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Digital financial literacy within the Telegram platform at the @sarjanacrypto community

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Abstract

Background: The crypto asset investment ecosystem on Telegram is characterised by extreme Information Velocity, which creates severe cognitive load, triggering irrational herding behaviour and exacerbating investor vulnerability to rampant misinformation.
Purpose: This study analyses digital financial literacy as a cognitive defence mechanism against crypto misinformation within the Dark Social ecosystem of Telegram, specifically focusing on the @sarjanacrypto community.
Methods: Employing a qualitative single-case study design, data were triangulated from online non-participatory observation, a thematic reduction of 3,974 archived Telegram messages, and in-depth interviews with seven informants spanning various market experiences.
Results: Findings reveal how investors practice digital financial literacy to combat crypto misinformation. The results show that investors frequently engage in "Pseudo-DYOR" practices and suffer Situational Regression, in which even experienced individuals revert to impulsive System 1 processing during extreme market euphoria, resulting in an illusion of literacy and a false sense of security that leaves them highly vulnerable to manipulation.
Conclusions: Digital financial literacy in high-velocity ecosystems operates as a reactive, evolutionary process rather than a linear educational outcome. Financial trauma acts as the primary catalyst, forcing investors to adopt independent verification. Practically, investor protection strategies must shift from normative dissemination to cultivating cognitive resilience and cross-platform verification habits.

Keywords:
Digital financial literacy
Telegram
Misinformation
Dark social
Cognitive resilience

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INTRODUCTION

The crypto asset investment ecosystem has evolved into an intense, high-risk environment characterised by extreme Information Velocity (Kang et al., 2019). On instant messaging platforms such as Telegram, particularly within communities like @sarjanacrypto, thousands of messages flood the chat columns within minutes (Dhawan & Putniņš, 2021). Unlike timeline-based social media, which curates content through algorithms, Telegram relies on a Chronological Stream where speed often trumps accuracy, and the recency of messages is frequently misinterpreted as urgency. In this setting, a single notification from an administrator or a signal distributor can instantly trigger a wave of panic buying or selling among tens of thousands of members. When faced with this information deluge and significant cognitive load, the human brain tends to rely on heuristic shortcuts or System 1 processing (De Neys & Pennycook, 2019; Pennycook & Rand, 2021). Consequently, individual rationality collapses, giving way to irrational herding behaviour where investment decisions are driven by collective emotion rather than fundamental analysis (Gianstefani et al., 2022).

This cognitive vulnerability is severely exacerbated by the structural nature of Telegram as a Dark Social space (Swart, 2023). Although groups like @sarjanacrypto operate publicly, their interactions remain isolated from public web indexing and conventional regulatory oversight. In this unmoderated environment, an illusion of consensus and an echo chamber quickly form, effectively silencing critical reasoning (Cinelli et al., 2021). The fundamental problem identified is the inability of retail investors to filter out manipulative information, as closed-group dynamics tend to reinforce confirmation bias (Gianstefani et al., 2022; Zhang et al., 2024). This creates fertile ground for Information Pathology—specifically pump-and-dump schemes—which function as a hybrid of disinformation and misinformation, deliberately inflating asset prices with hyperbolic narratives to trap retail investors (Charfeddine & Mahrous, 2024; Wardle & Derakhshan, 2017).

The impact of these manipulative practices is increasingly critical given the explosive growth of digital asset investors in Indonesia. Data from the Commodity Futures Trading Regulatory Agency (Bappebti) indicates that the number of crypto investors reached 20.24 million as of June 2024 (Otoritas Jasa Keuangan (OJK), 2024a). This growth is driven by digital natives under 30, who account for approximately 55.07% of the total investor base (OJK, 2024b). This demographic exhibits a high-risk tolerance that often does not align with their technical understanding, making Fear of Missing Out (FOMO) the primary driver of fatal financial decisions (Kim & Fan, 2025). Because the encrypted architecture of Telegram creates a regulatory blind spot that state laws struggle to penetrate, Multidimensional Digital Financial Literacy—defined as the integrated ability to critically search for, evaluate, and manage financial information—becomes the essential last line of defence (Choung et al., 2023; Lyons & Kass-Hanna, 2021; Vuorikari et al., 2022). The practical manifestation of this literacy is the self-protection practice of Do Your Own Research (DYOR), which represents the individual responsibility to

independently verify information before making decisions (Mihajlović, 2023). However, studies on financial literacy in Indonesia remain macro in nature and have not specifically examined this self-protection aspect against digital fraud within local crypto communities (Choung et al., 2023).

Despite its urgency, existing literature on investor information behaviour predominantly focuses on timeline-based Open Social networks such as X (formerly Twitter) and Reddit (Herasimenka et al., 2023; Kuerzinger & Stangor, 2024). Previous studies often overlook how the architecture of unmoderated, chronological, and high-velocity environments shapes the cognitive defence mechanisms of retail investors. To fill this gap, this study explores how digital financial literacy is practised to combat misinformation specifically within the Telegram ecosystem.

