

-RESEARCH ARTICLE-

THE IMPACT OF INVESTOR BEHAVIORAL BIASES ON INVESTMENT DECISION-MAKING: THE MODERATING ROLE OF FINANCIAL MANAGEMENT CAPABILITY

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—Abstract—

The research objective was to test the influence of behavioral biases on investment decision making with moderating effect of financial management capability. Data were collected from 305 investors using convenient sampling technique. PLS-SEM results shown that all behavioral biases positively and significantly effect to investment decision making, which is indicating that investors' choices are substantially influenced by psychological and heuristic factors rather than solely by rational financial considerations. The results further reveal that financial management capability significantly strengthens the relationships between regret aversion, representativeness bias, disposition effect, loss aversion, herding behavior, and investment decision making. However, financial management capability does not significantly moderate the relationship between cognitive dissonance and investment decision making, suggesting that influence of this bias may operate relatively independently of financial management capability. Robustness analysis further confirms the stability of the main findings, with the significant direct and moderating relationships remaining consistent across alternative analytical specifications. The study with the specific findings

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contributing literature through demonstrating that moderating influence of financial management is bias specific rather than universal. The findings also provide practical implications for investors, financial advisors, financial institutions, and policymakers by highlighting the importance of behavioral awareness and financial management capabilities in improving investment decision quality.

Keywords: Financial Management Capability, Behavioral Biases, Investment Decision Making.

INTRODUCTION

Investment decision making is one of the integral financial activity through which people invest their funds in various portfolios to achieve maximum return with lower risks (Barberis & Thaler, 2003). With respect to traditional theories, people always invest through the available information rationally and make decisions according to expected risk and return (Barberis & Thaler, 2003). However, behavioral finance challenges this assumption by demonstrating that psychological, emotional, and cognitive factors can systematically influence financial decisions (Barberis & Thaler, 2003; Shiller, 2003). The concept of bounded rationality further explains that individuals have limited information processing ability and cognitive constraints, which prevent them from making perfectly rational decisions in every situation (Simon, 1955). Accordingly, investment decision-making among the investors could be effected through the behavioral biases that influence how investors interpret information, evaluate risk, respond to gains and losses, and follow the actions of others (Kim & Ohk, 2025). Behavioral finance provides a theoretical foundation for knowing the deviation through the rational decision making. For example, Kahneman and Tversky (1979) prospect theory demonstrates that individuals evaluate gains and losses differently and generally attach greater psychological importance to losses than to equivalent gains. This provides an integral foundation for knowing the loss aversion and other various emotional biases. Barberis & Thaler. 2003) study also further enforced that investors could interpret their financial information through representativeness and sentiment which is resulting in judgments that differ from rational expectations. In this regard, it could be explained that behavioral biases could be systematically helps to make effective decisions and it could also lead to deviate from decisions based solely on fundamental financial information

Various empirical studies also highlighted that behavioral biases are more important factors to improve the investment decisions. For example, Khan et al. (2026) tested various behavioral biases in various individuals and found a positive and significant effect of anchoring, overconfidence, and herding, whereas risk aversion, disposition, and representativeness were insignificant. In the same vein, Gupta et al. (2025) found that behavioral biases influence investor decisions and examined financial literacy as a moderating mechanism. As behavioral biases are important factor in improving

effective decisions and among the various biases, regret aversion represents an important emotional bias in investment decision-making. [Kim and Ohk \(2025\)](#) study demonstrated that regret aversion is being effects to the stock market behavior and it becomes relevant under the various unfavorable market situations. [Wang and Yang \(2025\)](#) similarly show that regret aversion can influence asset-pricing behavior and wealth allocation. [Tuwo et al. \(2025\)](#) also report that regret aversion is associated with investment decisions. Equally, [Barberis and Thaler \(2003\)](#) study also provided an evidence that representativeness always contributes to the investor's sentiments and deviations from rational expectations. [Jan \(2022\)](#) results also highlighted that representativeness was significantly associated with investment decisions. [Khan et al. \(2026\)](#) also reported the insignificant relationship between representativeness and investment decisions.

On the other hand, cognitive disposition is another psychological mechanism which could effect to the investment decisions ([Bhutto et al., 2025](#)). This effect refers to investors' tendency to sell profitable investments too quickly while retaining losing investments for longer periods ([Bhutto et al., 2025](#)). Such specific behavior is related to prospect theory because the investors always evaluate gains and losses in their investment decisions ([Kahneman & Tversky, 1979](#)). Furthermore, loss aversion is also an important concept in behavioral finance which also affects investment decisions ([Bhutto et al., 2025](#)). [Kahneman and Tversky \(1979\)](#) stated that investors generally experience the psychological impact of losses more strongly than the satisfaction associated with equivalent gains. Consequently, loss-averse investors may avoid potentially profitable investments because of the possibility of losses or may react excessively to declining investment values. In other words, [Saleem et al. \(2023\)](#) study also found that loss aversion is an important factor for the investment decision while [Butt et al. \(2023\)](#) also identified loss aversion as an important behavioral determinant. [Akbar and Azam Anwar \(2025\)](#) further reported a significant role of loss-averse behavior in investment decision-making. Equally, herding behavior is also referred to as the tendency to follow the decisions, opinions, or actions of other market participants rather than independently evaluating available information. [Bikhchandani and Sharma \(2000\)](#) explain that herding can arise when investors believe that others possess superior information or when following the majority reduces uncertainty. [Jan \(2022\)](#) also provides empirical evidence that herding can significantly influence investment decisions. These prior studies highlighted that behavioral biases always lead investors to make their investments based on social influence rather than independent assessment of risk and return.

Along with significant studies of behavioral finance on investment decisions, various gaps still exist in the prior literature. For instance, prior studies have mainly focused on limited behavioral biases, rather than focusing on multiple cognitive and emotional biases simultaneously. For instance, most of the prior research has focused on herding, loss aversion, and cognitive dissonance ([Hussain et al., 2023](#)), whereas others have

examined combinations involving anchoring, overconfidence, herding, disposition, risk aversion, and representativeness (Khan et al., 2026). Recent studies have also investigated particular subsets of biases, such as availability and personality-related factors (Hanif et al., 2026). Therefore, comparatively limited attention has been given to a unified framework incorporating regret aversion, representativeness, cognitive dissonance, disposition effect, loss aversion, and herding behavior together. Therefore, the current study filled this gap through simultaneously examining six behavioral biases and their individual relationships with investment decision-making. Secondly, prior studies focused on the moderating influence of financial literacy except for focusing on financial management capability. Literature supported that financial literacy is being focused on knowledge and understanding of financial concept (Lusardi & Mitchell, 2014). While, the financial management capability is being concentrate on the broader practical ability to apply financial knowledge through the proper financial planning, budgeting and financial monitoring (Malik et al., 2026). Gupta et al. (2025), Malik et al. (2026), and Hanif et al. (2026) prior studies have used financial literacy as an moderating variable but not focused on the financial management capability as moderating variables which was unable to capture the broader practical capability required to translate financial knowledge into effective investment-management behavior. Malik et al. (2026) further found that financial literacy significantly reduced the influence of behavioral biases on investment decisions. Hanif et al. (2026) similarly found that financial literacy can reduce the influence of behavioral biases, whereas another recent study found that financial literacy did not significantly moderate the relationship between heuristic-driven biases and irrational investment behavior. This prior studies inconsistency is identifying that financial literacy is not always be more effective alone to overcome behavioral biases. This is providing a strong rationale for investigating financial management capability as a broader and more practically oriented capability as moderating variables.

