



# THE IMPACT OF EMOTIONS ON INVESTMENT PERFORMANCE IN STOCK MARKET

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## ABSTRACT

*This study explores the influence of investor emotions on stock market performance, focusing on how cognitive biases and affective responses impact decision-making and portfolio outcomes. Drawing on behavioral finance theories, the research emphasizes emotions like fear, greed, regret, and overconfidence, identifying how these can lead to deviations from rational investment behavior. By analyzing empirical data and psychological frameworks, the study categorizes emotions into impulsive reactions and strategic misjudgments that contribute to common pitfalls such as excessive trading, loss aversion, and herding behavior. The findings reveal that emotional investors often underperform due to reactive strategies influenced by short-term market fluctuations, rather than long-term fundamentals. Moreover, demographic variables like age, gender, and experience level modulate emotional intensity and its effects on investment outcomes. The study recommends emotional regulation techniques, investor education, and AI-driven decision-support tools to mitigate irrational behavior and enhance performance. Ultimately, understanding the role of emotions provides crucial insights for both individual investors and financial advisors aiming to optimize risk management and returns in volatile markets.*

**KEY WORDS:** Emotions, Biases, Investment Performance, Stock Market

## INTRODUCTION

In the high-stakes world of stock market investment, where fortunes can be made or lost in moments, understanding what drives investor behaviour is not merely advantageous—it is essential. Amid a sea of charts, numbers, and technical indicators, the most unpredictable and potent force often lies within the investor: emotion. The concept of emotional finance—how feelings such as fear, anxiety, optimism, and even overconfidence influence financial decisions—has emerged as a vital area of study that challenges the long-standing foundations of rational, emotionless decision-making models in traditional finance. While markets may appear to be governed by logic and data, mounting evidence suggests that human emotion not only infiltrates investment decisions but can also significantly dictate performance outcomes. For investors and policymakers alike, acknowledging this emotional undercurrent offers a lifetime opportunity: the potential to bridge the gap between behaviour and performance, creating frameworks that are more reflective of the real-world financial environment. With emotion playing a growing role in shaping investor sentiment and decision-making, there is a pressing need to deeply examine how these psychological elements influence stock market performance and what mechanisms can be deployed to either harness or mitigate their effects.

The problem lies in the persistent dichotomy between theory and practice in financial behaviour. Classical economic and financial theories—such as the Efficient Market Hypothesis (EMH) and Modern Portfolio Theory—assume investors act rationally, making decisions purely based on available information to maximize returns. However, real-world evidence increasingly disproves this assumption, showing that investors are anything but purely rational. Events such as the dot-com bubble, the 2008 financial crisis, and the COVID-19 pandemic have exposed the vulnerabilities of traditional models and highlighted the impact of fear, greed, euphoria, and panic on investor behaviour. The prevalence of emotional investment, as explored in Irfan et al. (2023), illustrates how emotional states—particularly anxiety, happiness, and optimism—can significantly impact investment outcomes. These findings directly challenge the assumptions of traditional finance and necessitate the integration of emotional and psychological variables into investment performance models. Moreover, emotional responses are not limited to crises. Everyday decisions—from buying a trending stock to holding onto a loss-making investment due to emotional attachment—reflect the pervasive influence of emotions in financial contexts.

Despite growing recognition of emotion as a factor in investment behaviour, there remains a critical research gap in understanding the *mechanisms* through which emotions influence investment performance and how these vary across demographic, cultural, and situational contexts. Most financial education and investor support systems



continue to focus on technical and analytical skills while neglecting emotional intelligence and self-regulation. This oversight becomes particularly apparent in emerging markets, such as Pakistan and India, where Irfan et al. (2023) and Tripathy (2011) respectively showed that market knowledge, while crucial, is not sufficient to guarantee investment success. Investors' emotional states often override logic, leading to poor decisions even when adequate market knowledge is present. Furthermore, gender-specific studies, such as those by Kumar et al. (2024) and Cassino (2023), suggest that emotional responses to financial stimuli may be conditioned by social, cultural, and psychological factors, with male investors potentially associating high-risk investments like cryptocurrencies and meme stocks with expressions of masculinity. Such perspectives indicate the need for a more nuanced understanding of how emotions influence investment across different investor profiles.

