

## Analysis of Determinants of Propensity to Indebtedness Based on Behavioral Biases, Emotions, Culture, and Materialism Moderated by Religiosity, Financial Literacy and Job Security

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### Abstract

*This study aims to analyze the determinants of Propensity to Indebtedness among civil servants (ASN) and employees/entrepreneurs in Indonesia. The main focus of the research includes the influence of financial behavior biases, emotions, culture, and materialism on the tendency to incur debt, as well as how financial literacy, job security, and religiosity moderate these relationships. A quantitative approach was used in this study, employing an ex post facto design supported by a survey questionnaire. Primary data were collected through an online questionnaire distributed via Google Forms, with 400 respondents selected through simple random sampling. The results show that financial behavior biases, such as overconfidence and aversion regret, have a positive and significant effect on Propensity to Indebtedness. Emotions and culture also have significant influences, where emotional impulsivity and consumption-driven cultural values affect the tendency to incur debt. Materialism was found to strongly influence decisions to incur debt to fulfill lifestyle needs. Additionally, the moderating effect of financial literacy strengthens the relationship between financial behavior biases and Propensity to Indebtedness, indicating that better financial understanding helps individuals make wiser decisions. Job security also strengthens this relationship by providing emotional and financial stability. On the other hand, religiosity weakens the influence of emotions and materialism on Propensity to Indebtedness, although practical approaches are still needed to strengthen these effects. This research contributes academically by expanding insights into financial behavior and debt management, and it provides practical implications for the development of effective financial education programs aimed at improving financial literacy among Indonesian society.*

**Keywords** Financial Behavior Biases, Emotions, Culture, Materialism, Financial Literacy, Job Security, Religiosity, Propensity to Indebtedness.

### INTRODUCTION

In accordance with the current development era, there are various alternative financial products and services that are provided specifically for the community, thus providing an opportunity for anyone to optimize product facilities with the profits provided. (Research and Development Center for Aptika & IKP, 2019). However, it is also necessary to understand and comprehend the risks and uncertainties within it. (Wahono & Pertiwi, 2020). Credit is one of the uncertain things, which is ideal in helping someone maximize their financial condition, for example by obtaining assets, efforts to cover important costs, improving long-term economic status (Azhara, 2023). The reality that occurs, on several occasions in providing credit, tends to trigger people to become increasingly obsessed with remaining in debt or called Propensity to Indebtedness (Patulak et al., 2021).

Pay Later helping people who are not covered by conventional financial products to get to know and grow confidence, especially in digital financial products. Through the use of PayLater, people who are not covered by financial products can build a good financial



history, helping them be ready to access other banking financial products, such as credit cards or mortgages. On the other hand, the proportion of PayLater users who have previously used credit cards is only 28.1%. This group is dominated by SES A people who have expenses of more than IDR 6 million per month. Then 10.4% of respondents have received unsecured credit services from banks, and 8.8% have accessed multipurpose credit from banks before they used PayLater.

Statement Fitch et al. (2007) warns that more and more people tend to choose instant loans or go into debt for purchases, which shows an increasing tendency for preference towards ease of application and more affordable loan costs compared to credit cards. (Rosadi & Andriani, 2023). The reason someone decides to go into debt is for two purposes, namely productive and consumptive; productive debt to buy goods with a value that tends to increase, provides financial benefits with the potential for increased income, while consumptive debt to buy goods that are consumed, the value of which tends to decrease over time, does not provide financial benefits and has the potential to make someone get into debt. (Sa'adah & Utami, 2020).

The stigma against excessive debt/loans can influence the increase in debt arrears, damage community support, reduce trust in debtors, and damage social networks. (Schicks, 2014). Excessive debt also has an impact on reducing social inclusion because the burden of loans results in a decrease in consumption which is important in social activities. (Gujarati & Porter, 2012). Excessive use of debt has negative effects on society, such as increasing poverty levels, decreasing social cohesion, losing trust in the financial sector industry, decreasing loan offers, and decreasing trust in trusted borrowers. (Schicks, 2014).

Drentea and Lavrakas (2000) states that debt behavior can result in several impacts, including isolating someone and causing tension between members of society, especially someone who is in debt. Meltzer The consequences of being in debt and not being able to pay the responsibility can trigger suicide because the individual feels dissatisfied and worthless. There is social pressure on someone who is in debt because they feel ashamed and inferior about failing to pay their debt. Study owned by Fitch et al. (2007) conveys that individuals who are in debt are more likely to experience mental health problems than those who are not in debt. High levels of borrowing to meet excessive consumption needs and the inability to pay them back can lead to negative psychological risks, including stress and depression. Similar findings were reported by Reading shows that debt is a powerful trigger for depression in American families.

Considering these conditions, it is important to recognize and understand the factors that influence the choice to get into debt for a person. This study discusses the factors that determine Propensity to Indebtedness. One of the main factors that is thought to influence people into debt is the existence of behavioral biases. According to the author, the most influential financial behavioral biases are overconfidence, regret aversion and herding. In addition, behavioral biases that influence Propensity to Indebtedness are emotions, culture and materialism, which are thought to be moderated by religiosity, Financial Literacy and Job Security.

According to the explanation Lusardi and Tufano (2015), debt behavior is influenced by the level of knowledge about money. Financial knowledge can influence the decision to use optimal financial products. Lack of knowledge about financial products in a person can result in economic losses and increased consumer spending. (Henchoz et al., 2019). In addition, factors that influence debt behavior come from excessive desires, which encourage them to make impulsive purchases at shopping centers. (Atmadja & Atmadja, 2006).

Factors that influence a person's debt behavior include financial literacy, emotions, risk perception, materialism, culture, religiosity, and debt tendency. Shows that financial literacy, emotions, and risk perception have a significant positive effect on debt tendency, while materialism has a negative but insignificant effect on debt tendency. (Haikal et al., 2023). Research result Rosadi and Andriani (2023) found that factors that influence debt behavior include internal factors (life cycle, financial economic conditions, environment, and personality), culture, and psychological (motivation, perception, learning and attitude).

Several researchers have studied the relationship between financial behavior, debt, and sociodemographic variables (Oliveira, 2020). Hogarth et al. (2003) shows that increased knowledge improves personal finance behavior. Disney and Gathergood, (2011) concluded that families with less financial literacy tend to assume higher levels of debt. The findings indicate that: a) behavioral factors have the strongest effect on the propensity to borrow; b) the level of debt is influenced by sociodemographic variables (gender, race, marital status, occupation, and income); c) the level of risk perception, materialism, and propensity to borrow are similar for the indebted and non-indebted groups; d) the level of financial behavior and rationality differs between the indebted and non-indebted groups. (Oliveira, 2020).

Some experts have found that emotions play a vital role in psychological processes, such as learning, remembering and decision making. Emotions do not just shape preferences, but have the power to influence decision making (Umayya & Faturochman, 2015). Different people may make different decisions in the same decision-making situation, depending on their perspective or understanding of the risks or consequences (Rahman et al., 2021). Perception of risk plays a crucial role in human behavior, especially regarding decision-making in situations full of uncertainty. A person is seen as considering a condition to be risky if he suffers a loss due to a mistake in making a decision, especially if the loss affects finances (Cho & Lee, 2006).

## **METHOD**

The researcher used a quantitative approach in this study. The quantitative approach aims to solve problems factually through collecting, compiling, and analyzing numerical data using statistical procedures, and testing hypotheses (Sugiyono, 2019). The research design used, namely ex post facto, is supported by the use of a questionnaire survey method. The questionnaire survey is the main source of data in this study (Sugiyono, 2019).

Research methods are scientific approaches that are implemented to obtain data for a specific purpose or benefit (Sugiyono, 2019). Quantitative research aims to gain an understanding of the significance of the proposed model as an answer to the problems in this



study (Indrawan & Yaniawati, 2016). This research method uses a descriptive method with a quantitative approach.

