is an aspect that has been neglected in previous research (Alshater *et al.*, 2020). According to Alshater *et al.* (2020), one of the future research streams is the attitude and perception of customers towards Islamic finance. They argue that the role of IFL in this regard needs to be further explored in future research.

This paper is accordingly organised as follows: after this introduction, the second section discusses the literature review on key themes related to the topic. The third section delineates the methodology that has been applied in this research. It is followed by the presentation and discussion of the results. The last section concludes the paper, laying out its theoretical contribution, practical implications, research limitations and recommendations for future research.

LITERATURE REVIEW

Financial Behaviour

Financial behaviour refers to an individual's behaviour in carrying out financial activities such as investing in stocks and securities (Dew & Xiao, 2011). Rey-Ares *et al.* (2021) recognise the following financial behaviours of the individual: investment behaviour (i.e., investment in retirement and savings products) and indebtedness (i.e., caused by personal loans and mortgages). Dew and Xiao (2011) similarly classify financial behaviour into savings and investment, but also added other aspects of individuals' behaviour including management of cash, credit and insurance.

Financial behaviour is influenced by factors such as individual's financial literacy, demographics and financial risk tolerance (Allgood & Walstad, 2016; Grohmann, 2018; Grohmann *et al.*, 2018; Bapat, 2020).

Islamic Financial Literacy

In the study of financial literacy, some researchers have examined IFL, which focuses on the financial literacy of Muslim communities (Antara *et al.*, 2016; Arum *et al.*, 2018; Biplop & Abdullah, 2019; Ali *et al.*, 2020). IFL is still a new concept. Therefore, only a few studies have focused on a scale or measurement tools for IFL (Nawi *et al.*, 2018). According to Nawi *et al.* (2018), IFL can be measured by using four dimensions, including money basics, Islamic banking, Islamic investment and *takāful*. Money in Islam serves as a medium of transaction. It performs a social role, benefitting the society at large. Earning interest on the lending of money is not allowed in Islam, and Islamic banking is instead founded on interest-free practices. Moreover, Islamic banks only finance Sharī'ah-compliant businesses. Islamic investments are based on the concepts of risk sharing and no guaranteed profit. *Gharar* (uncertainty) and *maysir* (gambling) are also prohibited elements in Islamic investments. *Takāful* is an insurance concept based on the mutual intention to protect one another against financial mishaps. It is based on *tabarru'* (donation) among participants.

Previous studies have highlighted the effects of financial literacy on financial behaviour (Hastings & Mitchell, 2018). However, there is no investigation into the IFL-financial behaviour relationship yet. Furthermore, financial literacy is influenced by several factors such as family communication patterns (Hanson & Olson, 2018). Financial literacy affects peoples' risk tolerance (Bannier & Neubert, 2016) and their financial behaviour in the future (Morgan & Long, 2020).

According to Abdullah *et al.* (2017), the factors influencing IFL are gender, education level, and attitude towards financial management. Ali *et al.* (2020) considered two dimensions of Islamic financial inclusion determinants:

- On the demand side, there are four influencing factors, including financial literacy, religious commitment, and social and economic influence.
- On the supply side, there are four influencing factors, including human capital, products and services, infrastructure readiness, and policies and regulation.

IFL in this study is taken from the research by Nawi *et al.* (2018). They argue that IFL is 'the knowledge gained through education and/or specific experience relating to important concepts and products of Islamic finance' (Nawi *et al.*, 2018, p. 632). This study has eight hypotheses based on the relationship between variables which are discussed below.

Family Communication Patterns and Risk Tolerance

Previous studies have stated that people's risk tolerance is influenced by various factors such as demographics, socio-demography and individual and environmental factors (León & Pfeifer, 2017). Rabbani *et al.* (2019) also found that personality factors influence risk tolerance. Furthermore, Hanson and Olson (2018) highlighted that communication patterns will affect attitudes towards risk and trust. One of the attitudes towards risk is the individual's tolerance for possible risk. Better communication patterns in the family are expected to provide better self-confidence for individuals. Hence, it is argued that they can be more tolerant towards risks. Although research on this relationship is still limited, it is believed that communication patterns within the family might significantly influence an individual's tolerance for risk.

Hanson and Olson (2018) stated that family communication patterns can be divided into two types: conformity orientation and conversation/discussion orientation. Conformity orientation refers to one-way communication methods where the communication flow is top-down from parents to children. Conversation/discussion orientation, on the other hand, is a type of communication where parents and children play their roles equally and they use two-way communication methods in their conversations. Presumably, children prefer conversation orientation and it leads to their tolerance in taking risks, whilst the conformity patterns will affect children's risk tolerance negatively (Zhu, 2019b). Based on this discussion, therefore, this study proposes the following hypotheses:

- H1: Conformity communication patterns have a negative and significant impact on risk tolerance.
- H2: Conversation communication patterns have a positive and significant impact on risk tolerance.

