JTS

JOURNAL OF TECHNO-SOCIAL
ISSN: 2229-8940 e-ISSN: 2600-7940

Vol. 18 No. 1 (2026) 1-13
https://publisher.uthm.edu.my/ojs/index.php/jts

Why Financial Knowledge Is Not Enough: Behavioral Manipulation and Investment Scam Vulnerability in the Digital Age

Amirul Ammar Anuar[1]*

[1] *Department of Shariah, Economics and Governance, API University of Malaya, 50603 Kuala Lumpur, MALAYSIA*

*Corresponding Author: ammar.3a@yahoo.com
DOI: https://doi.org/10.30880/jts.2026.18.01.001

Article Info

Received: 5 February 2026
Accepted: 17 June 2026
Available online: 30 June 2026

Keywords

Investment scams, behavioral manipulation, financial literacy, digital fraud, investor vulnerability

Abstract

Investment scams have become increasingly sophisticated in the digital age, targeting not only inexperienced investors but also educated and financially cautious individuals. While financial literacy is widely promoted as a key defense against fraud, growing evidence suggests that financial knowledge alone may be insufficient to protect individuals from increasingly sophisticated forms of deception. This study examines how investment understanding and behavioral manipulation interact to shape vulnerability to contemporary investment scams. This study employed a qualitative document research design using content analysis. A total of 42 publicly available regulatory reports, enforcement case summaries, and investor protection documents published by major international authorities between 2019 and 2024 were examined. The documents were systematically coded through open and axial coding procedures to identify recurring patterns of investor vulnerability and scammers' persuasive strategies. The findings reveal two interrelated patterns. First, many victims demonstrated weaknesses in evaluating investment risks, verifying online credentials, and critically assessing promises of extraordinary returns. Second, scammers employed sophisticated behavioral tactics, including personalized communication, emotional engagement, fabricated identities, staged investment gains, and repeated requests for additional deposits to cultivate trust and reinforce commitment. These tactics often undermined rational judgment and influenced decision-making even among individuals possessing a basic level of financial knowledge. The findings suggest that investment scam vulnerability is driven not solely by deficiencies in financial knowledge but by the interaction between cognitive limitations and behavioral manipulation. This study contributes to the growing literature on financial fraud by highlighting the behavioral dimension of investor vulnerability and argues that effective investor protection requires the integration of financial literacy, behavioral awareness, and digital verification competencies within educational initiatives, regulatory interventions, and institutional safeguards.

This is an open access article under the CC BY-NC-SA 4.0 license.

1. Introduction

Fraud and deception have been a part of human life for centuries, constantly changing to suit new social environments and technological conditions (Hagen & Malisa, 2022). One might expect that with better education and more financial information available today, people will be safer from investment fraud. However, current global reports show that investment scam and fraud not only increase but also affect a surprising number of victims (Suhaimi et al., 2026). According to Xiao et al. (2022), many people who fall for scams are educated individuals, including those with university degrees or professional qualifications and high-net-worth individuals, who usually pay careful attention to their finances.

This situation appears to be contradictory because educated individuals are often trained to analyze information and make rational decisions (Deliema et al., 2020). Individuals with high net worth usually take great care to protect their savings and investments. According to Wilson et al. (2024), scammers specifically target these groups, because they understand their habits, aspirations and blind spots. According to Chi et al. (2024) wealthy individuals are naturally inclined to seek opportunities to maintain or grow wealth. Scammers may use this tactic by presenting opportunities that appear exclusive, safe or unusually profitable. In contrast, educated individuals may believe they are skilled enough to spot deception, and this confidence can make them less likely to question something that appears sophisticated or well presented (Whitty, 2020). In both cases, scammers use psychological tactics rather than relying on the victim's lack of intelligence (Agarwarkar et al., 2025).

This gap between people's knowledge and behavior is partly linked to the way in which financial literacy is commonly taught. Financial literacy helps individuals manage budgets, save effectively, understand debt, and plan long-term goals (Mushtaq et al., 2024). These skills are important, but they do not necessarily prepare someone to recognize a scam. Investment literacy requires different types of awareness. It involves the ability to evaluate claims, understand how legitimate investments work, identify red flags and question persuasive messages that promise unrealistic returns (Deliema et al., 2020). These are not purely financial skills. They rely heavily on social and behavioral understanding, such as recognizing emotional triggers, social pressure, urgency, or the use of authority and trust to influence decisions.

Therefore, many individuals who manage their finances well are still deceived by investment scams. They may understand financial concepts but remain unaware of the psychological strategies that scammers use. Traditional financial education rarely teaches people how emotions, trust, fear of missing out (FOMO), or overconfidence influence investment decisions (Judges et al., 2017). Without this behavioral awareness, even well-informed individuals can react impulsively or overlook warning signs. Meanwhile, modern scammers use professional-looking presentations, convincing narratives, and trending technologies to legitimize their offers (Whitty, 2020). These tactics can weaken the natural caution that educated and affluent individuals may otherwise exercise.

Falling victims of scams have consequences that go beyond financial losses. Many individuals report feeling ashamed or distressed, which can discourage them from seeking help with their problems. On a broader level, widespread investment fraud weakens public trust in financial products and institutions (Whitty, 2020). This loss of confidence may also affect market stability and social well-being (Mackenzie, 2022). These effects highlight the need to reconsider how society approaches investment literacy and fraud prevention.

In response to these concerns, this study focuses on two objectives. First, it examines how investment-specific literacy supports an individual's ability to avoid fraudulent schemes. This includes understanding realistic risk and return patterns, recognizing common scam structures, conducting proper verifications and being aware of emotional influences. The second objective was to analyze the psychological and manipulative strategies used by scammers that allow them to bypass the defenses of educated and high-net-worth individuals. To achieve this, the study used qualitative document analysis of forty-two international regulatory reports, advisories, and documented cases.