This study uses primary data, namely information obtained directly from respondents regarding the variables of interest for research purposes (Sekaran & Bougie, 2020). The primary data that the researcher used was obtained from a questionnaire. A questionnaire is a series of written questions submitted to sources to obtain answers (Sekaran & Bougie, 2020). Researchers distributed questionnaires using Google Forms containing questions and statements related to respondent criteria and variable assessments.

This study intends to investigate the phenomenon of Propensity to Indebtedness based on behavioral biases, emotions, culture and materialism moderated by Religiosity, Financial Literacy and Job Security to explore the relationship that can strengthen or weaken Propensity to Indebtedness. In this study, the researcher uses the independent variable Propensity to Indebtedness, while the dependent variables are behavior biases, emotions, culture and materialism

According to Sugiyono, (2019) population can be divided into two types, namely sampling population or research population and target population or target population, where the target population has a larger size than the size of the sampling population. The sampling population is a unit of analysis that provides information or data needed by a study or research. While the target population is all units of analysis in the research area. The general population in this study is all ASN and employees/entrepreneurs in Indonesia, while the target population in this study is 60.2 million people with details:

1. Based on data from the State Civil Service Agency (BKN), the number of ASN in Indonesia in 2023 will be around 4.2 million people.
2. According to data from the Central Statistics Agency (BPS), in 2023, the number of workers in the private sector in Indonesia is estimated to reach around 56 million people.

Sugiyono, (2019) provides an understanding that a sample is part of the number and characteristics possessed by a population. Arikunto, (2018) states that the sample is part of the population. Sampling techniques are very necessary in a study because they are used to determine who are the members of the population who will be sampled. For this reason, sampling techniques must be clearly described in the research plan so that it is clear and not confusing when going into the field. According to Sugiyono, (2019) definition "Sampling technique is a sampling technique. To determine the sample to be used in research, there are various sampling techniques used". The purpose of sampling is to save costs, time, and energy. However, sampling must be done in such a way that it can describe the actual population.

According to Lasse (2018) Sample is an element selected to be a research participant. In this study, the researcher used Purposive Sampling, which is a sample selection technique based on criteria determined by the researcher. The sampling technique used in this study is to use Simple Random Sampling (taking random samples simply). According to Sugiyono, (2019) Simple Random Sampling is the taking of sample members from a population that is done randomly without considering the strata in the population. Sampling uses the Taro Yamane formula as explained by Riduwan, (2018) which is formulated as follows.

$$n = \frac{N}{N(d)^2 + 1}$$

Information:

n = Number of samples

N = Population size

d = Defined population (5% = 0.05 )

Based on this formula, the number of samples obtained is as follows:

$$n = \frac{60.200.000}{1 + 60.200.000 * 0,05^2}$$

$$n = \frac{60.200.000}{1 + 150500}$$

$$n = \frac{60.200.000}{150501}$$

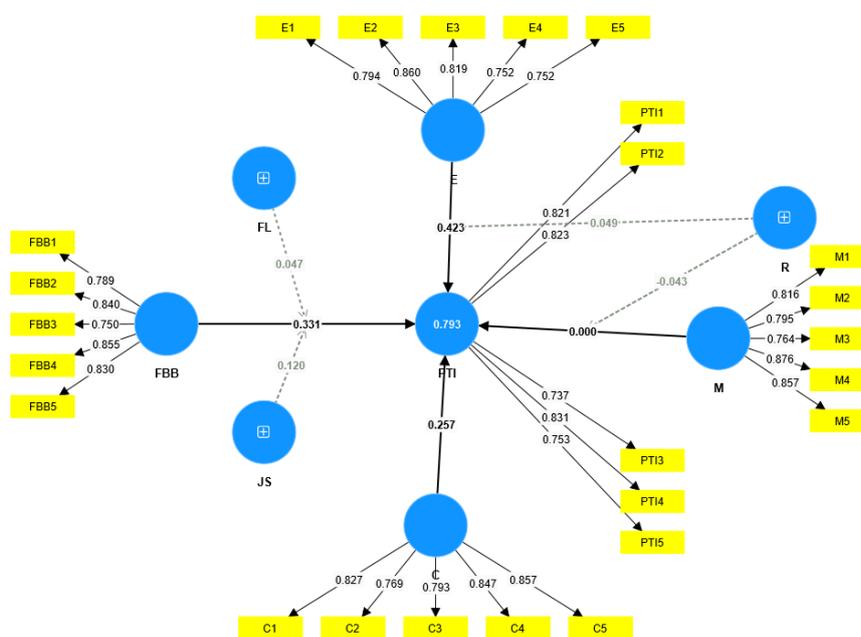
n = 400 samples

## RESULTS AND DISCUSSION

In this study, inferential analysis was carried out using multivariate statistical methods, through the Partial Least Square - Structural Equation Model (PLS-SEM) approach. In the analysis with PLS-SEM, the calculation of the structural equation is based on the variance value of the input data. This inferential statistical analysis is carried out in 2 main stages, first by assessing the results of the outer model or measurement model to test the reliability and validity of the indicators in a model. After this stage is carried out, the second stage is continued, namely by assessing the inner model or structural model to test the explanatory and predictive capabilities of the model, and then testing the significance of the influence between the variables in the research model.

### Outer Model Results

In data analysis with PLS-SEM, the first stage is the evaluation of the outer model which is also called the measurement model. This analysis stage is to test and evaluate the relationship of reflective indicators used to measure the latent variables (constructs). The analysis of this measurement model consists of 2 types, namely reliability testing and validity testing. To obtain the outer model in this study, SmartPLS4 software was used by running the calculate menu, namely the PLS Algorithm. The outer model reflective model test of this study is arranged in 4 parts, namely sequentially 1) indicator reliability (outer loading), 2) construct reliability (Cronbach's alpha and composite reliability), 3) construct validity (average variance extracted or AVE), and 4) discriminant validity (heterotrait-monotrait ratio). The results of data processing with the PLS Algorithm get an outer model image as below.



**Figure 1. Outer Model Results**

Source: Results of PLS-SEM research data processing (2024)

In the outer model results, a total of 41 reflective indicators were obtained which were used in the research model. From Figure 1 above in the outer model, it can be seen that all 41 indicators have been reliable to measure their constructs according to the required Outer loading value (Hair et al, 2019). Next, a detailed explanation of the results of the outer model evaluation will be described.

### Reliability Indicator

The first stage in the outer loading analysis is to assess the reliability indicator. From the results of data processing with PLS-SEM, the outer loading value is obtained which shows the relationship between the indicator and its construct. There is a required value as the limit of each indicator so that it can be said to be reliable to measure its construct. In PLS-SEM, an indicator can be said to be reliable if it has an outer loading value of more than 0.60.

**Table 1. Outer Loading Values**

Variables	Indicator	Loading Factor	Information
<i>Financial Behavioral Biases</i>	FBB1	0.789	Valid
	FBB2	0.840	Valid
	FBB3	0.750	Valid
	FBB4	0.855	Valid
	FBB5	0.830	Valid
<i>Emotion</i>	E1	0.794	Valid

Variables	Indicator	Loading Factor	Information
	E2	0.860	Valid
	E3	0.819	Valid
	E4	0.752	Valid
	E5	0.752	Valid
Culture	C1	0.827	Valid
	C2	0.769	Valid
	C3	0.793	Valid
	C4	0.847	Valid
	C5	0.857	Valid
Materialism	M1	0.816	Valid
	M2	0.795	Valid
	M3	0.764	Valid
	M4	0.876	Valid
	M5	0.857	Valid
<i>Financial Literacy</i>	FL1	0.773	Valid
	FL2	0.703	Valid
	FL3	0.828	Valid
	FL4	0.712	Valid
	FL5	0.786	Valid
	FL6	0.835	Valid
<i>Job Security</i>	JS1	0.722	Valid
	JS2	0.787	Valid
	JS3	0.807	Valid
	JS4	0.740	Valid
	JS5	0.775	Valid
Religiosity	R1	0.863	Valid
	R2	0.810	Valid
	R3	0.832	Valid
	R4	0.882	Valid
	R5	0.820	Valid
<i>Propensity to Indebtedness</i>	PTI1	0.821	Valid
	PTI2	0.823	Valid
	PTI3	0.737	Valid
	PTI4	0.831	Valid
	PTI5	0.753	Valid

Source: Results of PLS-SEM research data processing (2024)

Based on the outer loading model data from the table, it can be concluded that all indicators in this research model are reliable for measuring their respective constructs.



