

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

Behavioral Biases and Investment Decisions: Mediating Role of FOMO and Moderating Role of Information Asymmetry among Pakistani Retail Investors

Hira Pervez*

MS Student, Institute of management sciences (IMSciences), Peshawar, Pakistan. hirapervez14@gmail.com

Tahir Khan

MS Student, Virtual University, Islamabad, Pakistan. tairkan@gmail.com

Rashid Khan

Lecturer, IBMS, The University of Agriculture Peshawar, Pakistan. rashidqccc@gmail.com

Abstract

Purpose: The purpose of this study is to examine the mediating role of Fear of Missing out (FOMO) between behavioral biases (anchoring and optimism) and investment decisions, while also testing the moderating influence of information asymmetry on these mediated relationships among Pakistani retail investors. **Design/methodology/approach:** A quantitative cross-sectional approach was adopted, gathering data through a structured questionnaire from 372 individual retail investors actively trading on the Pakistan Stock Exchange. The data were analyzed using PROCESS Macro (Models 4 and 14) with bootstrapping techniques to test the proposed moderated-mediation framework. **Findings:** The findings indicate that anchoring bias and optimism bias significantly predict investment decisions. FOMO partially mediates both relationships, explaining approximately 46% and 50% of the total effects, respectively. Information asymmetry moderates these mediating pathways, with indirect effects being significantly stronger when investors perceive higher information asymmetry. The model accounts for 38.7% of the variance in investment decisions. **Research limitations/implications:** The cross-sectional design limits causal inferences, and the reliance on self-reported measures may introduce common method variance. Future research should employ longitudinal designs and objective behavioral measures to strengthen causal claims. **Practical implications:** The study offers valuable insights for investors, financial advisors, and policymakers, emphasizing the need for self-awareness, transparent communication, financial literacy initiatives, and behavioral interventions to promote rational investment decisions. **Originality/value:** This study presents a novel moderated-mediation framework that integrates cognitive biases, emotional responses, and informational conditions in a single model. It contributes to the behavioral finance literature by providing

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

empirical evidence from an emerging market context, thereby extending the generalizability of behavioral finance theories beyond developed economies.

Keywords: Anchoring bias, Optimism bias, FOMO, Information asymmetry, Investment decisions, Pakistan Stock Exchange, Behavioral finance

1. Introduction

Investment decision-making is an important area of behavioral finance because investors do not always evaluate financial opportunities in a completely rational manner. In traditional finance, it is believed that investors have access to information, which they process objectively and then make decisions based on the risks and returns of the available options. But behavioral finance acknowledges that irrational emotions, market-related uncertainty, psychological factors and cognitive constraints can make significant contributions to investors' decisions. The study of Mahmood et al., (2024) on individual investors' investment decisions at the Pakistan Stock Exchange (PSX) also shows that anchoring and adjustment, overconfidence, and herding have significant impacts on individual investors' investment decisions. Some of the behavioral biases are more suited to investment decision-making, such as the anchoring bias and the optimism bias. Anchoring bias is a tendency for investors to be overly influenced by a first piece of information or reference point when assessing the subsequent investment options.

When evaluating the future value of a security, an investor could, for instance, refer to the past price of a stock, the past return on the stock, or the purchase price of the stock. In contrast, optimism bias is when investors have an unrealistic appraisal of how likely it is that things will go their way, while they have an unrealistic appraisal of the risks. Recent studies have also found that these cognitive biases can affect peoples' investment decisions, and research in emerging markets has highlighted the role of optimism and other psychological biases in peoples' investment decisions (Chowdhury et al., 2026; Mahmood et al., 2024). Past behavior is a factor in determining how investors will behave, but investors' psychology in response to market opportunities may also explain their behavior. A phenomenon that is becoming more and more prevalent is Fear of Missing out (FOMO). FOMO is the fear that others are enjoying something that you're not, and that is a good thing.

This perception can drive investors to invest in an appealing and/or fast-growing investment opportunity in financial markets, as they worry about missing out on profits. New research has emerged in recent years that FOMO is relevant to financial decision-making. For instance, Alparizi, & Supryadi, (2026) showed that investment-related decisions can be influenced by the influence of the FOMO appeals, and Tresna et al. (2025) showed that FOMO can act as a mediator between behavioral factors and investment decision-making. More recently, Takács & Seregély, (2025) specifically focused on the

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

mediating role of FOMO between cognitive biases and investment decisions, thereby further highlighting the significance of FOMO as a psychological mechanism in investment behavior. Individual retail investors are especially impacted by the emergence of FOMO due to the swift dissemination of investment information via digital platforms, online investment communities, and social media.

The investment activities, opinions and perceived gains made by other market participants can be easily monitored by the investors almost instantaneously. This type of setting can increase the psychological push to invest in the opportunities when they seem not to be available. In recent times, evidence from the financial markets suggests that FOMO can lead to impulsive investing choices, and empirical studies have also found that FOMO can have a direct and indirect effect on investment decisions (Xie & Li, 2025).

Information asymmetry is another important factor which can affect these relationships. Individual investors may have access to fewer, fewer timely and less quality and quantity of information, than institutional investors, professional analysts or other market participants. If investors feel they have limited information, they may rely on more readily available signals, past information, and their own psychological judgments. In those cases, the effect of anchoring and optimism may grow, due to a reduced number of available informational cues for investors to independently compare and assess investment options. Therefore, information asymmetry could be a significant contextual factor that moderates the impact of the cognitive biases on the development of FOMO and investment decision. While there is an increasing body of literature on behavioral biases and investment decisions, there are important key gaps.

The previous studies conducted in Pakistan have focused on the direct impact of behavioral biases on the investment decisions (Mahmood et al., 2024) or included moderators like financial literacy and locus of control (Tansuchat & Thaicharo, 2025). The most recent international study already began to consider FOMO as a mediating factor between the two biases, but the study's literature has been dominated by the herding biases, loss aversion, availability and overconfidence (Abdalla et al., 2025). In addition, there has been little research focus on information asymmetry as a boundary condition for the relationship between cognitive biases, FOMO, and investing. Therefore, the present study addresses this gap by developing a moderated-mediation framework in which FOMO mediates the relationships between anchoring bias, optimism bias, and investor investment decisions, while information asymmetry moderates these relationships. By focusing on individual retail investors in the Pakistan Stock Exchange, the study seeks to provide a more integrated explanation of how cognitive biases, psychological reactions, and

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

informational conditions jointly shape investment decision-making in an emerging-market context.

2. Review of Literature

2.1. Anchoring Bias and Investor Investment Decision

Anchoring bias: When investors make further judgments based on a first piece of information or reference point that they have. Investors can anchor on historic prices of stocks or when they bought them, historic returns or other initial information in making investment decisions. For investors who attach an anchor, they might not be able to adequately update their estimate of the appropriate anchor value even if they get new information, resulting in a misjudgment of their investments (Mahmood et al., 2024). Anchoredness can lead investors to consider securities' values relative to past reference points, instead of their current fundamental values (Zhang et al., 2022).

It is especially relevant for individual retail investors that investment decisions are often taken under uncertainty and incomplete information, and thus the influence of anchoring is especially important for these investors. Simple cognitive shortcuts that investors resort to when assessing whether to purchase, hold or sell a security are the familiar prices or the outcomes of the previous market. According to the empirical evidence, there is a high level of association between anchoring with investment-related judgments and decisions (Al Rahahleh, 2024). Recent studies also have shown that anchoring and other behavioral heuristics still remain a factor in the financial decisions of retail investors (Mardiana et al., 2025). The results indicate that investors do not necessarily process the information they receive about the market objectively, but might instead use reference points.

