Neurofinance Perspective on Traditional and Behavioral Finance in Accounting Students' Decisions

Frischa Faradilla Arwinda Mongan[1*], Muliani Mangngalla[2], Ni Nyoman Ayu Suryandari[3], Desi Ratnasari[4], Alfianti Arung Badeng[5]
Universitas Kristen Indonesia Paulus, Makassar, Indonesia[1,2,4,5]
Universitas Mahasaraswati Denpasar, Denpasar, Indonesia[3]
frischa@ukipaulus.ac.id[1*], mulianimangngalla9@gmail.com[2], ayusuryandari@unmas.ac.id[3], bigbos010505@gmail.com[4], alfiantiarungbadenggg@gmail.com[5]

Abstract
Purpose: This study investigates the impact of traditional finance and behavioral finance on accounting students' financial decisions. A key objective is to emphasize the roles of financial literacy and psychological biases, and to determine whether neurofinance moderates their influence on individual choices.

Methodology/approach: Adopting a quantitative design, data were gathered through questionnaires distributed to accounting students at UKI Paulus and UNMAS Denpasar. The research model was analyzed using *Structural Equation Modeling* (SEM) with the *Partial Least Squares* (PLS) technique, which enables testing of both direct and moderating relationships among complex variables.

Results/findings: Both traditional finance and behavioral finance significantly influence students' financial decisions. Crucially, however, neurofinance does not significantly moderate the link between behavioral finance and financial decisions, suggesting that behavioral factors remain dominant. Future research should aim to integrate all three approaches into a unified framework.

Conclusions: This study finds that behavioral finance has a more substantial impact on students' financial decisions than traditional finance. Neurofinance offers insights but does not significantly moderate this relationship, suggesting the need for further integration of all three approaches.

Limitations: This research is confined to accounting students from two universities, which may limit the applicability of the results.

Contribution: The study provides a unified framework for traditional, behavioral, and neurofinance. It uniquely shows that neurofinance moderates the impact of traditional finance, but not behavioral finance, providing new insights into student financial actions.

Keywords: *Accounting Students, Behavioral Finance, Financial Decisions, Neurofinance, Traditional Finance*

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1. Introduction
Financial issues often arise from a lack of financial literacy and poor money management. Financial literacy refers to a person's understanding of personal finance principles, including budgeting, saving, and spending (Asih & Khafid, 2020). Strong financial knowledge is essential for making wise decisions, budgeting effectively, and securing one's future (Nuryana & Wicaksono, 2020). However, financial

knowledge alone often falls short; understanding the influence of technology and deeper cognitive and emotional factors that influence decision-making is also crucial (Munasib & Fitriyah, 2025).

The study of financial decision-making has evolved through three major theoretical phases. The first is Traditional Finance (TradFi), which established foundational concepts like agency theory and the efficient market hypothesis (*TradFi*, n.d.). TradFi adopts a purely rationalist perspective, assuming individuals can assess probabilities and optimize utility (Srivastava et al., 2020). Within this phase, financial literacy reinforces the rational decision-making model and influences financial self-efficacy (Pramithasari & Wibowo, 2025). The limitations of TradFi in explaining market anomalies led to the second phase, Behavioral Finance, which incorporates psychological and emotional factors, recognizing that emotions like fear and overconfidence often cause financial behavior to diverge from rational forecasts (Arianti, 2020). The third and most recent phase is Neurofinance a transdisciplinary field that applies neuroscience techniques to investigate the brain's role in financial decision-making (Ardalan, 2018). As an extension of neuroeconomics, neurofinance seeks to uncover the neural and emotional mechanisms behind economic choices (Srivastava et al., 2020). Despite its growing relevance, neurofinance remains underrepresented in academic literatures (Srivastava et al., 2019).

University students are crucial for advancing financial literacy as they are future economic agents. This is particularly critical in the Indonesian context, where financial anxiety and debt are increasingly urgent issues among youth According to the 2022 Higher Education Statistics Report, Indonesia has a significant pipeline of future professionals, including 417,882 accounting students (Higher Education Statistics Report, 2022). Despite their professional focus, this demographic faces severe financial behavior challenges. The problem is evident locally: A preliminary survey of 243 accounting students at UKI Paulus showed that most manage their finances poorly, with some unaware of their monthly expenditures. Furthermore, previous research on Gen Z accounting students in the region found that while they define financial management as self-control, they feel it has little practical impact due to uncertain monthly allowances and reliance on parental support (Mongan et al., 2024).