The novelty of this research lies in three aspects: first, positioning Dark Social ecosystems as the primary object of information literacy studies; second, formulating the original Adaptive Cycle of Digital Financial Literacy (AC-DFL) model, which views financial trauma as a crucial catalyst for literacy formation; and third, utilising a comprehensive synthesis of theoretical perspectives to dissect the cognitive structures underlying investor decisions. Specifically, Affordance Theory (Ronzhyn et al., 2023) is employed to understand how platform architecture dictates communication velocity, while the Hyperpersonal perspective of Computer-Mediated Communication (CMC) is used to analyse how anonymous Telegram interactions trigger over-attribution, idealising administrators as infallible experts (Walther & Whitty, 2021). Concurrently, Dual Process Theory (De Neys & Pennycook, 2019) and the Elaboration Likelihood Model (ELM) map whether investors process information via the Central Route (critical thinking and DYOR) or the Peripheral Route (FOMO-driven impulsivity) (Cyr et al., 2018; Whitty & Ruddy, 2025). Within this framework, DYOR is positioned as a mitigation variable to break the chain of behavioural bias. Based on this background, this study focuses on the @sarjanacrypto community by addressing the primary research question: How do retail investors practice digital financial literacy to combat crypto misinformation within a high-velocity Dark Social ecosystem? By answering this question, this study aims to provide fresh theoretical insights into information science and practical recommendations to mitigate regulatory blind spots in the digital investment ecosystem.

RESEARCH METHODS

This study employs a qualitative approach to deeply understand the meanings constructed by crypto community members when interacting with misinformation and investment signals on Telegram. As noted by Creswell & Creswell (2018), qualitative research is an appropriate framework for exploring individual or group attributes in social issues, enabling naturalistic inquiry without variable manipulation. Addressing the reviewer's methodological premise, this research extends beyond a purely exploratory scope by employing a comprehensive qualitative single-case study design. As defined by Yin (2018), an empirical inquiry that investigates contemporary phenomena

in depth within real-life contexts provides the rigorous foundation necessary not only to explore but to map cognitive mechanisms and formulate the AC-DFL model. This strategy is highly relevant given that the @sarjanacrypto community operates in an unmoderated digital ecosystem where the boundaries between communication phenomena and their high-velocity context are fluid.

The research was conducted online within the @sarjanacrypto Telegram community from June to September 2025, encompassing the pre-research, intensive observation, and data validation stages. Informants were selected through purposive sampling. To rigorously capture the dynamics of the Chronological Stream ecosystem, the inclusion criteria required informants to: (1) be registered members of the @sarjanacrypto group during the observed peak market activity period; (2) possess a history of executing investment decisions (whether through Central or Peripheral Routes) influenced by Telegram signals; and (3) represent a comprehensive spectrum of market tenure and digital financial literacy, ranging from beginners highly susceptible to FOMO to veterans oriented toward risk management.

In line with the analytical framework, the research subjects are categorised into two groups. The first group consists of five internal informants (Informant 01, Informant 02, Informant 04, Informant 06, and Informant 07) whose experiences were directly mapped to inform the formulation of the Adaptive Cycle of Digital Financial Literacy (AC-DFL). The second group consists of two external informants (Informant 03 and Informant 05) who served as triangulation data during the discussion stage to ensure the validity of the findings from an independent perspective. The demographic diversity and literacy characteristics of the seven participants are systematically organised to provide context for the subsequent analysis. As illustrated in Table 1, the informants span a spectrum of experience, from complete beginners to market veterans, which is essential for mapping the cyclic nature of the AC-DFL model.

Data collection was achieved through three integrated techniques adapted to the digital environment. First, semi-structured in-depth interviews were conducted via online voice calls and chat to explore participants' Do Your Own Research (DYOR) practices. Second, non-participatory online observation (Netnography) was conducted to record communication patterns and emotional responses to administrator notifications. Third, documentation was conducted by archiving 3,974 messages from the community chat logs. Through data reduction, 303 specific conversation units from the peak market activity period in July and August 2025 were selected as the primary dataset for thematic grouping. To ensure traceability, the following table documents the archived community communications cited throughout this study.

The data analysis followed the interactive model by Miles et al. (2020), involving data condensation, data display, and conclusion drawing. During the condensation phase, open and axial coding were applied to categorise thousands of lines of conversation into themes such as euphoria, panic, and regulatory awareness. Specifically,

Table 1. Research Informant Profiles and Literacy Roles

Code	Background	Investment Experience	Status & Role	Literacy Characteristics & Activities
Informant 01	Undergraduate Student	± 3 Years	Passive Member (*Silent Reader*)	Uses the group for initial validation; focuses on blockchain technology.
Informant 02	Entrepreneur	> 9 Years	Passive Member (Data Enthusiast)	Veteran focusing on macroeconomic data from admins; risk management oriented.
Informant 03	Master's Student	± 7 Years	External Member (Triangulation)	Uses bots for independent technical analysis; compares data with other groups.
Informant 04	Freelancer	± 4 Years	Conditionally Active Member	Sceptical of single-source info; seeks discussion partners ("peers") and verifies on Twitter (X).
Informant 05	Applied Undergraduate Student	± 4 Years	External Member (Triangulation)	Signal hunter focusing on short-term profits (*Futures*) and airdrops.
Informant 06	Full-time Trader	± 8 Years	Active Member (Educator)	On-chain analysis expert; critical of pump signals and active in rectifying members' understanding.
Informant 07	Entrepreneur	3 - 4 Months	Totally Passive Member (Follower)	Beginner vulnerable to FOMO; seeks instant profit without research; fully dependent on signals.