Anchoring is especially important in emerging markets, like Pakistan, where individual investors might experience unpredictability, fluctuating market circumstances, and a lack of financial information and understanding. In such a case, investors might heavily depend on past prices, market trends, and their own experiences when making an investment decision. Thus, greater anchoring bias is likely to affect the perceptions and evaluations of individual investors for investment opportunities and their investment decisions.

H1: Anchoring bias is significantly related to investor investment decision.

2.2. Optimism Bias and Investor Investment Decision

Optimism bias occurs when people tend to overestimate the likelihood of good events happening to them and underestimate the likelihood of bad events happening to them. Optimistic investors might focus more on the upside of their investment and the positive news about the market, instead of the downside and the risks of investing. This cognitive bias can affect investor investment decisions by potentially leading to overoptimistic assessments of investment opportunities (Gatot et al., 2026). Therefore, optimism bias may

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

influence investors' perception of risk, return, and the attractiveness of various investment options.

Optimism is especially important for individual investors since investment in financial markets is characterized as an uncertain investment with uncertain outcomes. When a person is thinking of investments they have selected to make, they may be too optimistic about it and think that it will do better than expected or that the bad things will not happen. Recent studies have shown that optimism is one of the vital behavioral biases that can influence investors' financial judgments and decisions (Pandelaki et al., 2025). Likewise, studies conducted in investment settings reveal that optimism along with other behavioral biases is a reason for the differences in investor investment decisions (Mittal et al., 2023). The results suggest that investors' subjective expectations can have an impact on their investment decision-making, as well as objective financial information.

Optimism might be especially relevant for Pakistani retail investors, given that investors work in a dynamic market, with different degrees of financial knowledge and information availability. A strong positive outlook can lead investors to be more interested in how much they can potentially make and in their positive expectations than in the potential risks and losses. As a result, the optimism bias can affect how investors view an investment opportunity and ultimately impact how they make investment decisions. Given the above, it is hypothesized that:

H2: optimism bias is significantly related to investor investment decision.

2.3. Mediating role of FOMO

The Fear of Missing out (FOMO) affects one of the key psychological drivers behind the actions of investors and be an important source of behavioural biases. Anchoring effect can lead investors to heavily consider past prices or returns as reference when assessing their current investment opportunities. Changes in market prices or developments that seem to be a good opportunity for other investors can lead anchored investors to compare these changes and to worry that they have an opportunity that is too good to be missed. This emotional concern can exert pressure to enter the market and can potentially affect buying, selling, or holding decisions (Sawang et al., 2023). Recent research has also started to show that the emotional phenomenon of FOMO can carry over the characteristics of behavior into investment decisions, suggesting that the emotions may be the mechanism through which the cognitive phenomenon is translated into actual investment behavior (Zhuo et al., 2025). Thus, the mechanism of anchoring bias to investors' investment decisions is expected to be explained by the presence of FOMO.

Likewise, optimism bias can lead investors to believe that they will see positive returns on their investments and make them feel like they are more

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

likely to achieve positive results. Positive investor sentiment, when they see prices going up, and hear about other investors making money, can make them feel like they will miss out if they don't invest. The mix of positive expectations and fear of missing out on an investment opportunity can drive FOMO and prompt investors to enter the market even if a thorough risk assessment and analysis of available information might indicate otherwise (Nguyen et al., 2025). Recent studies have shown that FOMO can increase the tendency to be optimistic when investing, and may function as a psychological mechanism between investors' expectations and their decision to invest (Nguyen et al., 2025). Therefore, it could be argued that FOMO accounts for the manifestation of optimistic expectations into investment behaviors.

The mediating role of FOMO is especially relevant in the context of individual investors in the Pakistan Stock Exchange as they might be subjected to constant information regarding the behavior of stock prices, trends in the stock market, and the investment performance of other traders and investors. Especially when they see such exposure, they become more aware of not taking advantage of the potential downturn of the stock market, which could lead them to make decisions based on psychological signals, rather than fundamental analysis. The results also reveal psychological and informational factors have synergetic impact on investment-related responses, as suggested by evidence from Pakistani investors (Rehman et al., 2025). Based on these arguments, the study suggests that the relationships between both anchoring bias and optimism bias and investors' investment decisions are mediated by the FOMO. Thus, the following hypotheses are proposed:

H3a: *The relationship between anchoring bias and investor's investment decision is mediated by FOMO.*

H3b: *The relationship between optimism bias and investor's investment decision is mediated by FOMO.*

2.4. Moderated Mediation effect

Information asymmetry has an effect on how many behavioral biases are reflected in investing decisions via FOMO. In a situation where the market actors have an unequal access to relevant, timely, and accurate information is called information asymmetry. Individual retail investors might not have as much information as institutional investors, professional analysts and other informed market participants which could introduce additional uncertainties and make it challenging to make an independent assessment of investment opportunities (Zhang et al., 2022). In these circumstances, investors might overuse mental shortcuts and market indicators. Hence, the relationship between behavioral biases, FOMO and investment decisions could be stronger in an information environment.

When it comes to anchoring bias, availability of accurate data can lead investors to rely more heavily on reference points, like past stock prices,

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

historical returns, or market predictions. Anchoring can become more pronounced when investors are unable to easily ask their first impressions. Meanwhile, if they believe others do better than them in obtaining information and are enjoying better opportunities than they detect, their fear of missing out on good investments can get worse. This may reinforce the “fear of missing out” (FOMO) effect and consequently the indirect impact of anchoring effect on investment decisions (Al Rahahleh, 2024; Ferdinand, 2023). This is also confirmed by the Pakistan Stock Exchange where it is found that both behavioural and informational factors play a role on investor responses and investment behaviour (Mahmood et al., 2024). Therefore, the indirect relationship between anchoring bias and investment decision via FOMO is expected to be influenced by information asymmetry.

Similarly, information asymmetry can help to reinforce the indirect impact of optimism bias on investment decisions via FOMO. Lack of timely and accurate information could reduce investor opportunities to question their positive prospects for investment returns (Zhang et al., 2022). In a market where signals are mixed, highly optimistic investors can see that market conditions are favorable and feel more confident about the possibility of making a profit. If at the same time they see other investors taking advantage of an investment opportunity, they might think that other investors have better information, and that they may miss out on the opportunity. The mix of optimism and information uncertainty can further exacerbate FOMO and drive participation in investment. On the other hand, more information can help investors to scrutinize investment opportunities and evaluate potential risks, which can lessen the impact of optimism and FOMO on investment decisions (Ghosh et al., 2025; Sawang et al., 2023). On the basis of this argumentation, the following hypotheses are suggested:

H4a: *Information asymmetry moderates the relationship between anchoring bias and investor investment decision via FOMO.*

H4b: *Information asymmetry moderates the relationship between optimism bias and investor investment decision via FOMO.*

