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INTERPLAY OF FINANCIAL RISK TOLERANCE IN RELATION TO FINANCIAL BEHAVIOUR AND FINANCIAL WELL-BEING AMONG YOUTH IN SABAH, MALAYSIA

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ABSTRACT

Interest in financial well-being has grown rapidly in recent years. However, the impact of financial risk tolerance on financial well-being, particularly regarding money management stress and future financial security, remains underexplored. This study assessed the relationship between these two variables among youth in Sabah, Malaysia. Additionally, it examined financial behaviour as a potential mediator in this relationship. A Partial Least Squares Structural Equation Modelling (PLS-SEM) approach was employed for data analysis using SmartPLS 4.0. Data were collected from 300 respondents aged 15 to 30, representing Sabahan youth. The findings provide valuable insights for government agencies addressing financial well-being, serve as a foundation for future research in this area, and highlight the need for youth to enhance their financial literacy and improve their personal financial practices.

Keywords: Financial Well-being, Current Money Management Stress, Financial Security, Financial Behaviour, Money Management Practices, Financial Risk Tolerance, Willingness to Take Risk

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1. INTRODUCTION

Youth refer to younger individuals, with some definitions extending the age range to 19–39 (Sticha et al., 2023). This group is particularly vulnerable in fragile and volatile economies, as their inexperience and limited access to resources place them at a significant disadvantage (Angel-Urdinola et al., 2023). This vulnerability is clearly demonstrated by their poor financial well-being, which is determined by their comfort with money management and their expectations for future financial security (Netemeyer et al., 2018).

Statistically, reports show that the overall financial well-being score among youth is 52 points, significantly lower than the 64-point score observed among older individuals aged 70 and above (Sticha et al., 2024). Less than 40% of young people aged 18 to 34 are capable of long-term financial planning and coping with economic shocks (Sticha et al., 2023, 2024). Those most affected by economic disruptions, such as the COVID-19 pandemic, experience decreased self-esteem, which negatively impacts their overall quality of life, including productivity and healthy lifestyle habits (Schwandt & Wachter, 2020).

1.2 Financial Well-Being and Youth: Malaysia and Sabah Case

In Malaysia, studies indicate that 51% of the younger population spend an amount equal to or exceeding their earnings (Ringgit Plus, 2020), while 27% report having insufficient savings to cover three months' worth of expenses (The Malaysian Insight, 2023) (The Malaysian Insight, 2023). Additionally, projections also suggest that over 90% of youth members of the Employees Provident Fund (EPF) will fail to meet the basic retirement savings threshold of RM240,000 (approximately $53,700 USD) (Loong et al., 2024).

The financial situation in Sabah is similarly concerning. Only 20% of the state's 2.2 million youths are in the high-income bracket, with approximately 200,000 remaining unemployed (Santos, 2022). Many also struggle to save enough to cover at least three months of expenses (Fabian, 2022), and the economic domain index for youth, which includes financial security and literacy, consistently falls short of the satisfactory benchmark (Malaysian Youth Development Research Institute, 2021).

While these external economic factors clearly contribute to poor financial well-being, the literature suggests that internal factors, such as financial risk tolerance and financial behaviour, also play a significant role (Coats & Bajtelsmit, 2024). Financial risk tolerance, for example, fosters optimism and confidence, motivating individuals to engage in risk-taking behaviours to achieve greater financial benefits and future security (Merkoulova & Veld, 2022b, 2022a; Van Rooij et al., 2012). Achieving success as a result of taking risks directly enhances individuals' confidence and their anticipation of future financial security (Smales, 2014).

Financial risk tolerance fosters optimism and confidence, enabling individuals to perceive risky decisions and behaviours as opportunities rather than threats (Merkoulova & Veld, 2022b, 2022a; Van Rooij et al., 2012). This perspective motivates individuals to engage more frequently in risk-taking behaviours and decisions, often with the intention of achieving greater financial benefits aligned with future financial goals (Coats & Bajtelsmit, 2024; Netemeyer et al., 2018). When such risky behaviours or decisions result in success, they directly enhance individuals' confidence and their anticipation of future financial security (Smales, 2014).

Despite the importance of these internal factors, a review of the literature reveals two critical gaps. Table 1 presents the relevant studies categorised by their theoretical frameworks (underlying concepts), contextual focus (objectives and target populations), and key findings (relevant insights). This approach aligns with and is inspired by methodologies employed in prior research using similar search frameworks (Bosi et al., 2022; Wellfren et al., 2024)

1.2.1 Limited studies and contradictory result of financial well-being dimension among youth population in Sabah, Malaysia.

Based on Table 1, the number of studies focusing on youth, particularly in Sabah, is limited. Several studies exclusively examine youth in Peninsular Malaysia (e.g., Anthony et al., 2022), while others focus on single states (e.g., Adee et al., 2024). Although some studies include respondents from Sabah, their sample sizes are relatively small. For example, Sabri et al. (2022) and Ghazali et al. (2023) each included only 70 respondents from Sabah. Additionally, the criteria for defining youth vary across studies. For instance, Sabri et al. (2022) defined youth as individuals aged 18 to 35, whereas Ghazali et al. (2023) defined youth as those aged 19 to 29.

Furthermore, previous research often treats financial well-being as a single index (e.g., Adee et al., 2024; Anthony et al., 2022), neglecting the influence of individual components within the construct. As a result, it remains unclear which specific components of financial well-being are most lacking or influential among the target population.

1.2.2 Inadequate research on financial risk tolerance in relation to financial behaviour and the dimensions of financial well-being.

Another key gap in the Malaysian literature is the limited research on financial risk tolerance in relation to financial well-being. As shown in Table 1, only one study incorporates financial risk into its framework (Adee et al., 2024), and it focuses on savings habits rather than financial well-being directly. While Table 1 does not represent all research in this domain, it effectively illustrates the limited references available.

Furthermore, the existing literature primarily examines financial risk tolerance as a predictor of factors leading up to financial well-being, such as financial behaviour, rather than as a direct determinant. This leaves two important questions unanswered: to what extent does financial risk tolerance directly affect the various dimensions of financial well-being, and does financial behaviour mediate this relationship? The studies listed in Table 1 have primarily focused on mediation analyses involving other determinants, leaving these specific relationships underexplored.