Source: Researcher's Analysis, 2026

Table 2. Telegram Archive Data Sources

Code	Account	Date	Context/Event
Informant 8	Administrator	July 14, 2025	Macroeconomic framing ("Era Trump printer brrrrr")
Informant 9	Community Member	July 14, 2025	Risk normalisation statement ("Judi halal ygy")
Informant 10	Community Member	August 11, 2025	AI tool recommendation for technical analysis
Informant 11	Community Member	August 13, 2025	Cyberbullying toward a dissenting member ("Kakek Crypto")
Informant 12	Community Member	August 14, 2025	High-risk asset recommendation request

Source: @sarjanacrypto Telegram Archive, July-August 2025

Affordance Theory, Dual Process Theory, the Elaboration Likelihood Model (ELM), and the Hyperpersonal perspective of CMC were used as analytical lenses during axial coding to classify investor information processing (Central versus Peripheral Routes), map over-attribution patterns toward the administrator, and identify structural platform influences. The synthesis between these theoretically grounded axial categories of the 303 messages and the interview transcripts from the five internal informants led to the formulation of the AC-DFL stages. To ensure data integrity and analytical trustworthiness, the researcher applied triangulation by comparing subjective interview results with objective, time-stamped archived conversation logs. This iterative process between personal accounts and mass conversation data ensures the

interpretive validity and credibility of the research findings. Furthermore, to mitigate researcher bias during the coding phase, a reflexivity protocol was maintained, ensuring that the thematic categories emerged organically from the informants' real experiences rather than being forced into predefined theoretical boxes. All procedures adhered to strict ethical principles, including informed consent and participant anonymity, ensuring that the data were used exclusively for academic purposes.

RESULTS AND DISCUSSION

The empirical results of this study are systematically categorised into the observational dynamics of the Telegram environment, the evolution of community discourse, and the formulation of the literacy model. An in-depth analysis of the @sarjanacrypto community chat archive reveals that this Telegram group is not merely a neutral information channel but an arena for narrative battles coloured by power dynamics and mass psychology. As recorded in daily activity data, group communication is characterised by sudden bursts of interaction. The extreme spike in messages on August 13–14, 2025, reaching 305 units, directly correlates with periods of high market volatility.

Furthermore, the data shows that these spikes were often triggered by Admin framing. On July 14, 2025, Informant 8 used the metaphor "Era Trump printer brrrrr" to frame the macroeconomic situation. Members associated the sound with a bull run (market rise), triggering collective euphoria without the need to verify real economic data (Informant 8, Telegram communication, July 14, 2025). The euphoria generated by this administrator narrative was often met with a unique coping mechanism among members: fatalistic humour. One striking finding was a statement explicitly stating: "Judi halal ygy" (Halal gambling, guys) (Informant 9, Telegram communication, July 14, 2025).