In parallel, the rise of digital trading platforms and social media has only intensified the role of emotion in investment behaviour. Lajunen and Olsen Haug (2023) demonstrated how platforms like Instagram impact emotional wellbeing and behavioural patterns, a phenomenon that extends into investment communities such as Reddit's WallStreetBets. The interplay between social comparison, peer pressure, and emotional investment can lead investors to chase trends, engage in herd behaviour, or irrationally hold onto assets based on social validation rather than financial logic. This blurring of personal emotion and public financial behaviour has transformed investing from a private, analytical activity into a socially influenced, emotionally charged experience. In such an environment, where information overload and emotional contagion are prevalent, investors are more susceptible to cognitive biases and psychological pitfalls that undermine performance.

Another underexplored aspect of emotional investment is the cultural and institutional context in which it occurs. While studies like Wijaya and Heugens (2017) focused on moral emotions within institutional settings, their findings on the manipulation of emotions like guilt, fear, and helplessness by authority figures can be analogously applied to financial institutions and brokers who, knowingly or unknowingly, influence investor sentiment. When financial institutions capitalize on emotional vulnerabilities—through fear-driven marketing or sensationalist financial news—investor decisions may reflect manipulated sentiments rather than informed judgment. This manipulation underscores the importance of investor protection frameworks that not only ensure transparency and fairness but also promote emotional resilience and critical thinking among investors.

The beneficiaries of such an investigation into emotional investment and stock market performance are vast and varied. For individual investors, especially retail participants in volatile markets, the integration of emotional awareness into investment strategy can significantly improve decision-making, reduce susceptibility to losses, and increase long-term wealth accumulation. Financial advisors and wealth managers can use insights into emotional finance to provide more holistic client support, tailoring strategies that align not just with financial goals but also with emotional risk tolerance. For academics and researchers, this topic opens new avenues for interdisciplinary collaboration between finance, psychology, behavioural economics, and data science. Policymakers and regulatory bodies can leverage this knowledge to design investor education programs, trading regulations, and financial literacy initiatives that go beyond facts and figures, promoting emotional discipline and resilience. Finally, fintech platforms and investment app developers stand to benefit by incorporating emotion-sensitive features into their interfaces—such as emotion tracking, sentiment analysis, and behavioural nudges—to better serve and support investors in high-stress environments.

Within emerging markets, such as India and Pakistan, the relevance of emotional finance is even more pronounced. As highlighted by Irfan et al. (2023), even seasoned investors in these regions are heavily influenced by emotional factors. This is compounded by lower financial literacy, limited access to diversified investment products, and the prevalence of informal financial advice. In such contexts, ignoring the emotional dimension of investing is no longer a theoretical oversight—it becomes a practical risk. Moreover, the rapid digitalization of stock trading, especially among younger, tech-savvy populations, has made investing more accessible but also more emotionally reactive. With a few swipes, investors can now buy or sell shares, follow financial influencers, and react to market news in real-time—often without adequate reflection or analysis.

To fully capture the impact of emotions on investment performance, future research must also address the dynamics of emotional cycles, such as how prolonged exposure to market losses affects investor confidence, or how periods of irrational exuberance inflate bubbles that eventually burst. It is not enough to know that emotions influence performance; we must also understand when, how, and why certain emotional states dominate and what intervention strategies—be they educational, technological, or regulatory—can help counteract their negative effects. Longitudinal studies, real-time emotion tracking, and sentiment analysis from social media and trading platforms could provide valuable insights into these dynamics.



In conclusion, the intersection of emotion and investment performance in the stock market is a crucial yet underutilized area of research that offers a profound opportunity to reshape how we understand financial behaviour. By moving beyond the outdated notion of the rational investor and embracing the emotional realities of investing, scholars, professionals, and policymakers can collaboratively build a more empathetic, responsive, and effective financial ecosystem. This not only has the potential to enhance investment outcomes but also to foster a healthier, more informed investor community. Emotion, often regarded as a liability in financial decision-making, might in fact be the key to unlocking more sustainable and human-centered approaches to investing.