Table 1: The Breakdown of Theory, Objective, Context and Finding Derived from Relevant Literatures

Title	Theory	Objective	Context	Finding
(Foong et al., 2021)	N/A	The study examines the relationship among life satisfaction, cognitive function, and financial well-being, as well as the moderating effect of sex	2,004 community-dwelling older adults from the low-income B40 group	Life satisfaction and cognitive function positively predict financial well-being
(Rahman et al., 2021)	N/A	The study investigates the key factors affecting financial well-being and examines which demographic variables account for significant differences within the study variables	412 Malaysians live in the Klang Valley, earning RM 5,000.00 per month	Financial behaviour and literacy positively predict financial well-being, while financial stress negatively predicts it. Financial behaviour does not mediate the relationship between financial literacy and well-being.
(She et al., 2022)	N/A	This study examines the impact of psychological beliefs (subjective financial knowledge, financial attitude, and locus of control) on financial well-being and the mediating role of financial behaviours in this relationship	500 Malaysians aged 18 to 60 with full-time job	Subjective financial knowledge, financial attitude, and locus of control positively impact both financial behaviour and financial well-being. The results also show that financial behaviour mediates the relationship between financial attitude and locus of control with financial well-being, except for subjective financial knowledge.
(Sabri, Wahab, et al., 2022)	N/A	The study investigates the association between financial knowledge, locus of control, and perceived financial well-being, with financial behaviour as a mediator	482 Malaysian respondents aged 18 to 35 years	Financial behaviour, internal locus of control, and financial knowledge influence financial well-being. Financial behaviour mediates the relationship between financial knowledge, internal locus of control, and financial well-being.
(Anthony et al., 2022)	System theory	The study assesses the influence of financial socialization on both financial behaviour and financial well-being.	360 respondents aged 18 to 29 years from Peninsular Malaysia	Financial socialization and behaviour positively predict financial well-being. Financial behaviour mediates the relationship between financial socialization and well-being.
(Sabri, Said, et al., 2022)	N/A	The study assesses the relationship between financial literacy, financial behaviour, self-efficacy, and money attitude on financial	590 Malaysian households aged 18 and above (including Sabah).	Financial literacy and self-efficacy do not predict financial health. Money attitudes mediate the relationship between financial literacy, self-efficacy, and financial behaviour on financial well-being.

		well-being. The mediating effect of money attitude is also assessed		
(Ghazali et al., 2023)	Family Financial Socialization Theory	The study assesses the influence of both explicit and implicit parental factors on financial well-being	500 Malaysians aged 19 to 29 years from Sabah, Pahang, Perak, Selangor, and Melaka	Implicit factors positively predict financial well-being, and financial behaviour mediates these relationships. Explicit factors do not have a significant influence on financial well-being.
(Mahdzan, Zainudin, et al., 2023)	N/A	The study examines the influence of financial self-efficacy, financial behaviour, and financial stress on financial well-being. It also assesses coping strategies as a moderator	738 Malaysian working adults	Financial self-efficacy and financial behaviour positively affect financial well-being, while financial stress and stressors have a significant negative relationship with financial well-being. Self-coping and borrowing (coping strategies) do not mitigate the impact of financial stress on financial well-being.
(Mahdzan, Sabri, et al., 2023)	N/A	The study examines the relationship between financial behaviour, financial stress, financial literacy, and locus of control on financial well-being. It also assesses the moderating effect of digital financial services on these relationships	1,948 Malaysians living in urban cities, earning less than RM 4,850.00, from Selangor, Johor, Penang, Pahang, Sabah, and Sarawak	Financial literacy and financial stress have a negative relationship with subjective financial well-being, financial behaviour and locus of control have a positive influence on financial well-being..
(Adee et al., 2024)	N/A	The study examined the factors that influence societal saving habits and pre-retirement well-being	400 working adults residing in Sarawak	Financial literacy, financial risk tolerance, and future time perspective positively predict saving habits. Saving habits positively predict retirement financial well-being.
(She et al., 2024)	Cognitive development theory and social cognitive theory	The study assesses the determinants of financial behaviour and financial well-being. The moderating effect of future orientation is also assessed	529 Malaysian millennials	Financial behaviour positively predicts financial well-being, but financial knowledge does not.

Notes: The table includes notable studies in the Malaysian context, with financial well-being (or similar constructs) with risk tolerance as one of the predictors (or indirectly) in recent years.

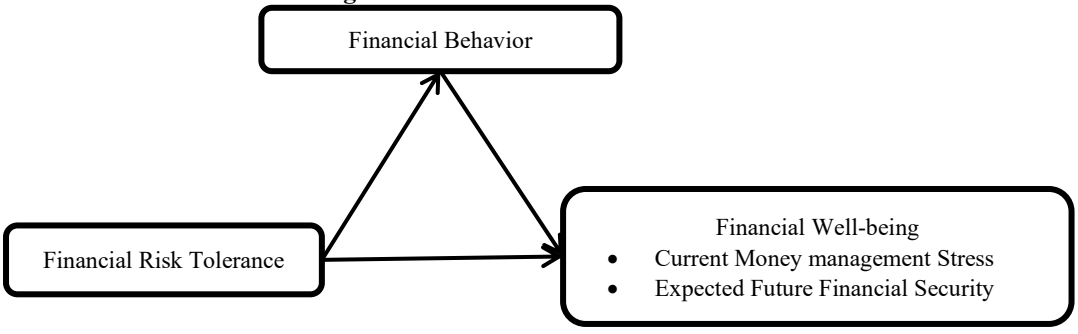
In summary, the study highlights the lack of research on financial well-being (including *money management stress & expected future financial security)* among youth in Sabah, as well as inconsistent findings in existing studies. Hence this study proposed three objectives research to address the identified gaps; 1) *the study seeks to assess the level of financial well-being at the dimensional level (money management stress & expected future financial security) among youth in Sabah*, 2) *the study aims to examine the influence of risk tolerance on financial behaviour and financial well-being* and 3), *assess the mediation effect of financial behaviour on financial risk tolerance and financial well-being*

2. LITERATURE REVIEW

2.1 Financial Well-being Framework

The Family Financial Socialization Theory (FFST) (Danes & Yang, 2014; Gudmunson et al., 2016; Gudmunson & Danes, 2011) identifies key factors influencing financial well-being, particularly financial socialization and behaviour. The theory posits that interpersonal factors such as financial knowledge, financial capability, and financial attitude predict both financial well-being and financial behaviour. Financial behaviour, in turn, translates these interpersonal resources into intended financial outcomes through effective money management practices.

Figure 1: Initial Research Framework



This study examines the two dimensions of financial well-being (CMMS & EFFS) separately, as they have distinct drivers (Figure 1). The former is influenced by factors like materialism and self-control, while the latter is driven by long-term planning and positive financial behaviours (Alam & Siddiqui, 2021; Netemeyer et al., 2018). Although financial risk tolerance is linked to financial well-being, its role is not defined in this model, and past research has focused almost solely on its effect on EFFS (e.g., Netemeyer et al. 2018). Consequently, it is essential to measure the influence of financial risk tolerance on both dimensions.

Financial Risk Tolerance (FRT) on Financial Behaviour (FB)

Prior studies consistently show a significant influence of financial risk tolerance (FRT) on financial behaviour (FB). An individual's willingness to take risks directly translates into their financial decisions and actions. For example, individuals with lower risk tolerance are less likely to use credit cards, borrow smaller amounts, and own fewer credit cards, perceiving them as risky tools

rather than financial leverage (Payne et al., 2019). Similarly, risk-averse individuals tend to allocate more of their investments to fixed assets, prefer low-risk financial instruments, and save more due to a greater awareness of unexpected economic events (Grable et al., 2020).