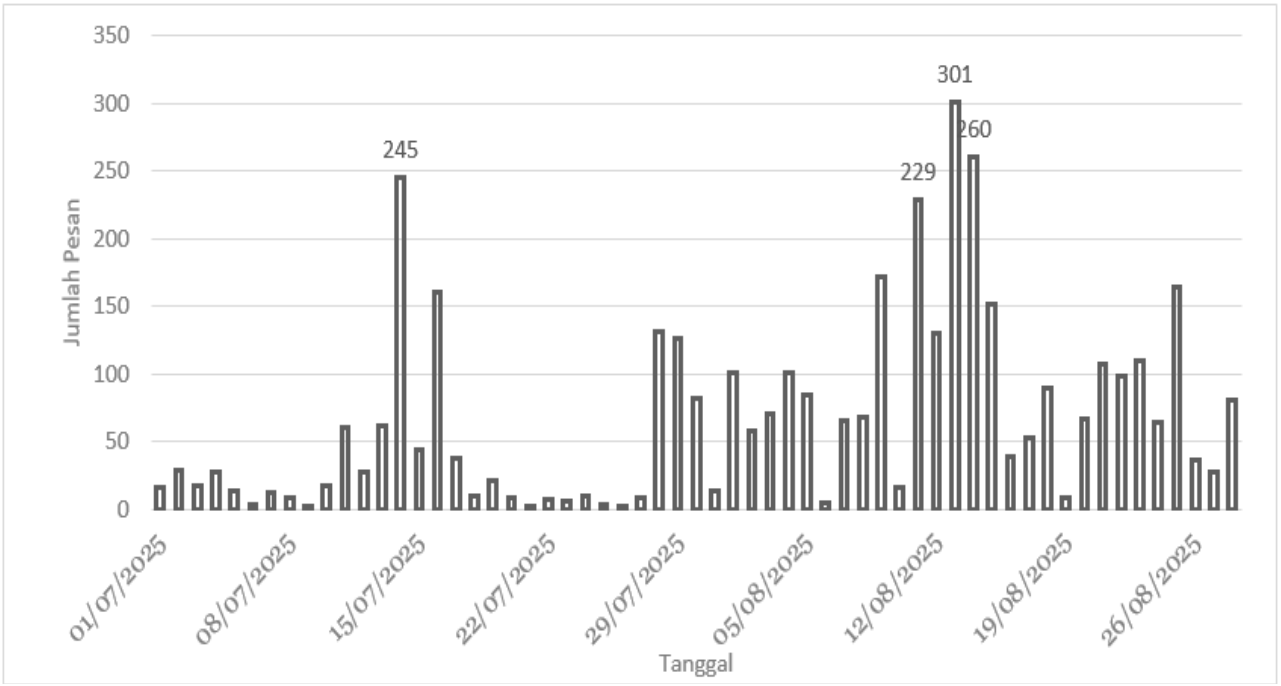

Figure 1. Daily Chat Activity Volume July-August 2025

Source: Research Analysis, 2026

Members consciously categorise their investment funds as "play money" or bets, thereby reducing the psychological burden in the event of losses. This was confirmed by Informant 06, who referred to such signals as "garbage" and stated that they serve only as exit liquidity for market makers (Informant 06, interviewed, September 21, 2025).

This fatalistic coping mechanism is closely tied to the administrators' construction of charismatic authority. In the absence of verifiable credentials, members rely heavily on the administrators' selective self-presentation and the algorithmic legitimacy provided by trading bots. This creates a profound Halo Effect, where members equate technical jargon with absolute financial expertise. Informant 02 perfectly captured this cognitive delegation, stating: "For the administrators there, I trust them and their data almost 100%." (Informant 02, interviewed, September 10, 2025). This unquestioning compliance not only validates the administrators' speculative narratives but also actively suppresses the members' individual rational evaluation, setting the stage for aggressive ingroup policing against anyone who dares to dissent.

The most alarming finding from the group dynamics is the mechanism of social control over dissidents. The study found evidence of cyberbullying against members who held differing views, particularly those expressing bearish or pessimistic sentiments. The case of the anonymous account "Kakek Crypto" on August 13, 2025, serves as a clear example. When he provided a price drop analysis that contradicted the group's euphoria, the response received was a personal attack: "Get out, grandpa... Your loudmouth describes the contents of your brain" (Informant 11, Telegram communication, August 13, 2025). The impact of this narrative hegemony is very real on the behaviour of passive members. Informant 01 revealed that although he had doubts, he chose to remain silent due to the suppressive group atmosphere (Informant 01, interviewed, September 6, 2025).

The @sarjanacrypto community chose Telegram for its architectural features that prioritise velocity. Informant 06 and Informant 01 consistently cited velocity as the main reason for using the platform. Informant 07 explained that Telegram is preferred because it is simple and not "heavy" for the phone's processor, which is crucial during a pump where being late by a few seconds can result in financial loss (Informant 07, interviewed, September 25, 2025). Amid the dominance of machine speed, some members step back to perform manual verification. One unique finding is how members use technology as a shortcut. For instance, on August 11, 2025, Member 2 suggested that members upload technical files to AI tools such as Grok or ChatGPT for analysis (Informant 10, Telegram communication, August 11, 2025). This is evident from Informant 05's admission that he relies heavily on the group due to his technical limitations in charting (Informant 05, interviewed, September 20, 2025).

However, there is a segment of members who use Telegram only as an initial hub of a wider information network. This finding is supported by Informant 04, who cross-checks information with X or global crypto news outlets like CoinDesk, ignoring information that comes only from "insiders" on Telegram (Informant 04, interviewed,

September 17, 2025). Thematic analysis of the chat archives shows a significant evolution in community maturity over time. In July, discourse was dominated by speculative narratives such as "Bitcoin", "$250k", and "Altseason". This speculative mentality culminated in extreme risk-taking, with members requesting recommendations for high-risk assets and unrealistic profit targets (Informant 12, Telegram communication, August 14, 2025). Entering August, a drastic shift toward pragmatism and regulatory awareness occurred.

As detailed in Table 3, July was characterised by 'hopium' and unrealistic price projections, primarily driven by international political narratives. However, the discourse underwent a drastic transformation in August under external regulatory pressure, specifically the enforcement of the Indonesian Minister of Finance Regulation (PMK 50/2025) on crypto asset taxation. This external shock temporarily sobered the community, shifting the daily chat focus from high-risk token hunting to technical debates on tax compliance, progressive income rates, and the security of centralised exchanges. This evolution demonstrates that while the group is highly susceptible to FOMO, it is also highly reactive to sovereign legal interventions.

The investigation reveals that digital financial literacy is not a binary state of competence, but rather a dynamic process formalised as the Adaptive Cycle of Digital Financial Literacy (AC-DFL) model. This formulation provides a nuanced understanding of how literacy is metabolised within a high-velocity environment, illustrating four hierarchical and iterative stages of member behaviour.