Thus, based on previous gaps, study focuses on a comprehensive model where financial management capability is being used a moderating variable between behavioral biases and investment decision making. This approach allows the study to determine whether stronger financial management capability can weaken or alter the influence of different psychological biases on investment decisions. The study with its specific objective, is contributing literature of behavioral finance by addressing the limited simultaneous examination of multiple behavioral biases and the relatively limited attention given to FMC as a broader moderating capability. It also responds to inconsistent findings concerning whether financial capability can reduce the influence of behavioral biases. Thus, the study seeks to explain not only whether behavioral biases influence investment decisions, but also whether investors with stronger financial management capability are better positioned to manage or reduce the influence of these biases. The rest of the paper was divided into five chapters.

HYPOTHESIS DEVELOPMENT

Regret Aversion Bias and Investment Decision

Regret aversion bias is the bias where investors avoid those decisions which may subsequently generate feelings of regret, particularly when an alternative investment could have produced a better outcome (Malik et al., 2026). This bias is important for the behavioral bias because the individuals does not evaluated the expected returns and risk. Kim and Ohk (2025) found that regret aversion significantly affects asset pricing and that investors demand higher compensation for holding assets associated with greater potential regret. Their findings further indicate that regret aversion becomes particularly pronounced during market downturns and when investors face unrealized capital losses. In the same vein, recent study also demonstrated that stronger regret aversion causes investors to tilt their portfolios toward benchmark strategies because they seek to minimize the possibility of experiencing regret from foregone investment opportunities (Kim & Ohk, 2025). On the other hand, Asif et al. (2026) study also found that multiple behavioral biases significantly affect investment decision quality among Pakistani investors, demonstrating the continuing importance of psychological factors in Pakistan's equity market. Malik et al. (2026) similarly argue that behavioral biases affect investment decisions by changing how investors perceive risk and evaluate financial information. In other study it was also found that regret aversion significantly improves the best investment decisions (Gupta et al., 2025). These prior studies highlighted that regret aversion as an independent determinant of investment decisions that could extend the current behavioral-finance literature and provide a more comprehensive explanation of investor behavior which improves the effectiveness investment decisions and accordingly hypothesis is,

H1: *Regret Aversion Bias has a significant relationship with Investment Decision.*

Representativeness Bias and Investment Decision

Representativeness bias is being occurred among the investors to judge the investment opportunity which increase their returns with minimum risks. Study also highlighted that heuristic processing could also cause investors to overweight recent or salient information which increases their returns (Barberis & Thaler, 2003). Khan et al. (2026) further study also examined that heuristic bias in the Pakistan Stock Exchange becomes an important factor investment decision-making. Their study also emphasizes that investors in Pakistan can rely on simplified cognitive processes when evaluating investment opportunities. In the same vein, Jan (2022) research also found that representativeness significantly affected investment decisions among investors in Pakistan's foreign-exchange market. While, in other study found the significant effect of representativeness on the investment decision making (Kim & Ohk, 2025). These specific mixed results highlighted that representativeness may operate differently depending on investor characteristics, market conditions, and the ability of investors to process financial information, but prior studies have inconsistent results. This

inconsistency in the results is being providing a strong reason for further investigation. In particular, it remains important to determine whether investors' practical financial capabilities influence the extent to which representative judgments affect their investment decisions (Hussain et al., 2023). Thus, based on previous studies, current study proposes that representativeness bias is an important factor for the investment decision-making and accordingly hypothesis is,

H2: *Representativeness Bias has a significant relationship with Investment Decision.*

Cognitive Dissonance Bias and Investment Decision

The cognitive dissonance is being referred to the psychological discomfort that occurs when an individual's existing beliefs, decisions, or actions conflict with new information (Gupta et al., 2025). For instance, Festinger (1957) study highlighted that individuals is being attempted to reduce the discomfort through changing their interpretation of information, rationalizing their behavior, or selectively accepting information that supports their existing beliefs. In investment decision-making, cognitive dissonance may emerge when investors receive unfavorable information about an investment that they have already selected (Hussain et al., 2023). Rather than objectively reassessing their decision, investors may search for information that confirms their original judgment or dismiss information that challenges it. Hussain et al. (2023) empirically investigated that cognitive dissonance is an important factor to improve the effective investment decision along with loss aversion and herding among Pakistani investors and incorporated financial literacy as a moderating factor. Their study demonstrates that cognitive and emotional biases can jointly influence individual investment decision-making. Malik et al. (2026) recent study also explained that behavioral biases affect investment decisions by influencing how investors perceive risk and interpret financial information. These prior studies highlighted that cognitive dissonance bias is an integral factor to improve investment decisions and prior studies have more focused on loss aversion, herding, overconfidence, anchoring, and disposition effects than on cognitive dissonance. This creates a meaningful research gap concerning the independent influence of cognitive dissonance on investment decisions and the conditions under which financially capable investors may be able to reduce its influence (Hussain et al., 2023). In this regard, current study focused on the relationship of cognitive dissonance and investment decision making and accordingly hypothesis is,

H3: *Cognitive Dissonance Bias has a significant relationship with Investment Decision.*

