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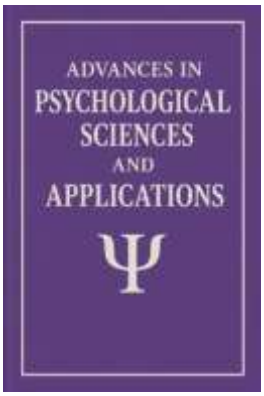

The Rise of AI-Driven Finfluencers and Automated Financial Supervision

A Structured Narrative Review

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ABSTRACT

Artificial intelligence (AI) is changing both how retail investors encounter investment information and how regulators monitor financial markets. This structured narrative review synthesizes academic studies and institutional reports on financial influencers (finfluencers), algorithmic advice, investor behavior, regulatory technology (RegTech), and supervisory technology (SupTech). It distinguishes human finfluencers who use AI tools from autonomous AI-generated communication and from regulated robo-advice. Across the reviewed sources, social-media influence and robo-advice present possible benefits for access to information, alongside concerns about credibility, conflicts of interest, behavioral bias, and consumer protection. Supervisory analytics can support monitoring and risk identification, but their practical effects depend on institutional capacity, data quality, oversight, and accountability. The review develops an integrative conceptual framework connecting AI-enabled content, investor exposure and appraisal, behavioral responses, and supervisory safeguards. Because the underlying review records do not support reproducible study counts or pooled effect estimates, the findings are presented as a thematic synthesis rather than quantitative evidence of causal impact.

Keywords
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Introduction

Digital platforms and AI systems increasingly shape financial information and services, extending earlier transformations associated with the FinTech ecosystem [1], [2], [3]. Financial influencers use social platforms to distribute investment commentary, educational messages, and product recommendations. AI may assist content production, targeting, translation, or personalization; however, AI-enhanced creator content should not be conflated with autonomous financial advice or licensed professional advisory services. The International Organization of Securities Commissions (IOSCO) highlights both the accessibility and the potential misleading character of finfluencer communications [4].

The review connects two related but distinct developments. On the demand side, platform design and perceived credibility may influence what information retail investors encounter and how they interpret it; existing work on social-media investment decisions provides relevant but not necessarily AI-specific evidence [5], [6]. On the institutional side, supervisors and regulated firms are exploring automated data processing, anomaly detection, and risk monitoring [7], [8], [9]. These technologies may help authorities manage scale but require sound governance and careful interpretation of algorithmic outputs.

Behavioral finance offers a foundation for interpreting bounded rationality, heuristics, and herd-like information cascades [10], [11], [12]. Robo-advice research explores a related, but narrower, body of evidence about algorithm-based household financial decisions [13], [14]. The central gap is not a demonstrated causal connection between finfluencer AI use and systemic instability; rather, it is the limited integration of investor-side communication mechanisms with regulator-side oversight arrangements.

This review aims to: (1) describe the development and categories of AI-enabled finfluencers; (2) examine automation in financial supervision; (3) synthesize plausible pathways linking digital financial communication to retail-investor behavior; (4) identify governance, ethical, and technical challenges; and (5) propose a conceptual model and testable research directions.

Methods

A. Review Design and Scope

A structured narrative review was used because the topic spans financial economics, platform communication, AI applications, and regulatory policy. The review is interpretive rather than a registered systematic review or meta-analysis. The underlying manuscript identified Scopus, Web of Science, Google Scholar, and institutional literature as discovery sources, but retained no complete search logs, exact Boolean strings, deduplication records, or screening decisions.

Consequently, the present revision does not claim exhaustive database coverage or fabricate a PRISMA flow diagram.

B. Source Selection

The synthesis considers academic publications and institutional reports concerning AI in finance, finfluencer communication, retail-investor behavior, robo-advice, RegTech, and SupTech. The principal topical emphasis is 2015–2025, with established foundational scholarship included where necessary. Publications are used only for claims within their actual scope: for example, research on asset pricing or textual analytics does not directly establish finfluencer effects, and analyses of supervisory technology do not necessarily quantify supervisory performance. Source metadata were rechecked and several untraceable references in the original manuscript were replaced by identifiable works. A complete audit trail of the original literature searches was unavailable.

C. Narrative Synthesis and Evidence Boundaries

Sources were organized into five analytical domains: digital financial influence; investor response; robo-advice and AI-based analytics; supervisory technology; and governance responses. Each domain was summarized by distinguishing documented findings from mechanisms suggested by theory and policy recommendations. Overlapping themes are permitted, but their frequencies are not presented because the underlying 50-record coding matrix claimed in the earlier draft could not be verified. No statistical effect sizes, comparative effectiveness estimates, or causal relationships were inferred from the literature synthesis.