These local observations are reinforced by wider national data showing a critical issue among young adults. Beyond Sulawesi and Bali, studies show that in regions like Pekanbaru, the low financial wellbeing among university students has become a severe concern, exacerbated by the rise of risky financial habits such as online gambling and loans. This problem is pervasive: the proliferation of easy-access credit and online loans (Pinjol) has entangled many in debt, creating widespread financial distress (Suriyanti et al., 2025). Moreover, high rates of financial anxiety with one study indicating that Indonesian young adults face an average of 71.65% financial anxiety demonstrate that financial decisions are often made under significant emotional pressure (Ramadhani & Faturohman, 2024). This prevalent national scenario underscores a critical disconnect between financial knowledge and effective financial execution among Indonesian youth.

This study uses the Theory of Planned Behavior (TPB), developed by Ajzen (1991), as the foundational framework. TPB posits that actions are predicted by attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). To explain the irrational financial behavior observed in the Indonesian context, this research introduces Neurofinance as a moderating variable. Neurofinance captures the effects of visceral, non-rational factors such as financial anxiety and self-efficacy (Anicama et al., 2025; Lima et al., 2024). We posit that the rational constructs of TPB will not directly lead to positive Financial Decisions when negatively moderated by Neurofinance-related emotional variables. For example, a student with high financial literacy (supporting high perceived control) may still make an irrational choice if their decision is compromised by high financial anxiety.

While prior studies have primarily examined student financial behavior using either Traditional Finance concepts (e.g., focusing only on financial literacy and knowledge) or Behavioral Finance models (e.g., focusing only on cognitive biases like herd behavior or overconfidence), and existing work on student decision-making (Kurniawan et al., 2020). This research rarely integrates deeper psychological factors; it offers a unique and critical advancement that directly addresses the shortcomings of fragmented financial research.

Its novelty stems from three core contributions: first, the development of an Integrated Framework, making it the first known study to synthesize the three major, sequential phases of financial management Traditional Finance, Behavioral Finance, and Neurofinance into a single, unified analytical framework, thus bridging decades of theoretical evolution. Second, the introduction of a Novel Moderating Variable, testing for the first Time how neurofinance (emotional and neural mechanisms) directly influences the strength of the relationship between rational attitudes (TPB) and financial outcomes. Third, its Primary Data Focus, which utilizes original data collected through questionnaires distributed to accounting students at UKI Paulus and UNMAS Denpasar, provides essential empirical evidence from a crucial yet financially challenged demographic in Indonesia. In sum, this study surpasses the limitations of existing research by going beyond isolated analyses of rationality or simple bias to develop a comprehensive model that explains neuro-emotional interference and sheds light on poor financial performance among financially literate youth.

2. Literature Review and Hypotheses Development

2.1. Theory of Planned Behaviour (TPB)

The Theory of Planned Behavior (TPB), developed by Icek Ajzen (1991), is a widely used psychological model to predict human action based on intention. TPB asserts that three factors determine intention. Attitude refers to a student's positive evaluation of sound financial management (Anggraeni et al. 2025; Rizani & Hendrawaty 2024). Subjective Norms capture the perceived social pressure, such as parental influence, to manage money effectively (Ismail et al., 2022). Crucially, Perceived Behavioral Control (PBC) reflects the student's belief in their ability and capacity to perform financial actions, often enhanced by financial literacy (Nur Chasanah et al., 2024). In short, TPB establishes a purely cognitive, rational foundation for financial decisions, arguing that competence and favorable beliefs logically lead to positive financial intentions.

2.2. Traditional Finance and Its Influence on Financial Decision-Making

Serving as the basis of contemporary financial theory, Traditional Finance (TradFi) relies on the fundamental premise that investors act rationally and that financial markets function efficiently. These principles are deeply rooted in neoclassical economic theory, viewing individuals as *homo economicus* agents who consistently make logical decisions to maximize their utility (G P, 2022).

Key concepts within TradFi, such as the Efficient Market Hypothesis (EMH) and Modern Portfolio Theory (MPT), remain the foundational benchmark for assessing rational financial behavior. Contemporary research continues to validate the spirit of these theories, exploring MPT's adaptability to modern assets like cryptocurrencies and reinforcing EMH as a critical benchmark for policymakers (G P, 2022; Fong & Wu 2020). This rational framework is directly relevant to the study population: empirical research consistently shows that financial literacy, a core pillar of Traditional Finance, has a significant and positive impact on accounting students' financial management behavior (Diskhamarzaweny et al., 2022; Nur Chasanah et al., 2024). In synthesis, the TradFi perspective establishes the crucial cognitive precondition: that financial decisions are optimal when driven by knowledge and logical utility maximization.

Based on this reasoning, the subsequent hypothesis is established:
H1: Traditional Finance has a positive influence on the financial decisions of accounting students.

2.3. Behavioral Finance and Its Influence on Financial Decisions

Behavioral Finance emerged in response to the shortcomings of Traditional Finance by incorporating psychological and sociological perspectives. This area aims to explore the reasons behind investors' frequent departures from rational choices, swayed by cognitive and emotional biases (Anggraeni et al., 2025). A fundamental concept is Prospect Theory, developed by Kahneman & Tversky (1979), which highlights loss aversion—the phenomenon in which the emotional impact of losses exceeds the satisfaction derived from equivalent gains (Sano, 2022). Behavioral Finance also identifies the overconfidence bias, where investors overestimate their capabilities, leading to excessive trading and worse investment outcomes (Rizani & Hendrawaty, 2024; Jonathan & Pradana, 2025).