Disposition Effect and Investment Decision

The disposition effect in behavioral biases refers to the investor's tendency to sell winning investments relatively quickly while continuing to hold losing investments for longer periods (Gupta et al., 2025). Prospect theory explains this phenomenon because investors evaluate both of gains and losses relative to reference points and generally

experience losses more intensely than equivalent gains (Kahneman & Tversky, 1979). Investors influenced by the disposition effect may therefore make investment decisions based on the emotional status of their current gains or losses rather than on the future expected performance of the investment. Bhutto et al. (2025) empirical study also found a significant positive impact of disposition effect and herding behavior on investment decisions. Their study further demonstrated that risk perception and dividend policy help explain these relationships. More recent Pakistani research by Asif et al. (2026) also found that disposition effect significantly reduces investment decision quality among individual investors. In their multi-bias analysis, disposition effect remained a significant predictor alongside herding and loss aversion. These findings provide contemporary evidence that investors' tendency to realize gains prematurely and hold losing positions can materially influence the quality of their investment decisions. On the other hand, Khan et al. (2026) found an insignificant direct relationship between the disposition effect and investment decision-making in their Pakistani sample. This inconsistency suggests that further study is needed on disposition biases to determine the strength of the disposition effect on investment decisions. Therefore, following hypothesis is proposed below,

H4: *Disposition Effect has a significant relationship with Investment Decision.*

Loss Aversion Bias and Investment Decision

Loss aversion shows the tendency where perception of losses as a psychological more important than equivalent gains (Gupta et al., 2025). It is one of the central propositions of prospect theory, and it is an important phenomenon to explain why investors frequently depart from conventional rational decision-making (Kahneman & Tversky, 1979). Loss-averse investors may become excessively concerned about potential losses, avoid attractive but risky opportunities, retain declining assets in the hope of recovering their original investment, or respond strongly to negative market information (Gupta et al., 2025). Asif et al. (2026) empirically found that loss aversion significantly reduced investment decision quality among Pakistani investors and reported that it was one of the strongest behavioral factors in their model. Their findings showed that loss aversion was particularly prevalent among Pakistani investors, highlighting the emotional importance of financial losses in an uncertain economic environment. Akbar and Azam Anwar (2025) study also found that loss aversion forms part of the broader set of heuristic biases influencing investment decision-making at the Pakistan Stock Exchange. Malik et al. (2026) also emphasize that investors in Pakistan may prioritize loss avoidance over long-term portfolio optimization because of the combined influence of loss aversion, regret aversion, market uncertainty, and risk perception. On the other hand, further study also demonstrated that behavioral biases are significantly associated along with investors risk perceptions and investment decisions which are indicating that psychological reactions to losses remain important determinants of financial behavior (Malik et al., 2026). As the association between loss aversion and investment decisions

has gained a major attention but there is a need to understand whether the investors' practical financial management abilities can weaken this psychological effect. Thus, based on prior studies, has the following hypothesis below,

H5: *Loss Aversion Bias has a significant relationship with Investment Decision.*

Herding Behavior Bias and Investment Decision

Herding behavior is being refers to investor's tendency to follow the decisions and trading reactions of other investors not focusing on their industrial analysis (Hussain et al., 2023). Herding may occur because investors believe that other market participants possess superior information, because of social pressure, or because investors feel more comfortable following a collective decision (Gupta et al., 2025). Bikhchandani and Sharma (2000) study also argued that remove the herding behavior is an important phenomena in the financial markets because collective behavior can cause investors to move in the same direction even when independent information does not justify such behavior. Bhutto et al. (2025) study empirically found a significant positive effect of herding behavior on investment decisions among Pakistani investors and demonstrated that risk perception and dividend policy help explain this relationship. Asif et al. (2026) study also found that herding was among other behavioral factors important because strongest herding behavioral predictor reduced investment decision quality in their Pakistani sample, with the authors highlighting the vulnerability of inexperienced investors to collective investment behavior. Asif et al. (2026) study also reported that herding had the strongest negative effect on investment decision quality among the behavioral biases examined. Malik et al. (2026) study also found that informal information and social influence can contribute to the prominence of behavioral biases among retail investors which could decrease the effective returns. These prior studies highlighted that herding behavior is an important factor in affecting the investment decisions and still prior studies have inconsistent findings. Therefore, study has formulated the following hypothesis below,

H6: *Herding Behavior Bias has a significant relationship with Investment Decision.*

Moderating Effect of Financial Management Capability

It has been highlighted in the previous section that relationship behavioral biases and investment decisions is not clear which highlighted that further research is needed with moderating effect. Gupta et al. (2025), Malik et al. (2026), and Hanif et al. (2026) prior studies have used the financial literacy as an moderating variable but not focused on the financial management capability as moderating variables which was unable to capture the broader practical capability required to translate financial knowledge into effective investment-management behavior. Financial management capability is being referred to an individual practical ability to apply the financial knowledge and skills for managing their organizational resources, assessing the risks, evaluating investment

alternatives, planning financial activities, and monitoring investment outcomes (Khan et al., 2026). Literature also supported that financial management capability is also more effective as compare to financial literacy because financial literacy primarily emphasizes on the financial knowledge while financial management capability emphasizes the application of that knowledge in actual financial decisions (Malik et al., 2026). Therefore, moderating effect of financial management capability could be explained through improving the behavioral biases to increase investment decisions (Hanif et al., 2026). As the behavioral biases is influenced to the investment decisions because the individuals are frequently relied on the emotions, heuristics, previous experiences, social information, and psychological shortcuts (Khan et al., 2026). They also argued that stronger financial-management capability may provide investors with analytical procedures that help them evaluate investment alternatives more objectively. Latest studies also demonstrated that financial capabilities can influence the behavioral-bias to improve the investment-decision (Sanyal et al., 2026).

Furthermore, Mumtaz et al. (2025) study also investigated that financial literacy can mitigate the relationship between behavioral biases and investment decision-making. Their study directly supports the proposition that financial capability-related factors can alter the influence of behavioral biases on investment decisions. Khalid and Riaz (2026) study also examined behavioral biases with the moderating effect of financial literacy improves the best investment decisions. Malik et al. (2026) also incorporated financial literacy as a moderator in a comprehensive behavioral-finance model and examined how behavioral biases influence investment decisions through risk perception. Furthermore, recent studies also highlighted that moderating effect of financial capability could also be justified. For instance, Khan et al. (2026) conducted study and directly tested financial literacy as a moderator across several behavioral biases. Although their broader findings emphasize the importance of financial literacy, their detailed interaction results for individual behavioral biases were statistically insignificant. This mixed evidence is theoretically important because it indicates that financial knowledge does not automatically eliminate behavioral biases. Instead, the practical ability to apply financial knowledge which is being captured more comprehensively through financial management capability which may provide a stronger explanation of why some investors are more resistant to behavioral biases than others.