## Construct Reliability

The second stage in the outer loading analysis is to assess construct reliability. This value is needed to determine the internal consistency of the respondent's answer data to the indicator items of a construct. From the PLS-SEM data processing results, the construct reliability value is obtained to assess the extent to which the construct can be measured reliably by its indicators. In this outer model analysis, a reliability test is carried out by evaluating Cronbach's alpha and composite reliability values (Hair et al., 2019; Hair et al., 2020). The limit value required as a reference is the Cronbach's alpha value above 0.6 as the lower bound, while the composite reliability value is expected to be between 0.7 and 0.95. The composite reliability value of 0.95 is considered the upper bound, therefore if it is found to be greater than this value, it can be suspected that there is redundancy in the use of indicators (Hair et al., 2019).

**Table 2. Cronbach Alpha and Composite Reliability Values**

	<b>Cronbach's alpha</b>	<b>Composite reliability</b>	<b>Results</b>
<i>Financial Behavioral Biases</i>	0.872	0.907	Reliable
<i>Emotion</i>	0.856	0.896	Reliable
<i>Culture</i>	0.877	0.911	Reliable
<i>Materialism</i>	0.880	0.912	Reliable
<i>Financial Literacy</i>	0.871	0.900	Reliable
<i>Job Security</i>	0.825	0.877	Reliable
<i>Religiosity</i>	0.899	0.924	Reliable
<i>Propensity to Indebtedness</i>	0.853	0.895	Reliable

Source: Results of PLS-SEM research data processing (2024)

From the table above, it can be seen that the Cronbach's alpha value for all variables is above 0.6 as required. Furthermore, it can be seen that all variables have a composite reliability value above 0.7 and the highest value found is 0.924. No composite reliability value was found above 0.950 as the upper limit (upper level) so that no redundancy indicators were found that could affect the correlation between indicators (Hair et al., 2022). Therefore, it can be said that the measurement model is reliable, namely all indicators are confirmed to be reliable to be able to consistently measure their respective constructs.

## Construct Validity

The third stage in the outer loading analysis, after testing reliability, is to assess construct validity or in the reflective model it is called convergent validity. The value used as a reference as the lower limit accepted is the average value of the variance or average variance extracted (AVE) of the indicators of a construct. A latent variable or construct can be declared valid if its AVE value is more than 0.50 (Hair et al., 2019; Hair et al., 2020).

**Table 3. Average Variance Extracted (AVE) Value**

	Average variance extracted (AVE)	Results
<i>Financial Behavioral Biases</i>	0.662	Valid
<i>Emotion</i>	0.634	Valid
<i>Culture</i>	0.671	Valid
<i>Materialism</i>	0.676	Valid
<i>Financial Literacy</i>	0.600	Valid
<i>Job Security</i>	0.588	Valid
<i>Religiosity</i>	0.708	Valid
<i>Propensity to Indebtedness</i>	0.630	Valid

Source: Results of PLS-SEM research data processing (2021)

In the table above, the average variance extracted (AVE) value of each variable can be seen, where all research variables in this research model have a value of more than 0.50 as required. Based on this, it can be concluded that the indicators in this research model have been considered valid to jointly measure their respective constructs.

**Discriminate Validity**

The fourth and final stage in the outer loading analysis is to test discriminant validity. This test is intended to determine whether a construction has indicators that have been discriminated well to measure the construct specifically. In this study, the method used in the discriminator validity test is to look at the value of the heterotrait-monotrait ratio (HT/MT Ratio) as proposed by Henseler et al. (2015). The discriminant value with this method is considered more precise when compared to the discriminator value of Fornell Larcker which was used earlier (Hair et al., 2019; Hair et al., 2020). In the assessment with this method, if the HT/MT ratio is found to be less than 0.9, then a construct has a valid discriminant value. Therefore, it can be said that the indicators in one variable are the most appropriate and specific to measure the construct (Henseler et al., 2015).

**Table 4. Heterotrait/Monotrait Ratio Values**

	Culture	Emotion	al behaviou	ancial liter	Job securit	aterialism	ty to Inde	Religiusita	s Financial	Financial bitas	x Mate	usitas x Em
Culture												
Emotion	0.776											
Financial b	0.752	0.878										
Financial b	0.071	0.129	0.137									
Job securit	0.742	0.653	0.747	0.079								
Materialism	0.636	0.718	0.727	0.176	0.608							
Propensity	0.801	0.843	0.815	0.166	0.655	0.697						
Religiusita	0.128	0.168	0.256	0.054	0.213	0.200	0.121					
Financial b	0.045	0.027	0.076	0.181	0.071	0.043	0.068	0.039				
Job securit	0.056	0.086	0.203	0.068	0.235	0.183	0.322	0.093	0.106			
Religiusita	0.173	0.076	0.074	0.035	0.025	0.043	0.093	0.051	0.001	0.126		
Religiusita	0.212	0.120	0.105	0.042	0.118	0.068	0.092	0.061	0.017	0.138	0.708	

Source: Results of PLS-SEM research data processing (2024)



In the table above, the HT/MT ratio value for the discriminant validity test can be seen, where the ratio value of each variable is found below 0.9. Based on these data, it can be concluded that all indicators in this research model have been discriminated well. These indicators are most appropriate for measuring their own constructs, thus it can be interpreted that the indicators in this research model can specifically measure their respective constructs.

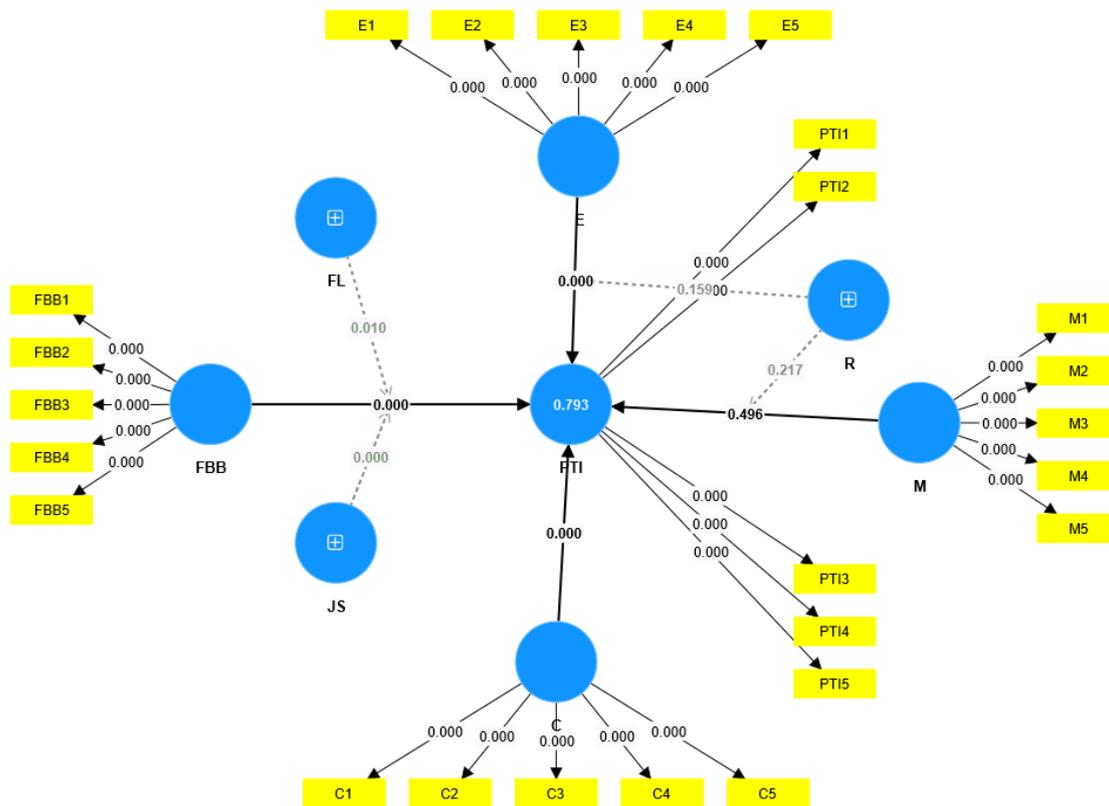
An assessment has been carried out on four statistical parameters resulting from the reliability and validity tests on the outer model as above, namely indicator reliability (outer loading), construct reliability (Cronbach's alpha and composite reliability), construct validity (average variance extracted or AVE), and discriminant validity (HT/MT Ratio).