However, some evidence contradicts these findings. For instance, higher FRT has been associated with having emergency funds (Wagner, 2014), and other studies have found no significant relationship between FRT and credit behaviour (Wagner, 2014). Additionally, individuals with higher risk tolerance are more likely to engage in retirement planning (Chatterjee et al., 2017). For example, those with higher risk tolerance exhibit more proactive behaviours like spending wisely and maintaining budgets (Song et al., 2023).

This inconsistency highlights an underexplored area in the literature, particularly regarding the level of FRT among youth in Sabah. Based on this review, this study posits that higher FRT increases the frequency of engaging in desirable financial behaviours. Accordingly, the study proposes the following hypothesis:

H1: Financial risk tolerance positively influences financial behaviour among youth in Sabah, Malaysia

Financial Risk Tolerance on Current Money Management Stress

Research shows that Financial Risk Tolerance (FRT) is a prominent predictor of financial satisfaction, which is a common proxy for CMMS (Aboagye & Jung, 2018). It also mediates the relationship between financial literacy and financial well-being. This is because confidence in one's financial knowledge and ability to achieve desired outcomes can act as a coping mechanism, alleviating worry and stress (Naveed & Ali, 2024). For example, large-scale studies have demonstrated that households with higher risk preferences for investments tend to report greater satisfaction with their current debt, assets, and wealth (Woodyard & Robb, 2016).

However, a deeper review of the literature reveals inconsistencies. For instance, Winarta and Pamungkas (2021) initially hypothesized that higher FRT would increase financial satisfaction among working women, but their findings showed the opposite. Similarly, past studies suggest that FRT can diminish financial satisfaction and increase financial stress when risks do not yield financial rewards (Koomson et al., 2022).

In summary, the literature highlights two key gaps: contradictory findings and insignificant relationships between FRT and CMMS. Building on prior studies, this study posits that higher FRT alleviates CMMS. Based on this premise, the study proposes the following hypothesis:

H2: Financial Risk Tolerance positively influences Current Money Management Stress among youth in Sabah, Malaysia.

Financial Risk Tolerance on Expected Future Financial Security

Expected future financial security is the anticipation of future financial comfort and security. This anticipation is linked to one's willingness to take risks. For example, studies show that risk-takers are motivated to invest in risky assets, while risk-averse individuals tend to prefer fixed assets (Wong et al., 2019). Similarly, risk tolerance also improves retirement savings and intentions to

save. Individuals, especially those planning for retirement, are more likely to allocate their pensions to risky assets if they believe the potential returns will compensate for the risk (Park & Martin, 2022). A higher willingness to take risks correlates with greater confidence in one's ability to achieve financial goals and future financial commitments (Warmath et al., 2021). In short, individuals take risks to earn rewards and accumulate wealth, and successful investments further enhance their financial contentment.

However, a deeper review of the literature reveals conflicting evidence. For instance, Mahdzan et al. (2021) found no significant association between mutual fund investment and working adults' FRT. Furthermore, other studies indicate that instead of a positive influence, FRT may negatively affect EFFS (Alam & Siddiqui, 2021).

These inconsistencies show that FRT does not always positively impact EFFS, underscoring the need to address these gaps. Building on prior studies, this study proposes that a higher willingness to take risks creates opportunities for individuals to improve their financial positions through potential financial rewards. Accordingly, this study formulates the following hypothesis:

H3: Financial Risk Tolerance positively influences expected future financial security among youth in Sabah, Malaysia

Financial Behaviour as mediator of Financial Risk Tolerance on Money Management Stress and Expected Future Financial Security.

According to the Family Financial Socialization Theory (FFST) (Danes & Yang, 2014; Gudmunson & Danes, 2011), FB is a critical determinant of financial well-being. This is supported by Kumar et al. (2024), who identified FB as the primary antecedent of financial ill-being, surpassing the influence of financial socialization and financial attitude in their study of a village population. Engaging in activities like consistent saving and investing is strongly associated with greater financial security (Cakhyaneu et al., 2024) while wise spending and daily budget tracking help minimize resource outflows on non-essential consumption (Fan & Henager, 2022). These behaviours ultimately promote wealth accumulation and enhance overall financial well-being.

Within the FFST, FB serves as the intermediary between financial capability, knowledge, and attitude. High levels of financial knowledge and a proper financial attitude provide individuals with heightened awareness, an understanding of financial alternatives, and the ability to adopt appropriate behaviours to achieve specific goals (Chen et al., 2023; Pak et al., 2023; Respati et al., 2023). Past studies have tested these theoretical notions and identified a significant mediating effect of FB in the relationship between financial well-being and various factors. For example, FB mediates the effects of financial education (Zhang & Fan, 2024), internal locus of control (Sabri, Wahab, et al., 2022; She et al., 2022),\ and financial attitude (She et al., 2022).

Studies have found that FB does not always mediate the relationship between subjective financial knowledge and financial well-being (She et al., 2022). This suggests that similar interpersonal factors, like FRT, may lead to comparable outcomes. Similarly, Fan and Henager (2022) reported that long-term FB, such as regular saving and investing, does not always positively influence financial well-being. This suggests that these behaviours do not guarantee satisfaction with one’s financial health.

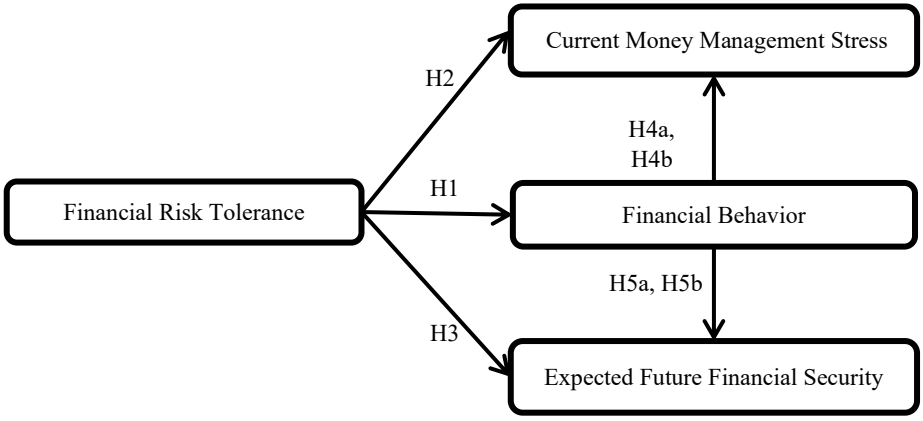
Given the conflicting evidence and the lack of studies on Malaysian youth, this study aims to explore whether FB mediates the influence of FRT on financial well-being. It is hypothesized that individuals with higher FRT are more willing to engage in riskier behaviours to accumulate wealth, which, in turn, fosters a sense of financial security and greater expectations for future financial rewards. Based on this understanding, the following hypotheses are proposed:

H4a: Financial behaviour positively influences current money management stress among youth in Sabah, Malaysia
H4b: Financial behaviour mediates the relationship between financial risk tolerance and money management stress among youth in Sabah, Malaysia
H5a: Financial behaviour positively influences expected future financial security among youth in Sabah, Malaysia
H5b: Financial behaviour mediates the relationship between financial risk tolerance and expected future financial security among youth in Sabah, Malaysia

2.2 Proposed Research Framework

As a result of the prior literature review, this study proposes the following research framework. The positioning of variables and the direction of their relationships are based on the proposed hypotheses and the study's research objectives.