Family Communication Patterns and Islamic Financial Literacy

Communication patterns in the family might greatly influence socialisation in the family and thus affect financial literacy, including IFL (Jorgensen & Savla, 2010; Hanson & Olson, 2018; Moreno-Herrero *et al.*, 2018). Discussion-oriented family communication patterns, as described by Hanson and Olson (2018), will be more suitable for families to socialise, allowing the younger generation to learn through discussions than through one-way or conformity communication patterns. Hence, discussion-oriented family communication patterns might increase the younger generation's level of financial literacy (Jorgensen & Savla, 2010; Grohmann *et al.*, 2015; Hanson & Olson, 2018).

Previous studies have only focused on financial literacy in general and only limited studies have addressed IFL (Moreno-Herrero *et al.*, 2018). Meanwhile, the number of Muslim members of Gen Z in Indonesia is high. They might potentially benefit from a higher level of IFL. Therefore, this study examines the impact of family communication patterns on IFL and proposes the following hypotheses:

H3: Conformity family communication patterns have a significant impact on IFL.

H4: Conversation family communication patterns also have a significant link to IFL.

Islamic Financial Literacy and Risk Tolerance

According to Zhu (2019a), a person's financial knowledge might increase their tolerance to financial risks. This level of financial knowledge can be real (actual financial knowledge) or perceptual (perceived financial knowledge) (Zhu, 2019b). People who understand or feel that they understand the risks they are facing become more courageous in taking risks. Risk tolerance is an important factor of IFL, which may have a significant impact on people's behaviour in the future. Hermansson and Jonsson (2021) highlighted the significant impact of financial literacy on risk tolerance. Similarly, Hsiao and Tsai (2018) found that individuals with high financial knowledge have a higher preference for investing in the capital market than those with low levels of financial knowledge. They will invest in more risky products because they have calculated the risk due to their sufficient knowledge. This is applicable not only in the case of general financial literacy but also for IFL. Therefore, this study hypothesises that:

H5: IFL is an antecedent of risk tolerance.

IFL, Risk Tolerance and Financial Behaviour

According to Cameron *et al.* (2014) and Kannadhasan (2015), a person's tolerance of risk affects their financial behaviour such as cash management, savings, insurance, investment allocation and loans. People with high risk tolerance will presumably have more complex investments with higher risk (Kannadhasan, 2015; Bannier & Neubert, 2016; León & Pfeifer, 2017; Salem, 2019). People with a higher level of risk tolerance and who have been supported by good financial literacy will understand various alternative investment instruments in terms of risk and return. Hence, they can choose from the different financial instruments available to build a more diverse and complex investment portfolio.

Hermansson and Jonsson (2021) have also asserted that financial literacy is an antecedent of financial risk tolerance. Accordingly, financial literacy might strengthen the financial risk

tolerance-financial behaviour link. This research hypothesises the following about IFL, which is a specific type of financial literacy:

H6: IFL significantly moderates the risk tolerance-financial behaviour relationship.

Islamic Financial Literacy and Financial Behaviour

According to Antara *et al.* (2017), the level of IFL can be measured using four indicators, namely basic financial knowledge (prohibition of *ribā*, *gharar* and *maysir*), loans/credit, investment/savings, and insurance/protection of resources. Previous studies have addressed the financial literacy impact on financial behaviour (Grohmann *et al.*, 2018; Hastings & Mitchell, 2018; García & Vila, 2020). However, they have not addressed the IFL-financial behaviour link yet. Knowledge about Islamic finance, such as the prohibition of interest, will affect people's investment choices which are related to financial behaviour. The above literature review supports the formulation of the following hypothesis:

H7: IFL is an antecedent of financial behaviour.

Risk Tolerance and Financial Behaviour

Several previous studies stated that financial behaviour is also determined by the level of risk tolerance (Aren & Zengin, 2016; Bannier & Neubert, 2016; León & Pfeifer, 2017; Garcia & Vila, 2020). When people have a higher risk tolerance level, they will have more courageous investment decision-making. Accordingly, this study argues that:

H8: Risk tolerance is a significant antecedent of financial behaviour.

METHODOLOGY

Population and Sample

This study used Muslim members of Gen Z in West Sumatra, Indonesia, who were at least 17 years old as the research population. The Generation Z in this study is a person who was born from 1995 to 2001 (Broadbent *et al.*, 2017). This study used G* Power in calculating the minimum sample. The minimum sample using G* Power with effect size = 0.2, alpha = 0.05 and power 0.99 was 443 respondents. This study analysed 571 respondents; therefore, it has met the minimum criterion.