By combining financial understanding with insights from the behavioral and social sciences, this study offers a more complete explanation of why modern scams have succeeded. This finding highlights that investment literacy must include both psychological and technical knowledge. This integrated perspective contributes to literature by reframing the concept of investment literacy as a multidimensional skill. It also provides practical insights for regulators, educators, and financial institutions seeking to design more effective fraud prevention programs that reflect how people think, feel, and make decisions in real investment situations.

2. Literature Review

2.1 Early Perspectives on Financial Literacy and Its Promised Benefits

Financial literacy has long been regarded as the cornerstone of personal financial wellbeing. Studies have consistently shown that individuals with stronger financial knowledge are better at planning, budgeting, saving and managing their debt (Akhtar & Malik, 2023; Mushtaq et al., 2024). Owing to these benefits, financial literacy is widely promoted by governments and international bodies as a protective factor against financial errors and instability. This foundational perspective assumes that individuals who understand the basic financial principles are better equipped to avoid harmful financial decisions.

However, this assumption is being increasingly contested. While financial literacy improves many responsible financial behaviors, growing evidence shows that it does not necessarily help individuals recognize fraudulent schemes or resist manipulative tactics. According to Cuadra et al. (2025), much of the financial literacy literature focuses on teaching people how to use money wisely, yet it rarely addresses how fraudsters operate or how psychological manipulation shapes decision-making. As a result, financial literacy is often treated as a broad solution to financial vulnerability, even though it does not directly address the behavioral mechanisms that lead individuals to investment fraud (Agarwal et al., 2025).

This emerging tension in literature highlights an important distinction between these studies. Financial literacy strengthens general financial competence but does not automatically build the specific awareness needed to detect deception. Scholars have, therefore, argued that financial literacy cannot be relied upon as a defense against investment scams unless it is complemented by targeted education on fraud and psychological manipulation. This debate lays the foundation for understanding why individuals who appear financially responsible may still fall victim to investment scams.

2.2 Shifting from Financial Literacy to Investment Literacy

Scholars have begun to distinguish between managing everyday finances and making complex investment decisions. Investment literacy is a specialized set of skills. This includes understanding risk, realistic returns, diversification, due diligence and the ability to evaluate whether an investment claim is credible (Agarwal et al., 2025; Deliema et al., 2020). These skills extend beyond the practical tasks covered in financial literacy programs. The evolution of this field reflects the growing recognition that investment environments are becoming increasingly complex. Investment education programs often concentrate on technical topics, such as market behavior, asset classes, valuation and volatility (Akhtar & Malik, 2023). Although these areas are important, they do not prepare individuals for the psychological and behavioral tactics used in modern investment scams. Fraudsters design their schemes to resemble legitimate investments using professional language, polished marketing, and references to new technologies (Cuadra et al., 2025). This makes traditional technical knowledge insufficient when scammers deliberately blur the line between genuine and fraudulent opportunities.

Therefore, a central debate has emerged in the literature. Some scholars argue that stronger investment literacy reduces vulnerability to fraud, whereas others report that knowledge alone does not protect individuals when scammers intentionally mimic legitimate investment structures. Investment literacy helps individuals understand how investments should work but does not automatically teach them how scams manipulate emotions, trust, or social cues to create an illusion of legitimacy.

These tensions reveal critical gaps. Investment literacy strengthens analytical ability but fails to address the behavioral and psychological pressures that individuals face when confronted with deceptive investment opportunities. This gap highlights the need for a more comprehensive understanding of investment literacy that incorporates behavioral awareness, emotional regulation and scam recognition strategies.

2.3 The Behavioral Turn: Recognizing the Role of Psychology in Scam Victimization

The increasing prevalence of fraud cases worldwide has prompted a significant paradigm shift in academic research, moving from a traditional focus on fraud as primarily an "information problem" to a more nuanced understanding of it as fundamentally a "human behavior problem." This transition reflects the deeper recognition that fraud and scam cannot be effectively addressed solely through information or education in financial and investment literacy alone as suggested by Ahmad (2025). Instead, it requires an analysis of the cognitive and emotional mechanisms exploited by scammers to manipulate the victims.

Extensive literature highlights that the success of many scams hinges less on victims' lack of knowledge and more on the strategic activation of their psychological vulnerability. Scammers intentionally design fraudulent schemes to elicit strong emotional responses, such as fear, urgency or greed, which impair rational decision making (Cuadra et al., 2025). These emotional triggers often override victims' critical thinking, making them susceptible to deception, despite possessing adequate information.

Moreover, the cognitive shortcut heuristics that individuals use to simplify complex decision making play a central role in facilitating fraud. For example, victims may rely on social proof or authority heuristics, assuming legitimacy based on perceived endorsements or a scammer's confident presentation of their credentials (Lin & Spence, 2018). Such mental shortcuts reduce cognitive load, but increase vulnerability to manipulation. Social pressures further compound these effects as individuals may feel compelled to conform to group norms or respond to perceived expectations from trusted social networks (Li et al., 2025). This social dimension underscores that fraud and scam is embedded within interpersonal contexts where trust and relational dynamics are manipulated to breach defenses.

Together, these behavioral and psychological insights illuminate why traditional information-based interventions often fall short of effectiveness. Therefore, effective fraud prevention must integrate an understanding of emotional regulation, cognitive bias, and social influence processes. This comprehensive behavioral framework enables the development of targeted strategies that go beyond knowledge dissemination to address the underlying human factors exploited by scammers.