Based on the outer data of the PLS-SEM model, a statistical conclusion can be determined, namely that in this research model all indicators have been declared reliable and valid to measure each of their constructs specifically. Thus, it is feasible to continue in the next analysis stage, namely the inner model test (structural model).

### **Inner Model Results (Structural Model)**

In the data analysis stage with PLS-SEM, after evaluating the outer model, the next step is to assess the inner model or structural model. At this stage, a one-tailed hypothesis test is carried out using the re-sample method with bootstrapping through SmartPLS4 software. Bootstrapping is a non-parametric procedure that uses re-sampling techniques to test the significance and coefficients owned by SmartPLS4. (Ringle et al., 2015; Memon et al., 2021). The test data on the inner model is used to assess the relationship between latent variables (constructs) in a research model.

According to the instructions from Hair et al. (2019), before reporting the hypothesis test, the inner model test output needs to first look at the quality of the research model proposed for empirical testing. The model quality parameters used in the inner model are Variance Inflation Factor (VIF), R-square, f-square, Q-square, Q-square predict (Hair et al., 2019; Hair et al., 2021). The quality of this model is to assess the explanatory and predictive capabilities of the proposed research model in accordance with the considerations of using PLS-SEM. After that, a significance test is carried out to determine whether the hypothesis can be supported and to see the path analysis through the results of the specific indirect effects test. At the end, an importance-performance analysis is added based on IPMA data using the total effect value on the target construct and the mean data from the respondent's answers (Ringle & Sarstedt, 2016). The importance-performance mapping analysis (IPMA) analysis can provide input for managers to compile a priority scale (Hair et al., 2019). Below are the results of the inner model image from the PLS-SEM bootstrapping results along with a description:



**Figure 2. Inner Model Results**

Source: Results of PLS-SEM research data processing (2024)

The results of bootstrapping in the form of an inner model image as above can be seen the structural relationship between variables in this research model. Where in this model there are 4 dependent variables, 1 independent variable and 3 moderating variables. In the inner model image, the T-statistic value of 8 paths or paths in the research model can be seen. All paths in the research model can be seen to have a T-Statistic value above the T-table so that it can be concluded that all paths in the structural research model are significant.

The detailed explanation of the inner model test results is written sequentially according to the reporting stages recommended by Hair et al. (2019).

### Multicollinearity

In structural model analysis, the first step reported is to evaluate whether there is a collinearity issue or problem between independent variables. Multicollinearity is a situation where there is a strong correlation or relationship between two or more independent variables in a model. Models with large multicollinearity have large standard errors and therefore reduce the precision of the model. In PLS-SEM, the inner Variance Inflation Factor (VIF) value is used for the multicollinearity test, where the ideal value or can be said to have no problems if it is less than 3. If the VIF value is more than 5, it can be said to be 'critical' or there is already a multicollinearity issue in the research model that will affect the path coefficient value in the research model (Hair et al., 2019). If the VIF value is found between



3 - 5, it can be said that there is a suggested value in the multicollinearity test or it is still within the limits to be tolerated or acceptable.

**Table 5. Inner VIF Value**

	Culture	Emotion	Financial Behaviour	Financial Literacy	Job Security	Materialism	Propensity to Indebtedness	Religiosity	Religiosity x Financial Literacy	Financial Literacy x Materialism	Religiosity x Materialism	Religiosity x Emotion
Culture							2.615					
Emotion							2.846					
Financial Behaviour							3.143					
Financial Literacy							1.101					
Job Security							2.213					
Materialism							1.988					
Propensity to Indebtedness												
Religiosity							1.105					
Financial Literacy							1.065					
Job Security							1.215					
Religiosity x Financial Literacy							2.065					
Religiosity x Materialism							2.080					

Source: Results of PLS-SEM research data processing (2024)

From the table above, it can be seen the Variance Inflation Factor (VIF) value in the results of the research model test where the VIF value in all variables was found to be less than 5. Therefore, it can be interpreted that all variables in the research model have ideal inner VIF values. Based on this, it can be said that between the variables in this research model, there is no multicollinearity problem. This shows that the quality of this research model has been acceptable in terms of not having multicollinearity issues.

### Determinant Coefficient (R-Squared)

The second step in the inner model analysis stage is to assess the quality of the research model by looking at the R-square value. The R-squared value or coefficient of determination can be seen from two aspects, the first is explanatory power or how much the independent variables in the research model can explain the dependent variable. The second is predictive accuracy or how accurate the ability of the independent variables in the research model is in predicting the dependent variable to a certain degree, which is measured from weak to strong (Hair et al., 2019). The R-squared value can be called substantial or strong if the value is equal to or greater than 0.75. The R-squared value is said to be moderate to strong if the value is equal to 0.50 - 0.75. The R-squared value is weak if the value is equal to 0.25 - 0.50. However, if an R-square value above 0.9 is found, the model can be considered overfit. (Hair et al., 2019).

**Table 6. R-Squared Value**

	R-square
<i>Propensity to Indebtedness</i>	0.793

Source: Results of PLS-SEM research data processing (2024)

In the table above, the R<sup>2</sup> (R-squared) value for the Propensity to Indebtedness variable can be seen at 0.793 and is therefore classified as having a strong category. It can be said that this research model has a strong ability to predict Financial Behavior Biases,

Emotion, Culture, Materialism which is moderated by Financial Literacy, Job Security and Religiosity.