Data Collection Procedures

The sampling method of this study is the convenience sampling method. The respondents of this study are members of Gen Z who have social media accounts and agreed to fill in the questionnaire via Google Forms. The Likert scale with five levels from 'Strongly Agree' to 'Strongly Disagree' was used as a measurement tool in the questionnaire. This study employed two stages of data collection. The first stage was pilot or preliminary data collection to 30 respondents. The pilot survey data were analysed to test the items' validity and reliability. The second stage was primary data collection. The data collection was conducted for two months over June–July 2020. The data have been collected using an online survey through Google Forms. The questionnaires were distributed to several social media platforms such as Facebook and Instagram and by email. To increase the response rate, the questionnaires were sent four times and gentle reminders were also sent to the respondents. Finally, after two months of data

collection, this study administered 668 responses and after the preliminary checks, including missing value and non-response biases, only 571 responses were used for the analysis.

Variables and Measurements

This study consisted of four variables, including financial behaviour, IFL, risk tolerance and family communication patterns. The measurement of financial behaviour was adapted from Dew and Xiao (2011). The 12 items of financial behaviour have been measured using scales 1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = always. IFL measurements were adopted from Nawi *et al.* (2018). This variable used 22 items, including money basics (6 items), Islamic banking (6 items), Islamic investment (5 items) and *takāful* (5 items). These items have been measured using scales 'True, False and Not Sure'. The value of this variable was measured using the number of correct answers from the respondents.

Furthermore, risk tolerance measurement item was taken from Bannier and Neubert (2016). The respondents were asked about their willingness to take risks. It has been measured using scales from '0' to '10', where 10 is the highest willingness to take risks. Finally, the last variable was family communication patterns. The measurement items of this variable were adopted from Hanson and Olson (2018). They classified family communication patterns into two dimensions, including conformity family communication patterns (11 items) and conversation family communication patterns (15 items). These items have been measured using a 5-point Likert scale from 'Strongly disagree = 1' to 'Strongly agree = 5'. **Table 1** and **Table 2** show the details of the variable measurements.

Table 1: Variables and Indicators

Variables	Definitions	Indicators	Sources
IFL	A person's knowledge and understanding of financial concepts and risks, financial skills, motivation and confidence to apply them in making financial decisions based on a Sharī'ah perspective.	<ul style="list-style-type: none"> • Money basics (6 items) • Islamic banking (6 items) • Islamic investment (5 items) • <i>Takāful</i> (5 items) 	Nawi <i>et al.</i> (2018)
Financial Behaviour	Individual behaviour in carrying out financial activities such as investing in stocks and securities.	<ul style="list-style-type: none"> • Comparison when purchasing a product or service • Paid all your bills on time • Keep written or electronic record of monthly expenses • Maintain budget or spending plan • Pay all credit card bills in full each month • Pay attention to the credit card limit • Pay minimum required level of loans • Prepare an emergency savings fund • Allocate some savings every month • Save some money for long-term investment such as a car, education, home, etc. • Allocate money for pension plan • Invest money in bonds, stocks, or mutual funds 	Dew & Xiao (2011)

Table 1: Variables and Indicators (Cont.)

Variables	Definitions	Indicators	Sources
Risk Tolerance	Tolerance of respondents to financial risks.	<ul style="list-style-type: none"> The willingness of respondents to take financial risks on a scale of 1 to 10 	Bannier & Neubert (2016)
Family Communication Patterns	The patterns of communication between parents and their children are divided into conformity orientation and conversation communication orientation.	<ul style="list-style-type: none"> Conformity orientation (11 items) Conversation orientation (15 items) 	Hanson & Olson (2018)

Source: Authors' own

Table 2: Islamic Financial Literacy Items

No.	Item	True	False	Not Sure
Money Basics				
1	Any excess or interest charged on loan is <i>ribā</i> .	X		
2	Paying or receiving interest is prohibited in Islam.	X		
3	Lending money must be for the purpose of helping, not for profit.	X		
4	Money should only be generated through lawful trade and investment where parties share the risks and rewards.	X		
5	Money is a medium of exchange.	X		
6	Human effort, initiatives and risks must be considered to earn profit.	X		
Islamic Banking				
1	Islamic banks eliminate the element of <i>ribā</i> .	X		
2	The income of Islamic banks comes from profit and rent.	X		
3	Islamic banks only finance Sharī'ah-compliant business/goods.	X		
4	The Islamic banking basic principle is risk sharing.	X		
5	Islamic banks in Indonesia are governed by Otoritas Jasa Keuangan (Financial Services Authority) and Dewan Pengawas Syariah (Sharī'ah Supervisory Board).	X		
6	Financing arrangements of Islamic banks are based on profit sharing, trading, agency and services.	X		
Islamic Investment				
1	Guaranteed returns in investment are contradictory to Sharī'ah principles.	X		
2	The Sharī'ah allows the element of <i>gharar</i> in investments.		X	
3	The Sharī'ah prohibits the element of <i>maysir</i> in investments.	X		
4	Otoritas Jasa Keuangan (Financial Services Authority) and Dewan Pengawas Syariah (Sharī'ah Supervisory Board) are responsible to monitor and approve Sharī'ah-compliant investment products.	X		
5	<i>Mudārabah</i> (profit sharing) is an example of a Sharī'ah-compliant investment contract.	X		
Takāful				
1	The <i>takāful</i> contract is based on the principle of <i>tabarru'</i> .	X		
2	In <i>takāful</i> , the participants guarantee each other.	X		
3	<i>Takāful</i> consists of the element of <i>gharar</i> just as in the case of conventional insurance.		X	
4	The contract of <i>takāful</i> insurance is based on the sale contract.		X	
5	There is no insurer-insured relationship between the <i>takāful</i> operator and participants.	X		