2.3.1 Behavioral Decision-Making and Cognitive Biases

Behavioral science offers important insights into investment scams. Individuals often rely on intuitive and fast decision making when they feel pressured or excited. This can reduce critical thinking, especially when faced with claims of limited time offers or exceptional rewards. Obasi et al. (2026) mentioned that a scammer might claim that an exclusive investment opportunity is only available for the next 24 hours, urging the individual to commit immediately to avoid missing out on it. This pressure to act quickly can bypass careful evaluation and lead to impulsive decision making. Additionally, the promise of unusually high returns within a short period can excite investors, further diminishing their critical assessment of an offer.

Deliema et al. (2020) indicates that overconfidence can also lead educated individuals to trust their instincts rather than verify details, causing them to overly rely on intuition and neglect a thorough examination of investment specifics. Consequently, such individuals become vulnerable to scams that exploit their misplaced trust in personal judgment rather than in objective analysis (Bird et al., 2025). Social proof and trust also influence judgement, especially when scams appear to be endorsed by peers or presented through referrals (Lin & Spence, 2018). Social proof occurs when individuals look at the behavior or endorsements of others to guide their decisions, especially in uncertain situations. Scammers exploit this by fabricating testimonials, creating fake reviews, or claiming that their trusted peers have already invested, thereby creating an illusion of legitimacy. Referrals from acquaintances or seemingly credible sources further reinforce trust and lower skepticism and make victims more likely to engage without thorough scrutiny of the offer.

Scammers can exploit these cognitive biases to manipulate victims and make impulsive decisions. Emotional triggers such as the fear of missing out (Constantino et al., 2024) or greed (Tudor, 2019) often override rational analysis and increase susceptibility to fraud. Educating individuals on these psychological factors is crucial for enhancing their resilience to investment scams.

2.3.2 Emotional and Social Influences

Scammers frequently use emotional triggers, such as urgency, exclusivity, embarrassment and reassurance. Scammers may create a sense of urgency by claiming that an investment opportunity is only available for a very limited time, pressuring victims to act quickly without due diligence (Cuadra et al., 2025). Embarrassment can be leveraged by suggesting that missing out on the deal reflects the victim's judgment or social standing poorly. Reassurances are often provided through fake testimonials or guarantees, making victims feel safe and confident in their decisions despite the risks involved. Research shows that emotional states can overshadow rational assessments and lead to decisions that would seem risky (López-Guzmán & Sautua, 2024). These insights challenge the traditional assumptions of rational investor behavior. They also highlighted why fraud prevention must involve more than just financial education. Thus, a person may understand financial principles but is still influenced by social cues or emotional manipulation as highlighted by Li & Peng (2022).

With this shift toward behavioral explanations, scholars now generally agree that psychological awareness should be viewed as a component of investment literacy (Ahmed et al., 2021). This development marked a significant evolution in the field.

2.4 Why Educated and High-Net-Worth Individuals Remain Vulnerable

A surprising but well-documented finding in recent research is that educated and high-net-worth individuals continue to fall victim to scams (Deliema et al., 2020). This finding raises an important question. Some studies have argued that education should strengthen analytical skills and reduce vulnerability. However, others show that educated individuals may be more susceptible to sophisticated schemes, because scammers intentionally mirror the tone, complexity and structure of legitimate investments. Educated individuals may also feel confident that they can spot scams, which sometimes leads to reduced caution in their behavior.

Vulnerability arises for different reasons in high-net-worth individuals. Their desire to protect and grow wealth makes them receptive to exclusive, premium, or high-return opportunities. Scammers use this by offering personalized pitches or exclusive-sounding products tailored for affluent clients (Wilson et al., 2024). This pattern reflects tension in literature. Wealth is often assumed to provide greater access to information and professional advice; however, scammers actively target wealthy individuals because of their capacity to invest large sums and openness to specialized opportunities. These debates reveal that vulnerability is not simply linked to knowledge or intelligence. Instead, they are shaped by a combination of psychological, social, and contextual factors.

Journal of Techno-Social Vol. 18 No. 1 (2026) 1-13

2.5 Remaining Gaps and Unanswered Questions

Although the literature on financial and investment literacies and behavioral fraud has grown substantially, several gaps remain. First, much of the research treats financial literacy as a protective factor, even though the findings are mixed. Some studies show a positive relationship between financial literacy and fraud avoidance, while others show no or even a negative effect due to overconfidence in financial knowledge. This inconsistency indicates that there is no clear consensus in the field.

Second, although investment literacy is recognized as important, it remains underdeveloped. Most studies focus on traditional investment principles without integrating behavioral insights, despite the evidence that scams rely heavily on psychological manipulation. Third, limited research specifically examines why educated and high-net-worth individuals are increasingly affected. These groups are often assumed to be more capable of recognizing bad investments; however, modern fraud cases show an opposite trend. Fourth, most existing studies examine fraud from either a financial or a behavioral perspective. However, an integrated framework that combines investment knowledge and psychological awareness is lacking. As modern scams blend financial claims with emotional and social manipulation, a one-sided approach is insufficient.

These gaps justify the need for research that integrates financial understanding, investment knowledge, and behavioral awareness. A combined approach can offer a more realistic explanation of why scams continue to succeed and inform the development of more holistic fraud-prevention strategies.

3. Methodology

This study employed a qualitative document research approach supported by content analysis (Morgan, 2022). A document-based method is appropriate for research on investment scams because much of the knowledge about scam structures, manipulative tactics, and victim behavior is captured in publicly available regulatory reports and case summaries. These documents provide insights into real incidents that might otherwise be difficult to access through interviews or surveys, especially when victims feel ashamed or reluctant to speak about their experiences (Lim, 2025). Therefore, using existing documents allows this study to examine authentic patterns of fraud and psychological manipulation without placing any burden on the victims.