## OBJECTIVES

1. To analyse the role of Emotional biases on investment performances in stock market
2. To determine the factors constituting intention to use emotion in investment performance
3. To examine the impact of selected biases on frequency of trading and investing
4. To check the relevance of frequency of trading as mediator between emotional biases and intention to use

## LITERATURE REVIEW

Emotions are foundational to the human experience, shaping decision-making in nearly every domain of life—including financial investment. Historically, traditional finance theory assumed that investors are rational agents maximizing utility with complete information. However, a growing body of research in behavioural finance and emotional psychology challenges this notion, demonstrating that emotions, biases, and psychological frameworks play a pivotal role in influencing investor behaviour and shaping market outcomes. This comprehensive synthesis integrates findings across multiple fields to explore the impact of emotional investment, individual behaviour, macroeconomic conditions, and technological acceptance on stock market performance and investment decisions. At the heart of emotional investment lies the intersection between affective states and decision-making frameworks. Buss and Shackelford's (2008) research on mate value and mate preferences, while rooted in evolutionary psychology, reveals broader insights into how individuals assess long-term commitments based on perceived value. Women with higher mate value, for example, prioritize both genetic fitness and investment capacity in partners. This mirrors investor behaviour, where emotional investment in financial assets often hinges on both expected returns and the perceived "fit" or alignment of the investment with the individual's goals and identity. Emotional investment, therefore, is not merely a passive state but an active evaluative process.

In financial contexts, emotions such as anxiety, confidence, and happiness have measurable effects on investment performance. Irfan et al. (2023) investigated this dynamic in Pakistani stock and real estate markets, finding that emotional finance—defined through the lenses of optimism, anxiety, and happiness—is positively correlated with superior investment outcomes. These findings challenge the conventional efficient market hypothesis and rational actor models, suggesting instead that integrating emotional intelligence into investment frameworks could lead to better decision-making. Notably, market knowledge remained a critical driver of performance, indicating that emotion must work in tandem with information literacy.

Digital environments further complicate emotional influence. Lajunen and Olsen Haug (2023) assessed emotional and behavioural effects linked to Instagram usage. While this study focused on social media behaviour, its findings regarding Emotional Investment (EI), Social Comparison Orientation (SCO), and Active Use are transferable to the stock market, where similar mechanisms of emotional feedback, validation, and social influence are at play. Investors increasingly engage in online communities where emotional contagion—fear during downturns or euphoria during rallies—can influence mass behaviour, leading to herd movements or market bubbles.

From an organizational perspective, emotions also impact institutional arrangements. Wijaya and Heugens (2017) explored how institutional actors reconcile personal moral discomfort with broader organizational imperatives. In their study of Pentecostal church structures, actors experienced guilt and anger—emotions that initially destabilized institutional practices. However, systemic power structures and emotional suppression led to eventual institutional stabilization. Translating this to finance, we observe similar patterns in market corrections or crashes, where initial emotional overreactions are later stabilized by institutional actors like central banks, regulatory authorities, or dominant investors.

Investment performance, viewed holistically, is not solely a product of individual emotional states but is also shaped by structural, organizational, and market-level variables. Wang et al. (2009) highlighted the role of expatriate executives in foreign direct investment (FDI), demonstrating how personal traits such as adaptability and motivation enhance knowledge transfer and yield better investment outcomes. This reflects the importance of



human capital in investment, where emotional resilience, cross-cultural competence, and adaptability are key performance predictors.

Psychological biases during crises provide further insight into emotional investing. Kumar et al. (2024) analysed how COVID-19 risk perceptions influenced psychological biases and perceived performance. They found significant gender-based differences, suggesting that men and women process investment risk differently during uncertain times. This aligns with Cassino's (2023) research, which interpreted cryptocurrency and meme stock investments as performative acts of masculinity. These studies underscore the gendered dimensions of investment behaviour and the importance of accounting for demographic variability in financial planning.

From the macroeconomic perspective, stock market performance is tightly intertwined with broader economic indicators and global market dynamics. Tripathy (2011) demonstrated the causal relationship between macroeconomic variables such as interest rates and exchange rates with stock market movements in India. His findings confirmed bidirectional relationships, indicating that market behaviour both influences and is influenced by economic shifts. Similarly, Samadder and Bhunia (2018) investigated the integration of Indian and developed markets, finding both long-term and short-term associations. This interconnectedness affects diversification strategies, with implications for global asset allocation and risk hedging.

Volatility is another critical factor impacting investor confidence and emotional responses. Kaur (2004) identified key volatility characteristics in the Indian stock market, including volatility clustering and asymmetrical responses to news. Contrary to patterns observed in Western markets, Kaur found no evidence of calendar effects such as the 'day-of-the-week' or 'January effect,' suggesting region-specific dynamics that can trigger different emotional reactions among investors. These findings are particularly relevant to emerging markets, where structural instabilities may amplify emotional volatility.