Source: Authors' own

Data Analysis

This study employed two data analysis methods, including descriptive and Structural Equation Modeling using Partial Least Square (SEM-PLS). The descriptive analysis aims to provide general information regarding the minimum, maximum, and average and standard deviation values. Before the main analysis, this study conducted several preliminary tests such as normality with kurtosis ± 3 , heteroscedasticity by using the Glejser test, and multicollinearity test with cut-off point Variance Inflation Factor (VIF) value < 10 (Hair *et al.*, 2010).

This study found the kurtosis values for all variables to be between 0.77 and 2.20. Based on the Glejser test, the significant value of all variables is more than 0.05. VIF values of all variables are between 1.04 and 1.10. Therefore, all variables have met the criteria of preliminary analysis. Furthermore, it was a cross-sectional study; hence, it will face a common method bias problem. To anticipate this problem, Harman's single-factor test using Exploratory Factor Analysis (EFA) was employed. It found the total variance explained for single-factor is 21.77 per cent, which was less than the cut-off point of 50 per cent (Podsakoff *et al.*, 2003).

Moreover, this study employed SEM-PLS for the analysis of data. This analysis has two models, notably the measurement model and the structural model (Hair *et al.*, 2013). For the measurement model, validity and reliability tests have been conducted. This study used Convergent Validity by using loading factor and Average Variance Extracted value (AVE). The loading factor should be ≥ 0.6 and AVE should be greater than 0.5. It has also tested Fornell and Larcker's criterion for the discriminant validity, where the value of the square root of AVE in the diagonal should be greater than the correlation value between variables. For the reliability test, this study has calculated the Composite Reliability (CR) and Cronbach's Alpha. The value should be ≥ 0.7 . **Table 3** and **Table 4** show that all constructs have good validity and reliability. Bootstrapping with 5000 re-sampling was also used to solve the normality problem (Hair *et al.*, 2013). After the validity and reliability tests, several items were deleted and **Table 3** shows that only 48 items have been included in the analysis.

Table 3: Construct Validity and Reliability

Constructs	Items	Loading	Cronbach's Alpha	CR	AVE
Conformity Orientation			0.865	0.894	0.514
	My parents do not want to know about something if they do not agree with it.	0.729			
	My parents often say their ideas are right and there is no question about it.	0.719			
	My parents often say adults are right and there is no argument about it.	0.686			
	My parents often say not to discuss about something.	0.671			
	My parents often say 'do not argue, it will make people mad'.	0.774			
	My parents expect me to follow their orders without question.	0.667			
	My parents feel that they are the boss.	0.744			
	My parents sometimes feel annoyed when I have a different idea.	0.740			

Table 3: Construct Validity and Reliability (Cont.)

Constructs	Items	Loading	Cronbach's Alpha	CR	AVE
Conversation Orientation			0.929	0.939	0.565
	My parents make me enjoy when we discuss about something, despite the fact that we have different ideas.	0.830			
	My parents like to discuss about my ideas, even when they have different opinions.	0.838			
	My parents let me discuss my ideas with them.	0.842			
	We often discuss about our family problems together.	0.799			
	In our family, we often discuss about our plans and hopes freely.	0.789			
	My parents often say every family member should be involved in family decision-making.	0.650			
	My parents often discuss with me about our financial conditions.	0.652			
	My parents let me give my point of view on their ideas.	0.688			
	I usually discuss about my financial situation with my parents.	0.644			
	I can discuss anything with my parents.	0.730			
	In our family we are free to discuss our feelings and opinions.	0.771			
	My parents and I often have time to discuss everything.	0.749			
IFL	Correct answers from 22 items		1.000	1.000	1.000
Risk Tolerance	I do not mind taking risks with respect to financial matters.		1.000	1.000	1.000
Financial Behaviour			0.788	0.853	0.538
	Kept a written or electronic record of your monthly expenses	0.690			
	Stayed within your budget or spending plans	0.727			
	Began or maintained an emergency savings fund	0.742			
	Saved money from every paycheck	0.763			
	Saved for a long term goal such as a car, education, home, etc.	0.743			

Source: Authors' own

Table 4: Discriminant Validity

	1	2	3	4	5
Conformity	0.717				
Conversation	-0.005	0.195			
Financial Literacy	0.086	0.201	1.000		
Risk Tolerance	0.195	0.166	0.201	1.000	
Financial Behaviour	0.028	0.328	0.274	0.197	0.734

Note: diagonal (in bold) is the square root of AVE; for the discriminant validity, the square root of AVE should be higher than off-diagonal elements.