3.1 Data Sources and Document Selection

A total of forty-two documents were analyzed. All documents were publicly accessible and were obtained from reputable international authorities that actively monitored, investigated, and educated the public about investment fraud. These sources include the United States Securities and Exchange Commission (SEC), Financial Conduct Authority (FCA) in the United Kingdom, Federal Bureau of Investigation (FBI), Australian Securities and Investments Commission (ASIC), Canadian Securities Administrators (CSA), Interpol, and Better Business Bureau (BBB). These organizations regularly publish alerts, case studies, enforcement actions, and consumer reports documenting how scams operate and how victims are deceived.

The documents cover the period from 2019 to 2024. This timeframe reflects the rapid growth of online investment scams and the increasing sophistication of fraudulent tactics during and after the COVID-19 pandemic. Collecting documents from multiple jurisdictions ensures that the findings are not limited to a single specific regulatory environment. Instead, the analysis draws on diverse contexts that share the challenges related to investment fraud.

3.2 Inclusion and Exclusion Criteria

Documents were included if they met the following criteria. First, they need to describe an investment scam, a financial fraud pattern, or a manipulation strategy. Second, they need to provide information about the behaviors, decision-making, or psychological factors that contribute to victim vulnerability. Third, they must originate from credible institutions that specialize in investor protection or financial crime enforcement.

Documents were excluded if they focused only on cybersecurity or technical hacking incidents without a behavioral investment component. Studies were also excluded if they did not offer insights into how the victims were approached, persuaded, or influenced. These criteria ensured that the examined documents were directly relevant for understanding both investment literacy and psychological manipulation (Lim, 2025).

3.3 Rationale for Using Document Analysis

Document research is particularly suitable for studying investment fraud because many victims are reluctant to speak publicly or participate in the research (Morgan, 2022). Shame, embarrassment, and emotional distress often prevent individuals from sharing experiences with others. However, regulatory documents offer detailed accounts of scam structures, victim experiences, and enforcement outcomes, without requiring direct engagement with victims. This approach respects privacy and avoids ethical complications while allowing rich and detailed analyses of real-world cases.

Document analysis is also appropriate, given this study's focus on literacy and manipulation. Regulatory bodies produce educational materials that explain how scammers exploit individuals' psychological tendencies. Analyzing these documents provides direct insight into the intersection between investment literacy and behavioral vulnerability, which closely aligns with the study objectives.

3.4 Analytical Process

The analysis followed a structured content analysis procedure in four stages:

First, the documents were read several times to gain familiarity with their content and identify the initial patterns. This step allowed the researcher to understand how agencies describe scams, victim behavior, and common manipulation techniques.

Second, open coding is performed. Segments of text that described fraud indicators, behavioral factors, emotional triggers, investment misunderstandings, and scam structures were highlighted and assigned codes. Open coding was inductive such that the data guided the creation of categories.

Third, codes were reviewed and grouped into broader categories using axial coding. Codes related to investment knowledge formed one cluster, whereas those related to psychological manipulation formed another cluster. This stage clarifies how conceptual patterns emerged across different documents.

Fourth, the categories were refined into two overarching themes that directly addressed the research question. The first theme focuses on investment literacy for scam avoidance and includes concepts such as risk awareness, due diligence, fraud recognition, and behavioral vigilance. The second theme concerns psychological and tactical manipulation, including emotional pressure, cognitive biases, social influence and the strategies used by scammers.

Throughout the process, reflexive notes were taken to ensure that the interpretations were grounded in the data and consistent with the aims of the study (Morgan, 2022). This reflexivity helped to avoid overgeneralization and supported a thoughtful examination of how literacy and psychology interact in real-life situations.

3.5 Ethical Considerations

All the data used in this study were obtained from publicly available documents produced by official regulatory bodies and consumer protection agencies. No personal information, confidential records, or private identities were available. As no human participants were involved, informed consent was not required for this study. Nevertheless, the research was conducted carefully to avoid misrepresentation and to ensure that institutional information was interpreted responsibly and respectfully.

3.6 Summary of Methodological Alignment

This document research approach supports the study's goal of understanding how investment literacy interacts with behavioral and psychological factors in scamming victimization. The selected documents provide concrete examples of fraud techniques and victim responses while also offering expert commentary from regulators. Content analysis allows these insights to be organized into themes that deepen the understanding of why educated and high-net-worth individuals remain vulnerable to investment scams, despite their financial resources or knowledge.

4. Findings

4.1 Overview of Findings

Content analysis of forty-two regulatory reports, advisories, and enforcement documents produced two overarching themes. The first theme concerns the patterns of investment-related knowledge reflected in scam cases. The second theme pertains to the behavioral and psychological tactics used by scammers to influence decision making and reduce individuals' natural resistance to deception. These themes emerged across documents from multiple jurisdictions and reflected the patterns identified by regulatory bodies in their public communications and case summaries.

4.2 Theme 1: Investment-Related Knowledge Patterns Observed in Scam Cases

Documents frequently highlight how gaps in investment-related competencies contribute to individuals' vulnerability. Although many victims demonstrated general financial familiarity, reports emphasized that specific investment-oriented skills were often incomplete or improperly applied. This theme as presented in Table 1 includes sub-themes related to risk interpretation, due diligence behavior, the recognition of fraud characteristics, and the influence of legitimacy cues.

Table 1 *Sub-themes under Theme 1: Investment-related knowledge patterns observed in scam cases*

Sub-Theme	Description	Patterns Observed in Documents
Understanding of Risk and Return	Difficulty recognizing unrealistic returns or investments inconsistent with market norms	Documents frequently described victims accepting guaranteed or unusually high returns without questioning feasibility
Due Diligence and Verification	Limited independent verification of credentials, licenses, or documents	Victims often relied solely on information supplied by scammers
Awareness of Red Flags	Lack of familiarity with common fraud indicators	Alerts repeatedly showed victims overlooking unregistered entities, unverifiable claims, or inconsistent documentation
Legitimacy Through Presentation	Influence of professional branding, websites, or technical jargon	Scam operations commonly used polished materials to create an appearance of credibility
Misinterpretation of "Low Risk" Narratives	Confusion between claims of low risk and the actual level of risk exposure	Documents noted that scams frequently framed products as "low risk" without supporting evidence

Across documents, regulatory agencies emphasized that many victims had some degree of financial awareness yet lacked the specialized competencies needed to evaluate investment opportunities critically. Weaknesses in assessing risk, questioning return plausibility, verifying legitimacy, and identifying structural inconsistencies recurred across the cases. Fraudsters leveraged these gaps by constructing schemes that resembled genuine investment structures, making fraudulent opportunities appear legitimate and consistent with the expected market behavior.