Empirical research affirms these psychological influences among students and young investors. Humairo & Panuntun (2023) found that overconfidence, loss aversion, and herding biases significantly influence investment decisions among Generation Z. Similarly, Rahman & Dewi (2023) confirmed the positive impact of overconfidence and loss aversion on investor decisions. In synthesis, Behavioral Finance validates the systematic role of emotional and cognitive shortcuts in financial decision-making, affirming their presence even among accounting students trained in rationality.

Accordingly, the following hypothesis is formulated:

H2: Behavioral Finance has a positive influence on the financial decisions of accounting students.

2.4. Neurofinance: Extending the Behavioral Perspective

Neurofinance is a burgeoning interdisciplinary area that connects finance, psychology, and brain science. While Behavioral Finance identifies and catalogs irrational *biases*, it often treats them as black-box deviations from rationality. Neurofinance explicitly extends the Behavioral Finance perspective by seeking to open this "black box."

Neurofinance achieves this by clarifying *how the brain physiologically influences financial choices* (Raggetti et al., 2021). Its primary aim is to uncover the neural and physiological mechanisms underlying these behavioral biases (Singhraul & Batwe, 2022). For example, fMRI research has demonstrated that financial decisions are often driven by immediate affective (emotional) reactions to risk rather than purely rational cognitive evaluation. Neurophysiologically, activity in brain areas associated with emotion, such as the Anterior Insula (linked to fear and risk anticipation), significantly predicts investment decisions. Therefore, Neurofinance captures the effects of visceral, non-rational factors (such as financial anxiety and self-efficacy) that can distort decision-making.

2.5. Neurofinance as a Moderating Variable in Financial Decision-Making

Neurofinance serves as a conceptual bridge that helps explain the origins of behavioral biases. The research emphasizes that Neurofinance not only identifies these biases but also investigates the neurological and physiological processes that trigger them (Singhraul & Batwe, 2022 & Raggetti et al., 2021). This makes Neurofinance a suitable moderating variable in this study. The emotional and neurological responses to stress or anxiety, as demonstrated by Kuhnen & Knutson (2005), can amplify or alter the influence of both rational (TradFi) and behavioral (BF) factors on financial decisions. Furthermore, studies show financial literacy positively affects self-efficacy, which in turn influences financial behavior, supporting the idea that emotional confidence and cognitive control are key interacting elements (Sari & Qodri, 2025). The presence of high financial anxiety, for instance, is theorized to negatively interfere with a student's rational intention (TradFi) and intensify their reliance on psychological shortcuts (BF).

Grounded in this theoretical framework, the subsequent hypotheses are suggested:

H3: Neurofinance moderates the influence of Traditional Finance on the financial decisions of accounting students

H4: Neurofinance moderates the influence of Behavioral Finance on the financial decisions of accounting students.

2.6. Conceptual Framework and Hypotheses Synthesis

Building on the three phases of financial theory, the following Table summarizes the role of each variable in the conceptual model (Figure 1), positioning Neurofinance as the key moderator that explains the failure of rational intention under emotional pressure.

Table 1. Synthesis of Financial Theories and Research Role

Financial Phase	Core Assumption	Explains	Study Role
Traditional Finance (TradFi)	Rationality & Utility Maximization	Cognitive Ability (Knowledge, Literacy)	Independent Variable (H1)
Behavioral Finance	Systematic Biases (Loss Aversion, Overconfidence)	Psychological Deviation from Rationality	Independent Variable (H2)

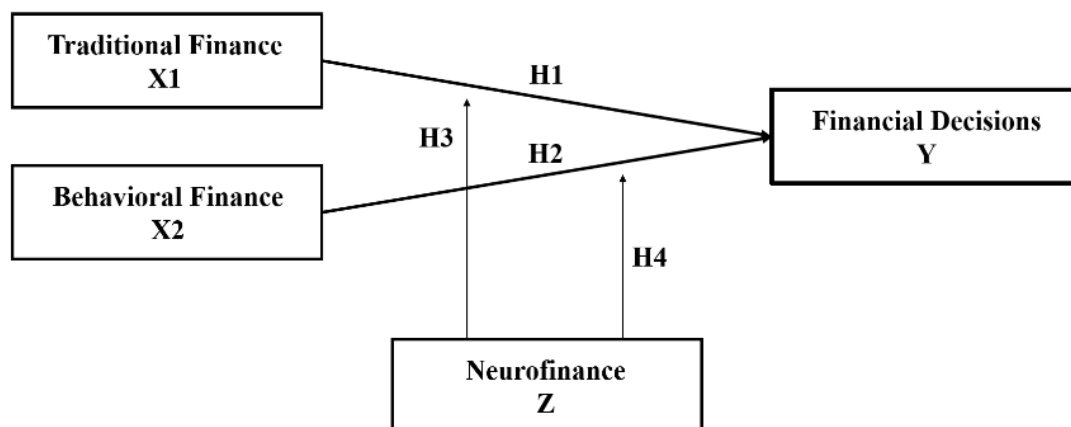| Neurofinance	Neural/Emotional Mechanisms (Visceral Factors)	Why Biases Occur: How Behavior is Altered by Stress	Moderating Variable (H3, H4)