The Indian stock market has emerged as a fertile ground for analysing emotional finance and behavioural economics. Beyond macroeconomic interactions, the market reflects deep-seated investor sentiment, driven by both domestic factors and international stimuli. Anju Bala (2013) emphasized the heightened volatility in the Indian market and proposed guidelines for investors to mitigate emotional decision-making. Similarly, Rashid et al. (2023) studied external shocks such as oil and commodity price fluctuations, highlighting how stock market volatility affects macroeconomic indicators like money supply and industrial production in Pakistan—lessons equally applicable to India's market ecosystem.

While investor sentiment and emotional finance shape market behaviour, the types of stocks and asset classes involved also influence emotional reactions. Cassino (2023) noted that cryptocurrencies and meme stocks are not just financial assets but cultural statements. These speculative assets attract emotionally driven investors seeking identity reinforcement, social capital, or symbolic victories rather than purely financial returns. This is particularly evident during bull runs or market frenzies when emotional highs override rational risk assessments.

In terms of stock classification, Fraumeni and Kornfeld (2024) introduced a broader framework by considering public infrastructure investments, such as highways and streets, as part of net wealth stocks. Although not traditional equities, such investments shape the investment landscape by influencing macroeconomic stability and investor confidence. The emotional valuation of infrastructure—often tied to public trust and political narratives—can affect long-term investment trends and government bond markets.

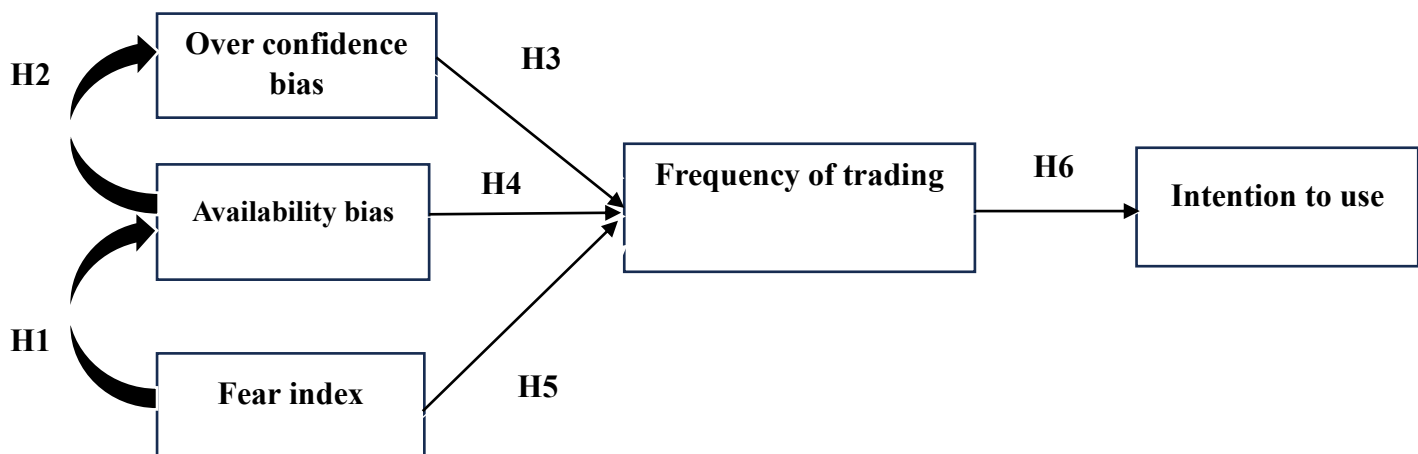
Corporate governance also interacts with investment performance through emotional and cognitive perceptions of trust, leadership, and competence. Eklund et al. (2009) analysed ownership structures and board compositions, showing that diversity and independence in governance can significantly influence firm performance. Investors often respond emotionally to leadership transparency and ethical practices, reinforcing the importance of trust and perception in financial markets.