Figure 2: Research Framework



3. RESEARCH METHODOLOGY

3.1 Research Context

The study was conducted in Sabah, a state in Malaysia geographically separated from Peninsular Malaysia by the South China Sea. Sabah's population is predominantly made up of diverse Sabahan Natives, including the *Kadazan*, *Dusun*, *Bajau*, *Rungus*, and *Murut* ethnic groups (Kaur, 1998;

Kok-Wah, 1996). Economically, Sabah's GDP is driven by services (46.1%), mining (26.4%), and agriculture (16.1%) (Idris & Mansur, 2020). Despite its relatively low contribution of 6.3% to Malaysia's national GDP in (Zulkeffili & Morhalim, 2021), eco-tourism is the largest economic contributor (Sabah State Government, 2025). In 2019, Sabah accounted for 12% of Malaysia's population. With a youth population (aged 15 to 29) comprising 31% of the state's population in that year, Sabah had the second-largest youth population in Malaysia in 2022, after Selangor (Dahali, 2022).

3.2 Survey Design and Development

The study's target population was youth in Sabah, Malaysia, specifically those aged 15 to 30 who were Malaysian citizens born and raised in the state. This age range aligns with the latest Malaysian definition of youth. A non-purposive sampling method was used due to the lack of a comprehensive sampling frame. To minimize bias, specific eligibility criteria were established. The required minimum sample size of 107 respondents was determined using G*Power software (Faul et al., 2009), and the study ultimately aimed to collect 300 responses to account for non-response rates.

The study measured four key variables: FRT (Hermansson & Jonsson, 2021), FB (Dew & Xiao, 2011), CMSS (Netemeyer et al., 2018), and EFFS (Netemeyer et al., 2018). All variables were assessed using a 5-point Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agree". To adapt the measurements from English to the local context, they were translated into Malay and validated through a back-translation process and expert review. A pretest with five volunteers was also conducted to refine the questionnaire's clarity. An online survey was distributed via social media over five months (May to September 2024) to collect data.

This study used an online survey because it is convenient and requires fewer resources. Additionally, the authors have past experience with this method and are aware of the proper procedures for data collection. Data collection was conducted from May 2024 to September 2024 (a period of five months). During this time, the survey was distributed to potential respondents who live in Sabah, Malaysia through social media platforms, including Facebook, Instagram, Twitter, LinkedIn, and WhatsApp. Potential respondents were identified based on available information about their locations. Before sharing the Google Form link, respondents were briefed on the study's objectives and the participant criteria.

This study employed the PLS-SEM approach due to the nature of the research objectives; exploring the relationships and mediation effects proposed and visualized in the research framework (Hair et al., 2019). SmartPLS version 4.0 (Ringle et al., 2024) was used to conduct the analysis, as it is widely referenced in the literature (Memon et al., 2021; Sarstedt & Cheah, 2019) and is commonly utilized in similar studies within the financial well-being domain (Mahdzan, Sukor, et al., 2023; Sabri, Said, et al., 2022). Data quality was ensured using SPSS version 26 to screen for and address issues. These issues included incomplete responses and straight-lining, with the latter defined as any set of responses having a standard deviation below 0.25 (McCarty & Shrum, 2000). Additionally, SPSS was utilized for descriptive analysis to identify trends and summarize the respondents' demographics and key indicators.

4. RESULTS

4.1 Descriptive analysis

At the end of the data collection process, a total of 300 surveys were distributed, but only 234 usable responses were retained after eliminating those with significant issues, such as straight lining and incomplete answers. Table 2 summarizes the respondents' demographics.

Table 2: Summary of Respondent Profile

Demographic	Category	n	%
Gender	Male	126	53.4
	Female	109	46.6
Age	15-20 years old	25	10.7
	21-25 years old	101	43.2
	26-30 years old	108	46.1
Education Level	SPM	38	16.2
	STPM/Diploma	93	39.7
	Bachelor's Degree	99	42.3
	Master's Degree	3	1.3
	Professionals	1	0.4
Ethnicity	Sabah Natives	186	79.5
	Chinese	43	18.4
	Indian	1	0.4
	Others	4	1.7
Employment	Public Sector	64	27.4
	Private sector	113	48.3
	Self-employed	27	11.5
	Unemployed	30	12.8
Income Level	RM 5,249 and Below (B40)	197	84.2
	RM 5,250 – RM 11,819 (M40)	37	15.8

4.2 Measurement Model Assessment

The reliability and validity of the items were assessed through the measurement model. As shown in Table 4 and Figure 3 (Appendix), all item loadings exceeded the minimum threshold of 0.5, ranging from 0.732 to 0.858, so no items were removed. All constructs demonstrated Composite Reliability (CR) values above the recommended threshold of 0.7, confirming internal consistency (Hair et al., 2019, 2022). Furthermore, all constructs satisfied the minimum Average Variance Extracted (AVE) requirement of 0.5 or higher (Hair et al., 2019, 2022). Finally, as shown in Table 5, the model's heterotrait-monotrait ratio (HTMT) was less than the recommended value of 0.85, indicating sufficient discriminant validity (Henseler et al., 2015).

Table 4: Measurement Model Assessment

Construct	Item	Loadings	CA	CR	AVE
Expected Future Financial Security	EFS1	0.823	0.871	0.905	0.657
	EFS2	0.819			
	EFS3	0.803			
	EFS4	0.814			
	EFS5	0.793			
Financial Behaviour	FB1	0.781	0.944	0.951	0.620
	FB10	0.839			
	FB11	0.785			
	FB12	0.793			
	FB2	0.732			
	FB3	0.789			
	FB4	0.735			
	FB5	0.778			
	FB6	0.793			
	FB7	0.817			
	FB8	0.784			
	FB9	0.818			
Current Money Management Stress	MS1	0.818	0.880	0.912	0.676
	MS2	0.807			
	MS3	0.801			
	MS4	0.848			
	MS5	0.836			
Financial Risk Tolerance	RT1	0.849	0.786	0.874	0.699
	RT2	0.800			
	RT3	0.858			

No item was deleted as loading Composite Reliability > .708 (Hair et al., 2017)

Table 5: HTMT Criterion

	EFS	FB	MS	RT
EFS				
FB	0.450			
MS	0.578	0.674		
RT	0.244	0.265	0.323	

***Criteria**: Discriminant validity is established at HTMT0.85* (Franke & Sarstedt, 2019; Henseler et al., 2015)

4.3 Structural Model Assessment

The first assessment in the structural model was the Variance Inflation Factor (VIF), which tests for collinearity. As shown in Table 6, all VIF values were within the acceptable range of 0.2 to 5, indicating no collinearity issues (Hair et al., 2022; Memon et al., 2017). Next, the effect size (f^2) of each indicator was assessed to determine how much the independent variables explain the

dependent variables. Table 6 shows that all f^2 values exceeded the minimum acceptable value of 0.02, demonstrating a significant effect size (Cohen, 1988).