Figure 1. Conceptual Framework
Source: processed data (2025)

2.7. Hypotheses Development

Based on the theoretical integration of Traditional Finance (TradFi), Behavioral Finance (BF), and Neurofinance (NF), the following hypotheses are established in declarative form:

Table 2. Hypotheses Development

Hypo thesis	Declarative Statement	Rationale
H1	Traditional Finance has a positive influence on the financial decisions of accounting students.	TradFi asserts that rational knowledge and established financial principles (financial literacy) lead to optimal, beneficial financial behavior, which is expected among students with academic training in finance (Diskhamarzaweny et al., 2022; Nur Chasanah et al., 2024).
H2	Behavioral Finance has a positive influence on the financial decisions of accounting students.	BF suggests that psychological shortcuts and systematic biases (like overconfidence or loss aversion) are integral components of decision-making, influencing action even when purely rational choices exist (Humairo & Panuntun, 2023; Rahman & Dewi, 2023).
H3	Neurofinance moderates the influence of Traditional Finance on the financial decisions of accounting students.	Neurofinance, capturing visceral emotional factors such as anxiety and self-efficacy, is hypothesized to interact with the cognitive factors of TradFi. This moderation is crucial for explaining how emotional states can influence or alter the strength of the relationship between rational knowledge and financial behavior.
H4	Neurofinance moderates the influence of Behavioral Finance on the financial decisions of accounting students.	Neuro-emotional states are expected to interact with behavioral biases (BF), providing an underlying mechanism for how these biases are amplified or diminished, thereby altering their impact on financial decisions.

3. Research Methodology

3.1. Research Design and Strategy

In this study, a causal-explanatory research design utilizing a survey-based quantitative strategy will be employed to analyze the complex relationships between financial theories and the role of neurological factors in student financial decision-making (Hayes & Rockwood, 2017; Creswell & Creswell, 2017). This quantitative approach is chosen because the research aims to test specific hypothesized relationships and the moderating effect (H3 and H4) between latent variables, which requires statistical inference. The core of the strategy is the dissemination of cross-sectional questionnaires distributed via an online platform (e.g., Google Forms) to gather self-reported, firsthand information from students. The questionnaire includes items related to Traditional Finance (TradFi), Behavioral Finance (BF), and Neurofinance (NF) to measure these constructs. The data collection process will adhere to ethical guidelines, ensuring voluntary participation and anonymity of the respondents.

3.2. Population and Sample

The population of this study comprises all active accounting students enrolled at UKI Paulus and UNMAS Denpasar in 2025, totaling 1,437 individuals.

3.2.1. Justification of Site and Population Selection

The selection of accounting students at these two universities is conceptually and empirically grounded. This population is highly relevant theoretically, as these students are expected to exhibit high levels of rational financial literacy (a core tenet of Traditional Finance). Their documented difficulties in personal financial management, as indicated by preliminary survey findings and local studies (cited in the Introduction), provide a compelling context for testing the influence of emotional and behavioral factors. This context reveals the critical disconnect between rational knowledge and actual financial decisions, underscoring the moderating role of Neurofinance.

3.2.2. Sampling Technique and Size

The sampling technique employed is purposive sampling. This method is used because the researcher must apply specific criteria to ensure the selected sample is highly relevant to the research problem of financial decision-making under stress.

Table 3. Criterion of Purposive Sampling

No	Criterion	Rationale for Selection
1	Active student at the university	Ensures relevance to the academic context.
2	Students who are in semesters 1 to 8	Includes students across all phases of academic exposure to financial education.
3	Students aged 18 to 25 years	Targets the Gen Z demographic, which is central to current financial behavior discourse in Indonesia.
4	Have Personal Financial Management Experience	Ensures respondents actively engage in the behavior being measured (financial decisions).
5	A monthly allowance of less than 2 million every month	Focuses on a demographic likely to experience financial stress and the necessity for decision-making, as measured by the variables.