### Effect Size (f-Squared)

In the structural model analysis, the next step as a reference for assessing the predictive ability of the suggested model is to look at the  $f^2$  (f-squared) value from the results of PLS-SEM bootstrapping data processing (Hair et al., 2020). The  $f^2$  test is used to determine the effect size or the magnitude of the influence of a construct if there is a change in the R-squared value of a target construct, when a certain construct as a predictor is removed from the research model (omitted). The f-squared test provides a value of how large the effect size or effect size is used as an evaluation of the substantial impact of the predictor variable in the research model. The size of the f-squared or effect size according to Cohen (1988) is if 0.02 is said to have a small effect size of a latent variable, if 0.15 is said to have a medium effect size of the latent variable, while if more than 0.35 is said to have a large effect size of a latent variable. The value of 0.02 itself is considered to be the significant limit of the effect that can be given by a latent variable, if  $f^2$  is found to be lower than 0.02 then it is said that it does not have a large enough effect size to provide a meaningful influence (Cohen, 1988). From the bootstrapping process, the  $f^2$  value in this research model is obtained as follows:

**Table 7. f-Squared Values**

Influence	Effect Size Value	Information
Culture -> Propensity to Indebtedness	0.122	Little Influence
<i>Emotion</i> -> Propensity to Indebtedness	0.304	Big Influence
<i>Financial Behavioral Biases</i> -> Propensity to Indebtedness	0.168	Moderate Influence
<i>Financial Literacy</i> -> Propensity to Indebtedness	0.013	Little Influence
<i>Job Security</i> -> Propensity to Indebtedness	0.010	Little Influence
Materialism -> Propensity to Indebtedness	0.000	Little Influence
Religiosity -> Propensity to Indebtedness	0.006	Big Influence
<i>Financial Literacy</i> x <i>Financial Behavior Biases</i> -> Propensity to Indebtedness	0.009	Little Influence
<i>Job Security</i> x <i>Financial Behavior Biases</i> -> Propensity to Indebtedness	0.096	Little Influence
Religiosity x Materialism -> Propensity to Indebtedness	0.005	Little Influence
Religiosity x Emotion -> Propensity to Indebtedness	0.009	Little Influence

Source: Results of PLS-SEM research data processing (2024)

In the table above, it is found that the Emotion variable has the greatest effect on Propensity to Indebtedness with an effect size value of 0.304. Thus, it can be said that



Emotion has a significant impact on Propensity to Indebtedness, so that this variable can be used as an important predictor in predicting Propensity to Indebtedness.

### Predictive Relevance Values (Q2 and Q2\_predict)

In the analysis of model quality in PLS-SEM, the next stage is through the Q-squared test. This test aims to determine the predictive relevance of a latent variable in the research model (Hair & Sarstedt, 2021). The Q2 value is in the range of 0 to 1 (Hair et al., 2019). If a Q-squared value of more than 0 is found, it is said to have relevance, if the value is up to 0.25, it is said that the predictive relevance is small (small predictive relevance), if the Q-squared value is between 0.25 and 0.5, it is said that the predictive ability of the model is medium (medium predictive relevance), if the Q-squared value is more than 0.5, it is said to have a large predictive relevance. The greater the Q-squared value found or the closer it is to 1, the more precise the predictive ability of a research model is to predict relatively the same research output if there is a change in the data parameters. This is done in PLS-SEM with an out-of-sample approach or simulated changes in data compared to the original estimated data (Hair et al., 2019; Hair & Sarstedt, 2021). Therefore, it can be said that this value can indicate the quality of the proposed model for empirical testing, considering that this model will be tested on different data in the future.

The Q2 value of this study was obtained from the calculation results using the blindfolding menu in PLS-SEM as shown in the table below.

**Table 8. Q-Squared and Q-Squared Predict Values**

Variables	Q-square	Q <sup>2</sup> predict	Results
<i>Propensity to Indebtedness</i>	0.479	0.763	Large Predictive Relevance

Source: PLS-SEM data processing results (2024)

In the table above, it can be seen that the calculation results show that the Propensity to Indebtedness variable has a moderate predictive relevance capability with a Q2 value of 0.479.

A more advanced statistical method for testing Q-squared values has been used in the analysis with PLS-SEM through the PLS<sub>predict</sub> calculation. This method was developed and published by Shmueli et al. (2018), and is currently considered more accurate than blindfolding (Hair et al., 2019; Hair & Sarstedt, 2021). Prediction with the PLS<sub>predict</sub> calculation is considered more sensitive to changes in the input data parameters. This test is useful in providing information about the magnitude of the possible relevance between latent variables in the study. The Q2 predict value can also be grouped into three groups, namely:

- small predictive relevance : < 0.25
- medium predictive relevance : 0.25 – 0.5
- large predictive relevance : > 0.5

The table shows the value of Q2-predict, which can be compared with the Q2 value of the blindfolding output. The Q2-predict value for Propensity to Indebtedness is 0.763 and

is classified as large predictive relevance. Therefore, it can be said that this research model has a strong ability to predict Propensity to Indebtedness.

**Cross-Validated Predictive Ability Test Results (CVPAT)**

This CVPAT analysis test is used to test the ability of the cross-validated predictive ability results. The results of this test must have negative results to be declared to have cross-predictive ability (Liengard, 2021; Hair et al, 2022).

**Table 9. CVPAT test results**

Variables	PLS SEM vs Indicator Average (IA)	PLS SEM vs Liner Model (LM)
	Average loss difference	Average loss difference
<i>Propensity to Indebtedness</i>	-0.637	0.042
Overall	-0.637	0.042

Source: Research Results Data (2023)

Based on the table above, the results of the Indicator Average (IA) Propensity to Indebtedness have a negative value, while in the Liner Model (LM) the Propensity to Indebtedness variable has a positive value, which can be concluded that the Propensity to Indebtedness variable has a fairly small error rate and good ability to predict.

**Research Hypothesis Test Results**

The most important stage in the analysis of the inner model or structural model in this study is to look at the significance value and coefficients in the relationship between variables in the research model. At this stage, the values that are the focus are found and interpreted to answer the research questions. The first thing to look at is through the significance test on the 8 paths in this research model. This significance test aims to determine the significance of the influence between variables in the research model so that it can be generalized at the population level. This test is carried out using the bootstrapping method using re-sampling and processed with SmartPLS4 (Ringle et al., 2015; Memon et al., 2021).

The results of testing whether a hypothesis can be supported are carried out by assessing the results of empirical tests, namely the significance and coefficient value. The direction of the coefficient must be in accordance with the direction of the previously proposed hypothesis, because the nature of this hypothesis is directional. Because the direction of influence has been stated in the hypothesis, a two-tailed statistical test is carried out. If the T-statistic value from bootstrapping is greater than the T-table value, which is 1.64 (with a significance level or alpha of 0.05), then the relationship between variables can be declared significant (Ringle et al., 2015; Sarstedt et al., 2017). The analysis of this research model was carried out using one-tailed bootstrapping with a significance level of 0.05. First, the significance of all paths is seen, then the size of the coefficient (standardized



coefficient) on each path is assessed and compared. If the test results have met both requirements, the research hypothesis can be declared supported. The table below shows the results of PLS-SEM data processing to determine the results of the hypothesis test.

**Table 10. Hypothesis Test Results**

Hypothesis	Influence	Original sample (O)	T statistics ( O/STDEV )	P values	Information
H1	<i>Financial Behavioral Biases</i> -> Propensity to Indebtedness	0.331	4,781	0.000	Hypothesis Supported
H2	<i>Emotion</i> -> Propensity to Indebtedness	0.423	6,716	0.000	Hypothesis Supported
H3	Culture -> Propensity to Indebtedness	0.257	4,841	0.000	Hypothesis Supported
H4	Materialism -> Propensity to Indebtedness	0.432	1,921	0.016	Hypothesis Supported
H5	<i>Financial Literacy</i> x <i>Financial Behavior Biases</i> -> Propensity to Indebtedness	0.047	2.314	0.010	Hypothesis Supported
H6	<i>Job Security</i> x <i>Financial Behavior Biases</i> -> Propensity to Indebtedness	0.120	5.258	0.000	Hypothesis Supported
H7	Religiosity x Emotion -> Propensity to Indebtedness	0.049	0.997	0.159	Hypothesis Not Supported
H8	Religiosity x Materialism -> Propensity to Indebtedness	0.043	0.781	0.217	Hypothesis Not Supported

Source: Results of PLS-SEM research data processing (2024).

This study involved 400 respondents consisting of ASN (State Civil Apparatus) and employees/entrepreneurs spread throughout Indonesia. From the respondent profile data, the majority of participants were aged between 36-40 years (23.0%), which indicates that this study mainly involved individuals who were of productive age and career-wise mature. This is relevant because this age group is usually at a phase of life where they already have significant financial responsibilities, such as family and investment, so decisions related to debt and financial management become very important. Other age groups that dominate are 46-50 years (21.3%) and 41-45 years (19.3%), which also shows the involvement of established age groups in financial decision-making.