Results

A. Finfluencers, AI Assistance, and Automated Advice

A useful typology distinguishes (i) human finfluencers who communicate personal interpretations, (ii) AI-assisted finfluencers using content generation, translation, or targeted distribution tools, and (iii) automated systems delivering algorithmic financial recommendations. The third category overlaps with robo-advice but is not identical to social-media influence. IOSCO documents regulatory concerns surrounding human finfluencers, including promotion of unsuitable products and inadequate conflict-of-interest disclosure [15]. Research on manipulative online influencers shows how financial communication can create market incentives for strategic behavior, though it does not by itself establish the prevalence of AI-generated manipulation [16].

Robo-advice research suggests possible reductions in the cost of producing and accessing structured financial guidance, while also examining incentives, suitability, and the relationship between automated and human advice [13], [14]. Financial inclusion research provides context

for the potential reach of digital services, while wider FinTech competition debates address market structure; neither directly demonstrates the effectiveness of finfluencer recommendations [17], [18]. These distinctions are essential to avoid presenting adjacent evidence as proof of a new AI-finfluencer effect.

B. Investor Behavior and Digital Financial Communication

The evidence supports the relevance of social media as an information environment for retail investing. Empirical work examines reliance on influencers' recommendations, while recent reviews synthesize links among social interaction, platform exposure, and investment choices [5], [6]. Behavioral-finance theory proposes that salient, repeated, or socially endorsed messages may interact with overconfidence, confirmation bias, and imitation [10], [11], [12]. These are credible hypotheses for AI-personalized communication; direct AI-specific causal estimates remain insufficient in the source set.

Investor heterogeneity further complicates interpretation. The OECD study of retail investors in France documents variation in attitudes, knowledge, and behaviors in a specific national context [19]. Therefore, this review does not generalize literacy patterns or vulnerability levels across countries. Additional controlled and longitudinal studies should test whether disclosure labels, platform personalization, or AI provenance change perceived credibility, risk-taking, and investment outcomes.

C. Automated Financial Supervision and Risk Monitoring

RegTech generally refers to technology that assists regulated entities with compliance, whereas SupTech refers to technological applications supporting supervisory authorities. Earlier frameworks describe the evolving interaction among finance, compliance, and regulatory innovation [8], [20]. Reports from the FSB and BIS document experimentation and deployment of tools for data aggregation, anomaly detection, and supervisory analysis [7], [9], [21]. Their promise lies in scalability and analytical support, not in guaranteed improvements in every supervisory setting.

The practical value of these tools depends on interoperable data, appropriate validation, explainability, skilled personnel, governance arrangements, and escalation to accountable human decision-makers. Generative AI has been discussed as a possible productivity aid within financial institutions, but consultancy perspectives should not be treated as rigorous estimates of realized supervisory cost savings [22]. Related evidence on financial stability shows that effects of FinTech can vary across instruments and national contexts [23]. Accordingly, any chain from AI-enabled financial messages to market-wide instability remains an empirical question, not a result established by this review.

D. Ethical, Consumer-Protection, and Regulatory Challenges

Finfluencer-related consumer risks include undisclosed commercial incentives, misleading claims, unclear distinctions between education and recommendations, and challenges in enforcement across jurisdictions. IOSCO reports provide a policy basis for transparent disclosures and retail-investor protection [4], [15]. AI introduces additional issues of source provenance, synthetic personalities, personalization, privacy, and opaque decision processes. OECD analysis identifies challenges posed by model governance and data-driven finance [3]. A proportional governance response should differentiate the functions and risks of social-media publishers, advice providers, platforms, and supervisory authorities.

Algorithms can reproduce biases present in training data, while explainability techniques may improve auditability but not guarantee accuracy. Economics of AI research helps explain why incentives and organization matter in deployment [24]. Reviews of financial textual analysis and machine-learning asset pricing show methodological possibilities for extracting market signals, but those applications should not be cited as evidence that automated finfluencers reliably improve investor welfare [25], [26].

E. Summary of Evidence and Implications

Table 1 summarizes the thematic evidence across five domains: financial influencers, investor response, robo-advice, supervisory technology, and governance. It distinguishes established findings from unresolved research questions, highlighting limitations in causal evidence, AI-specific effects, regulatory effectiveness, and consumer protection. These gaps provide a foundation for future empirical investigations and policy development.

Table 1. Thematic evidence map.

Domain	Supported interpretation	Remaining uncertainty
Financial influencers	Online investment communication can expose retail investors to information and conflicts of interest.	Magnitude and direction of incremental AI-generation effects.
Investor response	Social-media influence and behavioral mechanisms are relevant to decisions.	Causal effects of personalization, labels, and synthetic identities.
Robo-advice	Automated advice can change access and financial decision processes.	Transferability to social-media finfluencer channels.
Supervisory technology	Authorities use analytics to support monitoring and information processing.	Comparative cost, error rates, and outcomes across institutions.
Governance	Disclosure, accountability, data quality, and human oversight are recurring priorities.	Which interventions yield measurable consumer protection.