Table 6: Model Quality Assessment

Direct Effect	f^2	R^2	VIF
H1: RT -> FB	0.058	0.055	1.000
H2: RT -> MS	0.029	0.403	1.058
H4a: FB -> MS	0.550		1.058
H3: RT -> EFS	0.017	0.192	1.058
H5a: FB -> EFS	0.182		1.058

p-value of 0.01, 0.05 (Hair et al., 2017)
$f^2 \geq 0.35$ consider Substantial (Cohen, 1988)
$R^2 \geq 0.26$ consider Substantial (Cohen, 1988)
VIF ≤ 3.3 (Diamantopoulos & Siguaw, 2006) or ≤ 5.0 (Hair et al., 2017)

Regarding R^2, this metric indicates the model's predictive power and is calculated as the squared correlation between the observed and predicted values of an endogenous construct. R^2 value of 0.25 reflects weak explanatory power, 0.5 indicates moderate explanatory power, and 0.75 or higher signifies strong explanatory power (Hair et al., 2017; Henseler et al., 2009). As shown in Table 6, the R^2 value for the predictors of FB is 0.055, indicating weak explanatory power. In contrast, the R^2 value for the predictors of CMSS is 0.192, indicating moderate explanatory power. Similarly, the R^2 value for the predictors of EFFS is also 0.192, demonstrating moderate explanatory power.

4.3.1 Direct Relationship

By utilizing bootstrapping (3000 times), the study conducted a path coefficient assessment for direct relationships. According to the results presented in Table 7 and Figure 4 (Appendix), FRT was found to positively influence FB ($\beta = 0.234$, $p < 0.01$), CMSS ($\beta = 0.120$, $p < 0.01$), and EFFS ($\beta = 0.395$, $p < 0.05$). Thus, H1, H2, and H3 are supported. Additionally, financial behaviour was found to positively influence CMSS ($\beta = 0.589$, $p < 0.01$) and EFFS ($\beta = 0.395$, $p < 0.01$). As a result, H4a and H5a are also supported.

Table 7: Path Coefficients

Direct Effect	Beta	S.E.	t-value	p-value	LLCI	ULCI	Decision
H1: RT -> FB	0.234	0.064	3.642	0.000	0.111	0.328	Supported
H2: RT -> MS	0.135	0.053	2.528	0.006	0.043	0.220	Supported
H4a: FB -> MS	0.589	0.050	11.858	0.000	0.504	0.666	Supported
H3: RT -> EFS	0.120	0.062	1.936	0.026	0.015	0.217	Supported
H5a: FB -> EFS	0.395	0.060	6.534	0.000	0.288	0.486	Supported

Note**: *p<0.05, **p<0.01,t>1.645, Bias Corrected, LL=Lower Limit, UL=Upper Limit*

4.3.2 Mediation Effect Assessment

To assess the mediation effect, this study performed an indirect relationship assessment (bootstrapping) as recommended by prior literature (Carrión et al., 2017; Hair et al., 2022; Kock, 2014; Nitzl et al., 2016). Mediation analysis requires significant relationships between the predictors and the mediator, the predictors and the dependent variables, and the mediator and the dependent variables. Since the prior path coefficient results show significant relationships, this fulfils the requirement for conducting a mediation analysis. As shown in Table 8, the confidence intervals do not include zero, indicating significant mediation effects. The results demonstrate that FB significantly mediates the relationship between FRT and CMSS ($\beta = 0.130$, $p < 0.05$) as well as EFFS ($\beta = 0.092$, $p < 0.05$). Therefore, H4b and H5b are supported.

Table 8: Mediation Assessment

Indirect Effect	Beta	S.E.	t-value	p-value	LLCI	ULCI	Decision
H4b: RT -> FB -> MS	0.138	0.039	3.557	0.000	0.053	0.207	Supported
H5b: RT -> FB -> EFS	0.092	0.030	3.084	0.002	0.038	0.152	Supported

*Note: *p<0.05, **p<0.01,***t>1.645, Bias Corrected, LL=Lower Limit, UL=Upper Limit*

5. DISCUSSIONS

Based on descriptive analysis, this study examines a healthy level of CMMS and EFFS among respondents. These findings suggest that the youth in this study are capable of managing their finances with minimal stress, and they are confident in their ability to achieve financial goals and maintain savings. These results are consistent with prior studies (Ghazali et al., 2023; Mahdzan et al., 2023) and depict a more positive financial position for Sabah's youth than earlier reports (Institute for Youth Research Malaysia, 2022; Malaysian Youth Development Research Institute, 2021).

The study also assessed the influence of FRT on FB, CMMS, and EFFS among Sabah's youth. The results support hypotheses H1, H2, and H3. These studies suggest that individuals with a greater willingness to take risks are more engaged in relevant financial behaviours, leading to greater confidence in their future finances and less worry about falling behind (Park & Martin, 2022; Warmath et al., 2021). FRT influences FB by guiding individuals toward practices that align with their risk appetite. As a result, those with higher risk tolerance may engage in riskier financial behaviours, such as saving less conservatively or investing in high-risk assets (Aristei & Gallo, 2021; Liu & Zhang, 2021). These behaviours represent an opportunity to maximize returns and foster a sense of control. This expectation of potential rewards builds confidence, reinforces their belief in a better financial future, and desensitizes them to the pressures associated with risky financial behaviours (Xiao et al., 2014).

Finally, this study examined the mediating effect of FB on the relationship between FRT and both CMMS and EFFS. The findings confirm that the proposed mediation hypotheses (H4b and H5b) are supported. These results highlight the critical role of FB as a key mechanism for translating personal factors into improved financial well-being (Aboagye & Jung, 2018; Danes & Yang, 2014; Gudmunson & Danes, 2011). As proposed by the Family Financial Socialisation Theory, FB acts as a bridge, connecting individuals' mental and cognitive states with their desired financial

outcomes through practices like saving, spending, and planning for future needs (Danes & Yang, 2014; Gudmunson & Danes, 2011).

5.1 Implications

The main contribution of this study is its detailed analysis of financial well-being's separate dimensions (CMMS & EFFS). Unlike prior research that treated financial well-being as a single concept (e.g. Anthony et al., 2022; Ghazali et al., 2023; Mahdzan et al., 2023), this dimensional approach offers a novel theoretical extension. It links FRT to both CMMS and EFFS and positions FRT as a key interpersonal factor within the FFST framework. This suggests its relevance for other financial or risk-related constructions, such as financial satisfaction or risky credit card usage. By filling this demographic and analytical gap, the study provides timely, evidence-based insights for Malaysian policymakers developing economic and educational policies for the newly updated national youth demographic (15–30 years old).