4.3 Theme 2: Psychological Manipulation and Behavioral Vulnerability

The second theme reflects the behavioral influences identified across numerous cases as summarized in Table 2. Regulatory documents have consistently highlighted how scammers use emotional, cognitive, and social techniques to guide individuals toward impulsive or trusting decisions. These tactics operate alongside financial misrepresentations and often play a decisive role in overcoming individuals' initial cautions.

Table 2 *Behavioral influences identified across numerous cases*

Sub-Theme	Description	Patterns Observed in Documents
Emotional Triggers	Use of fear, urgency, excitement, or reassurance	Reports described scammers creating pressure to act quickly or offering emotional comfort to build trust
Cognitive Shortcuts	Exploitation of intuitive decision-making	Cases noted that victims relied on first impressions or quick judgments rather than verification
Social Influence and Trust	Recruitment through referrals, testimonials, or impersonation	Documents frequently detailed scams involving trusted intermediaries or fabricated endorsements
Authority Cues	Use of titles, credentials, or regulatory terminology	Alerts highlighted impersonators presenting themselves as officials or licensed professionals

Findings across the document set show that scams often succeed not because individuals lacked access to information but because fraudsters intentionally leveraged behavioral tendencies. Emotional pressure, cognitive shortcuts, and social validation mechanisms are among the most frequently used techniques. Messaging, which encourages rapid decision-making or reduces critical evaluation, appears consistently across multiple jurisdictions.

4.4 Cross-Theme Observation: Interaction Between Knowledge and Behavior

Although Themes 1 and 2 address different dimensions of scam vulnerability, the documents indicate that investment-related knowledge gaps and behavioral manipulation often interact. Limited awareness of investment fundamentals created opportunities for deception, whereas psychological tactics further reduced individuals' capacity to apply caution. Several reports described incidents where individuals who understood basic financial concepts responded impulsively when targeted with emotionally charged or highly personalized communication. This interaction underscores the multifaceted nature of scam victimization.

The analysis of regulatory and enforcement documents revealed two overarching themes: investment-related knowledge patterns and behavioral manipulation strategies. Theme 1 demonstrates recurring gaps in individuals' ability to critically assess investment opportunities, while Theme 2 highlights the behavioral mechanisms that scammers use to influence their decisions. Together, these findings provide an empirical foundation for exploring how investment competencies and behavioral vulnerabilities intersect. The following discussion interprets these findings in light of the existing literature and considers their implications for fraud prevention.

5. Discussion

5.1 Interpreting Investment-Related Knowledge Patterns in Modern Scam Contexts

These findings demonstrate that individuals often misinterpret risk and return claims in ways that reflect the complexity of contemporary digital investment settings. Many of the scams described in the documents were conducted online using mobile applications, messaging platforms, social media pages, and professionally designed websites. These digital environments allow fraudulent schemes to mimic genuine financial institutions with striking accuracy using interactive dashboards, branded interfaces, simulated account statements, and fabricated performance charts. These elements generated a convincing appearance of legitimacy, which many individuals associate with trustworthy investment opportunities. Such observations align with reports in the broader literature showing how digital technologies have significantly increased the sophistication and believability of fraudulent schemes (Siu & Hutchings, 2023).

The documents further revealed that victims often lack the specific investment-related competencies needed to critically assess digital claims. Although many understood the basic financial principles, they struggled to evaluate key investment indicators, such as risk exposure, realistic return expectations, and regulatory registration. The inability to distinguish between legitimate low-volatility products and fraudulent "low-risk high-return" claims is especially prominent. This finding reinforces scholarly arguments that investment literacy, beyond general financial knowledge, plays an important role in supporting informed decision making (Deliema et al., 2020; Hagen & Malisa, 2022). However, the patterns observed in the data suggest that traditional investment literacy frameworks are no longer adequate in environments where fraudulent actors deliberately replicate legitimate investment structures to deceive potential investors.

These observations contribute to ongoing debates by showing that individuals require updated forms of investment literacy, including digital verification. Skills such as confirming regulatory licenses, cross-checking digital identities, and recognizing falsified performance statements are becoming increasingly necessary to navigate today's online investment landscape. Therefore, the findings highlight a gap between traditional conceptualizations of investment literacy and the real-world competencies required to resist deception in digital financial ecosystems.

5.2 Behavioral and Psychological Mechanisms Underlying Scam Vulnerability

The second theme revealed how behavioral and psychological factors shape individuals' responses to fraudulent investment offers. Many of the scams described in the documents relied on persistent emotional engagement, trust building, and social engineering strategies that targeted individuals' intuitive rather than analytical reasoning. This reflects the dual-process theories of decision-making, which emphasize that intuitive, emotion-driven responses often override slower and more deliberate analysis when individuals are under pressure or uncertainty (Whitty, 2020).

A particularly striking pattern involved scammers identifying and exploiting the specific desires, insecurities, or aspirations of potential victims. Several documents described scammers who appeared to know exactly "what the victim wanted," whether it was financial security, higher returns, professional guidance, or emotional reassurance. Scammers personalized their communication to appeal to these needs, often using conversational familiarity, empathy, and encouragement to build trust. In some cases, scammers provide fabricated identification documents, personal details, or photos to create an impression of transparency. These tactics effectively lowered the psychological barriers and created a sense of relational closeness.