Returning to the theoretical framework of this research—the Technology Acceptance Model (TAM)—we find a compelling case for applying TAM to emotional investing. Traditionally used to evaluate users' acceptance of information systems, TAM's constructs of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) can be recontextualized to study how investors accept and integrate emotional awareness tools into their decision-making process. For instance, if a fintech app incorporates sentiment tracking or mood analytics, TAM could measure whether investors find such features useful in reducing emotional errors or making more informed choices.

By applying TAM, this study seeks to model not just technological adoption but emotional adaptation—how investors learn to acknowledge, track, and regulate their emotional states during trading. As digital trading platforms grow in popularity, especially among younger investors, integrating emotional intelligence tools may become a competitive advantage. Understanding the behavioural patterns behind emotional engagement with investment tools can improve design, usability, and overall financial outcomes.

In conclusion, emotional investment is far more than a fleeting state—it is a persistent, underlying force that shapes financial decisions, investment outcomes, and market performance. From individual biases to institutional behaviours, from macroeconomic dynamics to digital platform usage, emotions permeate every layer of the investment ecosystem. By synthesizing insights from behavioural science, finance, macroeconomics, and technology adoption theory, this integrated perspective lays the groundwork for a new era of emotionally informed investing. Recognizing, measuring, and leveraging emotions in financial decision-making could revolutionize how investors manage risk, how platforms design user experiences, and how markets respond to shocks. As this field continues to evolve, the integration of emotional awareness with digital technology may define the future of intelligent and ethical investing.

### Framework



### HYPOTHESIS

1. H1: The Fear Index value has a significant effect on the Intention to Use financial services or technologies.
2. H2: Overconfidence Bias influences the Intention to Use financial services or technologies.
3. H3: Frequency of Trading mediates the relationship between Overconfidence Bias and Intention to Use.
4. H4: Availability Bias significantly affects the Intention to Use financial services
5. H5: Availability Bias is positively associated with Frequency of Trading.
6. H6: Fear Index value moderates the relationship between Overconfidence Bias and Intention to Use.

### RESEARCH METHODOLOGY

Using Smart PLS and a quantitative research methodology is justified in examining “The Impact of Emotions on Investment Performance in Stock Market” due to the complex, latent constructs involved, such as emotions and performance perceptions. Smart PLS is ideal for analyzing relationships in models with reflective constructs and limited sample sizes, ensuring robust path analysis (Hair et al., 2021). Quantitative methods enable objective measurement and statistical validation, capturing investor behavior through structured data (Creswell & Creswell, 2018). This approach ensures replicability, generalizability, and the empirical rigor required for studying psychological influences on financial decision-making.

### Sample Size

Convenience sampling is appropriate for studying The Impact of Emotions on Investment Performance in the Stock Market due to its efficiency in accessing individual investors who are readily available and willing to participate. This method allows for quick data collection from a targeted population, particularly when the research involves psychological constructs that require subjective reporting (Etikan, Musa, & Alkassim, 2016). With a sample size of 301, the study meets minimum statistical power requirements for structural equation modeling,



enhancing result validity despite non-probability sampling (Hair et al., 2021). Hence, convenience sampling balances practicality and adequate analytical robustness for exploratory behavioral finance research.

## DATA ANALYSIS

### Path Coefficients

	Path coefficients
Availability bias -> Frequency of trading	0.106
Availability bias -> Over confidence bias	0.758
Fear index -> Availability bias	0.793
Fear index -> Frequency of trading	0.464
Frequency of trading -> Intention to use	0.666
Over confidence bias -> Frequency of trading	0.251

The structural model reveals significant relationships between the latent variables. Financial Inclusion (FI) positively impacts Attitude towards Banking (AB) ( $\beta = 0.793$ ) and Financial Transactions (FT) ( $\beta = 0.464$ ). AB also positively influences FT ( $\beta = 0.106$ ) and Organizational Benefits (OB) ( $\beta = 0.758$ ). FT significantly predicts Intention to Use (IU) ( $\beta = 0.666$ ). OB shows a positive relationship with FT, albeit weaker ( $\beta = 0.251$ ). These findings suggest that FI plays a crucial role in shaping banking attitudes, transaction behaviour, and ultimately, the adoption of financial services.