In the same vein, other study of Tuwo et al. (2025) found that framing can strengthen or weaken relationships between specific behavioral biases and investment decisions, while Khan et al. (2026) demonstrated that technological factors can alter the influence of heuristic behavior in the Pakistan Stock Exchange context. These studies support the broader proposition that behavioral biases do not necessarily operate in isolation; contextual and individual-level characteristics can condition their effects on investment behavior. In this regard, the current study has extended literature based on the prior literature gaps and used financial management capability to use a moderating variable

rather than relying exclusively on financial literacy, thereby emphasizing the practical application of financial skills. Based on the above theoretical and empirical arguments, the following moderating hypotheses are proposed under one integrated moderating-effect framework:

H7: *Financial management capability significantly moderates the relationship between regret aversion bias and investment decision.*

H8: *Financial management capability significantly moderates the relationship between representativeness bias and investment decision.*

H9: *Financial management capability significantly moderates the relationship between cognitive dissonance bias and investment decision.*

H10: *Financial management capability significantly moderates the relationship between disposition effect and investment decision.*

H11: *Financial management capability significantly moderates the relationship between loss aversion bias and investment decision.*

H12: *Financial management capability significantly moderates the relationship between herding behavior bias and investment decision.*

LITERATURE GAPS AND FRAMEWORK DEVELOPMENT

Prior literature demonstrated that behavioral biases played an integral role in improving effective decision making. While, with this effectiveness, various gaps still existed. Firstly, most of the prior studies on limited numbers of behavioral biases especially on herding, loss aversion, overconfidence, anchoring, and disposition effect, while relatively less attention has been given to the combined influence of regret aversion, representativeness, cognitive dissonance, disposition effect, loss aversion, and herding. Secondly, most of the existing studies used financial literacy as a moderating variable which only focused on primarily knowledge and understanding and does not fully capture an investor's ability to apply financial knowledge through planning, risk assessment, portfolio monitoring, and investment evaluation. Furthermore, prior studies also have mixed moderation and direct effect results. This suggests that merely possessing financial knowledge may not be sufficient to overcome behavioral biases. Therefore, current study used financial management capability as a broader and more practically oriented moderator. This study has been conducted with behavioral biases as independent variables, financial management capability as a moderating variable and investment decision making as a dependent variable has been formulated in [Figure.1](#) below.

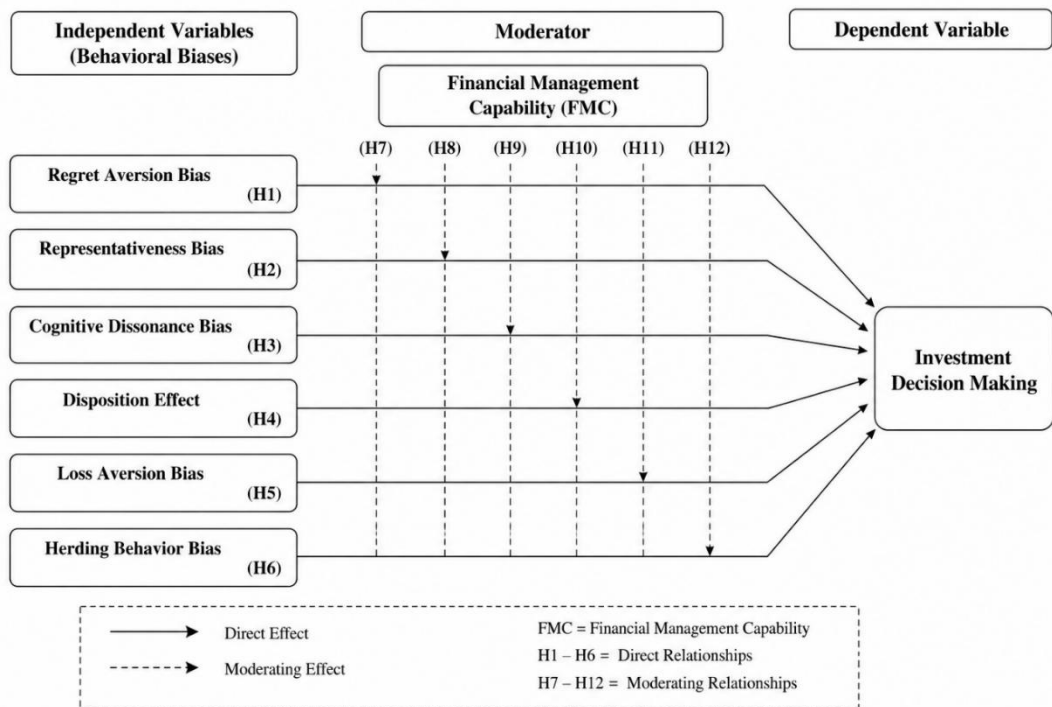


Figure 1: Research Framework

METHODS

Research Approach

Research objective was to test the influence of behavioral biases on investment decision making with moderating effect of financial management capability. For this purpose, research used the quantitative research approach to examine the proposed relationships among the study variables (Creswell & Creswell, 2017). The approach was appropriate because the study tested hypotheses using numerical data collected through a structured questionnaire. Statistical techniques were applied to examine direct relationships and the moderating role of Financial Management Capability (Hair et al., 2022). In this regard, researchers used this approach.

Research Design

Current study used the cross sectional research survey design for collecting data from the selected respondents at a single point in time (Saunders et al., 2019). A structured questionnaire was used to obtain information regarding behavioral biases, financial management capability, and investment decision making. The research design enabled the empirical testing of the proposed conceptual framework and hypotheses (Sekaran & Bougie, 2016).

Target Population and Sampling Technique

The study target population was the individual investors who invest in various stocks and main target respondents were those who had sufficient exposure to investment activities and could evaluate investment-related decisions. This population was considered appropriate because the research examined psychological biases affecting investment decisions (Saunders et al., 2019). Sample from selected from the population through employing the convenient sampling technique (Etikan et al., 2016). This technique was selected because respondents were approached based on their accessibility and willingness to participate in the study. Convenience sampling also facilitated efficient data collection within the available time and resource constraints (Sekaran & Bougie, 2016). Total 470 respondents were selected to provide sufficient observations for testing the proposed research model. Out of 470, 305 respondents came back which is satisfied with the study's participation criteria. The obtained sample was considered sufficient for conducting structural model and moderation analysis using PLS-SEM (Hair et al., 2022).

Research Instrument

Research instrument was taken from previous literature. Behavioral biases was comprised from six dimensions. Among those representative biases was comprises with 4 items, and anchoring biases was also comprises with four items and these items were comprises from (Sanyal et al., 2026). Herding behavior was also comprises from four items, and loss aversion bias was also comprises from four items and these items were comprises from (Abdalla et al., 2026). Moreover, regret aversion was comprises from 4 items and cognitive dissonance was comprises from 5 items of (Sanyal et al., 2026). Lastly, investment decisions was comprises from 4 items of (Sanyal et al., 2026). Each of the items was ranked on five point ranked scale.