The first stage, Awareness & Mimetic Response, describes the "Naïve Speculator" whose actions are driven by collective euphoria and FOMO. Informant 07 vividly reflected on this cognitive dependency during their initial entry into the community:

Table 3. Evolution of Strategic Issues and Changes in the Community

Strategic Issues	July 2025 Focus (Expectation Phase)	August 2025 Focus (Pragmatism Phase)	Information Shift Mechanism
Macro Narrative	Focus on US politics (Trump) and global liquidity.	Focus on real economic data releases (CPI/PPI) and institutional adoption.	From narrative speculation to reactions based on precise economic data.
Key Assets	Fantastic price projections (BTC $250k) and "Altseason" hopes.	Bitcoin dominance and utility coins with AI/ETF narratives.	The failure of "Altseason" predictions forced members to return to primary assets.
Regulation & Law	Ignored; the market was perceived as a barrier-free space.	Intensive debates on PMK 50/2025 and progressive income tax rates.	Realised profits triggered fear of state tax surveillance.
Analysis Methods	References to global influencers (GCR/Elon).	Utilisation of AI (Grok/ ChatGPT) as independent analysis tools.	The need for rapid data processing to mitigate volatility.
Psychological Condition	Euphoria, extreme optimism, and risk-taking boldness.	Anxiety, regret, and mental fatigue.	Extreme volatility caused emotional exhaustion for retail investors.

Source: Researcher's Analysis, 2026

> "The language there is all strange, talking about candlesticks, resistance, whatever that is... If many people are talking about it, then my 'research' says this is a good coin. Seeing the group busy, I got heated up and followed along. The administrator was also incredibly good at talking, making me panic as if I'd be late by tomorrow. I didn't think twice, I just thought I'd get rich automatically... I put in all the rest of my salary for that month." (Informant 07, interviewed, September 25, 2025).

As members gain experience or suffer losses, they transition to Verification & Triangulation. The "Sceptical Verifier" uses Telegram only as a trigger for further investigation. The third stage, Independent Audit & Decision Making, marks the emergence of the "Technical Auditor" who possesses the skills to conduct analysis without relying on community consensus.

> "In my opinion, DYOR is not just reading news. I check the smart contract to see whether the liquidity is locked, who the biggest holder is... I cross-check everything via Etherscan, I don't just believe the roadmap on the website." (Informant 06, interviewed, September 21, 2025).

Furthermore, at this advanced stage of literacy, the function of Telegram fundamentally shifts. Rather than using the platform as a source of instant signals, advanced members strategically use exclusive or paid VIP groups to curate information and filter out mass 'noise.' Informant 03 articulated this strategic decoupling:

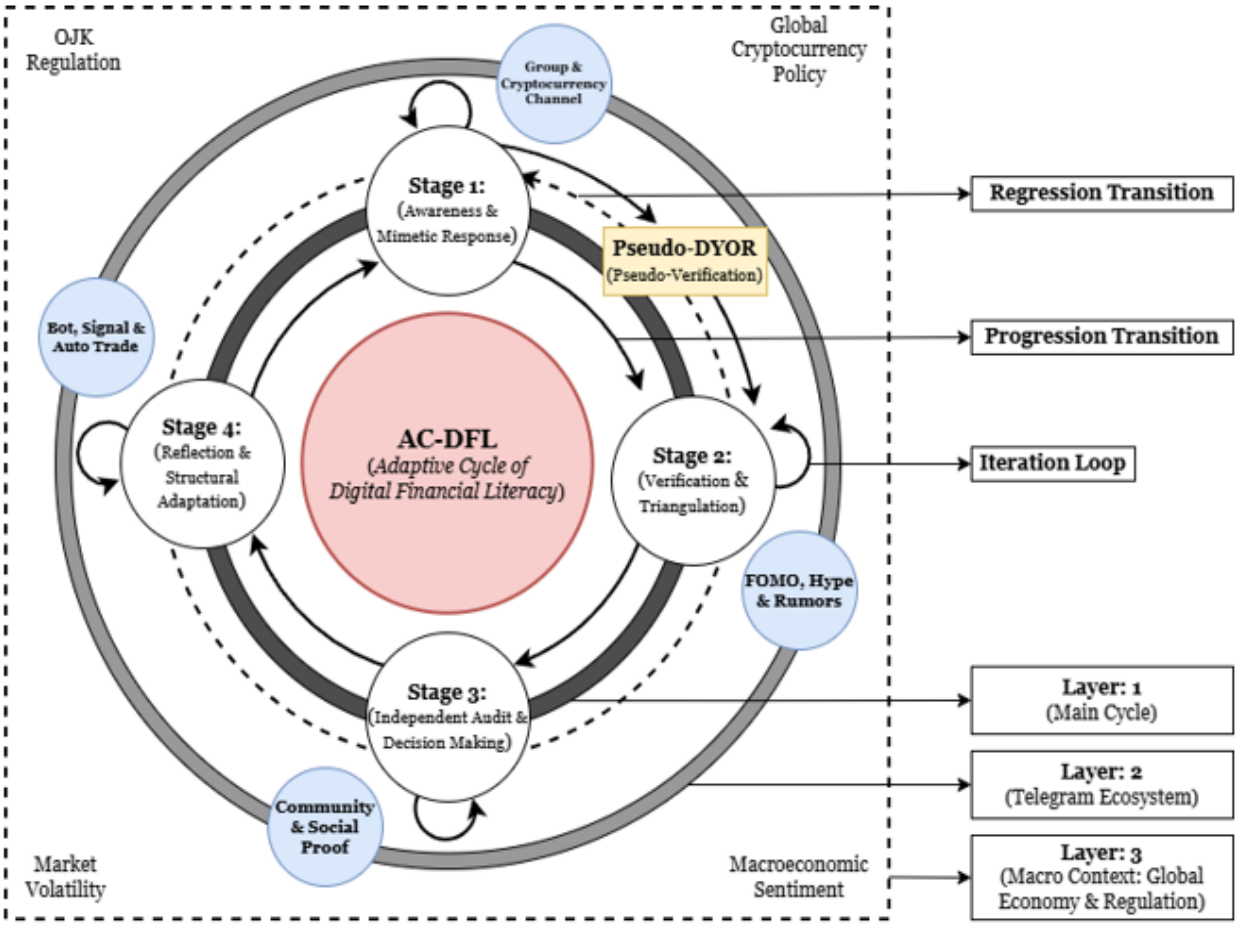

Figure 2. Adaptive Cycle of Digital Financial Literacy (AC-DFL) Model

Source: Researcher's Analysis, 2026

> "My goal in joining paid VIP groups is not to rely on their signals, but to have discussion partners and cross-reference my own analysis so I don't become biased." (Informant 03, interviewed, September 11, 2025).

This explicitly demonstrates that for adaptive investors, Telegram is no longer the final decision-maker. It merely a node within a broader, independently verified information network.

At the peak lies Reflection & Structural Adaptation, marking the emergence of the "Adaptive Investors". Movement through these stages is not strictly linear; it incorporates Reactive Progression and Situational Regression. To provide a profound interpretation of these empirical results, the ensuing discussion synthesises the findings through the theoretical lenses of Affordance Theory, Computer-Mediated Communication (CMC), and Dual Process Theory. The dominance of Telegram within the @sarjanacrypto community is not merely a functional preference but an ecological decision. Through the lens of Affordance Theory (Ronzhyn et al., 2023), Telegram's architecture—specifically its immediacy, automation, scalability, and anonymity—structurally shapes investor cognition. Immediacy creates a high-velocity temporal pressure that frames urgency, effectively degrading analytical evaluation capacity. This velocity aligns with the CMC Hyperpersonal perspective (Walther & Whitty, 2021), in which anonymous environments foster over-attribution. Administrators construct charismatic authority using selective self-presentation and macroeconomic jargon, inducing a Halo Effect that mandates unquestioning compliance among retail investors.

This authority is rigorously maintained through communal social sanctions against dissenting views, systematically labelling them as "FUD" (Fear, Uncertainty, and Doubt). Consequently, a profound self-censorship mechanism is activated among the rational minority (Jiang & Cluett, 2025), constructing an echo chamber and an illusion of consensus. Furthermore, the automation affordance—manifested through algorithmic trading bots and AI tools—introduces a Machine Heuristic (Sundar & Lee, 2022). Instead of purely filtering data, these tools create an illusion of technological objectivity, often justifying impulsive decisions and reinforcing administrators' algorithmic legitimacy.

The convergence of these ecological pressures severely disrupts investors' cognitive processing. Drawing on Dual Process Theory (De Neys & Pennycook, 2019) and the ELM, the findings reveal that the high-velocity, unmoderated environment forces novice investors to rely on System 1 processing. Operating exclusively via the Peripheral Route, decisions are driven by social cues and herd behaviour rather than fundamental asset analysis. This cognitive dissonance gives rise to a critical pathology identified in this study as "Pseudo-DYOR" (pseudo-research). Faced with the steep learning curve required to read smart contracts, analyse whitepapers, or interpret on-chain metrics, retail investors opt for a dangerous cognitive shortcut. Investors delegate their analytical responsibilities to the collective sentiment, equating the volume of group chatter with verified research. By doing so, they maintain an illusion of literacy and a false sense of security while remaining

highly vulnerable to manipulation.

The AC-DFL model demonstrates that progression from this naive dependency (System 1) to independent technical auditing (System 2/Central Route) is rarely facilitated by preventive formal education. Instead, the transition is primarily catalysed by a "Pedagogy of Loss." Aligning with Carter & Nicolaides's (2023) concept of the disorienting dilemma and Song's (2025) loss aversion, severe financial trauma—such as portfolio liquidation—functions as an educational shock. This trauma disrupts heuristic processing, compelling the investor to engage in critical, Central Route evaluation. However, the efficacy of this pedagogy is conditional; without a foundational reflective framework, financial loss merely triggers retaliatory revenge trading rather than cognitive evolution.