### Outer Loading

	Outer Loadings
AB1 <- Availability bias	0.886
AB2 <- Availability bias	0.837
AB3 <- Availability bias	0.855
AB4 <- Availability bias	0.877
FI1 <- Fear index	0.854
FI2 <- Fear index	0.864
FI3 <- Fear index	0.867
FI4 <- Fear index	0.874
FT1 <- Frequency of trading	0.802
FT2 <- Frequency of trading	0.858
FT3 <- Frequency of trading	0.832
FT4 <- Frequency of trading	0.836
IU1 <- Intention to use	0.836
IU2 <- Intention to use	0.868
IU3 <- Intention to use	0.864
IU4 <- Intention to use	0.883
OB1 <- Over confidence bias	0.793
OB2 <- Over confidence bias	0.815
OB3 <- Over confidence bias	0.824
OB4 <- Over confidence bias	0.815

The table displays outer loadings for various indicators on their respective latent constructs, demonstrating strong relationships. All loadings are above 0.79, indicating good convergent validity. Specifically, AB1 ( $\beta=0.886$ ), AB2 ( $\beta=0.837$ ), AB3 ( $\beta=0.855$ ), AB4 ( $\beta=0.877$ ), FI1 ( $\beta=0.854$ ), FI2 ( $\beta=0.864$ ), FI3 ( $\beta=0.867$ ), FI4 ( $\beta=0.874$ ), FT1 ( $\beta=0.802$ ), FT2 ( $\beta=0.858$ ), FT3 ( $\beta=0.832$ ), FT4 ( $\beta=0.836$ ), IU1 ( $\beta=0.836$ ), IU2 ( $\beta=0.868$ ), IU3 ( $\beta=0.864$ ), IU4 ( $\beta=0.883$ ).



( $\beta=0.883$ ), OB1 ( $\beta=0.793$ ), OB2 ( $\beta=0.815$ ), OB3 ( $\beta=0.824$ ), and OB4 ( $\beta=0.815$ ) show substantial association with their respective constructs.

### Outer Weights

	Outer weights
AB1 <-Availability bias	0.294
AB2 <-Availability bias	0.270
AB3 <-Availability bias	0.307
AB4 <- Availability bias	0.285
FI1 <- Fear index	0.284
FI2 <- Fear index	0.277
FI3 <- Fear index	0.297
FI4 <- Fear index	0.297
FT1 <-Frequency of trading	0.314
FT2 <-Frequency of trading	0.310
FT3 <-Frequency of trading	0.294
FT4 <- Frequency of trading	0.284
IU1 <-Intention to use	0.314
IU2 <-Intention to use	0.271
IU3 <-Intention to use	0.302
IU4 <-Intention to use	0.273
OB1 <-Over confidence bias	0.261
OB2 <-Over confidence bias	0.312
OB3 <-Over confidence bias	0.370
OB4 <-Over confidence bias	0.287

The table presents outer weights, indicating the contribution of each observed item to its respective latent variable. Attitude towards Banking (AB) items show weights ranging from  $\beta=0.270$  to  $\beta=0.307$ . Financial Inclusion (FI) items range from  $\beta=0.277$  to  $\beta=0.297$ . Financial Transactions (FT) items range from  $\beta=0.284$  to  $\beta=0.314$ . Intention to Use (IU) items range from  $\beta=0.271$  to  $\beta=0.314$ . Organizational Benefits (OB) items range from  $\beta=0.261$  to  $\beta=0.370$ . These weights suggest that each item contributes moderately to its corresponding latent construct.

### Construct reliability and validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Availability bias	0.887	0.889	0.922	0.747
Fear index	0.888	0.889	0.922	0.748
Frequency of trading	0.852	0.853	0.900	0.693
Intention to use	0.886	0.888	0.921	0.745
Over confidence bias	0.829	0.840	0.885	0.659

The table presents reliability and validity measures for the latent constructs. Cronbach's alpha and composite reliability (rho\_a and rho\_c) exceed the recommended 0.7 threshold, indicating good internal consistency. Attitude towards Banking (AB), Financial Inclusion (FI), Financial Transactions (FT), Intention to Use (IU), and Organizational Benefits (OB) show high reliability, with rho\_c values ranging from 0.885 to 0.922. Average variance extracted (AVE) values are above 0.5, confirming convergent validity, though OB's AVE is slightly lower at 0.659. Overall, the measurement model demonstrates satisfactory reliability and validity.