In terms of gender, the majority of respondents were male (52.5%), while females comprised 47.5%. This almost balanced composition suggests that this study captures perspectives from both genders that may have differences in financial behavior, including the propensity to borrow and manage debt. The slightly more dominant involvement of males may also reflect that males are more active in managing family finances or more involved in financial decisions in their work environment. In the case of Indonesia, men tend to play a larger role in family and business finances, so these results may provide a more in-depth picture of how gender influences debt-related decisions.

In terms of employment, the majority of respondents were ASN (68.3%), with the rest coming from the private sector/entrepreneurs (31.8%). This composition indicates the focus of the study on individuals with relatively high job stability, given that ASN tend to have stable incomes and job security. However, respondents from the private sector/entrepreneurs also provide an important perspective, especially since they may face

higher financial risks and income variability. The majority of respondents (58.5%) have an income between IDR 5,000,001 and IDR 10,000,000 per month, indicating that this study involved participants from the middle class. This is relevant because the middle class is usually more involved in consumption behavior and taking on debt, making this group ideal for analysis in terms of debt propensity.

The Propensity to Indebtedness variable has the highest average value on the PI3 indicator of 4.288, which is included in the frequent category, while the other four indicators are included in the very rare category. The maximum value found is 5 and the minimum value is 1. The highest standard deviation on the PI2 indicator is 1.187, indicating that the distribution of respondents' answers is quite uniform. Respondents tend to have a low tendency to be in debt, as seen from the dominance of indicators that are included in the very rare category. The high average on PI3 indicates that there is something that makes respondents agree more with that specific aspect. However, the distribution of answers is generally even and does not show any significant outlier patterns. This finding indicates that the majority of respondents have a negative view of debt as a financial option. This can be caused by culture, personal experience, or distrust of debt as a financial solution.

In the Financial Behavior Biases variable, the FBB4 indicator has the highest average of 3.918, which is categorized as frequent, while the other four indicators are in the rare category. The maximum value is 5, the minimum is 1, with the largest standard deviation in the FBB3 indicator of 1.254. Although there is one indicator that has a high average value, respondents generally show an unbiased financial behavior pattern. Variations in the FBB3 indicator indicate diversity in financial behavior, but still within the limits considered reasonable. Bias in financial behavior does not seem to be a significant problem among respondents. This indicates awareness and a fairly rational mindset in managing their finances.

In the Emotion variable, the highest average is in the E4 indicator of 3.745. The maximum value is 5, the minimum is 1, with the highest standard deviation in the E1 indicator of 1.328. Respondents' answers show greater variation compared to other variables. This variable indicator shows a diverse distribution of answers, reflecting significant differences in the emotional aspects of respondents. This indicates that emotions are influenced by different personal or social experiences among respondents. This finding indicates that respondents have variations in their emotional responses to each indicator. This reflects that emotions play an important role in their decisions, but in very varied ways.

The Culture variable shows two indicators in the disagree category, one indicator in the neutral category, and two indicators in the strongly disagree category. The highest mean value was found in C3 at 2.855. The largest standard deviation was 1.230 in indicator C1, with a distribution of answers that tended to be even. Respondents' perceptions of this variable tended to be negative, with most indicators showing a level of disagreement. Neutral answers in C3 indicate a diversity of views on a particular culture that may be more relevant to a small number of respondents. This finding suggests that culture does not have a strong influence on respondents' decision making or views. This may reflect differences in cultural values or a lack of cultural relevance in their specifics.



The Materialism variable has three indicators in the disagree category, one indicator in the neutral category, and one indicator in the strongly disagree category. Indicator M1 has the highest mean of 3.145. The largest standard deviation is in indicator M3 of 1.203. Respondents' answers show a negative view of materialism, with most indicators in the disagree category. The neutral indicator indicates that there are some aspects of materialism that may be considered relevant or important by a small number of respondents. Overall, respondents showed a preference for non-materialistic values, which may reflect their views on consumption, lifestyle, or higher life priorities than material possessions.

Based on the results of the descriptive analysis of the Financial Literacy variable, respondents showed varying understanding of basic financial concepts. Most respondents were able to correctly answer questions about inflation and savings interest rates, as well as the concept of investment diversification, reflecting a good basic understanding of financial management. However, despite the basic understanding, there was a lack of more technical understanding. For example, the majority of respondents were aware that inflation could reduce their purchasing power (46.0%), but they did not fully understand the impact of rising market interest rates on bond prices, with 39% of respondents answering "don't know." In addition, the majority of respondents were also able to understand the risks of credit card debt, with 55.3% answering that debt would increase with high interest rates. These findings indicate that although respondents have basic awareness of financial management, many still need to improve their understanding of more advanced concepts, such as the effect of inflation on long-term purchasing power and the relationship between interest rates and bond prices. Better financial literacy can help individuals make wiser financial decisions, especially in debt and investment management.

The results of the descriptive analysis of the Religiosity variable show a high level of religiosity among respondents, although there is variation in the answers related to several indicators. Most respondents indicated the habit of praying before starting an activity (66.3%) and preferring to attend religious events rather than watching music concerts (34.0%). Most respondents also balance their time between routine and spiritual activities by choosing a proportion of 50 percent for each (34.5%), indicating that the balance between the two is considered important. However, despite high religiosity in terms of spiritual habits, the results of this study also show disagreement regarding tolerance for differences in beliefs, with only 30.0% of respondents agreeing that individuals have the right to change religions. Although religiosity has a significant influence on daily habits and decision-making, this finding shows that religiosity does not affect other variables analyzed in this study. This suggests that although religiosity is an important part of respondents' lives, its influence on other aspects of their lives, such as decision-making and social interactions, tends to be limited.

Based on the latest data, the R-squared value or coefficient of determination for the Propensity to Indebtedness variable is 0.793, which is included in the strong category according to the classification of Hair et al. (2019). This shows that the research model is able to explain 79.3% of the variation in Propensity to Indebtedness through independent variables such as Culture, Emotion, Financial Behavior Biases, Materialism, as well as

moderation from Financial Literacy, Job Security, and Religiosity. Thus, only 20.7% of the variation is not explained by the model and may be caused by external factors outside the model. This value indicates that this model has excellent predictive ability as well as high relevance in terms of financial behavior.

The f-squared analysis provides information on the effect size of each variable on Propensity to Indebtedness. The variable with a large effect size is Emotion (0.304), which shows a significant and substantial influence on the dependent variable. Financial Behavior Biases has a medium effect size (0.168), while other variables such as Culture (0.122), Financial Literacy (0.013), Job Security (0.010), and Materialism (0.000) have relatively small effects. Although some variables have small effect sizes, their collective contribution has a significant influence on increasing the R-squared value of the model. This confirms the importance of the existence of these variables to enrich the model, even though their individual influence is small. With a fairly large effect size, the Emotion variable becomes an important focus for developing strategies or policies related to Propensity to Indebtedness.

In addition, the Q-squared and Q<sup>2</sup>predict analysis provides insight into the relevance of the model's predictions. With a Q-squared value of 0.479 and a Q<sup>2</sup>predict of 0.763, this model has large predictive relevance. This means that this model is not only able to explain the dependent variable well in the research sample but also has reliable predictive ability to be applied to new data. The high Q-squared and Q<sup>2</sup>predict values indicate that this model is robust enough and relevant to be used in different situations or new data scenarios. In terms of management, these results provide added value for companies or financial institutions that want to use this model to understand and manage factors that influence the propensity to Indebtedness. Thus, this model not only offers a strong explanation of current data but also provides relevant and reliable predictive ability for the future.