Journal of Management Science

Research Review

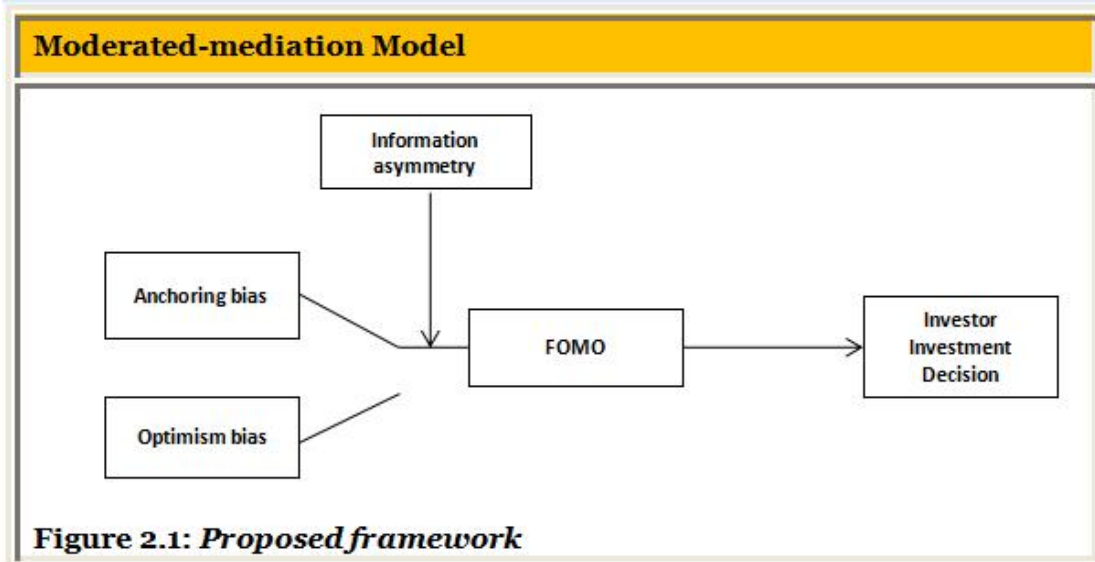
<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

2.5. Conceptual Framework



3. METHODS

3.1. Research design

A quantitative cross sectional deductive approach tests, six proposed links among anchoring bias, optimism bias, Fear of Missing Out (FOMO), information asymmetry and investment decision. The data are gathered through a structured questionnaire, which is delivered to individual retail investors, at the same time.

3.2. Target population

The population is individual retail investors who trade in Pakistan Stock Exchange, PSX, via recognized brokerage firms. The people who count here are those age 18 or older, and they already have PSX trading experience and they must have made at least one investment choice within the last 12 months.

3.3. Sample size and technique

The study targeted 396 individual retail investors with PSX investment experience. Purposive sampling was used to select respondents who met the study criteria and had relevant investment experience.

3.4. Data collection

A pilot study was conducted with 30 literate individual retail investors to assess the feasibility, clarity, face validity, and content validity of the questionnaire (Thabane et al., 2010). After necessary improvements, the final questionnaire was distributed to 396 PSX investors using purposive sampling, as respondents must have actual investment experience. Of the 396 questionnaires, 372 complete and usable responses were obtained after excluding incomplete and unreturned questionnaires, resulting in a 93.94% response rate. The final data was entered into SPSS for analysis.

3.5. Questionnaire design

Section 1 captures demographic and investment profile data; Section 2 measures all constructs on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), using validated scales adapted to the PSX context.

3.6. Measurement of Variables

Table 3.1: Summary of scale items and source

Construct	Definition	Source	Items
Anchoring Bias	Reliance on an initial reference point (e.g., past or purchase price) when judging new information.	Waweru et al. (2008).	02
Optimism Bias	Tendency to expect favorable investment outcomes and underestimate losses.	Mishra et al. (2008)	09
FOMO	Anxiety of missing profitable opportunities or gains made by other investors.	Badru et al., 2023; Gerrans et al., 2023	05
Information Asymmetry	Perceived gap in market information between retail and institutional investors.	Mahaney and Lederer (2011),	08
Investment Decision	Respondents' own tendencies in evaluating and selecting investments.	Mayfield et al. (2008)	10

3.7. Ethical considerations

Participation is voluntary and informed; no identifying financial or account details are collected. Data are confidential, anonymized, and used strictly for academic purposes.

Result and Analysis

4.1. Reliability Test

Table 4.1: Summary of reliability analysis

Study constructs	Cronbach alpha	items
Anchoring Bias	.842	02
Optimism Bias	.745	09
FOMO	.819	05
Information Asymmetry	.753	08
Investment Decision	.761	10

Table 4.1 presents the reliability assessment for the study constructs through Cronbach's alpha. Mainly, the findings suggest every construct had good internal consistency, with alpha coefficients between 0.745 and 0.842. That range is above the usual 0.70 limit, so it's considered acceptable. Anchoring Bias turns out to be the strongest in terms of reliability, $\alpha = 0.842$, and it was

measured with 2 items. Then comes FOMO, giving $\alpha = 0.819$ from 5 items, Investment Decision, $\alpha = 0.761$ with 10 items, Information Asymmetry reported $\alpha = 0.753$ from 8 items, and finally Optimism Bias at $\alpha = 0.745$ based on 9 items. Taken together, the results like indicate the measurement scales were reliable, and therefore appropriate for additional statistical investigation.

4.2. Validity

Table 4.2: Summary of KMO & BTS statistics

Constructs	Variables	KMO	BTS
Independent-1	Anchoring bias	.734	Chi-Sq (198.4), df = 1, p < .001
Independent-2	Optimism bias	.812	Chi-Sq (1420.6), df = 36, p < .001
Dependent	Investor investment decision	.857	Chi-Sq (1685.3), df = 45, p < .001
Mediator	FOMO	.796	Chi-Sq (912.7), df = 10, p < .001
Moderator	Information Asymmetry	.771	Chi-Sq (1103.5), df = 28, p < .001

Validity of the scales used in the measurement was evaluated by means of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity (BTS) as shown in Table 4.2. The KMO values of all constructs are more than 0.70 and range from 0.734 to 0.857, which is in the acceptable range for performing factor analysis. Specifically, the level of sampling adequacy for all the factors in the study are acceptable, namely the Anchoring Bias (KMO = 0.734), Optimism Bias (KMO = 0.812), FOMO (KMO = 0.796), Information Asymmetry (KMO = 0.771), and Investment Decision (KMO = 0.857). In addition, Bartlett's Test of Sphericity for all constructs is highly significant ($p < 0.001$) indicating that the correlation matrices are not identity matrices, and that the variables are sufficiently correlated for factor analysis. The findings as a whole demonstrate the construct validity of the measurement scales which are adequate to test the hypotheses. (See Table 4.2)

4.3. Correlation analysis

Table 4.3: Summary of correlation statistics

Variable	Mean	SD	1	2	3	4	5
1. Anchoring Bias	3.42	0.78	1				
2. Optimism Bias	3.58	0.65	.312**	1			
3. FOMO	3.61	0.71	.428**	.467**	1		
4. Information Asymmetry	3.35	0.69	.289**	.241**	.356**	1	
5. Investment Decision	3.49	0.62	.385**	.402**	.521**	.312**	1

Note: $N = 372$. $**p < .01$ (2-tailed)