The researcher employs the Slovin formula to calculate the required number of samples:

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

$$n = \frac{1.437}{1 + 1.437(0,1)^2}$$

$$n = \frac{1.437}{15,37}$$

$$n = 93,49$$

If rounded up, the number of samples for this research is 94 people.
Description:
n = Sample Size
N = Total Population
E = Error Tolerance

There are two provisions in the Slovin formula for determining error tolerance, namely:
1. The value of e = 10% (0.1) if the population is large.
2. The value of e = 5% (0.05) if the population is small.

3.3. Measurement and Data Control
3.3.1. Common Method Bias Control
To mitigate the risk of Common Method Bias (CMB), which often arises when all data is collected via a single self-reported questionnaire, the researcher employs both procedural and statistical remedies. The need for these controls is supported by leading methodological reviews (Podsakoff et al., 2024). Procedurally, the questionnaire design achieves psychological separation and minimizes respondent consistency motives by grouping items into distinct blocks with distinct instructions, strategically varying the placement of independent and dependent variable blocks, and, where feasible, using different scale formats for different constructs. Statistically, CMB will be assessed as a preliminary diagnostic test using Harman's Single-Factor Test. CMB is considered acceptable if a single, unrotated factor accounts for less than 50% of the variance (Polas, 2025). This combined approach ensures the reliability of the quantitative findings by actively controlling for spurious correlations.

3.3.2. Measurement Model Validation (Validity and Reliability)
Prior to testing the structural model, the consistency and quality of the latent constructs (Traditional Finance, Behavioral Finance, Neurofinance, and Financial Decisions) will be thoroughly verified. The analytical process will commence with the development of the measurement model, focusing on the constructs' validity and reliability. Initially, the questionnaire data will undergo normality testing, and if required, transformation procedures will be applied to satisfy the fundamental statistical assumptions necessary for the Structural Equation Modeling (SEM) analysis. For validity assessment, convergent validity is assessed using the Average Variance Extracted (AVE), which must meet a minimum criterion of 50% (Hair et al., 2014), indicating that more than half of an indicator's variance is explained by its respective construct. Discriminant validity will be evaluated using the Heterotrait-Monotrait Ratio (HTMT) criterion, with values preferably below 0.90 to confirm that each construct is empirically distinct from others. Finally, for reliability assessment, construct reliability is evaluated using both Composite Reliability (CR) and Cronbach's Alpha, with acceptable values exceeding 0.70 for both metrics to ensure internal consistency and construct adequacy.

3.4. Data Analysis and Hypothesis Testing (SEM-PLS)
Analysis of the complex relationships and hypothesis testing in this study will be performed using Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach. This method is highly suitable for testing complex relationships, including both direct and moderating effects, particularly in exploratory research and when dealing with non-normal data (Hair et al., 2014). The entire analytical procedure, encompassing both measurement and structural model development and the rigorous testing of hypotheses, will be executed using Smart-PLS software.

3.4.1. Justification of Neurofinance as Moderator
The use of Neurofinance as a moderating variable is conceptually justified by its role as the mechanism for visceral interference between established rational/behavioral intentions and actual financial choices. Neurofinance captures emotional factors (such as financial anxiety) that are theorized to amplify or diminish the impact of cognitive constructs (Traditional Finance) and psychological biases (Behavioral Finance) on students' final decisions (Raggetti et al., 2021). The explicit test of this moderation directly addresses a significant gap in the literature regarding why financial literacy often fails to translate into positive financial behavior.

3.4.2. Structural Model Evaluation

Following the rigorous validation of the measurement model, the structural model will be constructed to assess the hypothesized relationships and their effects on student financial decisions. These connections will be examined using path coefficients (β) to quantify their effects.

3.4.3. Hypothesis Testing

The hypotheses (H1-H4) will be rigorously tested using bootstrapping procedures in Smart-PLS. Bootstrapping will be utilized to generate t-values, which will then be employed to evaluate the statistical significance of the path coefficients. A t-value > 1.96 (for a two-tailed test) is considered statistically significant at a $p < 0.05$ level, indicating support for the respective hypothesis.

3.4.4. Model Fit and Predictive Relevance

The overall explanatory power and predictive capability of the structural model will also be assessed. The R-squared (R^2) value measures the proportion of variance in the dependent variable (Financial Decisions) accounted for by the combined predictor constructs in the model. Additionally, the Q-squared Q^2 value assesses the model's predictive relevance; a $Q^2 > 0$ indicates adequate predictive capability for the dependent variable.

3.4.5. Moderating Effect Test

To specifically test the moderating effect of Neurofinance, an interaction analysis will be conducted within the SEM-PLS framework. This involves incorporating product terms (e.g., Traditional Finance X Neurofinance for H3, and Behavioral Finance X Neurofinance for H4) into the structural model. The significance of these interaction terms will determine if Neurofinance alters the impact of Traditional Finance and Behavioral Finance on financial decision-making. The analysis will provide insights into how neurological factors may enhance or diminish the influence of traditional and behavioral financial constructs on students' decisions.