These insights are especially relevant given the recent implementation of Malaysia's new youth definition. Policymakers can use these findings to better understand the impact of financial behaviour and risk tolerance, leveraging this knowledge to enhance the financial well-being of youth in Sabah. Furthermore, this study can serve as an awareness tool for young people, highlighting the importance of FRT in relation to financial well-being. The findings can help them channel their risk appetite into prudent FB and decision-making. The study also encourages Sabah's youth to utilise financial tools and services that align with their risk tolerance levels and financial goals, empowering them to make informed decisions and optimise their financial outcomes.

5.2 Limitations and recommendations

The study has several limitations. First, the reliance on social media for data collection means that the findings may not be representative of individuals who are not active on these platforms. Additionally, the study did not collect data on the respondents' specific city or region of origin, which limits the ability to account for important cultural and sociodemographic factors. Future research could address these issues by conducting a larger-scale study or comparing different regions within Sabah. Another limitation is the exclusive use of a survey as the data collection method, which introduces the risk of response bias. Future studies could use experimental designs or mixed methods to mitigate this. Finally, the findings on FRT may not be generalisable to other risk-related variables, such as investment risk behaviour and risky credit card usage, as these are distinct concepts. Further research is needed to explore these relationships and fill these gaps.

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REFERENCES

Aboagye, J., & Jung, J. Y. (2018). Debt Holding, Financial Behavior, and Financial Satisfaction. *Journal of Financial Counseling and Planning*, *29*(2), 208–218. https://doi.org/10.1891/1052-3073.29.2.208

Adee, S., Lau, E., & Wong, S. (2024). Mediating factors in retirement savings and well-being: A focused study on Sarawak. *Cogent Economics & Finance*, *12*(1), 2422217. https://doi.org/10.1080/23322039.2024.2422217

Alam, A., & Siddiqui, D. A. (2021). How financial Knowledge and personal Saving Orientation affect money management stress and financial security, Leading towards Wellbeing and positive financial behavior: The complementary Role of Materialism and Self Efficacy, mediated by the willingness to take risk. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3942314

Angel-Urdinola, D., Rodon, G., & Torres, N. (2023, July 13). *Youth economic disengagement: A harsh global reality to remember on World Youth Skills Day*. World Bank Blogs. https://blogs.worldbank.org/en/education/youth-economic-disengagement-harsh-global-reality-remember-world-youth-skills-day

Anthony, M., Sabri, M. F., Rahim, H. A., & Othman, M. A. (2022). *Financial Socialisation and Moderation Effect of Gender in The Influence of Financial Behaviour on Financial Well-Being among Young Adults*. *28*.

Aristei, D., & Gallo, M. (2021). Financial Knowledge, Confidence, and Sustainable Financial Behavior. *Sustainability*, *13*(19), 10926. https://doi.org/10.3390/su131910926

Bosi, M. K., Lajuni, N., Wellfren, A. C., & Lim, T. S. (2022). Sustainability Reporting through Environmental, Social, and Governance: A Bibliometric Review. *Sustainability*, *14*(19), 12071. https://doi.org/10.3390/su141912071

Cakhyaneu, A., Muhammad, M., Anwar, R., & Selçuk Sari, E. (2024). Exploring the Determinants of Financial Well-Being: An Empirical Study in Muslim-Majority Countries. *International Journal of Islamic Finance and Sustainable Development*, *16*(4). https://doi.org/10.55188/ijifsd.v16i4.972

Carrión, G. C., Nitzl, C., & Roldán, J. L. (2017). Mediation Analyses in Partial Least Squares Structural Equation Modeling: Guidelines and Empirical Examples. In H. Latan & R. Noonan (Eds.), *Partial Least Squares Path Modeling* (pp. 173–195). Springer International Publishing. https://doi.org/10.1007/978-3-319-64069-3_8

Chatterjee, S., Fan, L., Jacobs, B., & Haas, R. (2017). Risk Tolerance and Goals-Based Savings Behavior of Households: The Role of Financial Literacy. *Journal of Personal Finance*. https://ssrn.com/abstract=2918014

Chen, F., Yu, D., & Sun, Z. (2023). Investigating the associations of consumer financial knowledge and financial behaviors of credit card use. *Heliyon*, *9*(1), e12713. https://doi.org/10.1016/j.heliyon.2022.e12713

Coats, J., & Bajtelsmit, V. (2024). *Measures and drivers of financial well-being*. TIAA Institute. https://www.tiaa.org/content/dam/tiaa/institute/pdf/insights-report/2024-05/tiaa-institute-measures-and-drivers-of-financial-wellbeing.pdf

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587

Dahali, R. (2022, March 22). Populasi belia Sabah kedua tertinggi dalam negara. *Berita Harian*. https://www.bharian.com.my/berita/nasional/2022/03/937727/populasi-belia-sabah-kedua-tertinggi-dalam-negara

Danes, S. M., & Yang, Y. (2014). *Assessment of the Use of Theories within the Journal of Financial Counseling and Planning and the Contribution of the Family Financial Socialization Conceptual Model*. *25*(1).

Fabian, N. (2022, October 6). Many youths do not have savings. *Daily Express*. https://www.dailyexpress.com.my/news/200443/many-youths-do-not-have-savings/

Fan, L., & Henager, R. (2022). A Structural Determinants Framework for Financial Well-Being. *Journal of Family and Economic Issues*, *43*(2), 415–428. https://doi.org/10.1007/s10834-021-09798-w

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Foong, H. F., Haron, S. A., Koris, R., Hamid, T. A., & Ibrahim, R. (2021). Relationship between financial well-being, life satisfaction, and cognitive function among low-income community-dwelling older adults: The moderating role of sex. *Psychogeriatrics*, *21*(4), 586–595. https://doi.org/10.1111/psyg.12709

Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: A comparison of four procedures. *Internet Research*, *29*(3), 430–447. https://doi.org/10.1108/IntR-12-2017-0515

Ghazali, M. S., Alwi, S. F. S., Idris, N. H., Sabri, M. F., & Aziz, N. N. A. (2023). Financial Well-Being For Sustainable Development Goals (Sdgs): Family As The Foundation. *Journal of Sustainability Science and Management*, *18*(10). https://doi.org/10.46754/jssm.2023.10.006

Grable, J. E., Joo, S.-H., & Kruger, M. (2020). Risk tolerance and household financial behaviour: A test of the reflection effect. *IIMB Management Review*, *32*(4), 402–412. https://doi.org/10.1016/j.iimb.2021.02.001

Gudmunson, C. G., & Danes, S. M. (2011). Family Financial Socialization: Theory and Critical Review. *Journal of Family and Economic Issues*, *32*(4), 644–667. https://doi.org/10.1007/s10834-011-9275-y

Gudmunson, C. G., Ray, S. K., & Xiao, J. J. (2016). Financial Socialization. In J. J. Xiao (Ed.), *Handbook of Consumer Finance Research* (pp. 61–72). Springer International Publishing. https://doi.org/10.1007/978-3-319-28887-1_5