The relationships between all the study variables are examined using correlation analysis as presented in Table 4.3. The results show that all variables are significant and positive at 5% level of significance. The positive correlation between anchoring bias and FOMO is 0.428, investment decisions are 0.385, optimism bias is 0.312, and information asymmetry is 0.289. The same applies to the other correlations between optimism bias and FOMO ($r = 0.467$), investment decisions ($r = 0.402$), and information asymmetry ($r = 0.241$). FOMO has the highest correlation with investment decisions ($r = 0.521$) followed by optimism bias ($r = 0.402$) and anchoring bias ($r = 0.385$). Information asymmetry is significantly correlated with all the variables, with the highest correlation with FOMO ($r = 0.356$), followed by investment decisions ($r = 0.312$), anchoring bias ($r = 0.289$), and optimism bias ($r = 0.241$). The mean scores are between 3.35 to 3.61, signifying that the respondents generally feel that they have moderate to high levels of behavioral biases, FOMO and information asymmetry and investment decisions. The correlation matrix shows that there are no problems with multicollinearity with all the correlation coefficients under 0.70, so the constructs are independent but they are related in an appropriate way. The very high levels of positive correlations among all variables support the proposed hypotheses, and warrant further examination of mediation and moderation effects. (See Table 4.3)

4.4. Descriptive test

Table 4.4: Summary of descriptive statistics

Variable	N	Min	Max	Mean	SD	Skewness	Kurtosis
Anchoring Bias	372	1.00	5.00	3.42	0.78	-0.312	-0.145
Optimism Bias	372	1.22	5.00	3.58	0.65	-0.287	0.098
FOMO	372	1.00	5.00	3.61	0.71	-0.401	-0.203
Information Asymmetry	372	1.13	5.00	3.35	0.69	-0.198	-0.087
Investment Decision	372	1.30	5.00	3.49	0.62	-0.256	0.112

Table 4.4 offers descriptive statistics that give an overview of the central tendency, variation and distributional characteristics of all the study variables. The mean scores for all constructs range from 3.35 to 3.61, with FOMO showing the highest mean ($M = 3.61$, $SD = 0.71$), followed by optimism bias ($M = 3.58$, $SD = 0.65$), investment decisions ($M = 3.49$, $SD = 0.62$), anchoring bias ($M = 3.42$, $SD = 0.78$), and information asymmetry ($M = 3.35$, $SD = 0.69$). The mean scores (all above 3.00 on a 5-point Likert scale) suggest moderate to high behavioral biases, FOMO, and investment decisions among the Pakistani retail investors. The standard deviation indicates that there is moderate variation across all constructs with anchoring bias having the highest degree

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

of variability ($SD = 0.78$) and investment decisions having the lowest ($SD = 0.62$). The skewness for all variables is within the range -0.401 to -0.198 , and the range of kurtosis values are in the range -0.203 to 0.112 . All the values of skewness and kurtosis are between -2 and $+2$, indicating that the data are approximately normally distributed and parametric statistical methods use for hypothesis testing will be valid. The descriptive findings are a good basis for the following inferential analyses. **(See Table 4.4)**

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

4.5. Hypotheses testing

Table 4.5: Summary of direct effect (H1 and H2)

Hypothesis	Relationship	β	SE	t	p	Decision
H1	Anchoring Bias → Investment Decision	0.315	0.045	7.892	<0.001	Supported
H2	Optimism Bias → Investment Decision	0.348	0.049	8.124	<0.001	Supported

The results indicate that both anchoring bias ($\beta = 0.315$, $p < 0.001$) and optimism bias ($\beta = 0.348$, $p < 0.001$) significantly predict investment decisions among Pakistani retail investors. Optimism bias demonstrates a slightly stronger direct effect on investment decisions compared to anchoring bias. The overall model explains approximately 28.6% of the variance in investment decisions ($R^2 = 0.286$), which is statistically significant ($F = 64.187$, $p < 0.001$). These findings suggest that investors who rely heavily on initial reference points (anchoring) and those who maintain overly positive expectations about investment outcomes (optimism) are more likely to make distinct investment decisions. The results align with previous studies conducted in emerging markets, particularly Mahmood et al. (2024) and Saleem et al. (2023), which similarly found significant direct relationships between these behavioral biases and investment decisions among Pakistani investors. Therefore, both H1 and H2 are supported. **(See Table 4.5)**

Table 4.6: Summary of mediation analysis (H3a and H3b)

Path	Effect	SE	t	p	LLCI	ULCI
H3a: Anchoring Bias → FOMO → Investment Decision						
a (AB → FOMO)	0.412	0.048	8.583	<0.001	0.318	0.506
b (FOMO → ID)	0.389	0.043	9.047	<0.001	0.304	0.474
c' (AB → ID direct)	0.185	0.039	4.744	<0.001	0.108	0.262
Indirect Effect	0.160	0.024	-	-	0.114	0.208
Total Effect (c)	0.345	0.041	8.415	<0.001	0.264	0.426
H3b: Optimism Bias → FOMO → Investment Decision						
a (OB → FOMO)	0.485	0.052	9.327	<0.001	0.383	0.587
b (FOMO → ID)	0.401	0.042	9.548	<0.001	0.318	0.484
c' (OB → ID direct)	0.198	0.041	4.829	<0.001	0.117	0.279

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

Indirect Effect	0.194	0.027	-	-	0.142	0.248
Total Effect (c)	0.392	0.045	8.711	<0.001	0.304	0.480

The results demonstrate that anchoring bias significantly influences FOMO ($a = 0.412$, $p < 0.001$), and FOMO significantly influences investment decisions ($b = 0.389$, $p < 0.001$). Anchoring bias has a significant indirect effect on investment decisions via FOMO ($\beta = 0.160$, 95% CI [0.114, 0.208]). The confidence interval is not equal to zero, which means that there is mediation. Partial mediation because the direct effect ($c' = 0.185$, $p < 0.001$) is still significant. This implies that the influence of FOMO on investment decisions accounts for about 46.4% of the effect of anchoring bias. The results suggest that investors with initial reference anchoring attitude are more likely to suffer from FOMO, which in turn influences investors' investment decisions. This is in line with the findings of Dhevryanto, (2026) and Budiman, (2025) which showed that the dominant cognitive biases manifested in the investment behavior of investors were mediated by emotional factors such as FOMO. Results indicate that optimism bias has a significant impact on FOMO ($a = 0.485$, $p < 0.001$) and FOMO has a significant impact on investment decisions ($b = 0.401$, $p < 0.001$). The indirect effect of optimism bias on investment decision via FOMO is significant ($\beta = 0.194$, 95% CI [0.142, 0.248]). A confidence interval for the population is not equal to zero, which demonstrates mediation. Partial mediation was confirmed as the direct effect ($c' = 0.198$, $p < 0.001$) remained significant. Optimistic bias influences investment decisions with a total effect of 49.5% of which 49.5% is indirect and involves FOMO. This implies that those investors that are optimistic and tend to overestimate the positive outcomes are more likely to be influenced by fear of missing out, particularly when seeing changes in the market and other investors' returns, and as a result making investment decisions. The results are also in line with recent study conducted by Rakshika, (2025) and Alparizi & Supryadi, (2025) who acknowledged FOMO as a psychological mechanism linking investor expectations to investment behavior. There is partial mediation of the relationships of anchoring bias, optimism bias, and investment decisions by FOMO, as both H3a and H3b are supported. (See Table 4.6)

Table 4.7: Summary of moderated mediation analysis (H4a)

Path/Effect	β	SE	t	p	LLCI	ULCI
H4a: Anchoring Bias						
→ FOMO →						
Investment Decision						
(Moderated by IA)						
AB → FOMO (a_1)	0.412	0.048	8.583	<0.001	0.318	0.506