3.5. Operational Definitions of The Variables

Table 4. The Operational Definitions of The Variables

Variable	Operational Definitions	Indicators
Traditional Finance	Traditional Finance refers to the basic principles of rational financial management grounded in economic theory, such as budgeting, expenditure management, and the Time value of money, in the context of everyday financial decisions.	1. Budget Planning 2. Expense Management 3. Financial Recording
Behavioral Finance	Behavioral Finance explores how psychological biases and emotional factors influence everyday financial decisions, highlighting that individuals' perceptions of money play a significant role. This approach fundamentally argues that humans are prone to irrational decisions because they are not entirely rational actors.	1. Consumptive Habits 2. Openness to Advertising and Discounts 3. Limitations in Self-Control
Neurofinance	Neurofinance examines how emotional responses, risk perception, and past financial experiences in the brain affect daily financial choices. Neurofinance seeks to extend beyond behavioral finance by identifying the fundamental physiological reasons for departures from neoclassical utility-maximizing actions.	1. The Brain's Reaction to Financial Uncertainty 2. The Influence of Emotions on Spending 3. Financial Self-Control
Financial Decisions	Everyday financial decisions include actions individuals take to manage expenses, save, and use money in routine activities to meet life's needs.	1. Daily Expense Management 2. Credit Use and Payment 3. Consumptive Decisions

4. Result and Discussion
4.1. Measurement Model Evaluation
The measurement model (outer model) encompasses evaluations of validity and reliability to examine the standard of the employed survey. Validity testing assesses whether an instrument accurately reflects the constructs it purports to measure. In contrast, reliability testing evaluates the degree of precision, consistency, and accuracy with which the instrument measures the variables under investigation. Convergent validity is assessed using the loading factor; an indicator is considered valid if its loading is greater than 0.70. As shown in Table 5, all indicators for Traditional Finance, Behavioral Finance, Neurofinance, and Financial Decisions exhibit loading factors exceeding this threshold, confirming their validity.

Table 5. Convergent Validity Test

Variable	Indicators	Loading Factor	Description
Traditional Finance	X1_1	0.833	Valid
	X1_2	0.809	Valid
	X1_3	0.773	Valid
	X1_4	0.802	Valid
	X1_5	0.792	Valid
Behavioral Finance	X2_1	0.755	Valid
	X2_2	0.777	Valid
	X2_3	0.826	Valid
	X2_4	0.803	Valid
	X2_5	0.744	Valid
Financial Decisions	Y_1	0.862	Valid
	Y_2	0.848	Valid
	Y_3	0.860	Valid
	Y_4	0.798	Valid
	Y_5	0.781	Valid
Neurofinance	Z_1	0.772	Valid
	Z_2	0.724	Valid
	Z_3	0.790	Valid
	Z_4	0.842	Valid
	Z_5	0.769	Valid

Source: Processed data (2025)

Furthermore, convergent validity is confirmed by the Average Variance Extracted (AVE), which must exceed 0.50.

Table 6. AVE Value

Variable	Average Variance Extracted	Description
Traditional Finance	0.643	Valid
Behavioral Finance	0.611	Valid
Financial Decisions	0.690	Valid
Neurofinance	0.609	Valid

Source: Processed data (2025)

Table 6 confirms that all variables have AVEs above 0.50, validating the constructs. The visual representation of the final SEM-PLS model, including all validated path coefficients and loadings, is presented below:
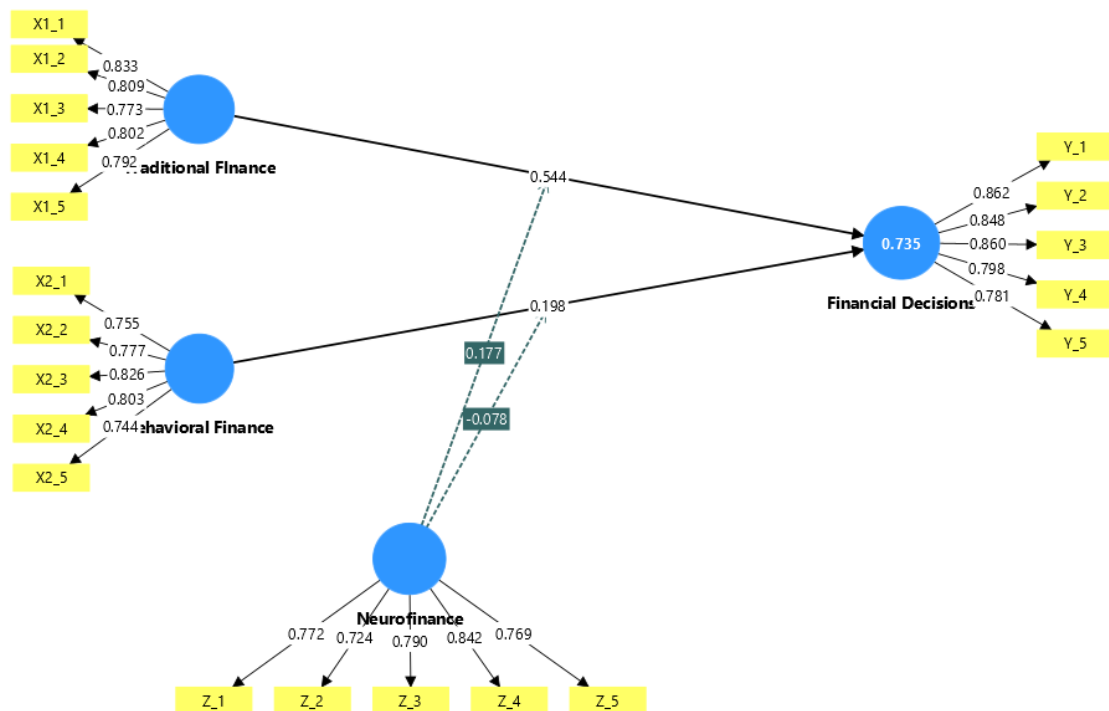
Figure 2. SEM-PLS model
Source: processed data, 2025