DATA ANALYSIS AND RESULTS

Respondents Profile

This section shown the demographic profile of 305 respondents. From the demographic results, there were 60% (183) respondents were male and 40% (122) were females. From the age group, there were most of the respondents were 25–34 years, representing 35.1% of the sample. Regarding education, bachelor's degree holders constituted the largest group at 41.3%, followed by master's degree holders at 36.4%. In terms of investment experience, respondents with 2–5 years of experience represented the largest group at 36.7%. Regarding monthly income, the largest proportion of respondents earned \$179–\$357 per month, representing 33.8% of the sample. Overall, the demographic profile indicates that the study included respondents with varied demographic and investment characteristics. Above results are in Table.1.

Table 1: Respondents Profile

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	183	60.0
	Female	122	40.0
Age	Below 25 years	61	20.0
	25–34 years	107	35.1
	35–44 years	82	26.9
	45–54 years	39	12.8
	55 years and above	16	5.2
Education	Intermediate	32	10.5
	Bachelor's degree	126	41.3
	Master's degree	111	36.4
	MPhil/PhD	36	11.8
Investment Experience	Less than 2 years	74	24.3
	2–5 years	112	36.7
	6–10 years	76	24.9
	More than 10 years	43	14.1
Monthly Income (USD)	Below \$179	69	22.6
	\$179–\$357	103	33.8
	\$358–\$536	78	25.6
	Above \$536	55	18.0
Total		305	100.0

Measurement Model

Measurement model was being assessed using the Smart PLS employing Partial Least Square (PLS)-Structural Equation Modeling (SEM). It was assessed from convergent and discriminant validity criteria's. Convergent validity assessed using Cronbach's alpha, Composite Reliability (CR), outer loadings, and Average Variance Extracted (AVE). Both of the alpha and composite reliability evaluated the internal consistency of the indicators whereas outer loadings and AVE provide evidence regarding indicator reliability and convergent validity (Hair et al., 2022). A value of 0.70 or higher is generally considered acceptable of alpha, indicating satisfactory reliability among the indicators of a construct. Similarly, CR should generally be 0.70 or higher, with values between approximately 0.70 and 0.95 indicating satisfactory internal consistency; excessively high values may suggest that the indicators are measuring essentially the same aspect of a construct (Hair et al., 2022).

Table 2: Outer Loadings

Construct	Item	Loading	SE	t-value
Regret Aversion Bias	RAB1	0.865	0.023	37.028
	RAB2	0.897	0.018	48.881
	RAB3	0.879	0.027	32.265
	RAB4	0.857	0.022	38.354
Representativeness Bias	RB1	0.909	0.020	45.695

Table 2: Outer Loadings (cont...)

Construct	Item	Loading	SE	t-value
	RB2	0.904	0.018	49.676
	RB3	0.907	0.017	51.962
	RB4	0.840	0.031	26.745
Cognitive Dissonance Bias	CDB1	0.894	0.021	42.038
	CDB2	0.851	0.028	30.297
	CDB3	0.861	0.025	33.780
	CDB4	0.802	0.040	19.832
Disposition Effect	DE1	0.939	0.012	77.574
	DE2	0.894	0.019	47.868
	DE3	0.877	0.021	41.848
	DE4	0.831	0.029	28.567
Loss Aversion Bias	LAB1	0.881	0.020	44.797
	LAB2	0.902	0.019	48.040
	LAB3	0.811	0.033	24.383
	LAB4	0.832	0.026	32.363
Herding Behavior	HB1	0.930	0.012	76.553
	HB2	0.927	0.014	67.339
	HB3	0.863	0.023	37.301
	HB4	0.867	0.025	34.668
Financial Management Capability	FMC1	0.903	0.020	44.817
	FMC2	0.913	0.018	51.503
	FMC3	0.861	0.027	32.367
	FMC4	0.863	0.025	34.003
	FMC5	0.893	0.019	45.878
	FMC6	0.858	0.029	29.823
	FMC7	0.842	0.034	24.943
	FMC8	0.830	0.032	25.528
	FMC9	0.826	0.034	24.533
	FMC10	0.840	0.028	30.280
	FMC11	0.813	0.035	23.510
	FMC12	0.792	0.033	23.919
	FMC13	0.783	0.039	19.903
Investment Decision	ID1	0.860	0.030	28.601
	ID2	0.857	0.030	28.721
	ID3	0.902	0.022	40.669
	ID4	0.846	0.031	27.511

On the other hand, outer loadings values should be greater than 0.70, while an AVE of at least 0.50 indicates that the construct explains at least half of the variance in its indicators (Fornell & Larcker, 1981; Hair et al., 2022).

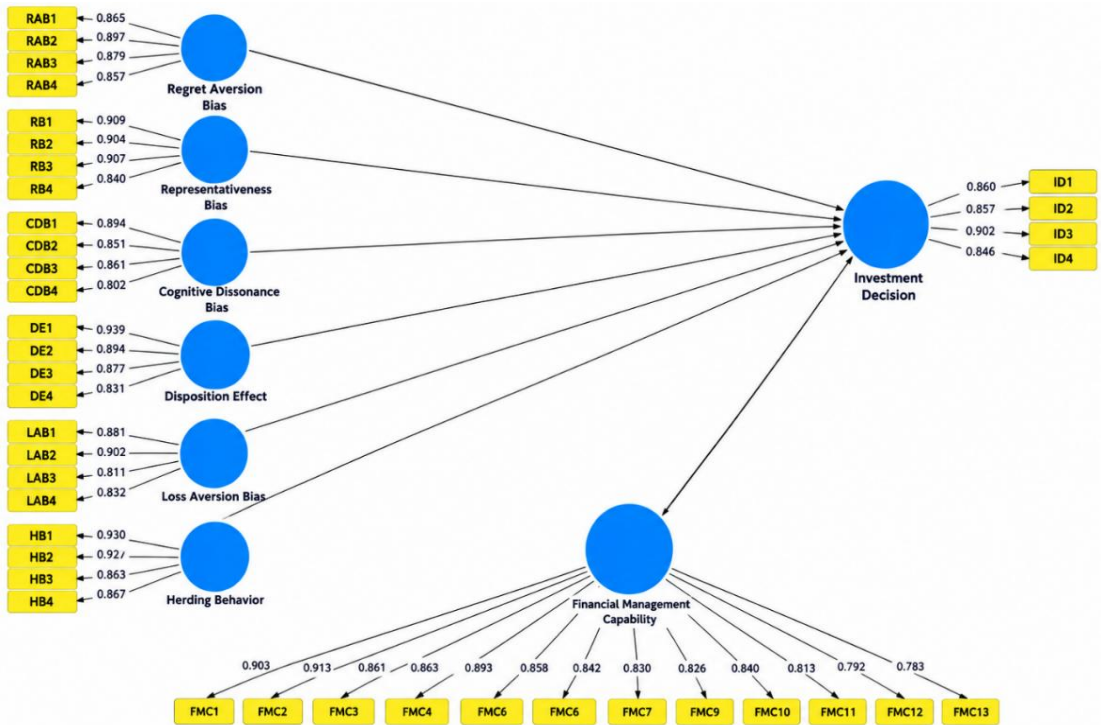


Figure 2: Outer Loadings

All the constructs values are greater from recommended values which shown the convergent validity of constructs. Measurement model results are in [Table.2](#) and [3](#).