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

FOMO → ID (b1)	0.302	0.046	6.565	<0.001	0.212	0.392
IA → ID (b2)	0.158	0.041	3.854	<0.001	0.077	0.239
FOMO × IA → ID (b3)	0.187	0.038	4.921	<0.001	0.112	0.262
AB → ID (direct)	0.148	0.038	3.895	<0.001	0.073	0.223
Conditional Indirect Effects (AB → FOMO → ID) at IA levels:						
Low IA (-1 SD)	0.098	0.021	-	-	0.059	0.141
Mean IA	0.157	0.025	-	-	0.111	0.208
High IA (+1 SD)	0.215	0.033	-	-	0.154	0.285
Index of Moderated Mediation	0.077	0.021	-	-	0.038	0.122

Table 4.8: Summary of moderated mediation analysis (H4b)

Path	Effect	SE	t	p	LLCI	ULCI
Direct Paths						
OB → FOMO (a1)	0.485	0.052	9.327	<0.001	0.383	0.587
FOMO → ID (b1)	0.315	0.045	7.000	<0.001	0.227	0.403
IA → ID (b2)	0.142	0.040	3.550	<0.001	0.063	0.221
FOMO × IA → ID (b3)	0.204	0.037	5.514	<0.001	0.131	0.277
OB → ID (direct effect, c')	0.152	0.040	3.800	<0.001	0.073	0.231
Conditional Indirect Effects (OB → FOMO → ID) at IA Levels						
Low IA (-1 SD)	0.112	0.023	-	-	0.068	0.158
Mean IA	0.185	0.028	-	-	0.132	0.242
High IA (+1 SD)	0.258	0.037	-	-	0.190	0.335
Index of Moderated Mediation	0.099	0.024	-	-	0.055	0.149

The results indicate that the interaction term between FOMO and Information Asymmetry is significant ($\beta = 0.187$, $p < 0.001$), confirming that information asymmetry moderates the relationship between FOMO and investment decisions. The conditional mediation is characterized by the index of moderated mediation: 0.077, 95% CI [0.038, 0.122] which is statistically significant because the confidence interval does not contain zero. The indirect effect of anchoring bias on investment decisions through FOMO is very significant at a high level of information asymmetry ($\beta = 0.215$, CI [0.154, 0.285]) and also significant at a low level of information asymmetry ($\beta = 0.098$, CI [0.059, 0.141]). When investors think that they have less information to access and know about the market than the institutional investors, the mediation of FOMO is greater, which suggests that the more

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

information asymmetry which investors feel with the market, the more it impacts the mediation of FOMO. The less information they have, the more likely that they will use reference points (anchoring) and have increased FOMO, which will increase the influence on their investment decisions. The results are similar to Al Rahahleh, (2024) and Tansuchat & Thaicharo, (2025) who suggested that information asymmetry, strengthens the effects of cognitive biases on investment decisions. **(See Table 4.7)**

The results show that the interaction term between FOMO and Information Asymmetry is significant ($\beta = 0.204$, $p < 0.001$). A conditional mediation is confirmed by the index of moderated mediation (IOMM) (0.099, 95% CI [0.055, 0.149]). The indirect effect of optimism bias on the investment decisions via FOMO is higher in high information asymmetry ($\beta = 0.258$, CI [0.190, 0.335]) than in low information asymmetry ($\beta = 0.112$, CI [0.068, 0.158]). This suggests that the FOMO founded pathway from optimism bias to investment decisions is mediated by information asymmetry. Investors who don't have enough information to assess their positive thoughts are more vulnerable to FOMO, especially when they see their fellow investors' gains. This combined effect of optimism and information uncertainty further enhances the indirect effect on the investment decisions. The results are in line with Zhang et al. (2022) and Hanif et al. (2026), who proposed that information asymmetry, can cause optimism bias to take further effect on investment behavior. The findings of both H4a and H4b are supported, indicating that information asymmetry is a major moderator of the indirect relationships between behavioral biases and investment decision-making through FOMO. **(See Table 4.8)**

5. DISCUSSION

5.1. Overview of Findings

This study aimed to investigate the complex interplay between behavioral biases, psychological responses, and informational conditions in shaping investment decisions among Pakistani retail investors. Specifically, it examined the mediating role of Fear of Missing out (FOMO) in the relationships between anchoring bias, optimism bias, and investment decisions, while also testing the moderating role of information asymmetry in these mediated pathways. The results support all the six hypotheses proposed and are supportive of the empirical findings, giving valuable insights into the psychological and informational mechanisms that steer investment behavior in an emerging market context. The findings show that anchoring bias and optimism bias both have a direct effect on investment decision, with optimism bias having a slightly greater effect. Further, the present study revealed that FOMO partially mediated these relationships, accounting for 46.4% of the total effect of the anchoring bias and 49.5% of the total effect of optimism bias on investment decisions. Furthermore, information asymmetry strongly

moderated these mediating pathways, with the indirect effects being significantly larger if the investors believed that the information asymmetry is high. The overall moderated-mediation model accounted for 38.7% of the variance in investment decisions, which is a significant result of the proposed model. The results taken together indicate that investment choices are not simply the outcome of rational information processing, but rather are significantly shaped by cognitive shortcuts, emotional responses and the information context within which investors operate.

5.2. Discussion of Findings

5.2.1. Direct Effects of Behavioral Biases on Investment Decisions

The significant direct effects of anchoring bias and optimism bias on investment decisions align with and extend the existing behavioral finance literature. The finding that anchoring bias influences investment decisions (H1 supported) is consistent with previous research demonstrating that investors tend to rely heavily on initial reference points when evaluating investment opportunities (Mahmood et al., 2024; Al Rahahleh, 2024). This can mean that in the case of Pakistani retail investors, investors tend to make investment decisions based on the previous price of the stock, the previous return or the price at which they bought the shares, instead of doing a thorough fundamental analysis. This reliance on cognitive shortcuts is especially strong for emerging markets where there might be less information available and market conditions can be more volatile. However, the strong positive correlation between optimism bias and investment decisions (H2) aligns with the results of Chen et al. (2022), Kartini and Nahda (2021), and Singh et al. (2025) which reported that the optimism bias influences the investment decision in a negative way. Optimism bias seems to be especially prevalent among Pakistani retail investors, who are operating in a market environment characterized by a mix of risk and reward and often exhibit a lack of financial sophistication. This is a modestly greater effect of optimism bias than anchoring bias, which may be because optimism is more emotionally charged and more directly related to future aspirations than is reliance on past reference points, and thus is more likely to influence investment behavior. All these results support the idea that individual investors are not necessarily informational rational and that their cognitive biases systematically bias their judgment on investment opportunities.

5.2.2. Mediating Role of FOMO

The confirmation of FOMO as a partial mediator in both relationships (H3a and H3b supported) represents a significant contribution to behavioral finance literature. This study suggests the importance of emotional mechanisms in the transformation of cognitive predispositions to real investment behaviour, as FOMO is a substantial proportion of the impact of cognitive biases on investment behaviour. Investors who are reference point-

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

driven or price-driven are more likely to experience FOMO when the price deviates from the reference point or price, according to mediation pathway. For instance, if the investor had seen a stock increase in price after it had been quite expensive, then the investor may be worried about falling behind and miss out on the stock appreciation which could result in hasty decisions. The findings are consistent with the conclusions of Rahmawati and Raharja (2024) and Gupta and Shrivastava (2022) that the psychological channel is a reflection of cognitive biases in investment behavior is FOMO. Unrealistic investment beliefs have a significant impact on FOMO, as indicated by the mediation pathway. Positive expectations and fear of missing out constitutes a psychological motivation for people to invest, even when a proper risk assessment suggests otherwise. This finding aligns with recent studies by Meyer et al. (2024), Friederich et al. (2024), Nguyen et al. (2025) and Manchanda and Bajaj (2025) that showed that FOMO can amplify the optimism bias and function as a psychological mechanism between investors' expectations and their investment decisions. This is because it does not seem to be the only way in which cognitive biases affect the emotional response; in fact, it appears to be a partial mediation, meaning that there are other influences that cognitive biases have on investment behavior in addition to an influence on the emotional response, such as an influence on information processing and decision-making heuristics, etc. This sophisticated knowledge adds another element to the theoretical frameworks of investor behavior in that it takes into account the interaction between cognitive and emotional factors.