Source: Authors' own

RESULTS AND DISCUSSION

Results

Respondents

Based on the results, most of the respondents were women (74.4 per cent), and they have graduated from senior high school (82.8 per cent). Most of them were born in 1999 (28.7 per cent). Their personal income was less than Rupiah 2 million (93.2 per cent). The largest category of parents' occupation was entrepreneurship (22 per cent), and 44 per cent of parents are senior high school graduates.

Hypothesis Testing

This study tested the hypothesis by using SEM-PLS with SMART-PLS 3.2.6. **Table 5** shows the results of the hypothesis testing. This study highlighted that parent communication patterns have a significant impact on risk tolerance, including conformity (H1; $\beta=-0.18$; ***) and conversation (H2; $\beta=0.13$; ***). Parent communication patterns also have a significant impact on IFL, including conformity (H3; $\beta=-0.09$; **) and conversation (H4; $\beta=0.25$; ***). This study found that IFL has a significant impact on risk tolerance (H5; $\beta=0.15$; ***). IFL is a moderating variable of the risk tolerance-financial behaviour relationship (H6; $\beta=0.12$; **). IFL has a significant impact on financial behaviour (H7; $\beta=0.25$; ***). Finally, this study also found that financial behaviour will be significantly influenced by risk tolerance (H8; $\beta=0.152$; ***)).

Table 5: Hypothesis Testing

	Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (Std Dev)	T-Statistics (O/Std Dev)	P-Values
H1	Conformity and Risk Tolerance	-0.18	0.190	0.043	4.252	***
H2	Conversation and Risk Tolerance	0.13	0.132	0.045	2.867	***
H3	Conformity and IFL	-0.09	0.090	0.044	1.982	**
H4	Conversation and IFL	0.25	0.253	0.039	6.512	***
H5	IFL and Risk Tolerance	0.15	0.150	0.044	3.513	***
H6	IFL * Risk Tolerance and Financial Behaviour	0.12	0.113	0.044	2.593	**
H7	IFL and Financial Behaviour	0.25	0.257	0.042	6.078	***
H8	Risk Tolerance and Financial Behaviour	0.15	0.155	0.045	3.343	***

Note: *** means $P<0.01$; ** means $P<0.05$

Source: Authors' own

Discussion

Communication patterns in the family (conformity and conversation) have a significant impact on risk tolerance (H1, H2) as follows:

- Conformity patterns have a significant and negative impact on risk tolerance.
- Conversation patterns have a positive relationship with risk tolerance.

These findings support previous research (Hanson & Olson, 2018; Rabbani *et al.*, 2019). According to León and Pfeifer (2017), socio-demographic factors such as communication in the family will lead to the risk tolerance of family members. Therefore, families who have good communication patterns—such as two-way communication and discussion—will give confidence to children, which will lead to higher levels of risk tolerance. On the other hand, families with conformity patterns—where parents give top-down orders to their children—will affect their children's risk tolerance in a negative way.

Communication patterns within the family are also a significant antecedent of IFL (H3, H4). These findings also support previous studies (Jorgensen & Savla, 2010; Hanson & Olson, 2018; Moreno-Herrero *et al.*, 2018). Grohmann *et al.* (2015) highlighted that communication in a family relates to child financial literacy. Conversation or discussion-oriented communication patterns will encourage children to think critically and help to establish a learning process so that children will have sufficient knowledge of IFL. Members of Generation Z will be more inclined to discuss than to communicate with a doctrinal pattern. They will accept opinions or concepts which are logical and understandable.

IFL also significantly affects risk tolerance (H5). This finding is similar with some previous studies, such as Zhu (2019a) who assert that people who are more knowledgeable in finance will have a greater tolerance of financial risk. They can calculate the financial risk in more detail, and this will affect their tolerance level of the financial risk because they have more confidence in making a decision. This study also found that IFL is a significant moderating variable on the link between risk tolerance and financial behaviour (H6). Even though previous studies have not addressed this link yet, Cameron *et al.* (2014) have highlighted that higher risk tolerance will affect people's financial behaviour. Accordingly, when people have a good level of financial literacy, it will strengthen the relationship between financial risk and financial behaviour because they can calculate potential risks and have a higher confidence in making a decision. IFL has a moderating role in strengthening the link between risk tolerance and financial behaviour. This finding is congruent with several previous studies (Grohmann, 2018; Hastings & Mitchell, 2018). Consumers who have good financial knowledge will have a better financial behaviour such as making the right consumption patterns and being able to make the right investment choices.