Crucially, the AC-DFL model reveals that digital financial literacy is not a permanent, linear achievement. Investors possessing advanced analytical capabilities remain susceptible to Situational Regression. Extreme market euphoria and the allure of speculative luck can trigger an overconfidence bias. This regression is frequently triggered by a phenomenon identified in the field data as 'Lucky FOMO'—speculative success achieved without analytical effort. For instance, Informant 05 recounted securing a massive 1600% profit from a highly volatile asset ('Metrobot') driven entirely by impulsive herd behaviour rather than calculation. Such unearned windfalls generate a dangerous illusion of competence, conditioning the investor to falsely attribute random speculative luck to their own analytical prowess. When market euphoria peaks, this overconfidence systematically dismantles the investors' carefully built Central Route protocols, leading to a rapid cognitive relapse from System 2 back into the impulsive System 1 behaviours of the Naïve Speculator.

Ultimately, mitigating the chain of misinformation within Dark Social ecosystems requires a change in basic assumptions in financial education. Moving beyond passive information transmission, literacy initiatives must focus on cultivating cognitive resilience, training investors to independently triangulate data, and helping them resist the systemic psychological pressures engineered by high-velocity platform architectures.

CONCLUSION

This study concludes that digital financial literacy at @sarjanacrypto within high-velocity, Dark Social ecosystems like Telegram is not a linear educational outcome, but a reactive, evolutionary process. By formulating the Adaptive Cycle of Digital Financial Literacy (AC-DFL) model, this research maps how retail investors navigate four non-linear stages: from initial Awareness & Mimetic Response to ultimate Reflection & Structural Adaptation. Crucially, the transition from impulsive, heuristic-driven decisions (System 1) to critical, analytical evaluation (System 2) is rarely sparked by formal education. Instead, it is catalysed by a "Pedagogy of Loss", severe financial trauma that forces individuals to abandon Pseudo-DYOR practices and confront market realities. Furthermore, the platform's affordances, specifically its chronological speed and automation, structurally exacerbate this vulnerability

by promoting Machine Heuristics and silencing dissenting views through collective echo chambers. In practice, these findings urge a rethink of investor protection strategies. Regulators and educators must move beyond one-way information dissemination and instead focus on building cognitive resilience, teaching investors to triangulate data across multiple platforms independently. This study acknowledges limitations regarding generalisability, as it focuses exclusively on a single Telegram community. Therefore, future research should conduct comparative studies across various Dark Social platforms and asset classes. Longitudinal investigations are also recommended to observe how the AC-DFL cycle adapts over time to evolving regulatory frameworks and market volatility.

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Author Contributions

Conceptualization, M.N.F.; methodology, M.N.F.; software, M.N.F.; validation, M.N.F., N.A.D., and S.R.; formal analysis, M.N.F.; investigation, M.N.F.; resources, M.N.F.; data curation, M.N.F.; writing—original draft preparation, M.N.F.; writing—review and editing, M.N.F., N.A.D., and S.R.; visualization, M.N.F.; supervision, N.A.D. and S.R.; project administration, M.N.F. All authors have read and agreed to the published version of the manuscript.

AI Declaration

The authors declare that artificial intelligence (AI) tools, specifically Gemini Pro (Google), Grammarly, and DeepL, were used solely to assist with language editing, translation, grammar correction, and manuscript clarity. These tools were not involved in the study design, data collection, analysis, interpretation, or generation of scientific conclusions. All AI-assisted content was carefully reviewed and validated by the authors, who take full responsibility for the integrity and accuracy of the work.

Data Availability Statement

The data presented in this study, including interview transcripts and chat log archives, have been deposited in the Repositori Ilmiah Nasional (RIN) BRIN. The data are not publicly available due to privacy and ethical restrictions on the anonymity of research informants and community members, but may be accessed upon reasonable request via the repository.

Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study, the collection, analysis, or interpretation of data, the writing of the manuscript, or the decision to publish the results.

REFERENCES

Carter, P. L., & Nicolaides, A. (2023). Transformative learning: An emotional (r)evolution. *New Directions for Adult and Continuing Education*, *2023*(177), 25–36. https://doi.org/10.1002/ace.20476

Charfeddine, L., & Mahrous, A. (2024). What drives cryptocurrency pump and dump schemes: Coin versus market factors? *Finance Research Letters*, *67*, 105861. https://doi.org/10.1016/J.

FRL.2024.105861

Choung, Y., Chatterjee, S., & Pak, T. Y. (2023). Digital financial literacy and financial well-being. *Finance Research Letters*, *58*, 104438. https://doi.org/10.1016/J.FRL.2023.104438

Cinelli, M., De Francisci Morales, G., Galeazzi, A., Quattrociocchi, W., & Starnini, M. (2021). The echo chamber effect on social media. *Proceedings of the National Academy of Sciences*, *118*(9), e2023301118. https://doi.org/10.1073/pnas.2023301118

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications, Inc.