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (Second edition). Sage.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (Third edition). SAGE.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In R. R. Sinkovics & P. N. Ghauri (Eds.), *Advances in International Marketing* (Vol. 20, pp. 277–319). Emerald Group Publishing Limited. https://doi.org/10.1108/S1474-7979(2009)0000020014

Idris, R., & Mansur, K. (2020). Sabah Economic Model: An Overview. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *10*(3), Pages 475-484. https://doi.org/10.6007/IJARAFMS/v10-i3/8156

Kaur, A. (1998). Independence and Federation. In A. Kaur, *Economic Change in East Malaysia* (pp. 169–176). Palgrave Macmillan UK. https://doi.org/10.1057/9780230377097_6

Kock, N. (2014). Advanced Mediating Effects Tests, Multi-Group Analyses, and Measurement Model Assessments in PLS-Based SEM: *International Journal of E-Collaboration*, *10*(1), 1–13. https://doi.org/10.4018/ijec.2014010101

Kok-Wah, F. L. (1996). A 'New Sabah' and the Spell of Development: Resolving Federal-State Relations in Malaysia. *South East Asia Research*, *4*(1), 63–83. https://doi.org/10.1177/0967828X9600400105

Koomson, I., Churchill, S. A., & Munyanyi, M. E. (2022). Gambling and Financial Stress. *Social Indicators Research*, *163*(1), 473–503. https://doi.org/10.1007/s11205-022-02898-6

Kumar, P., Ahlawat, P., Deveshwar, A., & Yadav, M. (2024). Do Villagers' Financial Socialization, Financial Literacy, Financial Attitude, and Financial Behavior Predict Their Financial Well-Being? Evidence from an Emerging India. *Journal of Family and Economic Issues*. https://doi.org/10.1007/s10834-024-09976-6

Liu, L., & Zhang, H. (2021). Financial literacy, self-efficacy and risky credit behavior among college students: Evidence from online consumer credit. *Journal of Behavioral and Experimental Finance*, *32*, 100569. https://doi.org/10.1016/j.jbef.2021.100569

Loong, Y. S., Azizi, A. H., Abu Rahim, M. A. R., Gong, R., Ai Ni, T., Mukhriz Mudaris, I. S., & Yang, K. W. (2024). *Households And The Pandemic 2019-2022: The State Of Households 2024*. Khazanah Research Institute. https://www.krinstitute.org/Publications-@-The_State_of_Households_2024-;_Households_and_the_Pandemic_2019-2022.aspx

Mahdzan, N. S., Sabri, M. F., Husniyah, A. R., Magli, A. S., & Chowdhury, N. T. (2023). Digital financial services usage and subjective financial well-being: Evidence from low-income households in Malaysia. *International Journal of Bank Marketing*, *41*(2), 395–427. https://doi.org/10.1108/IJBM-06-2022-0226

Mahdzan, N. S., Sukor, M. E. A., Zainudin, R., Zainir, F., & Ahmad, W. M. W. (2023). A Comparison of Financial Well-Being and Its Antecedents Across Different Employment Categories in Malaysia. *Gadjah Mada International Journal of Business*, *25*(3), 255. https://doi.org/10.22146/gamaijb.73947

Mahdzan, N. S., Zainudin, R., & Sukor, M. E. A. (2023). Coping Strategies to Improve Financial Well-Being During the COVID-19 Pandemic in an Emerging Economy. *Journal of Financial Counseling and Planning*, *34*(3), 338–353. https://doi.org/10.1891/JFCP-2022-0002

Mahdzan, N. S., Zainudin, R., & Yoong, S.-C. (2021). Investment Literacy, Risk Tolerance and Mutual Fund Investments: An Exploratory Study of Working Adults in Kuala Lumpur. *International Journal of Business and Society*, *21*(1), 111–133. https://doi.org/10.33736/ijbs.3230.2020

Malaysian Youth Development Research Institut. (2021). *Facts & Figures Malaysian Youth Index 2020 :Measuring Quality Of Life And Well-Being Of Malaysian Youth*. https://www.iyres.gov.my/images/penerbitan/Facts%20&%20Figures%C2%A0Malaysian%20Youth%20Index%202020.pdf

McCarty, J. A., & Shrum, L. J. (2000). The Measurement of Personal Values in Survey Research: A Test of Alternative Rating Procedures. *The Public Opinion Quarterly*, *64*(3), 271–298.

Memon, M. A., T., R., Cheah, J.-H., Ting, H., Chuah, F., & Cham, T. H. (2021). PLS-SEM STATISTICAL PROGRAMS: A REVIEW. *Journal of Applied Structural Equation Modeling*, *5*(1), i–xiv. https://doi.org/10.47263/JASEM.5(1)06

Memon, M. A., Ting, H., Ramayah, T., Chuah, F., & Cheah, J.-H. (2017). A REVIEW OF THE METHODOLOGICAL MISCONCEPTIONS AND GUIDELINES RELATED TO THE APPLICATION OF STRUCTURAL EQUATION MODELING: A MALAYSIAN SCENARIO. *Journal of Applied Structural Equation Modeling*, i–xiii. https://doi.org/10.47263/JASEM.1(1)01

Merkoulova, Y., & Veld, C. (2022a). Does it pay to invest? The personal equity risk premium and stock market participation. *Journal of Banking & Finance*, *136*, 106220. https://doi.org/10.1016/j.jbankfin.2021.106220

Merkoulova, Y., & Veld, C. (2022b). Stock return ignorance. *Journal of Financial Economics*, *144*(3), 864–884. https://doi.org/10.1016/j.jfineco.2021.06.016

Naveed, M., & Ali, S. (2024). Does Risk Tolerance Mediates the Relationship Between Financial Literacy and Financial Wellbeing During COVID-19: Empirical Evidence From an Emerging Economy. *Sage Open*, *14*(4), 21582440241297065. https://doi.org/10.1177/21582440241297065

Netemeyer, R. G., Warmath, D., Fernandes, D., & Jr, J. L. (2018). How Am I Doing? Perceived Financial Well-Being, Its Potential Antecedents, and Its Relation to Overall Well-Being. *JOURNAL OF CONSUMER RESEARCH*.