IFL is a significant influencing factor of financial behaviour (H7). This finding is in line with some previous studies (Grohmann *et al.*, 2018; Hastings & Mitchell, 2018; García & Vila, 2020). For example, García and Vila (2020) found that financial literacy has a significant impact on financial behaviour. Even though previous studies were not in the Indonesian context, financial behaviour was also found to be significantly affected by risk tolerance (H8). This finding supports the findings of previous studies. León and Pfeifer (2017) argue that tolerance

for risk greatly determines a person's financial behaviour. The higher a person's risk tolerance level, the more courageous they will be in making financial/investment decisions.

CONCLUSION

In terms of theoretical development, this study has three contributions:

1. It examines a more comprehensive IFL model by considering family communication patterns as the antecedent and risk tolerance and financial behaviour as the consequences (Hanson & Olson, 2018).
2. It expands previous studies which were focused on general financial literacy by addressing IFL as a variable and it is expected to enrich research on financial literacy in the Islamic context and especially for Generation Z (Abdullah *et al.*, 2017).
3. It also extends prior studies by addressing the moderating role of Islamic finance literacy on the risk tolerance-financial behaviour relationship. Financial literacy is already known as the antecedent of financial behaviour (Rey-Ares *et al.*, 2021). Financial literacy also relates to risk tolerance (Hermansson & Jonsson, 2021). To the best of the authors' knowledge, there was no previous study that examined the moderating effect of IFL on the risk tolerance-financial behaviour relationship.

This study is also expected to help decision makers such as OJK, the government, and management of Islamic banks and IFIs to improve Gen Z financial behaviour by considering their IFL, risk tolerance and family communication patterns. Hence, the decision makers might educate not only the Muslim Gen Z about IFL but also their parents. Socialisation, promotion and training to Gen Z might be considered by the decision makers to increase the level of IFL. Increasing the understanding of IFL will in turn improve their risk tolerance. They will be aware of financial risks which will impact on their future financial behaviour. Moreover, the government might also give some incentives to Islamic banks or the central bank to educate Gen Z about IFL. Finally, these findings are useful to societies that attribute importance to IFL development. They can use these findings to build parents' awareness on how to communicate with their children about Islamic financial knowledge, which may influence their children's financial behaviour.

Regarding limitations and future research, first, this study faces a common method bias problem because it is a cross-sectional study. Even though it has conducted Harman's single-factor analysis, for future research it is suggested that a longitudinal study be carried out. Secondly, this study focused on members of Gen Z who were born from 1995 to 2001, which means that most of the respondents were students and their financial behaviour is affected by their parents. Future research may include older respondents who have an occupation. Presumably, they will decide their own financial behaviour. Finally, future research might include other factors which might influence IFL and financial behaviour such as demographic factors (e.g., gender, level of income, educational background and occupation) and religiosity.

ACKNOWLEDGEMENT

The authors would like to thank Lembaga Penelitian dan Pengabdian Kepada Masyarakat Universitas Negeri Padang for funding this work (contract number: 780/UN35.13/LT/2021).