Cyr, D., Head, M., Lim, E., & Stibe, A. (2018). Using the elaboration likelihood model to examine online persuasion through website design. *Information & Management*, *55*(7), 807–821. https://doi.org/10.1016/J.IM.2018.03.009

De Neys, W., & Pennycook, G. (2019). Logic, fast and slow: Advances in dual-process theorizing. *Current Directions in Psychological Science*, *28*(5), 503–509. https://doi.org/10.1177/0963721419855658

Dhawan, A., & Putniņš, T. J. (2021). A new wolf in town? Pump-and-dump manipulation in cryptocurrency markets. *SSRN Electronic Journal*. https://doi.org/10.2139/SSRN.3670714

Gianstefani, I., Longo, L., & Riccaboni, M. (2022). The echo chamber effect resounds on financial markets: A social media alert system for meme stocks. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4053771

Herasimenka, A., Bright, J., Knuutila, A., & Howard, P. N. (2023). Misinformation and professional news on largely unmoderated platforms: The case of Telegram. *Journal of Information Technology and Politics*, *20*(2), 198–212. https://doi.org/10.1080/19331681.2022.2076272

Jiang, M., & Cluett, L. (2025). *Spiral of Silence in the Social Media Era* (M. Jiang & L. Cluett, Eds.). Springer Nature Singapore. https://doi.org/10.1007/978-981-96-8050-4

Kang, I., Cui, H., & Son, J. (2019). Conformity consumption behavior and FoMO. *Sustainability (Switzerland)*, *11*(17), 4734. https://doi.org/10.3390/SU11174734

Kim, K. T., & Fan, L. (2025). Beyond the hashtags: social media usage and cryptocurrency investment. *International Journal of Bank Marketing*, *43*(3), 569–590. https://doi.org/10.1108/IJBM-12-2023-0665

Kuerzinger, L., & Stangor, P. (2024). The relevance and influence of social media posts on investment decisions of young and social media-savvy individuals: An experimental approach based on tweets. *Journal of Behavioral and Experimental Finance*, *44*, 101005. https://doi.org/10.1016/j.jbef.2024.101005

Lyons, A. C., & Kass-Hanna, J. (2021). A methodological overview to defining and measuring "digital" financial literacy. *Financial Planning Review*, *4*(2), e1113. https://doi.org/10.1002/cfp2.1113

Mihajlović, M. (2023, May 8). *How to do your own research (DYOR)*. https://academy.shrimpy.io/lesson/how-to-do-your-own-research-dyor

Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE Publications.

Otoritas Jasa Keuangan (OJK). (2024a). *Peta jalan pengembangan dan penguatan inovasi teknologi sektor keuangan, aset keuangan digital dan aset kripto 2024-2028*.

Otoritas Jasa Keuangan (OJK). (2024b). *Statistik bulanan Agustus 2024*. https://ojk.go.id/id/kanal/pasar-modal/data-dan-statistik/statistik-pasar-modal/Pages/Statistik-Bulanan-Pasar-Modal---Agustus-2024.aspx

Pennycook, G., & Rand, D. G. (2021). The psychology of fake news. *Trends in Cognitive Sciences*, *25*(5), 388–402. https://doi.org/10.1016/j.tics.2021.02.007

Ronzhyn, A., Cardenal, A. S., & Batlle Rubio, A. (2023). Defining affordances in social media research: A literature review. *New Media & Society*, *25*(11), 3165–3188. https://doi.org/10.1177/14614448221135187

Song, Z. (2025). Behavioral biases in the cryptocurrency market: A study on the impact of investor sentiment on price anomalies. *Journal of Applied Economics and Policy Studies*, *18*(2), 35–39. https://doi.org/10.54254/2977-5701/2025.21938

Sundar, S. S., & Lee, E. J. (2022). Rethinking communication in the era of artificial intelligence. *Human Communication Research*, *48*(3), 379–385. https://doi.org/10.1093/hcr/hqac014

Swart, J. (2023). Tactics of news literacy: How young people access, evaluate, and engage with news on social media. *New Media and Society*, *25*(3), 505–521. https://doi.org/10.1177/14614448211011447

Vuorikari, Riina., Kluzer, Stefano., & Punie, Yves. (2022). *DigComp 2.2: The digital competence framework for citizens - with new examples of knowledge, skills and attitudes*. https://doi.org/10.2760/115376

Walther, J. B., & Whitty, M. T. (2021). Language, psychology, and new new media: The hyperpersonal model of mediated communication at twenty-five years. *Journal of Language and Social Psychology*, *40*(1), 120–135. https://doi.org/10.1177/0261927X20967703

Wardle, C., & Derakhshan, H. (2017). *Information disorder: Toward an interdisciplinary framework for research and policy making*. www.coe.int

Whitty, M. T., & Ruddy, C. (2025). COVID-19 lies and truths: Employing the elaboration likelihood model (ELM) and linguistic inquiry and word count (LIWC) to gain insights into the persuasive techniques evident in disinformation (fake news). *Computers in Human Behavior Reports*, *20*, 100797. https://doi.org/10.1016/j.chbr.2025.100797

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications, Inc.

Zhang, Z., Cheng, Z., Gu, T., & Zhang, Y. (2024). Determinants of users' unverified information sharing on social media platforms: A herding behavior perspective. *Acta Psychologica*, *248*, 104345. https://doi.org/10.1016/J.ACTPSY.2024.104345