### **The Influence of Financial Behavior Biases on Propensity to Indebtedness**

The results of the analysis show that Financial Behavior Biases have a positive and significant effect on Propensity to Indebtedness. The T-statistic value of 4.781 is greater than the T-table limit value of 1.64, indicating a significant effect. The standardized coefficient of 0.331 indicates a positive direction, so it can be concluded that the higher a person's financial behavior bias, the greater their tendency to get into debt. Behavioral biases such as overconfidence or self-control bias make individuals more likely to make irrational financial decisions, which ultimately increases the risk of getting into debt. This is in line with the Behavioral Finance theory which explains that behavioral biases, such as overconfidence and self-control bias, can influence individual financial decisions. Behavioral biases can make someone tend to underestimate risk and overestimate their ability to manage debt, which ultimately increases the tendency to get into debt. This theory recognizes that humans are not always rational in making financial decisions, so behavioral biases often appear in decision making involving financial risk.

These results are supported by previous studies, such as research conducted by Pompian (2012), which found that financial behavioral bias tends to increase risky financial behavior, including taking on debt. In addition, research by Ricciardi and Simon (2000) also



showed that individuals with overconfidence are more likely to take on debt, because they believe they can manage risk better than they actually do. Therefore, this study strengthens the empirical evidence that behavioral bias plays a role in increasing the tendency to take on debt.

However, there are also studies that reject this relationship, such as research conducted by Gathergood (2012), which found that in some cases, individuals with higher levels of behavioral bias tend to avoid debt due to feelings of discomfort or uncertainty in facing risks. However, in general, previous research is more supportive of the finding that Financial Behavior Biases tend to increase the tendency to go into debt.

In terms of hypothesis, this study successfully supports H1 which states that Financial Behavior Biases have a positive and significant effect on Propensity to Indebtedness. This result strengthens the existing theoretical framework in the behavioral finance literature, especially those that emphasize the importance of understanding how behavioral biases affect individual financial decisions.

### **The Influence of Emotion on Propensity to Indebtedness**

The second hypothesis is also supported by the data, with a T-statistic value of 6.716 and a standardized coefficient of 0.423. Positive emotions such as excessive optimism or impulsivity can increase a person's tendency to take risks in financial decisions, including debt. In other words, when a person's emotions are unstable or influenced by excessive feelings, the individual tends to decide to go into debt more easily. Behavioral finance theory states that emotions can influence financial decision-making, especially in situations involving risk. When emotions such as excessive optimism or impulsivity increase, individuals tend to make irrational financial decisions, including debt. Strong emotions can reduce a person's ability to think logically and make more careful decisions.

Previous research supporting these findings includes a study by Lerner et al. (2004), which found that emotions such as fear, anger, or excessive happiness can significantly influence financial decisions. Similarly, research by Rick and Loewenstein (2008) showed that emotions often lead individuals to take greater financial risks, including debt, because they believe that financial conditions will improve in the future.

However, some studies have found that emotions do not always have a direct impact on the propensity to borrow. For example, a study by Kausel et al. (2015) stated that strong emotions can worsen decision-making, but in some cases, emotional individuals are more likely to avoid risks due to fear of potential negative consequences, including in taking on debt. Nevertheless, in general, the results of this study are consistent with the literature supporting a positive relationship between emotions and propensity to borrow.

This result supports the hypothesis H2 that emotions have a positive and significant effect on Propensity to Indebtedness. This strengthens previous findings that individual financial decisions are not only influenced by rational factors, but also by emotional factors that are sometimes uncontrolled.

### **The Influence of Culture on Propensity to Indebtedness**

For the third hypothesis, the influence of culture on Propensity to Indebtedness is supported by a T-statistic value of 4.841 and a standardized coefficient of 0.257. A culture that emphasizes the values of thrift, financial responsibility, and avoiding debt will tend to suppress a person's desire to go into debt. This shows that certain cultures can be protective factors in financial behavior, meaning that certain cultures can suppress a person's tendency to go into debt. This shows that certain cultures can be protective factors in financial behavior, meaning that certain cultures can suppress a person's tendency to go into debt. Theoretical studies in the field of cross-cultural finance show that cultural norms can influence the way individuals view debt and financial risk. Cultures that value financial conservatism, self-control, and caution in spending will usually suppress an individual's tendency to go into debt.

This research is supported by a study conducted by Hofstede (2001), which showed that cultures with high scores in uncertainty avoidance tend to have individuals who are more reluctant to take on debt. Research by Chui et al. (2010) also supports this finding, showing that collectivist cultures, which emphasize social responsibility and prudence, are more likely to avoid taking on excessive debt.

However, research by Guiso et al. (2006) found that in individualistic cultures, people tend to be freer to make financial decisions including debt, because financial decisions are considered a personal responsibility, not a group. Nevertheless, the findings of this study further support the hypothesis that certain cultures can reduce a person's tendency to go into debt, especially in more conservative and risk-averse societies.

These results support hypothesis H3, which states that culture has a significant effect on Propensity to Indebtedness, with a positive direction. This suggests that a culture that emphasizes caution and debt avoidance plays an important role in reducing the propensity to indebtedness.

### **The Influence of Materialism on Propensity to Indebtedness**

The results of the fourth hypothesis also show a significant effect, with a T-statistic value of 1.921 and a standardized coefficient of 0.432. Materialism, which is related to the tendency to measure happiness through the ownership of material goods, encourages individuals to go into debt in order to achieve the desired lifestyle. The higher the level of a person's materialism, the higher the tendency to go into debt in order to meet consumptive needs. The theory of consumption and materialistic behavior explains that materialistic individuals tend to measure success and happiness through the ownership of material goods. To achieve a materialistic lifestyle, individuals are often willing to take on debt to finance their consumptive needs, such as buying luxury goods.

This finding is consistent with previous studies, such as research by Richins and Dawson (1992), which found that individuals with high levels of materialism are more likely to have consumptive behavior and take on debt to meet their needs. Research by Watson (2003) also shows that materialism drives individuals to borrow money to finance a high lifestyle, even though it can have a negative impact on their financial health in the future.



However, there are some studies that refute this relationship. For example, research by Burroughs and Rindfleisch (2002) suggests that although materialism drives consumer behavior, it does not necessarily mean that individuals will take on debt. In some cases, they may prefer to save up first before making a purchase, especially if their social environment encourages financial responsibility.

The results of this study support the hypothesis H4, which states that materialism has a positive and significant effect on Propensity to Indebtedness. This strengthens the view that consumer behavior and materialistic lifestyles can trigger individuals to go into debt in order to achieve the desired social status.

### **Financial Literacy Moderating the influence of Financial Behavior Biases on Propensity to Indebtedness**

The fifth hypothesis is supported by a T-statistic of 2.314 and a standardized coefficient of 0.047. This shows that Financial Literacy can strengthen the influence of financial behavioral bias on the tendency to get into debt. The higher a person's financial literacy, the stronger the influence of behavioral bias that can encourage them to get into debt. People who understand financial concepts tend to make more rational decisions and can strengthen the tendency of risky behavior. The results of the study show that Financial Literacy acts as a significant moderator between Financial Behavior Biases and Propensity to Indebtedness. This is in accordance with the theory of financial literacy which states that a good understanding of finance can strengthen the impact of financial behavioral bias. Financial literacy helps individuals to make more rational decisions, even when they have a tendency towards behavioral bias, such as overconfidence or mental accounting. Individuals with good financial literacy are more likely to have stronger control over their debt decisions.

Previous studies support these results, such as research by Lusardi and Mitchell (2014), which found that financial literacy can help reduce the influence of behavioral bias in making wrong financial decisions, including in terms of debt. Financial literacy helps individuals understand the long-term consequences of their financial decisions, so they tend to be more careful in taking on debt. In addition, Atkinson and Messy (2012) also emphasized that high financial literacy allows individuals to manage debt risks more effectively, even though they are affected by behavioral bias.