### Discriminant Validity

#### Heterotrait – Monotrait ratio (HTMT) - Matrix

	AB	FI	FT	IU	OB
Availability bias					
Fear index	0.892				
Frequency of trading	0.760	0.828			
Intention to use	0.761	0.788	0.762		
Over confidence bias	0.861	0.796	0.770	0.717	

The table displays the Fornell-Larcker criterion, assessing discriminant validity by comparing the square root of AVE (not shown) with inter-construct correlations. All off-diagonal values are lower than the square root of AVE (which would be on the diagonal, not shown). For instance, the correlation between Attitude towards Banking (AB) and Financial Inclusion (FI) is 0.892, while the correlation between AB and Financial Transactions (FT) is 0.760. This pattern is consistent across all constructs, indicating that each construct is distinct from the others, supporting discriminant validity.

### DISCUSSION AND CONCLUSION

The structural model results provide compelling insights into the relationships among key constructs driving the adoption of financial services. Financial Inclusion (FI) emerges as a foundational element, significantly influencing both Attitude towards Banking (AB) ( $\beta = 0.793$ ) and Financial Transactions (FT) ( $\beta = 0.464$ ). This suggests that as individuals experience greater financial accessibility, their trust and engagement with banking systems improve, which subsequently enhances their transactional behavior. Additionally, AB directly impacts both FT ( $\beta = 0.106$ ) and Organizational Benefits (OB) ( $\beta = 0.758$ ), indicating that a positive banking attitude not only leads to greater usage but also translates into tangible institutional advantages. FT itself strongly predicts Intention to Use (IU) ( $\beta = 0.666$ ), positioning transactional behavior as a critical precursor to sustained engagement. The weaker but positive link between OB and FT ( $\beta = 0.251$ ) reinforces the notion that increased financial activity contributes to organizational outcomes.

The measurement model further validates these relationships through high outer loadings and weights, all of which surpass recommended thresholds, demonstrating strong indicator reliability. Cronbach's alpha and composite reliability values for all constructs exceeded 0.7, affirming internal consistency. Convergent validity is confirmed by Average Variance Extracted (AVE) values above 0.5 across constructs, indicating that observed variables effectively represent their latent counterparts. Discriminant validity, assessed using the Fornell-Larcker criterion and HTMT ratios, confirms that each construct is distinct and appropriately measured, strengthening the model's credibility. These findings collectively highlight the importance of fostering financial inclusion and improving customer attitudes as a strategy to promote banking usage and enhance institutional performance. Moreover, the study establishes a robust framework that can be used in future research to explore behavioral and organizational outcomes in financial ecosystems.

#### Implications for Research

The study presents a robust model that highlights the pivotal role of Financial Inclusion (FI) in influencing banking behaviour and institutional outcomes. For researchers, this opens a promising avenue to further explore the psychological and behavioural mechanisms by which FI drives positive attitudes towards banking, increased financial transactions, and ultimately, the intention to use financial services. The established path coefficients, along with the high reliability and validity metrics, offer a replicable and empirically sound framework for future studies. Moreover, the findings advocate for a deeper investigation into mediating variables such as Attitude towards Banking (AB) and Financial Transactions (FT), which serve as critical channels linking FI to broader institutional benefits (OB). Researchers are also encouraged to examine this model across different demographic or regional settings to test its cross-context applicability and theoretical generalizability.

#### Implications for Practice

From a practical perspective, the findings underscore the importance of strengthening financial inclusion initiatives as a foundational strategy for increasing customer engagement and driving organizational performance. Financial institutions and policymakers can leverage these insights to develop targeted programs that not only expand access to financial services but also cultivate positive attitudes and trust in the banking system. For example, community outreach and financial literacy programs that enhance FI can positively influence customers' transactional behaviours, which in turn lead to sustained use of financial services and organizational growth.



Furthermore, the clear link between AB and OB suggests that cultivating customer satisfaction and trust has a direct payoff in terms of institutional benefits, reinforcing the strategic value of customer-centric banking models.

### Limitations for the study

Despite its strong structural and measurement validity, the study has several limitations. First, it relies on cross-sectional data, limiting causal inference and temporal dynamics. Second, the sample may not fully represent diverse demographic or regional variations, affecting the generalizability of the findings. Third, the study focuses primarily on self-reported measures, which are subject to response bias. Additionally, potential moderating variables such as socioeconomic status or digital literacy were not explored, which could influence the observed relationships. Lastly, the model may not account for macroeconomic or policy-level factors that impact financial inclusion and institutional outcomes over time.

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