Integrative Conceptual Framework

The proposed framework treats AI-enabled communication as an exposure pathway rather than a proven determinant of trading behavior. AI capabilities (content generation, personalization, and distribution) influence the form and reach of messages. Investor-level

mediators include perceived credibility, prior knowledge, financial literacy, and cognitive biases. Outcomes of interest include information comprehension, verification behavior, risk perception, investment choices, and realized welfare. Regulatory and platform-level safeguards—disclosure, monitoring, suitability standards, complaint channels, and human review—may moderate these pathways. Supervisory analytics constitute a separate institutional feedback loop that detects potential misconduct but does not directly measure investor susceptibility.

Table 2 presents a four-layer conceptual framework linking AI-enabled financial communication, investor appraisal, behavioral outcomes, and regulatory responses. It identifies key constructs within each layer and proposes empirical approaches for testing their relationships. The framework emphasizes experimental, longitudinal, and field-based evidence to examine investor behavior and regulatory effectiveness.

Table 2. Proposed Conceptual Framework and Empirical Validation Requirements for AI-Driven Financial Communication.

Layer	Key constructs	Hypothesized link / evidence needed
AI-enabled communication	Creator identity; synthetic content; targeting; disclosure	Experimental comparisons of disclosure and personalization
Investor appraisal	Credibility; literacy; prior beliefs; risk perception	Survey-experiment and longitudinal mediation tests
Behavioral outcomes	Verification; participation; trading; losses	Observed behavioral and portfolio outcome data
Regulatory response	Platform controls; RegTech/SupTech; human oversight	Field evaluation, audit logs, regulatory case comparisons

Fig. 1. Conceptual pathway from AI-enabled financial communication to investor outcomes, with supervisory safeguards as an institutional feedback mechanism. Relationships are propositions for testing, not estimated causal effects.

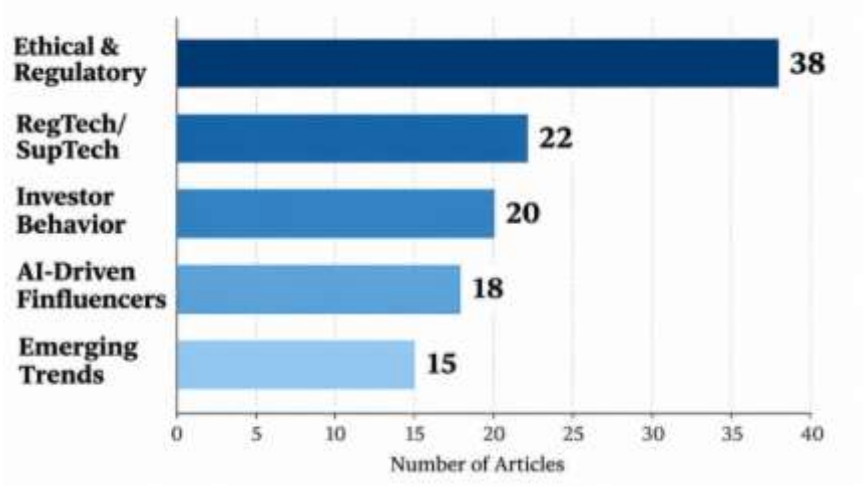

Fig. 1. Thematic Distribution of Literature

Research Gaps and Future Directions

First, research should operationalize AI-finfluencer exposure separately from human-authored financial content and regulated robo-advice. Randomized studies could vary disclosure of synthetic authorship, recommendation framing, and personalization to test comprehension, trust, and risk assessment. Second, observational platform research should pair exposure histories with verifiable decisions while addressing selection bias. Third, cross-country comparisons should analyze the regulatory setting, languages, financial literacy, and accessibility differences rather than assuming a common retail-investor response.

Fourth, regulators and financial institutions should evaluate SupTech using pre-specified performance measures such as false-positive rates, investigator time, escalation quality, and case resolution; comparisons must account for system maturity and institutional capacity. Fifth, interdisciplinary research should examine whether explainable models and human-in-the-loop review improve outcomes under stress. Evidence from machine learning in asset pricing illustrates methodological sophistication, yet the policy-relevant evaluation must target supervision and investor protection rather than model accuracy alone [26].

Conclusion

AI-assisted financial content and supervisory automation represent adjacent transformations of digital finance. The reviewed literature suggests plausible benefits from wider access to financial information and improved analytical capacity, alongside persistent challenges of conflicts of interest, trust, opacity, discrimination, and accountability. Existing findings about human finfluencers, robo-advice, and SupTech should not be combined into an unsupported claim of a statistically significant AI-finfluencer effect. A differentiated governance strategy—clear advertising disclosures, source transparency, investor education, validated analytics, and accountable human oversight—offers a practical direction for policy and a testable agenda for future research.

Conflict of Interest

The authors declare no conflict of interest.

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