Another recurring strategy involves simulating early profits or initial transaction success. Victims were shown fabricated screenshots of successful trades or allowed to “withdraw” a small amount of money during the initial stages of the scam. This tactic demonstrates the use of intermittent reinforcement and reciprocity, in which the offering of small benefits increases an individual’s willingness to invest more. Once the first deposit was made, scammers began fabricating explanations, such as “transaction errors,” “verification fees,” or “account upgrades” account upgrades, to justify repeated requests for additional transfers. The findings suggest that this sequential escalation exploits commitment bias, whereby individuals feel compelled to continue investing after making an initial contribution.

Emotionally charged communication further intensifies susceptibility. Messages emphasizing urgency, exclusivity, or the risk of losing an opportunity create psychological pressure to act quickly. Digital environments amplify these effects because communication is rapid and continuous. Frequent messaging, reassuring voice notes, and persuasive updates cultivate an ongoing emotional connection that overrides analytical reasoning. Social influence mechanisms were also prominent. Many cases involved referrals from acquaintances, fabricated testimonials, or impersonation of authority figures such as financial advisers or regulatory officials. These tactics create a sense of legitimacy and social validation that makes individuals more willing to engage.

Collectively, these behavioral strategies illustrate how modern fraudsters combine emotional manipulation, social engineering, and digital presentation tools to overcome natural skepticism. This confirms that scam victimization cannot be adequately explained solely through knowledge gaps. Instead, they reflect the strategic exploitation of fundamental psychological tendencies.

5.3 Integrating Knowledge Gaps and Behavioral Manipulation

The interplay between investment-related knowledge gaps and behavioral manipulation offers a more holistic explanation of why individuals fall victim to scams. The findings indicate that even when individuals possess foundational financial or investment knowledge, emotional triggers and social influence often disrupt their ability to effectively apply that knowledge. This dynamic is particularly pronounced in digital contexts, where persuasive strategies can be executed rapidly and with high degrees of personalization.

For example, individuals who understood that guaranteed high returns are unrealistic were still persuaded by simulated profits, personalized reassurance, or the perceived transparency created by scammers sharing identification documents. Emotional engagement, repeated communication, and staged evidence of legitimacy often neutralize analytical concerns. This demonstrates how cognitive awareness can be overshadowed by psychological inducements, especially when messages evoke trust, urgency or the fear of missing out.

This interaction explains why financial and investment education have shown inconsistent effects on reducing fraud victimization (Xiao et al., 2022). Knowledge-based approaches may strengthen individuals’ ability to understand investment concepts, yet they do not sufficiently prepare them for behavioral tactics that manipulate emotional and cognitive responses. The findings strongly support emerging calls to reconceptualize investment literacy as a multidimensional construct that includes behavioral recognition skills, emotional regulation, and digital fraud awareness.

By presenting empirical evidence on how behavioral manipulation intersects with knowledge gaps, this study fills an important conceptual gap in literature. This shows that effective fraud prevention must address both the cognitive and behavioral dimensions of decision-making. In essence, it is not only what individuals know that protects them but also how they respond emotionally and psychologically in real investment encounters. These findings can also be interpreted through the lens of Behavioral Finance Theory, which suggests that financial decisions are not always based on rational evaluation of available information. Instead, emotions, cognitive biases, and social influences may affect judgement even when individuals possess relevant knowledge. The patterns identified in this study indicate that scammers exploit these behavioral tendencies, thereby reducing the effectiveness of investment knowledge as a protective mechanism against fraud.

5.4 Advancing Contemporary Debates on Fraud Prevention

These findings offer important contributions to the current debate on how fraud-prevention strategies should be designed. In an era where investment scams are increasingly digital, transnational, and technologically enhanced, traditional financial literacy programs have a limited capacity to address the complexity of modern fraud. Currently, many scams operate through sophisticated interfaces supported by data analytics, artificial intelligence tools, and social media profiling, enabling scammers to target individuals with unprecedented precision. This reality challenges the older assumptions that fraud primarily affects those with limited knowledge or financial exposure.

By integrating investment-related insights with behavioral perspectives, this study supports regulatory recommendations emphasizing psychological resilience, digital verification skills, and awareness of social engineering techniques. The findings illustrate that fraudsters do not simply misrepresent investment information; they craft psychologically tailored experiences that imitate genuine financial interaction. This means that fraud-prevention initiatives must move beyond the technical aspects of investment literacy and incorporate training on emotional awareness, distrust regulation, and strategies for evaluating digital authenticity.

Through this lens, this study extends scholarly conversation by showing that modern scams function as complex behavioral systems rather than isolated financial deceptions. Fraudsters combine financial misrepresentation, emotional persuasion, technological design, and social influence to create environments that feel legitimate. These insights highlight the need for multidimensional fraud prevention frameworks that reflect the interconnected realities of digital finance. These findings can also be understood through the concept of digital behavioral manipulation, where digital technologies are intentionally used to influence how people think, feel, and make decisions. Unlike traditional face-to-face fraud, modern investment scams often use social media, messaging applications, targeted online content, and professionally designed digital platforms to create convincing and personalized experiences. These findings suggest that people are increasingly becoming victims of scams because of the combined effects of psychological persuasion and digital technology. Therefore, fraud prevention frameworks should address not only technological risks but also the psychological factors that influence financial decision-making.

6. Recommendations

This study highlights that investment scam vulnerability arises from the interaction between partial investment competencies and sophisticated behavioral manipulation. Preventing such scams requires coordinated efforts across several stakeholder groups. Based on these findings, the following recommendations are proposed to guide more effective prevention strategies.