Table 3: Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
RAB	0.897	0.929	0.765
RB	0.913	0.939	0.793
CDB	0.875	0.914	0.727
DE	0.908	0.936	0.785
LAB	0.879	0.917	0.735
HB	0.919	0.943	0.805
FMC	0.967	0.971	0.720
ID	0.889	0.923	0.751

Multicollinearity

The research assessed the Multicollinearity using the Variance Inflation Factor (VIF), with values below the recommended threshold of 5.0 indicating that multicollinearity is not a concern. [Table 5](#) shown that all values are less than 5 which shown the multicollinearity of constructs. This result shown that shown that construct has the discriminant validity also ([Hair et al., 2022](#)).

Table 5: Variance Inflation Factor

Predictor	VIF
RAB	1.057
RB	1.051
CDB	1.140
DE	1.063
LAB	1.097
HB	1.023
FMC	1.042

Hypothesis Results

The direct-effect results indicate that all six behavioral biases have a positive and statistically significant relationship with Investment Decision Making. Regret Aversion Bias has a significant positive effect on Investment Decision Making ($\beta = 0.203$, $p = 0.009$), supporting H1. Representativeness Bias also demonstrates a significant positive relationship with Investment Decision Making ($\beta = 0.161$, $p = 0.035$), supporting H2. Cognitive Dissonance Bias has a significant positive effect ($\beta = 0.222$, $p = 0.006$), supporting H3. Similarly, Disposition Effect shows a significant positive relationship with Investment Decision Making ($\beta = 0.342$, $p < 0.001$), supporting H4. Loss Aversion Bias has a significant positive effect ($\beta = 0.319$, $p < 0.001$), supporting H5, while Herding Behavior demonstrates the strongest direct effect among the six biases ($\beta = 0.359$, $p < 0.001$), supporting H6. Overall, these findings indicate that behavioral biases significantly influence investors' Investment Decision Making, with Herding Behavior and Disposition Effect demonstrating comparatively stronger relationships. Above results are in [Table.5](#) and [Figure.3](#).

Table 5: Direct Effects

Relationship	β	p-value	Decision
RAB $\rightarrow$ ID	0.203	0.009	Accepted
RB $\rightarrow$ ID	0.161	0.035	Accepted
CDB $\rightarrow$ ID	0.222	0.006	Accepted
DE $\rightarrow$ ID	0.342	<0.001	Accepted
LAB $\rightarrow$ ID	0.319	<0.001	Accepted
HB $\rightarrow$ ID	0.359	<0.001	Accepted

The moderating-effect results show that FMC significantly changes the strength of several relationships between behavioral biases and ID. The interaction between regret aversion bias and financial management capability is positive and significant ($\beta = 0.243$, $p < 0.001$), supporting H7. Similarly, the interaction between representativeness bias and financial management capability is significant ($\beta = 0.202$, $p = 0.005$), supporting H8. However, the interaction between cognitive dissonance bias and financial management capability is statistically insignificant ($\beta = 0.074$, $p = 0.325$), indicating

that H9 is not supported. Financial management capability significantly moderates the relationship between disposition effect and investment decision making ($\beta = 0.380$, $p < 0.001$), supporting H10. The interaction involving loss aversion bias is also positive and significant ($\beta = 0.308$, $p < 0.001$), supporting H11. Finally, the interaction between herding behavior and financial management capability is significant ($\beta = 0.198$, $p = 0.003$), supporting H12.

Table 6: Moderating Effects

Moderating Relationship	β	p-value	Decision
RAB $\times$ FMC $\rightarrow$ ID	0.243	<0.001	Accepted
RB $\times$ FMC $\rightarrow$ ID	0.202	0.005	Accepted
CDB $\times$ FMC $\rightarrow$ ID	0.074	0.325	Not Accepted
DE $\times$ FMC $\rightarrow$ ID	0.380	<0.001	Accepted
LAB $\times$ FMC $\rightarrow$ ID	0.308	<0.001	Accepted
HB $\times$ FMC $\rightarrow$ ID	0.198	0.003	Accepted

These findings confirmed that financial management capability is an integral moderating variable to improve behavioral biases to increase investment decisions. Above results are in [Table.6](#) and [Figure.3](#).

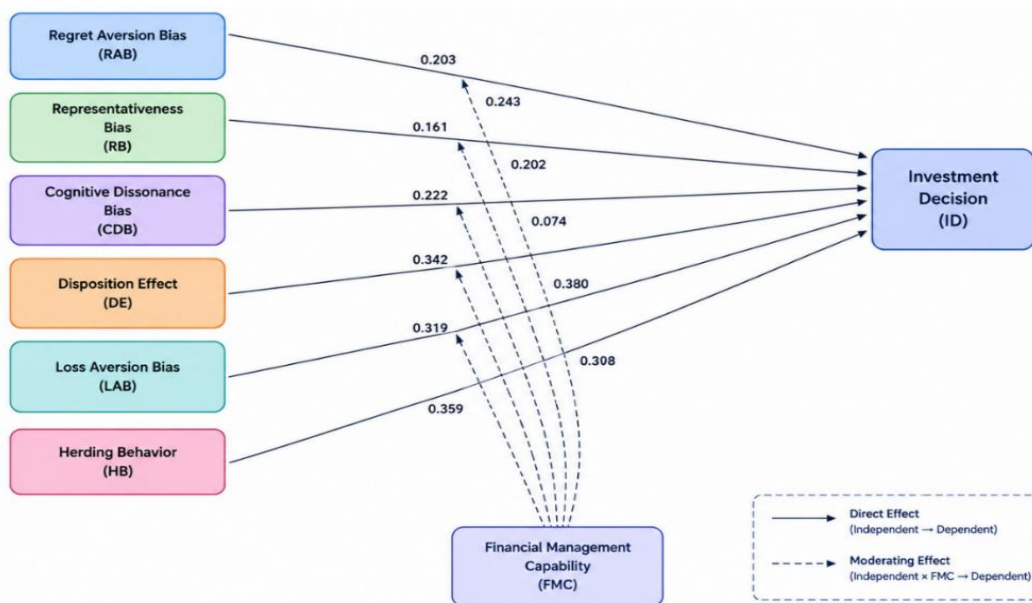


Figure 3: Coefficient Values

Robustness Test

The gender-based MGA results indicate that most behavioral biases have a positive relationship with investment decision making for both female and male respondents. Regret aversion bias, representativeness bias, cognitive dissonance bias, disposition effect, loss aversion bias, and herding behavior bias generally show positive path