Construct reliability is evaluated using both Composite Reliability (CR) and Cronbach's Alpha. A construct is deemed reliable when both indicators exceed the 0.70 threshold.

Table 7. Reliability Test Results

Variable	Cronbach's Alpha	Composite Reliability	Description
Traditional Finance	0.861	0.900	Reliable
Behavioral Finance	0.841	0.887	Reliable
financial decisions	0.887	0.917	Reliable
Neurofinance	0.839	0.886	Reliable

Source: Processed data (2025)

Since the Composite Reliability and Cronbach's Alpha values for all variables in Table 7 exceed 0.70, the gathered data are reliable and appropriate for the subsequent analytical steps.

4.2. Hypothesis Testing Results
The overall explanatory power and predictive ability of the structural model are evaluated using the R-squared (R^2) value.

Table 8. R-Square Value

	Adjusted R-Square
Financial Decisions	0.719

Source: Processed data (2025)

The model explains 71.9% of the variation in financial decision-making. Hypothesis testing is conducted using bootstrapping procedures, with a t-value > 1.96 indicating statistical significance at the $p < 0.05$ level.

Table 9. Hypothesis Testing

Hypo thesis	Correlation	Original Sample	T- Statistic	P- Value	Result
H1	Traditional Finance → Financial Decisions	0.544	6.382	0.000	Accepted
H2	Behavioral Finance → Financial Decisions	0.198	2.138	0.033	Accepted
H3	Neurofinance x Traditional Finance → Financial Decisions	0.177	2.142	0.032	Accepted
H4	Neurofinance x Behavioral Finance → Financial Decisions	-0.078	0.973	0.331	Accepted

Source: Processed data (2025)

4.3. Discussion of Significant Findings

4.3.1. Traditional and Behavioral Finance Influence

The research confirms that both Traditional Finance (H1) and Behavioral Finance (H2) positively and significantly influence the financial decision-making of accounting students. Traditional Finance, rooted in rational principles, provides the necessary cognitive base for risk management and planning. Behavioral Finance, meanwhile, provides crucial additional insights into psychological biases and individual investment behavior. The acceptance of H1 and H2 confirms that financial decisions are a product of both cognitive knowledge and psychological management. These findings align with extensive literature demonstrating that financial literacy and financial behavior have a significant influence on students' investment choices, validating the real-world relevance of both Traditional and Behavioral Finance concepts in financial decision-making (Upadana & Herawati, 2020). The theoretical necessity for both approaches is reinforced by the Theory of Planned Behavior (TPB), which posits that TradFi influences Attitude, and BF relates to Perceived Behavioral Control.

Given the confirmed influence of both rational and psychological factors, these results suggest a clear path for educational reform. Financial education must move beyond purely technical literacy (TradFi) and integrate practical training focused on identifying and managing psychological biases (BF) to maximize the likelihood of positive financial outcomes among students. Therefore, programs must establish a dual focus on providing a rational foundation for structured decision-making, while simultaneously enhancing students' ability to recognize and correct for biases such as loss aversion and overconfidence. This dual approach ensures that students can make wiser, more informed decisions in real-world scenarios.

4.3.2. Neurofinance Moderates Traditional Finance

The hypothesis that Neurofinance significantly moderates the influence of Traditional Finance on financial decision-making (H3) is accepted (p=0.032). The significant interaction effect reveals a nuanced dynamic in which students' emotional and neurological factors shape the relationship between rational knowledge (TradFi) and financial decisions. The positive Original Sample coefficient (β=0.177) for the interaction term indicates that Neurofinance positively amplifies the impact of Traditional Finance. This suggests that emotional stability, self-efficacy, or controlled risk perception (factors captured by Neurofinance) acts as a catalyst, making students more effective at applying their rational knowledge. This finding resonates with the idea that contextual and psychological factors can alter financial behavior (Zanra & Sufnirayanti, 2024), and is supported by research arguing that individuals with greater emotional regulation tend to make more goal-oriented financial decisions (Akula & Chodisetty, 2025).