Nitzl, C., Roldan, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems*, *116*(9), 1849–1864. https://doi.org/10.1108/IMDS-07-2015-0302

Pak, T., Fan, L., & Chatterjee, S. (2023). Financial socialization and financial well-being in early adulthood: The mediating role of financial capability. *Family Relations*, fare.12959. https://doi.org/10.1111/fare.12959

Park, H., & Martin, W. (2022). Effects of risk tolerance, financial literacy, and financial status on retirement planning. *Journal of Financial Services Marketing*, *27*(3), 167–176. https://doi.org/10.1057/s41264-021-00123-y

Payne, P., Kalenkoski, C. M., & Browning, C. (2019). Risk Tolerance and the Financial Satisfaction of Credit Card Users. *Journal of Financial Counseling and Planning*, *30*(1), 110–120. https://doi.org/10.1891/1052-3073.30.1.110

Rahman, M., Isa, C. R., Masud, M. M., Sarker, M., & Chowdhury, N. T. (2021). The role of financial behaviour, financial literacy, and financial stress in explaining the financial well-being of B40 group in Malaysia. *Future Business Journal*, *7*(1), 52. https://doi.org/10.1186/s43093-021-00099-0

Respati, D. K., Widyastuti, U., Nuryati, T., Musyaffi, A. M., Handayani, B. D., & Ali, N. R. (2023). How do students' digital financial literacy and financial confidence influence their financial behavior and financial well-being? *Nurture*, *17*(2), 40–50. https://doi.org/10.55951/nurture.v17i2.154

Ringgit Plus. (2020). *Malaysian Financial Literacy Survery 2020*. Ringgit PLus. https://www.fenetwork.my/wp-content/uploads/2020/11/RinggitPlus-Financial-Literacy-Survey-Full-Report.pdf

Ringle, C. M., Sven, W., & Becker, J.-M. (2024). *SmartPLS* [Computer software]. https://www.smartpls.com/

Sabah State Government. (2025). *Economy*. https://sabah.gov.my/en/content/economy

Sabri, M. F., Said, M. A., Magli, A. S., Pin, T. M., Rizal, H., Thangiah, N., Ithnin, M., Abdul Majid, H., Ismail, R., Su, T. T., & Husniyah, A. R. (2022). Exploring the Relationships of Financial Literacy and Financial Behaviour with Health-Related Quality of Life (HRQOL) among the Low-Income Working Population in Malaysia during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, *19*(19), 12520. https://doi.org/10.3390/ijerph191912520

Sabri, M. F., Wahab, R., Mahdzan, N. S., Magli, A. S., & Rahim, H. A. (2022). Mediating Effect of Financial Behaviour on the Relationship Between Perceived Financial Wellbeing and Its Factors Among Low-Income Young Adults in Malaysia. *Frontiers in Psychology*, *13*, 858630. https://doi.org/10.3389/fpsyg.2022.858630

Santos, J. (2022, October 3). Sabah youth ill-equipped to handle rising inflation: State youth council. *The Vibes*. https://www.thevibes.com/articles/news/73176/sabah-youth-ill-equipped-to-handle-rising-inflation-state-youth-council

Sarstedt, M., & Cheah, J.-H. (2019). Partial least squares structural equation modeling using SmartPLS: a software review. *Journal of Marketing Analytics*, *7*(3), 196–202. https://doi.org/10.1057/s41270-019-00058-3

She, L., Ma, L., Pahlevan Sharif, S., & Karim, S. (2024). Millennials' financial behaviour and financial well-being: The moderating role of future orientation. *Journal of Financial Services Marketing*, *29*(4), 1207–1224. https://doi.org/10.1057/s41264-024-00281-9

She, L., Rasiah, R., Turner, J. J., Guptan, V., & Sharif Nia, H. (2022). Psychological beliefs and financial well-being among working adults: The mediating role of financial behaviour. *International Journal of Social Economics*, *49*(2), 190–209. https://doi.org/10.1108/IJSE-07-2021-0389

Smales, L. A. (2014). The relationship between financial asset returns and the well-being of US households. *Applied Economics Letters*, *21*(17), 1184–1188. https://doi.org/10.1080/13504851.2014.916380

Song, C. L., Pan, D., Ayub, A., & Cai, B. (2023). The Interplay Between Financial Literacy, Financial Risk Tolerance, and Financial Behaviour: The Moderator Effect of Emotional Intelligence. *Psychology Research and Behavior Management*, *Volume 16*, 535–548. https://doi.org/10.2147/PRBM.S398450

Sticha, A., Lusardi, A., & Sconti, A. (2023). *Development and testing of a comprehensive financial well-being measure* (Reseach Dialoge). TIAA Institute. https://www.tiaa.org/content/dam/tiaa/institute/pdf/research-dialogue/2023-12/rd-201_hasler_july-2023.pdf

The Malaysian Insight. (2023, January 31). Majoriti belia Malaysia tanggung hutang, menurut kaji selidik. *The Malaysian Insight*. https://www.themalaysianinsight.com/bahasa/s/425913

Van Rooij, M. C. J., Lusardi, A., & Alessie, R. J. M. (2012). Financial Literacy, Retirement Planning and Household Wealth. *The Economic Journal*, *122*(560), 449–478. https://doi.org/10.1111/j.1468-0297.2012.02501.x

Wagner, J. (2014). An empirical analysis linking a person's financial risk tolerance and financial literacy to financial behaviors. *Journal of Economic Psycholog*, 1–27.

Warmath, D., Chen, P., Grable, J., & Kwak, E. J. (2021). Soft landings: Extending the cushion hypothesis to financial well-being in collectivistic cultures. *Journal of Consumer Affairs*, *55*(4), 1563–1590. https://doi.org/10.1111/joca.12408

Wellfren, A. C., Lajuni, N., Jamil, I. A. A., & Jalil, R. A. (2024). Financial inclusion and financial well-being among youth: A systematic scoping review. *International Journal of*

Happiness and Development, *1*(1), 10068067. https://doi.org/10.1504/IJHD.2024.10068067

Winarta, S., & Pamungkas, A. S. (2021). *The Role of Financial Behavior, Financial Attitude, Financial Strain, and Risk Tolerance in Explaining Financial Satisfaction:* Ninth International Conference on Entrepreneurship and Business Management (ICEBM 2020), Jakarta, Indonesia. https://doi.org/10.2991/aebmr.k.210507.077

Wong, R. S., Osman, M., Wong, W. H., Lin, Y., & Ho, K. (2019). Saving for a Better Retirement: How Risk Attitudes Affect Choice of Retirement Scheme. *Psychological Reports*, *122*(1), 305–322. https://doi.org/10.1177/0033294118755093

Woodyard, A. S., & Robb, C. A. (2016). Consideration of Financial Satisfaction: What Consumers Know, Feel and Do from a Financial Perspective. *Journal of Financial Therapy*, *7*(2). https://doi.org/10.4148/1944-9771.1102

Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer Financial Capability and Financial Satisfaction. *Social Indicators Research*, *118*(1), 415–432. https://doi.org/10.1007/s11205-013-0414-8

Zhang, Y., & Fan, L. (2024). The nexus of financial education, literacy and mobile fintech: Unraveling pathways to financial well-being. *International Journal of Bank Marketing*, *42*(7), 1789–1812. https://doi.org/10.1108/IJBM-09-2023-0531

Zulkeffili, Z., & Morhalim, A. (2021). *Exploring Sabah's Economic Pearls*. MALAYSIAN INDUSTRIAL DEVELOPMENT FINANCE. https://www.midf.com.my/sites/corporate/files/2022-10/Thematic-Exploring%20Sabah%27s%20Economic%20Pearls-MIDF-211022.pdf