coefficients. However, the MGA results reveal that only the relationship between Loss Aversion Bias and Investment Decision Making differs significantly by gender. This relationship is considerably stronger among females ($\beta = 0.470$, $p < 0.001$) than males ($\beta = 0.110$, $p = 0.381$), with a significant MGA difference of 0.360 ($p = 0.027$). The remaining direct-path differences between females and males are statistically insignificant, indicating that gender does not significantly alter those relationships. Discussed results are in [Table.7](#).

Table 7: Robustness Results

Relationship	Female β	Female p	Male β	Male p	MGA Difference (F–M)	MGA p	Gender difference?
RAB $\rightarrow$ ID	0.202	0.043	0.228	0.082	-0.026	0.896	No
RB $\rightarrow$ ID	0.275	0.004	0.114	0.384	0.161	0.372	No
CDB $\rightarrow$ ID	0.205	0.055	0.223	0.098	-0.017	0.922	No
DE $\rightarrow$ ID	0.318	0.001	0.354	0.007	-0.035	0.816	No
LAB $\rightarrow$ ID	0.470	<0.001	0.110	0.381	0.360	0.027	Yes
HB $\rightarrow$ ID	0.276	0.004	0.480	<0.001	-0.203	0.224	No

The MGA results for the moderating role of Financial Management Capability (FMC) show that FMC significantly strengthens some relationships within individual gender groups, particularly the interaction between FMC and Disposition Effect for females ($\beta = 0.413$, $p = 0.011$) and males ($\beta = 0.452$, $p = 0.003$). The FMC $\times$ Representativeness Bias interaction is significant for males ($\beta = 0.419$, $p = 0.007$) but not females ($\beta = 0.012$, $p = 0.925$). Nevertheless, none of the six gender-based differences in moderation effects is statistically significant (all MGA p-values > 0.05).

Table 6: Moderating Effect

Moderating relationship	Female β	Female p	Male β	Male p	MGA Difference (F–M)	MGA p	Gender difference?
FMC $\times$ RAB $\rightarrow$ IDM	0.189	0.188	0.159	0.247	0.029	0.894	No
FMC $\times$ RB $\rightarrow$ IDM	0.012	0.925	0.419	0.007	-0.407	0.123	No
FMC $\times$ CDB $\rightarrow$ IDM	0.139	0.222	- 0.134	0.422	0.274	0.233	No
FMC $\times$ DE $\rightarrow$ IDM	0.413	0.011	0.452	0.003	-0.038	0.857	No
FMC $\times$ LAB $\rightarrow$ IDM	0.223	0.053	0.314	0.019	-0.090	0.543	No
FMC $\times$ HB $\rightarrow$ IDM	0.193	0.165	0.245	0.046	-0.052	0.795	No

Therefore, although FMC moderates certain behavioral-bias relationships within the gender groups, there is insufficient evidence to conclude that gender significantly changes the strength of the moderating effects of Financial Management Capability.

DISCUSSION

Study results found that regret aversion positively and significantly affects investment decision making. This results shown that investor's concern about making a wrong investment choice and consequently experiences regret is integral in shaping their investment decisions. Investors may avoid certain alternatives because they anticipate dissatisfaction or regret if the investment produces an unfavorable outcome. Theoretically, results are supported with regret theory which possess that individuals consider the possibility of future regret when making decisions under uncertainty. The results are supported with following studies [Bell \(1982\)](#) and [Loomes and Sugden \(1982\)](#) explain that anticipated regret can influence individuals' choices between risky alternatives. [Gupta et al. \(2025\)](#) also found the same results where they found that regret bias as one of the behavioral factors influencing investors' decisions in the Indian context. Thus, the present finding extends the existing literature by demonstrating that regret-related considerations remain important in explaining investment decisions.

Study results further shown that representative biases also positively and significantly effect to investment decision making. This finding highlighted that investors may be evaluated based on investment opportunities which is relying on information, patterns, or characteristics that appear representative of previous experiences. This result is also highlighted the role of heuristic-based judgment in financial decision-making. Instead of evaluating every available piece of information, investors may simplify complex decisions by relying on familiar patterns or previous experiences. The theoretical foundation for this behavior can be traced to [Kahneman and Tversky \(1973\)](#), who explained representativeness as a cognitive heuristic through which individuals make judgments based on similarity or perceived typicality. Empirical study also found the evidence that representative improves the investment decisions ([Gavrilakis & Floros, 2022](#)). Other results also shown that cognitive dissonance positively and significantly affect investment decision. This result shown that investor's previous investment decisions could influence their subsequent choices. When investors receive information that contradicts their previous decisions, they may experience psychological discomfort and attempt to maintain consistency with their earlier beliefs. The study findings also supported the idea that why investors may sometimes continue to support an investment even when new information suggests that reconsideration is appropriate. The results are in line with the previous theory of [Festinger \(1957\)](#), which suggests that individuals experience psychological discomfort when they hold inconsistent beliefs, attitudes, or behaviors. In the investment context, this discomfort may encourage individuals to rationalize previous decisions rather than immediately revise them. The result is also consistent with the behavioral finance study where they show that that psychological processes influence financial judgments and investment decisions ([Shaheen et al., 2022](#)). Accordingly, cognitive dissonance represents an important psychological mechanism for understanding investment decisions.

In addition to previous results, disposition effect also positively and significantly effects to investment decisions. This result shown that disposition related behavior is an important factor in explaining investors' decisions. The study results also highlighted that investors may make decisions differently depending on whether an investment has generated gains or losses. The results are also important because disposition effect has become one of the most established behavioral phenomena in finance. [Odean \(1998\)](#) subsequently provided empirical evidence demonstrating investors' reluctance to realize losses. These prior studies emphasized that investors' decisions may be influenced by psychological preferences regarding gains and losses rather than by purely rational portfolio considerations. Further results indicated that loss aversion also positively and significantly effect to the investment decisions. This result shown that investor's sensitivity toward potential losses significantly affects their investment choices. Investors may attach greater psychological importance to potential losses than to equivalent gains and consequently modify their investment decisions accordingly. The result are supported with the prior study of [Barberis and Huang \(2001\)](#) where they found the results where they incorporated loss aversion into financial decision-making and demonstrated its relevance to investor behavior and asset pricing. In other more recent study also found that loss aversion as an important behavioral factor in investment decisions across emerging financial markets ([Gupta et al., 2025](#)). The result similarity with the same study and prior study argued that loss related psychological responses are important determinants of investment decisions.