REFERENCES

- Abdullah, M.A., Ab Wahab, S.N.A., Sabar, S. & Abu, F. (2017), 'Factors determining Islamic financial literacy among undergraduates', *Journal of Emerging Economies and Islamic Research*, Vol. 5 No. 2, pp. 67–76.
- Abror, A., Patrisia, D., Engriani, Y., Evanita, S., Yasri, Y. & Dastgir, S. (2019), 'Service quality, religiosity, customer satisfaction, customer engagement and Islamic bank's customer loyalty', *Journal of Islamic Marketing*, Vol. 11 No. 6, pp. 1691–1705.
- Abror, A., Patrisia, D., Engriani, Y., Idris, I. & Dastgir, S. (2021), 'Islamic bank trust: the roles of religiosity, perceived value and satisfaction', *Asia Pacific Journal of Marketing and Logistics*, Vol. ahead-of-print No. ahead-of-print.
- Ali, M.M., Devi, A., Furqani, H. & Hamzah, H. (2020), 'Islamic financial inclusion determinants in Indonesia: an ANP approach', *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 13 No. 4, pp. 727–747.
- Allgood, S. & Walstad, W.B. (2016), 'The effect of perceived and actual financial literacy on financial behaviors', *Economic Inquiry*, Vol. 54 No. 1, pp. 675–697.
- Alshater, M.M., Hassan, M.K., Khan, A. & Saba, I. (2020), 'Influential and intellectual structure of Islamic finance: a bibliometric review', *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. ahead-of-print No. ahead-of-print.
- Antara, P.M., Musa, R. & Hassan, F. (2016), 'Bridging Islamic financial literacy and halal literacy: the way forward in halal ecosystem', *Procedia Economics and Finance*, Vol. 37, pp. 196–202.
- Antara, P.M., Musa, R. & Hassan, F. (2017), 'Conceptualisation and operationalisation of Islamic financial literacy scale', *Social Sciences & Humanities*, Vol. 25 No. S, pp. 251–260.
- Aren, S. & Zengin, A.N. (2016), 'Influence of financial literacy and risk perception on choice of investment', *Procedia - Social and Behavioural Sciences*, Vol. 235, pp. 656–663.
- Arum, S., Harmadi, H. & Sunarjanto, S. (2018), 'Islamic financial literacy and personal financial planning: a socio-demographic study', *Jurnal Keuangan dan Perbankan*, Vol. 22 No. 1, pp. 63–72.
- Bannier, C.E. & Neubert, M. (2016), 'Gender differences in financial risk taking: the role of financial literacy and risk tolerance', *Economics Letters*, Vol. 145, pp. 130–135.
- Bapat, D. (2020), 'Antecedents to responsible financial management behavior among young adults: moderating role of financial risk tolerance', *International Journal of Bank Marketing*, Vol. 38 No. 5, pp. 1177–1194.
- Biplop, H. & Abdullah, M.F. (2019), 'The importance of Islamic financial literacy for Muslim: a general review', *Islamic and Civilisational Renewal*, Vol. 10 No. 1, pp. 106–117.
- Broadbent, E., Gougoulis, J., Lui, N., Pota, V. & Simon, J. (2017), 'Generation Z: global citizenship survey', *What the World's Young People Think and Feel*, London, Varkley Foundation.

- Cameron, M.P., Calderwood, R., Cox, A., Lim, S. & Yamaoka, M. (2014), 'Factors associated with financial literacy among high school students in New Zealand', *International Review of Economics Education*, Vol. 16, pp. 12–21.
- Capital, A. (2021), *Islamic Finance and Wealth Management 2021*, Alpen Capital, Dubai.
- Dew, J. & Xiao, J.J. (2011), 'The financial management behavior scale: development and validation', *Journal of Financial Counseling and Planning*, Vol. 22 No. 1, pp. 43–59.
- García, J.M. & Vila, J. (2020), 'Financial literacy is not enough: the role of nudging toward adequate long-term saving behavior', *Journal of Business Research*, Vol. 112, pp. 472–477.
- Grohmann, A. (2018), 'Financial literacy and financial behavior: evidence from the emerging Asian middle class', *Pacific-Basin Finance Journal*, Vol. 48, pp. 129–143.
- Grohmann, A., Klühs, T. & Menkhoff, L. (2018), 'Does financial literacy improve financial inclusion? Cross country evidence', *World Development*, Vol. 111, pp. 84–96.
- Grohmann, A., Kouwenberg, R. & Menkhoff, L. (2015), 'Childhood roots of financial literacy', *Journal of Economic Psychology*, Vol. 51, pp. 114–133.
- Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. (2010), *Multivariate Data Analysis*, Prentice Hall, New Jersey.
- Hair, J.F., Hult, G.T.M., Ringle, C. & Sarstedt, M. (2013), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, SAGE Publications, London.
- Hanson, T.A. & Olson, P.M. (2018), 'Financial literacy and family communication patterns', *Journal of Behavioural and Experimental Finance*, Vol. 19, pp. 64–71.
- Hastings, J. & Mitchell, O.S. (2018), 'How financial literacy and impatience shape retirement wealth and investment behaviors', *Journal of Pension Economics and Finance*, Vol. 19 No. 1, pp. 1–20.
- Hermansson, C. & Jonsson, S. (2021), 'The impact of financial literacy and financial interest on risk tolerance', *Journal of Behavioral and Experimental Finance*, Vol. 29, <https://doi.org/10.1016/j.jbef.2020.100450>.
- Hsiao, Y.-J. & Tsai, W.-C. (2018), 'Financial literacy and participation in the derivatives markets', *Journal of Banking & Finance*, Vol. 88, pp. 15–29.
- ICD-Refinitiv (2019), *Islamic Finance Development Report 2019: Shifting Dynamics*, available at: https://icd-ps.org/uploads/files/IFDI%202019%20DEF%20digital1574605094_7214.pdf (accessed 16 February 2023).
- Idris, M. (2021), 'Generasi Z dan Milenial Dominasi Jumlah Penduduk Indonesia', Kompas, Jakarta.
- Jorgensen, B.L. & Savla, J. (2010), 'Financial literacy of young adults: the importance of parental socialization', *Family Relations*, Vol. 59 No. 4, pp. 465–478.
- Kannadhasan, M. (2015), 'Retail investors' financial risk tolerance and their risk-taking behaviour: the role of demographics as differentiating and classifying factors', *IIMB Management Review*, Vol. 27 No. 3, pp. 175–184.
- KPPN/BPPN (2018), 'Masterplan Ekonomi Syariah Indonesia 2019–2024', *Hasil Kajian Analisis Ekonomi Syariah di Indonesia*.
- León, A.K. & Pfeifer, C. (2017), 'Religious activity, risk-taking preferences and financial behaviour: empirical evidence from German survey data', *Journal of Behavioral and Experimental Economics*, Vol. 69, pp. 99–107.