6.1 Recommendations for Financial Regulators

Regulators should strengthen public advisories by incorporating behavioral cues and not just technical red flags. Alerts should highlight how scammers exploit emotions, simulate legitimacy, and personalize communication to influence decisions. Regulatory bodies may also develop digital verification tools such as quick license-check systems or publicly accessible scam databases to help individuals authenticate investment platforms and online identities. Furthermore, enforcement announcements should transparently illustrate behavioral manipulation techniques observed in real cases so that the public recognizes psychological patterns, not just financial misrepresentations.

6.2 Recommendations for Financial Educators and Public Learning Programs

Financial education programs must expand beyond technical investment concepts to include behavioral awareness and emotional regulation. Workshops should integrate real-case simulations to illustrate how scammers build trust, generate profits and escalate commitment. Teaching individuals pause, verify, and question emotional triggers can strengthen their psychological resistance. Investment literacy modules should also include digital competence, such as evaluating online interfaces, identifying artificially generated content, and verifying regulatory claims, to reflect the realities of modern financial fraud.

6.3 Recommendations for Financial Institutions and Industry Practitioners

Financial institutions can play a role in reducing scam vulnerability by enhancing public communication regarding legitimate financial engagement. Clear guidance on how official representatives contact clients, what verification steps are standard, and how to recognize unofficial communication can help reduce confusion. Institutions may also adopt proactive fraud alerts when they detect impersonation patterns or when clients initiate suspicious transfers. Collaboration among banks, regulators, and fintech platforms is essential for creating coherent safeguards in digital transactional environments.

6.4 Recommendations for the General Public

Individuals must cultivate both technical and behavioral vigilance when encountering investment opportunities. This includes verifying all digital claims with official regulatory databases, seeking third-party confirmation, and exercising caution when confronted with personalized messages, staged profits, or emotionally charged communications. The public should be encouraged to adopt a "slow-thinking approach before transferring funds, cross-checking unfamiliar platforms, and consulting trusted advisers. Recognizing that scammers rely as much on psychological persuasion as financial misrepresentation can help individuals better understand their own decision-making vulnerabilities.

6.5 Recommendations for the Development of Future Prevention Frameworks

The findings highlight the need for integrated frameworks that combine investment literacy, behavioral science, and digital verification practices. Policymakers and educators should collaborate in designing curricula and interventions that reflect the hybrid nature of modern scams. Prevention strategies must emphasize not only what individuals should know, but also how they interpret, feel, and respond during scam interactions. Incorporating behavioral insights into national financial education strategies may offer a more realistic and comprehensive approach to protecting individuals in digital financial ecosystems.

7. Conclusion

This study shows that investment scam victimization is not a simple consequence of lacking financial knowledge but the result of a deeper and more complex interplay between partial investment competencies and highly personalized behavioral manipulation. In today's digital environment, scammers do more than misrepresent financial products; they construct emotionally charged, relationship-driven encounters that mimic legitimate advisory behavior. Even educated and financially responsible individuals can be persuaded when fraudulent communication is engineered to speak directly about their aspirations, fears, and perceived opportunities. These finding challenges conventional financial literacy narratives by demonstrating that technical understanding alone cannot reliably protect individuals when psychological engagement is the primary mechanism of influence.

The study contributes to a clearer conceptual shift: resisting fraud requires behavioral awareness as much as financial competence. Modern scams work by neutralizing the skills that financial education attempts to build critical thinking, risk assessment, and cautious evaluation by embedding them within a persuasive digital context designed to feel trustworthy and personalized. This reframing position scams vulnerability not as a deficit in ability but as a predictable human response exploited through digital intimacy, social proof, and staged legitimacy. This insight underscores the need for fraud prevention strategies that integrate behavioral science principles, emotional self-regulation, and digital verification habits alongside traditional investment literacy. Viewed through a Behavioral Finance perspective, these findings suggest that scam vulnerability arises not only from knowledge limitations but also from the influence of emotions, cognitive biases, and social pressures on financial decision-making. Similarly, the concept of digital behavioral manipulation helps explain how digital technologies can be used to amplify these influences through personalized and persuasive online interactions.

While document-based analysis limits access to lived experiences, the consistency of behavioral patterns across jurisdictions signals a pressing need to rethink how investor protection is conceptualized. Future work should build on this behavioral orientation by examining how emotional trajectories unfold during scam interactions and by testing interventions that strengthen psychological resilience in digital financial environments. The contribution of this study lies in highlighting that prevention in the digital age must move beyond information delivery toward a more realistic understanding of how people think, relate, and decide under targeted manipulation.

Acknowledgement

The author would like to express their gratitude to the article reviewers who provided feedback on the manuscript, and to the editorial board of the journal in which this article was published.

Conflict of Interest

Author declare that there is no conflict of interest regarding the publication of the paper.

Author Contribution

The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

References

Agarwal, A., Rao, N. V. M., & Nogueira, M. C. (2025). Financially Savvy or Swayed by Biases? The Impact of Financial Literacy on Investment Decisions: A Study on Indian Retail Investors. Journal of Risk and Financial Management, 18(6), 322. https://doi.org/10.3390/jrfm18060322

Agarwarkar, S., Dodiya, K. R., & Kumar, K. (2025). The Phishing Epidemic (pp. 229–256). https://doi.org/10.4018/979-8-3373-2252-0.ch010

Ahmad, Z. (2025). Investment scams: the effect of bias-induced gullibility on victimization propensity. Crime, Law and Social Change, 83(1), 17. https://doi.org/10.1007/s10611-024-10187-1

Ahmed, Z., Noreen, U., Ramakrishnan, S. A. L., & Abdullah, D. F. B. (2021). What explains the investment decision-making behaviour The role of financial literacy and financial risk tolerance. Afro-Asian J. of Finance and Accounting, 11(1), 1. https://doi.org/10.1504/AAJFA.2021.111814