Further direct effect also shown that herding behavior also positively and significantly effect to the investment decision. This result shown that investors' tendency to follow the decisions, opinions, or actions of other investors is particularly important in explaining investment decision. The study results also indicated that investor could be rely on the behavior of others when they face uncertainty, incomplete information, or limited confidence in their own analysis. The result is also supported on the theoretical basis where explained that herding behavior through informational cascades, whereby individuals may imitate others because they believe that other market participants possess superior information ([Bikhchandani et al., 1992](#)). Empirical evidence from different markets has also documented herding as an important behavioral phenomenon. [Gavrilakis and Floros \(2022\)](#) also found the same result where herding behavior in financial markets and highlighted its relevance to investor decision-making. These prior studies indicated that behavioral biases are important factors to improve the investment decisions,

Further indirect moderating effect result shown that financial management capability strengthens the relationship of regret aversion, representative bias, loss aversion bias, and herding behavior and investment decisions. All the results are indicating that financial management capability is important factor for explaining how the behavioral biases translate into investment decisions. This result is also suggested that financial capability particularly changes the influence of gain- and loss-related investment

tendencies. These findings are supported by international research. [Sanyal et al. \(2026\)](#) also reported significant moderating effects of financial literacy across several behavioral biases among Indian retail investors. Evidence from Nepal also demonstrates the relevance of financial literacy in the relationship between herding behavior and investment decisions ([Koirala & Niraula, 2025](#)). Thus, these results shown that financial management capability is an important deterrent for understanding the conditional influence of behavioral biases on investment decision that could increase the more investment opportunities in stock market.

On the other hand, financial management capability not significantly moderates between cognitive dissonance bias and investment decision. The result shown that financial capability might be not enough to change the influence of cognitive dissonance on investors' decisions. Cognitive dissonance is strongly connected with individuals' desire to maintain consistency with their previous beliefs and decisions, which may operate independently of financial knowledge or management skills. The results is also important because finding demonstrated that moderating influence of financial capability is not universal across all behavioral biases. [Sanyal et al. \(2026\)](#) study results also found that financial literacy significantly moderated several behavioral-bias relationships but did not significantly moderate cognitive dissonance bias. [Divakara Reddy et al. \(2026\)](#) similarly reported that the moderating role of financial literacy varies across different behavioral biases. Study insignificant results shown that cognitive dissonance interaction in the present study provides evidence that financial management capability should be viewed as a bias-specific moderator rather than a universally effective mechanism for minimizing the influence of behavior.

Further results of robustness also shown supported the view of the study's empirical findings. The study results which are obtained from the robustness analysis which remain consistent with the main hypothesis-testing results, indicating that the significant relationships between behavioral biases and investment decision which are not being driven by a particular model specification or isolated estimation outcome. In the same vein, moderating effect of financial management capability between involving regret aversion bias, representativeness bias, disposition effect, loss aversion bias, and herding behavior bias remain stable, whereas the interaction involving cognitive dissonance bias continues to be insignificant. This consistency strengthens confidence in the findings and suggests that the observed relationships are sufficiently robust across alternative analytical specifications. The robustness results therefore reinforce the conclusion that behavioral biases are important determinants of investment decision making and that financial management capability plays a meaningful, although bias-specific, moderating role. This robustness analysis is being increasing the credibility, stability, and study empirical strength.

IMPLICATIONS AND FUTURE DIRECTIONS

Research results contributed to the context of behavior finance through demonstrating that investment decision is significantly influenced by multiple psychological biases, including regret aversion bias, representativeness bias, cognitive dissonance bias, disposition effect, loss aversion bias, and herding behavior bias. The findings extend existing behavioral-finance literature by incorporating financial management capability as a moderator and demonstrating that its influence is bias-specific rather than universal. In particular, the significant moderation of five behavioral-bias relationships and the insignificant moderation of cognitive dissonance bias provide a more nuanced understanding of how financial capability interacts with psychological factors in investment decisions. Study result is being strengthen the reliability that investment behavior cannot be fully explained through rational decision-making assumptions alone.

On the other hand, the results also offer important practical implications for investors, financial advisors, and policymakers. Investors should recognize the potential influence of regret, representativeness, cognitive dissonance, disposition, loss aversion, and herding tendencies when making investment decisions and should strengthen their financial-management skills to improve decision quality. Financial institutions and advisors can develop financial education and investor-awareness programs focusing on behavioral biases, risk evaluation, and independent decision-making. Since financial management capability significantly moderates most of the behavioral relationships, improving investors' financial knowledge and management skills can help them make more informed investment decisions. Furthermore, insignificant moderation analysis shown that cognitive dissonance bias suggests that financial education alone may not be sufficient for all psychological biases, highlighting the need for broader behavioral-awareness interventions.

The study with significant findings has various limitations. Firstly, study focused on moderating effect while ignored the mediating effect. Therefore, increasing the predictive power the model, further research could conduct with mediating effect. Secondly, study conducted on cross sectional research design, while ignored the longitudinal research design. Future research could be conducted on longitudinal research design to check the variation in results. Lastly, study focused on quantitative research approach while ignored the qualitative research approach. Therefore, future research could be explored mixed methods to increase the scope of study.

CONCLUSION

The research objective was to test the influence of behavioral biases on investment decision making with moderating effect of financial management capability. Data were collected from 305 investors using convenient sampling technique. PLS-SEM results

shown that all behavioral biases positively and significantly effect to investment decision making which is indicating that investors' choices are substantially influenced by psychological and heuristic factors rather than solely by rational financial considerations. The results further reveal that financial management capability significantly strengthens the relationships between regret aversion, representativeness bias, disposition effect, loss aversion, herding behavior, and investment decision making. However, financial management capability does not significantly moderate the relationship between cognitive dissonance and investment decision making, suggesting that the influence of this bias may operate relatively independently of financial management capability. Robustness analysis further confirms the stability of the main findings, with the significant direct and moderating relationships remaining consistent across alternative analytical specifications. The study with the specific findings contributing literature through demonstrating that moderating influence of financial management is bias specific rather than universal. The findings also provide practical implications for investors, financial advisors, financial institutions, and policymakers by highlighting the importance of behavioral awareness and financial management capabilities in improving investment decision quality.

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