This positive moderation suggests that emotional competence serves as the "activation switch" that enables students to successfully convert their learned theory into consistent positive behavior. Therefore, educational interventions must actively focus on building emotional regulation and financial self-efficacy (Neurofinance principles). The traditional emphasis on cognitive input alone is insufficient; programs must integrate strategies to enhance the students' psychological capacity to apply their rational knowledge effectively in real-world scenarios.

4.4. Theoretical Meaning of Insignificant Moderation

The hypothesis that Neurofinance moderates the relationship between Behavioral Finance and financial decision-making (H4 is rejected), as indicated by a p-value of 0.331. This result suggests that emotional and neurological factors (Neurofinance) do not consistently alter the strength of the link between established psychological biases (Behavioral Finance) and actual financial decisions. This finding implies that deeply ingrained cognitive biases (BF), such as overconfidence or loss aversion, may exert a dominant, stable influence on decision-making that is resilient to the general emotional factors measured by Neurofinance. The insignificant result for H4 contrasts sharply with the acceptance of H3, highlighting a significant challenge in the full integration of these three fields.

The theoretical idea of Neurofinance arising from the broader discipline of Neuroeconomics acts as a foundational theory basis for recent advancements in behavioral finance studies that investigate the relationship between economic actions and cerebral functions (Singhraul & Batwe, 2022). Nevertheless, the insignificant result for H4 indicates that the full integration of these fields remains fragmented when Neurofinance is applied as a moderator of complex Behavioral Finance constructs. This suggests that Neurofinance's role is currently more effective in facilitating rational knowledge (TradFi) than in directly mitigating behavioral errors (BF). Furthermore, to date, there is no specific empirical research that directly examines how Neurofinance moderates the relationship between Behavioral Finance and financial decision-making. Thus, this finding opens a crucial area for future research to refine the conceptual mechanism of integration between these two fields, particularly in understanding when and how neurological insights can effectively modify established behavioral patterns.

5. Conclusions

5.1. Conclusion

This research confirms the significant impact of both Traditional Finance (TradFi) and Behavioral Finance (BF) on the financial decision-making of accounting students. Conventional Finance provides the necessary cognitive base, focusing on logical assessment and strategic financial planning. In contrast, Behavioral Finance highlights how psychological factors, such as cognitive biases like loss aversion and overconfidence, can lead to illogical decisions. Crucially, the study established that Neurofinance significantly moderates the influence of Traditional Finance, suggesting that emotional factors amplify the effectiveness of rational knowledge. This finding validates that financial decisions are a product of both cognitive knowledge and psychological management.

However, research suggests that Neurofinance does not significantly affect the connection between Behavioral Finance and financial decision-making. Neurofinance primarily focuses on neurological responses and brain mechanisms, while Behavioral Finance emphasizes social and broader psychological factors. This indicates that Behavioral Finance remains a stronger and more influential framework for understanding complex psychological dynamics in this area. Therefore, Neurofinance cannot currently influence these deep-seated behavioral patterns, underscoring the need for further research to integrate these three approaches fully.

5.2. Limitations and Future Research

The study contributes a unified framework that integrates the three sequential phases of financial theory Traditional Finance (TradFi), Behavioral Finance (BF), and Neurofinance providing novel insight into student financial actions. The contrasting results for moderation, where Neurofinance (NF) moderates TradFi but not BF, highlight the conceptual fragmentation of integrating these fields. This opens a critical area for future research, which should examine how these three methods can be more effectively combined to offer a thorough insight into financial decision-making, particularly concerning the interaction between neurological factors and established behavioral biases.

The findings carry direct implications for financial literacy policy in higher education. Institutions must revise curricula to include mandatory training in behavioral economics, focusing on teaching students to recognize and manage biases. Furthermore, the significant role of Neurofinance suggests that programs should incorporate modules dedicated to emotional regulation and enhancing financial self-

efficacy. This dual focus ensures that students can move beyond theoretical comprehension and effectively translate rational knowledge into consistent, positive financial behavior.

However, this research faces limitations, including the use of a cross-sectional design, which restricts the ability to observe changes in behavior over time. The sample was also limited to accounting students at two specific universities, which may limit generalizability. Therefore, research in the future should employ longitudinal studies to capture dynamic shifts in behavior and incorporate participants from various disciplines to enhance external validity. Additionally, future studies should move farther from self-reported perceptions of Neurofinance by incorporating neuroscientific methods such as EEG or biometric tracking to provide more objective insights into the brain's influence on financial behavior.

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