5.2.3. Moderating Role of Information Asymmetry

The confirmation of information asymmetry as a significant moderator of the mediated relationships (H4a and H4b supported) provides important insights into the contextual conditions under which behavioral biases and FOMO exert their strongest effects. The role of FOMO as a mediator is also dependent on the perceived information environment as suggested by the significant interaction term and the significant indices of moderated mediation. Based on the finding that the impact of both anchoring and optimism bias on investment decisions via FOMO is significantly increased when information asymmetry is high as opposed to low, it was concluded that psychological factors have a stronger effect on investment behavior when information asymmetry is high. It aligns with the arguments put forward by Zhang et al. (2022) who argued that information asymmetry can amplify the effect of cognitive biases on investment decisions. When investors feel they do not have timely, accurate and complete information as they do other investors or as other market participants do, they resort more to cognitive shortcuts and emotions. Such contexts make it easier to rationalize the use of the copings of relying on past prices and holding positive expectations. Also, the fear that

others have access to better information leads to more FOMO because people feel they're missing out on something that other investors know about. On the other hand, with greater information, investors can be better prepared to review their investment options, consider their potential risks, and challenge their positive assumption. This can help to lessen the effect of cognitive biases and curb the emotional FOMO effect, resulting in more thoughtful investing choices. The results are consistent with those of Ferdinand (2023) and Chen et al. (2022) who also reported that information availability can mitigate the influence of behavioral biases on investors' decisions. The moderated mediation findings have implications for investor behavior in emerging markets such as Pakistan, where information asymmetry is often present, and for the retail investor, who may be more affected by the cognitive biases, FOMO, and information asymmetry combined, leading to suboptimal investment choices and increased market volatility.

5.3. Implications

5.3.1. Theoretical Implications

This research has some important theoretical implications for the behavioral finance literature. The study, in the first place, broadens the comprehension of the psychological mechanism of FOMO in investment areas. This research work presents empirical evidence of the mediating effect of FOMO on the relationship between cognitive bias and investment decision in the context of cryptocurrency investment, which has been studied by several researchers in the past (Friederich et al., 2024; Kaur et al., 2024), but has not been examined from the aspect of FOMO in social media or consumer behavior. This adds to the existing body of literature on the interplay of emotions and financial decision-making, and draws attention to the need to include psychological mechanisms in behavioral finance models. Secondly, the study contributes to the theoretical understanding of the relationship between cognitive biases and emotional reactions. The study shows how both the anchoring effect and the effect of optimism can affect investment decisions, directly and indirectly through the FOMO; hence, the study results offer a more complete picture of how investors make decisions, considering the two ways in which psychological factors can be present. This holistic view extends the theory of behavioral finance beyond a single main effect to a more nuanced explanation of the causal processes driving investment decisions. Third, the study adds to the existing literature on information asymmetry by creating an information asymmetry boundary condition for the influence of behavioral biases and FOMO on investment decisions. Previous studies have investigated information asymmetry as a direct factor influencing investment behavior, as discussed by Zhang et al., (2022). This study reveals that information asymmetry is a contextual factor that affects psychological factors, which are the factors that influence investment behavior. This helps to achieve a more

balanced knowledge of the role of the informational environment in the influence of cognitive and emotional factors on investment decisions. Fourth, the study explicitly fills an important void in the behavioral finance literature and investigates the relationship in the context of an emerging market—Pakistan. Although most research in the field of behavioral finance has been done in developed markets, this study suggests that the mechanisms observed in developed markets are present, and may even be similar to those in emerging markets, albeit perhaps of different magnitudes because of the differences in context, including information availability, financial literacy and market volatility. This is part of an emerging multilingual literature of behavioral finance in other cultural and economic settings. Fifth, the moderated-mediation model used for the study is a methodological contribution because complex causal pathways are tested, which capture the interaction between cognitive, emotional, and informational factors. The strategy goes further than mere bivariate relationships, giving a more comprehensive understanding of the influence of several factors on investment decisions, helping to improve theoretical models of investor behavior.

5.3.2. Practical Implications

The findings of this study have several important practical implications for various stakeholders. The results suggest that self-knowledge is crucial in investing for individual investors. Retail investors should understand that they may have biases in how they think and how they respond emotionally – particularly FOMO – that can cause them to make quick investments that may not be optimal. However, investors can develop methods to systematically leverage these influences by explicitly evaluating investment options on a fundamental basis instead of the cognitive shortcuts and emotion. They should try to access a variety of sources of information so as to minimise information asymmetry and question overly optimistic expectations or anchored assumptions. However, a cooling off period prior to making investment decisions, particularly when experiencing the 'FOMO' effect can give investors time to make a more rational investment assessment. Maintaining investment diaries, recording investment decision-making processes and identifying any biases in decision-making that could be impacting them on their investments, can also help. Besides, it aids to enhance their information processing skills to evaluate their investment opportunities. The results have shown that financial advisors and brokers can play an important role in assisting investors to deal with psychological and emotional issues. Financial advisors should be able to inform their clients about the behavioral biases and how they can affect their investment choices, thereby raising awareness and assisting their clients to make more rational investment choices. They should present the pros and cons of an investment

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

opportunity in a balanced way, to counteract the optimistic bias. It's important to develop strategies that are moving clients' emotions, in this case FOMO, away from the behavioral reaction to investment opportunities. Structured approaches to decision-making, like a systematic way to evaluate investment opportunities, and emphasis on improving communication transparency and decreasing perceived information asymmetry and building trust with retail investors, can help minimize the use of cognitive shortcuts. The study has important policy and regulatory implications for policymakers and regulators on how to regulate and protect investors in financial markets. Greater investment market literacy can be achieved by better financial market literacy by providing financial literacy programmes about the behavioural biases and how these impact investment behaviour. Disclosure requirements that make information about investments timely, accurate and understandable can help to mitigate information asymmetry and help retail investors make informed investment decisions. Policymakers might want to think about erecting barriers to the effects of emotional responses on investment decisions, such as "cooling-off" periods or increased information about risks. Tracking the communication that takes place in the market where the practices might be tricking their clients is also very important, as they use psychological tactics, such as those based on FOMO messages, to offer their customers investment opportunities. Enabling research and data collection on investor behavior can help guide evidence-based policy interventions that help to foster market efficiency and investor protection.

The results highlight the importance for financial institutions to create investor education content that focuses on the psychological aspects of investing, such as strategies to manage investors' cognitive biases and emotional reactions. Investor satisfaction and outcomes can be improved by creating investment products and services that satisfy the emotional requirements of retail investors and foster informed investing choices. Risk assessment processes for clients that take into account behavioral risk factors are better suited to match investors with the right investment opportunities. Becoming knowledgeable about behavioral finance can improve financial advisors' capacity to recognize and overcome clients' behavior biases. Creating user-friendly information platforms that minimize information asymmetry and give retail investors the tools to make informed decisions is also essential for a long-term client relationship and for fostering financial wellness.