However, there are some studies that reject the role of financial literacy as a significant moderator. For example, a study by Gerardi et al. (2010) showed that although financial literacy is important, in some cases, individuals who have very strong behavioral biases, such as self-control bias, may still be at high risk of debt despite having good financial literacy. These biases can sometimes be more dominant than financial knowledge.

The results of this study support hypothesis H5, which states that Financial Literacy moderates the influence of Financial Behavior Biases on Propensity to Indebtedness. This suggests that financial literacy plays an important role in reducing the impact of behavioral biases, helping individuals make wiser financial decisions.

### **Job Security Moderating the influence of Financial Behavior Biases on Propensity to Indebtedness**

The sixth hypothesis is also supported, with a T-statistic of 5.258 and a standardized coefficient of 0.120. These results indicate that Job Security can strengthen the influence of financial behavioral bias on Propensity to Indebtedness. With a sense of security in work, individuals tend to be more careful in making financial decisions, even though they have financial behavioral biases. Job stability can function as a counterweight, encouraging individuals not to be too hasty in making risky financial decisions. The results of the study indicate that Job Security acts as a significant moderator between Financial Behavior Biases and Propensity to Indebtedness. This is consistent with the theory that states that individuals who feel secure in their jobs tend to have more stable financial behavior. Job security provides greater confidence in facing financial uncertainty, so it can strengthen the influence of the impact of financial behavioral biases such as overconfidence or loss aversion. With good job security, individuals may be more likely to make more controlled financial decisions, even though they have behavioral biases.

Research by De Witte (2005) supports this finding, finding that individuals who feel secure in their jobs tend to be more emotionally and financially stable, which ultimately reduces the tendency to take unnecessary risks, including in terms of debt. Another study by Boswell et al. (2004) also showed that job security can reduce impulsive financial behavior, because individuals feel they have a stable and planned income.

However, there is also research that suggests that job security does not always moderate the influence of behavioral bias effectively. For example, research by Korniotis and Kumar (2011) found that some individuals, despite having high job security, still exhibit risky behavior in their financial decisions due to the influence of strong behavioral bias. In some cases, individuals with excessive job security can become overconfident, thus still risking taking on excessive debt.

The results of this study support hypothesis H6, which states that Job Security moderates the influence of Financial Behavior Biases on Propensity to Indebtedness. This finding highlights the importance of job security in helping individuals control the impact of behavioral biases on debt decisions.

### **Religiosity Moderates the Influence of Emotion on Propensity to Indebtedness**

The results of the study indicate that this hypothesis is not supported. With a T-statistic of 0.997 and a p-value of 0.159, Religiosity plays a role in weakening the influence of emotions on the tendency to borrow, but not significantly. Although in theory Religiosity is believed to be able to weaken the impact of emotions in financial decision making, because religion often teaches self-control and avoidance of risky behavior such as borrowing, the results of this study indicate that Religiosity does not have a significant effect in weakening the relationship between emotions and the tendency to borrow. This indicates that although religiosity has the potential to influence financial decisions, its role in controlling the tendency to borrow influenced by emotions is not strong enough to provide a significant effect in this study.



Previous research supporting these findings includes a study by Parboteeah et al. (2008), which found that in some cases, religiosity does not always directly influence economic decisions, especially in terms of controlling emotions related to financial decisions. This study suggests that while religiosity can be a controlling factor, strong emotions such as impulsivity are often more dominant in financial decisions, especially when it comes to debt.

However, other studies such as the study by Guiso et al. (2003) found that religiosity can affect financial decisions by reducing consumer tendencies and risky behavior. This study shows that religious individuals tend to be more careful in their financial decisions and are better able to control emotions in risky financial situations, including in debt.

In terms of hypothesis, this study failed to support hypothesis H7, which states that Religiosity moderates the influence of Emotion on Propensity to Indebtedness. This result suggests that in some cases, emotion may play a bigger role than religiosity in influencing debt decisions.

### **Religiosity Moderates the Effect of Materialism on Propensity to Indebtedness**

The eighth hypothesis shows that Religiosity weakens the influence of Materialism on Propensity to Indebtedness. With a T-statistic of 0.781 and a standardized coefficient of 0.043, these results indicate that Religiosity is not effective enough to suppress the influence of Materialism on the tendency to get into debt. Although in theory, Religiosity is often associated with teachings to avoid consumptive behavior and focus more on spiritual values, which should be able to reduce the tendency of excessive materialism, this study shows that Religiosity does not significantly weaken the influence of Materialism on the tendency to get into debt. This shows that although religious values and spirituality have the potential to reduce the orientation towards material wealth, in this context, Religiosity does not have a strong enough influence to moderate the relationship.

Previous studies, such as Burroughs and Rindfleisch (2002), found that religiosity can play a role in suppressing the influence of materialism on consumption decisions and debt behavior. Vitell et al. (2007) also showed that religious individuals tend to have better control over materialistic urges, making them less likely to go into debt to fulfill a consumptive lifestyle.

However, there are also studies such as Seuntjens et al. (2015) which state that religiosity does not always succeed in reducing materialism, especially in societies or cultures where materialistic values have been deeply ingrained. In terms of this study, although the literature supports the potential of religiosity to reduce the influence of materialism, the results of the study indicate that the religiosity factor is not significant enough to function as a counterweight to materialism in relation to the tendency to debt. Thus, hypothesis H8 is not supported, and the role of religiosity in moderating the influence of the relationship between materialism and the tendency to debt requires further research in different respects.

## CONCLUSION

1. The results of the study show that Financial Behavior Biases have a positive and significant effect on Propensity to Indebtedness. The higher a person's financial behavioral bias, the greater their tendency to get into debt. Biases such as overconfidence and self-control bias make individuals tend to underestimate the risks of debt and are more likely to make irrational financial decisions.
2. *Emotion* proven to have a positive and significant effect on Propensity to Indebtedness. This suggests that individuals who are easily influenced by emotions, such as impulsiveness or excessive optimism, are more likely to make risky decisions, including debt. Uncontrolled emotions affect an individual's ability to consider the long-term risks of financial decisions.
3. Culture has a positive and significant influence on Propensity to Indebtedness. In cultures that emphasize prudent financial management and conservative values, the propensity to go into debt may be suppressed, suggesting that culture plays an important role in helping individuals make wiser financial decisions.
4. Materialism has a positive and significant effect on Propensity to Indebtedness. The more materialistic a person is, the more likely they are to go into debt to fulfill their higher lifestyle desires. Individuals who prioritize material possessions tend to be more prone to taking financial risks through debt to fulfill their consumptive lifestyle.
5. *Financial Literacy* strengthens the influence of Financial Behavior Biases and Propensity to Indebtedness positively and significantly. Better financial literacy helps individuals reduce the negative impact of financial behavioral biases. With a good understanding of financial concepts, individuals are more likely to make wise financial decisions and are less likely to get into debt.
6. *Job Security* strengthens the influence of Financial Behavior Biases on Propensity to Indebtedness positively and significantly. Job security helps individuals control their debt tendencies triggered by financial behavioral biases. Job stability provides confidence and caution in making financial decisions, even though individuals have behavioral biases that affect their financial decisions.
7. *Religiosity* weakens the influence of Emotion on Propensity to Indebtedness. These results suggest that the influence of strong emotions, such as impulsive or excessive optimism, cannot be significantly controlled only through religious values. This indicates that emotional control requires a more practical and direct approach, such as emotion management training or psychological intervention, which is more effective than relying solely on religious values.

Religiosity weakening the influence of Materialism on Propensity to Indebtedness. These results indicate that religious individuals do not significantly reduce the materialistic urges that can trigger consumer behavior. Thus, religiosity is not strong enough to suppress a person's tendency to go into debt to fulfill their materialistic desires. Therefore, other interventions are needed, such as financial education or psychological approaches, to manage materialistic urges and reduce the tendency to go into debt.



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