- Moreno-Herrero, D., Salas-Velasco, M. & Sánchez-Campillo, J. (2018), 'Factors that influence the level of financial literacy among young people: the role of parental engagement and students' experiences with money matters', *Children and Youth Services Review*, Vol. 95, pp. 334–351.
- Morgan, P.J. & Long, T.Q. (2020), 'Financial literacy, financial inclusion, and savings behavior in Laos', *Journal of Asian Economics*, Vol. 68(C), <https://doi.org/10.1016/j.asieco.2020.101197>.
- Nawi, F.A.M., Dawud, W.M.N.W., Chazali, P.L., Yazid, A.S. & Shamsuddin, Z. (2018), 'Islamic financial literacy: a conceptualization and proposed measurement', *International Journal of Academic Research in Business & Social Sciences*, Vol. 8 No. 12, pp. 629–641.
- OJK (2017), 'Strategi Nasional Literasi Keuangan Indonesia', *SNLKI*, OJK, Jakarta.
- OJK (2019), 'Siaran Pers Survei OJK 2019 Indeks Literasi Dan Inklusi Keuangan Meningkat', OJK, Jakarta.
- Patrisia, D. & Fauziah, M. (2019), 'The effect of financial literacy and financial management behavior on retirement confidence', *Third Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA 2019)*.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y. & Podsakoff, N.P. (2003), 'Common method biases in behavioral research: a critical review of the literature and recommended remedies', *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879–903.
- Puspaningtyas, L. (2019), 'Tingkat Inklusi Keuangan Syariah Indonesia Turun', republika.co.id, Jakarta.
- Rabbani, A.G., Yao, Z. & Wang, C. (2019), 'Does personality predict financial risk tolerance of pre-retiree baby boomers?', *Journal of Behavioural and Experimental Finance*, Vol. 23, pp. 124–132.
- Rey-Ares, L., Fernández-López, S., Castro-González, S. & Rodeiro-Pazos, D. (2021), 'Does self-control constitute a driver of millennials' financial behaviors and attitudes?', *Journal of Behavioral and Experimental Economics*, Vol. 93, <https://doi.org/10.1016/j.socec.2021.101702>.
- Salem, R. (2019), 'Examining the investment behavior of Arab women in the stock market', *Journal of Behavioral and Experimental Finance*, Vol. 22, pp. 151–160.
- Tan, V. (2018), 'IFN Indonesia Report 2018', *Islamic Finance News*, Kuala Lumpur.
- Yumna, A. (2019), 'Examining financial needs of banking customers for product development in Islamic banking in Indonesia', *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 12 No. 5, pp. 712–726.
- Zhu, A.Y.F. (2019a), 'Financial risk tolerance of Hong Kong adolescents: a hierarchical model', *Children and Youth Services Review*, Vol. 102, pp. 193–200.
- Zhu, A.Y.F. (2019b), 'School financial education and parental financial socialization: findings from a sample of Hong Kong adolescents', *Children and Youth Services Review*, Vol. 107(C), <https://doi.org/10.1016/j.childyouth.2019.104532>.

ABOUT THE AUTHORS

Dina Patrisia, PhD, is a lecturer at Universitas Negeri Padang, Indonesia. She has research interest in Islamic finance, corporate governance and corporate social responsibility. She has published articles in reputable journals, such as Eurasian Accounting and Business review, Asia Pacific Journal of Marketing and Logistics and Journal of Islamic Marketing. Dina Patrisia is the corresponding author and can be contacted at: dpatrisia@fe.unp.ac.id

Abror Abror, PhD, is a lecturer at Universitas Negeri Padang, Indonesia. He has research interest in Islamic marketing, halal tourism and internal marketing. He has published a number of articles in reputable journals, such as Asia Pacific Journal of Marketing and Logistics, and Journal of Islamic Marketing.

Shabbir Dastgir, PhD, is an Assistant Professor at University of Huddersfield Business School, United Kingdom. He has research interest in economics, Islamic finance, performance measurement and corporate diversification. He has published several articles in high impact journals, such as International Journal of Quality and Reliability Management, and Eurasian Accounting and Business Review.

Rita Rahayu, PhD, is a lecturer at Universitas Andalas, Padang, Indonesia. She has research interest in Islamic finance, digital financial literacy, enterprise resource planning system, and e-commerce.