5.4. Limitation and Future Direction

It is important to consider the following limitations in this study, which it makes contributions to the behavioural finance literature. The study used a cross-sectional research design, and because of that, it was not possible to make causal inferences, as there were other possible causal pathways not excluded in the study. Longitudinal designs should be used in future research

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

to claim temporal precedence and enhance causal interpretations. Self-reported behavioural biases, FOMO, information asymmetry and investment decisions are vulnerable to social desirability bias, recall bias, and common method variance. While Harman's single-factor test did not suggest any problems with common method bias, future studies might use indices other than self-reports, such as actual trading records, and experimental designs might be used to explore causal relationships more directly. The study was done on a specific context of the Pakistan Stock Exchange and may not be generalizable to other contexts owing to institutional differences, regulatory framework, cultural differences and investors' attributes. It is recommended that this study be repeated in other market areas such as other emerging and developed markets and that cross cultural comparison be made. Other cognitive biases, like overconfidence, herding, availability, and loss aversion, could have interactions with FOMO and information asymmetry that impact investment decisions, but were not considered in the current study. The framework could be expanded in future studies to incorporate other behavioral biases, as well as studying the separate and synergistic impacts of these biases.

The measurement of information asymmetry was based on perceived rather than objective measures. Subjective indicators of asymmetry, such as investors' perceptions, are included here, but future studies might add objective measures (market transparency, analyst coverage, disclosure quality). The study considered FOMO as a mediator, however, the relationship between cognitive biases, FOMO, and investment decision could be bipolar and dynamically complex. More advanced methods, such as dynamic panel models or experience sampling methods, could be used in future research to investigate the time-varying nature of the relationships. Moreover, this study did not consider individual differences like financial knowledge, risk-taking, investment experience, demographic factors, and personality traits which can moderate the relationships observed. Additionally, the study did not specify the various kinds of investment decisions (e.g., stock selection, timing decisions, portfolio diversification) and the impact those relationships have on investment performance. Further studies may investigate the proposed framework in specific investment situations, and determine if the psychological factors are linked to better or worse investment results. The study took place over a particular time frame which could have had specific market conditions, and further research should explore the impact that these relationships have in other market conditions. It is interesting to note that the emphasis is on individual retail investors, and future research should investigate whether similar psychological processes are found in institutional investing situations.

The study also neglected to explore the impact of social media and digital platforms, which are increasingly seen as important sources of investment information and could exacerbate FOMO. In light of the current trends in social trading platforms and social media content pertaining to financial information, future studies should investigate the impact of digital information environments on the link between cognitive biases, FOMO, and investment decisions. Lastly, financial advisors' and social network's influence on financial decisions was not addressed in the study, and future research should consider whether their influence on financial choices has an impact on the psychological mechanisms related to investment behaviors.

5.5. Conclusion

This study aimed to analyze the multi-dimensional relationship between behavioral biases, psychological responses and informational conditions in making investment decisions among the retail investors of Pakistan. The study empirically tests the moderated-mediation between cognitive biases (anchoring and optimism), emotional response (FOMO), and perceived information asymmetry to determine the impact of FOMO on investment behavior, and results in robust evidence for the interplay. The study used a moderated-mediation framework to develop and empirically test how cognitive biases (anchoring and optimism), emotional response (FOMO), and perceived information asymmetry influenced investment behavior. The results show that the anchoring bias and the optimism bias significantly affect investment decisions, both directly and indirectly through the FOMO, which makes the FOMO as a psychological mechanism a key player in the transmission of the anchoring bias and optimism bias to investment behavior, and accounts for almost half of the total effects. Investors' feeling of being at a disadvantage in terms of information (information asymmetry) is a key boundary condition that exacerbates the mediation of the FOMO effect. The research is in line with the existing literature of behavioral finance and offers empirical evidence that the psychological factors found to be present in other markets are also present in this developing market in Pakistan.

The implications of the results of this study are significant. The results underscore two key takeaways for individual investors: the need for self-awareness and established decision-making processes to reduce the impact of cognitive biases and emotional reactions. The findings highlight the significance of information symmetry and transparent communication with clients for financial advisors and brokers to help ensure rational investment choices. Findings indicate the necessity for financial literacy initiatives, disclosure improvements, and behavioral measures for retail investors and market efficiency for policymakers and regulators. Nevertheless, the study has certain limitations that offer guidance for future research such as longitudinal

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

studies, objective measures, cross-cultural studies, further behavioral biases and individual differences.

Finally, this research offers a thorough knowledge of the combined effect of psychological and informational factors on investment decisions in emerging markets. The study, which combines the perspectives of behavioral finance, psychology, and information economics, provides a more comprehensive understanding of investor behavior, recognizing the multifaceted nature and complexity of financial decision-making. Overall, the results indicate that the rational decision-making based on objective information is not always present, but is strongly influenced by the cognitive biases, emotions, and information environments people experience. The acknowledgment has significant implications for theory, practice, and policy, and underscores the importance of a multi-disciplinary understanding and enhancement of investment behavior in increasingly complex financial markets.

References

- Abdalla, R., Al Aaraj, H., & Alam, Y. (2026). Behavioral Biases and Investor Decision-Making in the Saudi Stock Market: The Moderating Roles of Overconfidence and Loss Aversion in an Islamic and Oil-Dependent Economy. *Journal of Risk and Financial Management*, 19(7), 522.
- Ahmed, M., Almotairi, M. A., Ullah, S., & Alam, A. (2014). Mobile banking adoption: a qualitative approach towards the assessment of TAM model in an emerging economy. *Academic Research International*, 5(6), 248.
- Al Rahahleh, N. (2024). The influence of anchoring and overconfidence on investment decision-making in the Saudi stock market: A moderated mediation model. *Review of Middle East Economics and Finance*, 20(1), 45–75.
- Alam, A. F. T. A. B., Idris, E. A. A., Malik, O. M., & Gaadar, K. A. M. I. S. A. N. (2016). The relationship between tourism, foreign direct investment and economic growth: Evidence from Saudi Arabia. *European Academic Research*, 4(4), 4091-4106.
- Alam, A., Malik, O. M., Ahmed, M., & Gaadar, K. (2015). Empirical analysis of tourism as a tool to increase foreign direct investment in developing country: Evidence from Malaysia. *Mediterranean Journal of Social Sciences*, 6(4), 201-206.
- Alparizi, G. W., & Supryadi, D. I. (2026). The Influence of Social Media Influencers and Investment Motivation on Stock Purchase Intention, Moderated by Fear of Missing Out (FOMO), in the Capital Market Among Students of the University of Mataram. *Al-Kharaj: Journal of Islamic Economic and Business*, 8(2).
- Alparizi, G. W., & Supryadi, D. I. (2026). The Influence of Social Media Influencers and Investment Motivation on Stock Purchase Intention,