Akhtar, M., & Malik, M. U. (2023). Personality traits and investor risk behavior: moderating role of financial literacy. Managerial Finance, 49(5), 884–905. https://doi.org/10.1108/MF-08-2021-0387

Bird, R., Gallagher, D. R., Khan, A., & Yeung, D. (2025). Do Emotions Influence Investor Behavior? Journal of Behavioral Finance, 26(2), 229–250. https://doi.org/10.1080/15427560.2023.2282966

Chi, N. T. K., Pham, H.-G., Stoffers, A., Anh, D. T. P., & Nam, V. H. (2024). Investigating individual intention to make money: can motivation of wealth be a socio-economic leverage? Current Psychology, 43(2), 1651–1669. https://doi.org/10.1007/s12144-023-04413-7

Constantino, T. D. S. T., Da Silva, A. C. M., & Constantino, M. A. M. D. O. (2024). Ponzi schemes in Brazil: what leads people to still invest in this fraud? Journal of Financial Crime, 31(6), 1436–1450. https://doi.org/10.1108/JFC-10-2023-0262

Cuadra, J. M., Mandras, Y. S., Raya, M. R., Belardo, H. A. B., Lopez, R. P., & Rodriguez, J. G. E. (2025). Experiencing investment scams in the Philippines: an interpretative phenomenological analysis of victims' financial decision-making. Review of Behavioral Finance, 17(5), 769–784. https://doi.org/10.1108/RBF-03-2025-0116

Deliema, M., Shadel, D., & Pak, K. (2020). Profiling Victims of Investment Fraud: Mindsets and Risky Behaviors. Journal of Consumer Research, 46(5), 904–914. https://doi.org/10.1093/jcr/ucz020

Hagen, J., & Malisa, A. (2022). Financial fraud and individual investment behavior. Journal of Economic Behavior & Organization, 203, 593–626. https://doi.org/10.1016/j.jebo.2022.09.015

Judges, R. A., Gallant, S. N., Yang, L., & Lee, K. (2017). The Role of Cognition, Personality, and Trust in Fraud Victimization in Older Adults. Frontiers in Psychology, 8. https://doi.org/10.3389/fpsyg.2017.00588

Li, J., Xu, J., Lin, D., Li, H., & Xu, L. (2025). How Personality Shapes the Impact of Persuasion Strategies in Scam Warnings: Evidence from the Chinese Context. International Journal of Human–Computer Interaction, 1–29. https://doi.org/10.1080/10447318.2025.2580551

Li, M., & Peng, H. (2022). How Cues of Being Watched Promote Risk Seeking in Fund Investment in Older Adults. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.765632

Lim, W. M. (2025). What Is Qualitative Research? An Overview and Guidelines. Australasian Marketing Journal, 33(2), 199–229. https://doi.org/10.1177/14413582241264619

Lin, X., & Spence, P. R. (2018). Identity on Social Networks as a Cue: Identity, Retweets, and Credibility. Communication Studies, 69(5), 461–482. https://doi.org/10.1080/10510974.2018.1489295

López-Guzmán, S., & Sautua, S. I. (2024). Effects of a fearful emotional state on financial decisions in the presence of prior outcome information. Journal of Economic Psychology, 101, 102706. https://doi.org/10.1016/j.joep.2024.102706

Mackenzie, S. (2022). Criminology Towards the Metaverse: Cryptocurrency Scams, Grey Economy and the Technosocial. The British Journal of Criminology, 62(6), 1537–1552. https://doi.org/10.1093/bjc/azab118

Morgan, H. (2022). Conducting a Qualitative Document Analysis. The Qualitative Report. https://doi.org/10.46743/2160-3715/2022.5044

Mushtaq, R., Murtaza, G., Yahiaoui, D., Alessio, I., & Talpur, Q. (2024). Impact of financial literacy on financial inclusion and household financial decisions: exploring the role of ICTs. International Studies of Management & Organization, 54(1), 68–84. https://doi.org/10.1080/00208825.2023.2281207

Obasi, J. C., Amoniyan, O. M., & Obetta, C. (2026). Manipulative Strategies in Scam Messages Among Selected Nigerian University Undergraduates. Howard Journal of Communications, 37(1), 94–112. https://doi.org/10.1080/10646175.2024.2396591

Suhaimi, S., Hashim, H., Mohd, S. N. H., Shafee, N. B., En, G. Q., & Suhaimi, D. M. (2026). Exposing the Risks: Key Factors Driving Young Adults into Investment Scams (pp. 1013–1021). https://doi.org/10.1007/978-3-031-99466-1_91

Tudor, K. (2019). Symbolic Survival and Harm: Serious Fraud and Consumer Capitalism's Perversion of the Causa Sui Project. The British Journal of Criminology, 59(5), 1237–1253. https://doi.org/10.1093/bjc/azz009

Journal of Techno-Social Vol. 18 No. 1 (2026) 1-13

Whitty, M. T. (2020). Is There a Scam for Everyone? Psychologically Profiling Cyberscam Victims. European Journal on Criminal Policy and Research, 26(3), 399–409. https://doi.org/10.1007/s10610-020-09458-z

Wilson, S., Hassan, N. A., Khor, K. K., Sinnappan, S., Abu Bakar, A. R., & Tan, S. A. (2024). A holistic qualitative exploration on the perception of scams, scam techniques and effectiveness of anti-scam campaigns in Malaysia. Journal of Financial Crime, 31(5), 1140–1155. https://doi.org/10.1108/JFC-06-2023-0151

Xiao, X., Li, X., & Zhou, Y. (2022). Financial literacy overconfidence and investment fraud victimization. Economics Letters, 212, 110308. https://doi.org/10.1016/j.econlet.2022.110308