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

- Moderated by Fear of Missing Out (FOMO), in the Capital Market Among Students of the University of Mataram. *Al-Kharaj: Journal of Islamic Economic and Business*, 8(2).
- Badru, B. O., Ahmad, N. B. J., & Ghazali, Z. B. (2023). The effect of fear of missing out in the relationship between social media usage and impulsive buying among young adults. *Heliyon*, 9(3), Article e14788.
- Budiman, J., Ong, T., & Yuwono, W. (2025). Exploring Cognitive Bias Influence on Investment Decisions in Indonesia: The Mediating Role of FOMO. *Jurnal Economia*, 21(3), 432-446.
- Chowdhury, N. T., Mahdzan, N. S., & Rahman, M. (2026). Impact of behavioural biases on stock market participation in the context of emerging markets: the moderating role of financial knowledge. *South Asian Journal of Business Studies*, 15(1), 100-121.
- Dhevyanto, B. (2026). The Influence of FOMO (Fear of Missing Out) and Herding Behavior on Cryptocurrency Investment Decisions Among GIBEI Members in the Ciayumajakuning Region: The Mediating Role of Financial Literacy. *Al Tijarah*, 12(1), 122-129.
- Gatot, R., Sulistyowatie, S. L., & Amelia, R. W. (2026). ANALYSIS OF BEGINNER INVESTOR BEHAVIOR IN CHOOSING FOREX AND STOCK INVESTMENTS: A THEORY OF PLANNED BEHAVIOR PERSPECTIVE. *Widya Dharma Journal of Business-WIJoB*, 5(1), 75-85.
- Gerrans, P., Abisekaraj, S. J., & Liu, Z. F. (2023). The fear of missing out on cryptocurrency and stock investments: Direct and indirect effects of financial literacy and risk tolerance. *Journal of Financial Literacy and Wellbeing*, 1(1), 103-137.
- Ghosh, R. (2025). As investors sow, can they reap? Examining the moderating effect of investment opportunity on the relationship between financial literacy and investment decision. *Global Knowledge, Memory and Communication*, 74(5-6), 1954-1972.
- Hanif, S., Aftab, R., Zeeshan, A., Andleeb, R., & Ullah, K. (2026). Personality traits, availability bias, risk attitude and investment decisions: Moderating role of financial literacy and gender. *Acta Psychologica*, 266, 106853.
- Haq, F. I. U., Alam, A., Mulk, S. S. U., & Rafiq, F. (2020). The effect of stress and work overload on employee's performance: a case study of public sector Universities of Khyber Pakhtunkhwa. *European Journal of Business and Management Research*, 5(1).
- Hidayat-ur-Rehman, I., Ahmad, A., Ahmed, M., & Alam, A. (2021). Mobile Applications to Fight against COVID-19 Pandemic: The Case of Saudi Arabia. *TEM Journal*, 10(1).

Journal of Management Science

Research Review

<https://jmsrr.com/index.php/Journal/about>

Volume. 4 Issue No. 4 (2025)

Online ISSN: 3006-2047

Print ISSN: 3006-2039

- Khan, A. A. (2012). The role social of media and modern technology in arabs spring. *Far East Journal of Psychology and Business*, 7(1), 56-63.
- Khan, A. A., & Khan, M. (2010). Pakistan textile industry facing new challenges. *Research journal of international studies*, 14(14), 21-29.
- Mahaney, R. C., & Lederer, A. L. (2011). An agency theory explanation of project success. *Journal of Computer Information Systems*, 51(4), 102-113.
- Mahmood, F., Arshad, R., Khan, S., Afzal, A., & Bashir, M. (2024). Impact of behavioral biases on investment decisions and the moderation effect of financial literacy: An evidence of Pakistan. *Acta Psychologica*, 247, Article 104303.
- Mardiana, R., Yossinomita, Saputra, M. H., Ridwan, M., & Kartika, Y. D. (2025). Peran financial literacy dalam memediasi behavioral bias terhadap investment decision [The role of financial literacy in mediating behavioral bias towards investment decisions]. *Jurnal Manajemen dan Organisasi (JMO)*, 17(1), 24-42.
- Mayfield, C., Perdue, G., & Wooten, K. (2008). Investment management and personality type. *Financial Services Review*, 17(3), 219-236.
- Mishra, H., Shiv, B., & Nayakankuppam, D. (2008). The blissful ignorance effect: Pre- versus post-action effects on outcome expectancies arising from precise and vague information. *Journal of Consumer Research*, 35(4), 573-585.
- Mittal, S. K. (2022). Behavior biases and investment decision: theoretical and research framework. *Qualitative Research in Financial Markets*, 14(2), 213-228.
- Nguyen, X. H., Bui, D. A., Le, N. A., & Nguyen, Q. T. (2025). The role of fear of missing out (FOMO), loss aversion, and herd behavior in gold investment decisions: A study in the Vietnamese market. *International Journal of Financial Studies*, 13(3), 175.
- Pandelaki, Maureen Lucia Bernadette, Kenneth August Sahetapy, and Novie P. Sibilang. "The Effects of Overconfidence and Risk Perception on Generation Z Stock Investment Decisions: The Moderating Role of Financial Literacy." *Economics and Digital Business Review* 7, no. 1 (2026): 629-640.
- Rakshika, R. (2025). Unraveling FOMO Relations with Behavioral Biases on Investment Decision: A Study on the Psychology of Investor's Behavior. *Gyan Management*, 19(2), 131.
- Rehman, M. A., Finance, M. H., Ali, M., & Ahmad, M. (2025). Behavioral finance and market inefficiencies: Analyzing the influence of investor psychology, heuristics, and biases on stock market anomalies and investment decision-making. *Advance Journal of Econometrics and Finance*, 3(2), 54-67.

- Sawang, S., Lee, C. C., Chou, C. Y., Vighnesh, N. V., & Chandrashekar, D. (2023). Understanding post-pandemic market segmentation through perceived risk, behavioural intention, and emotional wellbeing of consumers. *Journal of Retailing and Consumer Services*, 75, 103482.
- Takács, J., & Seregély, B. (2025). Parallel mediation of FoMO and self-control on the relationship between problematic smartphone use and neuroticism, at-risk group's characteristics among young adults. *Acta Psychologica*, 260, 105608.
- Tansuchat, P., & Thaicharo, Y. (2025). Cognitive biases and investment choices: Exploring the psychological determinants of financial decision-making in Thailand. *Journal of Business and Economic Options*, 8(1), 43-60.
- Tansuchat, P., & Thaicharo, Y. (2025). Cognitive biases and investment choices: Exploring the psychological determinants of financial decision-making in Thailand. *Journal of Business and Economic Options*, 8(1), 43-60.
- Thabane, L., Ma, J., Chu, R., Cheng, J., Ismaila, A., Rios, L. P., Robson, R., Thabane, M., Giangregorio, L., & Goldsmith, C. H. (2010). A tutorial on pilot studies: The what, why and how. *BMC Medical Research Methodology*, 10, Article 1.
- Tresna, I. C., Usman, I., Siswono, T., & Rachmah, N. (2025). Fear of missing out (FOMO) in consumer behaviour: A systematic literature review on antecedents, consequences, and moderating factors. *Journal of information systems engineering and management*, 10(36s), 626-639.
- Waweru, N. M., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making: A survey of institutional investors operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets*, 1(1), 24-41.
- Xie, F., & Li, M. (2025). The role of FOMO and mindfulness in the relationship between mobile phone dependence and sleep quality among Chinese youth: a mediating and moderating analysis. *Frontiers in Psychology*, 16, 1632396.
- Zhang, M., Nazir, M. S., Farooqi, R., & Ishfaq, M. (2022). Moderating role of information asymmetry between cognitive biases and investment decisions: A mediating effect of risk perception. *Frontiers in Psychology*, 13, Article 828956.
- Zhou, R. (2025). The impact of scarcity promotions in live streaming e-commerce on purchase intention: the mediating effect of emotional experience. *Asia Pacific Journal of Marketing and Logistics*, 37(7), 1733-1749.