



Economic Bubble and Fraud in Unicorn Startups: A Case Study of eFishery

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Abstract: Examine the lifecycle of the Indonesian startup eFishery using the Minsky and Kindleberger economic bubble framework. A qualitative single-case study design was employed, based on extensive secondary data analysis of investigative media reports, forensic audit summaries, and industry publications. Findings demonstrate a clear alignment between eFishery's development and the five stages of an economic bubble: displacement, boom, euphoria, financial distress, and revulsion. Internal financial dynamics were mapped to Minsky's regimes of hedge, speculative, and Ponzi finance, revealing how staged venture capital funding created structural incentives that contributed to financial manipulation. Governance failures were identified as principal drivers, notably moral hazard between founders and investors and a pervasive growth-at-all-costs culture, which accelerated both the bubble's expansion and its subsequent collapse. The Minsky and Kindleberger framework was found to be an effective analytical tool for assessing firm-level financial instability in high-growth startups. Implications are discussed for regulators, investors, and founders, with recommendations for improved governance, transparency, and funding practices to mitigate systemic risks associated with the pursuit of unicorn valuations.

Keywords: Startup Lifecycle, Economic Bubble, Minsky-Kindleberger Framework, Venture Capital, Startup Bubble, Financial Fraud, E-Fishery, Indonesia

Introduction

The global technology landscape of the past decade has been defined by the rapid emergence of "unicorns," privately held startups valued at over US\$1 billion (Lee & Kim, 2019) (Tekic et al, 2024). This phenomenon has been particularly pronounced in Southeast Asia's burgeoning digital economy, where venture capital (VC) has fueled aggressive expansion and sky-high valuations (Judijanto, 2024) (Marpaung et al, 2024) (Rosa et al, 2019). Indonesia, as the region's largest economy, became a fertile ground for such ventures, celebrating its unicorns as symbols of national innovation and economic prowess (Firmansyah & Al Ayyubi, 2024) (Iskandar, 2024) (Judijanto, 2024) (Richau et al, 2021). Among these was E-Fishery, a startup founded in 2013 in Bandung with an ambitious mission to revolutionize Indonesia's traditional aquaculture sector through technology (Alanudin & Robbani, 2024) (Sabran & Rusfian, 2023) (Zainudin et al, 2023).

E-Fishery's core innovation, an Internet of Things (IoT)-enabled smart fish feeder, addressed a critical pain point for farmers, namely feed inefficiency, which constitutes up to 70% of operational costs (Alanudin & Robbani, 2024) (Kamilaris et al, 2019) (Oglend,

2020). This tangible solution, combined with a charismatic founding story, attracted significant investor interest. The company expanded its model into a comprehensive ecosystem, offering financing, feed distribution, and a marketplace for farmers' produce (eFishery, 2021) (Fadilah, 2022) (Zainudin et al, 2023). This narrative of disruption and social impact culminated in July 2023, when a US\$200 million Series D funding round valued E-Fishery at US\$1.4 billion, cementing its status as the world's first Aquatech unicorn (Singh & Ruehl, 2023). Indonesian media lauded it as a national success story, transforming thousands of smallholder fish farms into profitable enterprises (Fadilah, 2022).

However, this celebrated narrative concealed a dysfunctional reality. In late 2024, a whistleblower report triggered an internal investigation that exposed a sophisticated, multi-year accounting fraud (Bloomberg, 2025) (Agustin et al, 2025) (Rahman, 2025). A subsequent forensic audit revealed that management had systematically inflated key business metrics, maintaining two sets of books to deceive investors and auditors. For the first nine months of 2024, revenue was inflated by 4.8 times, from an actual US\$157 million to a reported US\$752 million (Bloomberg, 2025) (Guild, 2025). The company, which had claimed a profit, was in fact facing massive losses. The revelation acted as a catalyst for a swift and total collapse. By early 2025, E-Fishery was declared commercially non-viable, over 90% of its workforce was laid off, and its founders were arrested on charges of fraud and embezzlement (Muskita, 2025) (Rahman, 2025) (Wong, 2025).

The spectacular rise and fall of E-Fishery raises critical questions about the sustainability and integrity of the VC-driven growth model. While startup failure is common (Cantamessa et al, 2018) (Szathmári et al, 2024), a collapse of this magnitude, rooted in systemic fraud at a unicorn level, necessitates a deeper structural analysis. This study posits that E-Fishery's lifecycle was not merely a case of corporate mismanagement but a manifestation of an economic bubble at the firm level. To analyze this, we employ the theoretical framework developed by Hyman Minsky and Charles Kindleberger (Kindleberger & Aliber, 2005) (Minsky, 1982). Minsky's Financial Instability Hypothesis argues that periods of economic stability encourage risk-taking, leading financial structures to evolve from robust (Hedge Finance) to fragile (Speculative Finance) to unstable (Ponzi Finance) (Minsky, 1982) (Wray, 2001). Kindleberger adapted this into a five-stage model of a typical bubble: Displacement, Boom, Euphoria, Financial Distress/Crisis, and Revulsion/Panic (Kindleberger & Aliber, 2005).

While this framework was designed for macroeconomic phenomena, scholars have increasingly recognized its applicability to technology manias and sector-specific bubbles (Firmansyah & Al Ayyubi, 2024) (Jumiati & Maulana, 2024) (Marpaung et al, 2024) (Sukarni Putri et al, 2023). This paper extends its application to a micro, firm-level analysis, arguing that the staged financing process of venture capital structurally mimics the credit expansion dynamics that fuel macroeconomic bubbles. By mapping E-Fishery's journey onto this framework, this study seeks to answer the following research question: To what extent does the lifecycle of E-Fishery, from its inception to its collapse, align with the Minsky-Kindleberger economic bubble framework, and what were the key drivers of its financial instability?

Methodology

Research Design

This study utilizes a qualitative, single-case study approach to conduct an in-depth analysis of the E-Fishery lifecycle (Patton, 2023) (Yin, 2014). The case study method is particularly well-suited for investigating complex, contemporary phenomena within a real-life context, allowing for a rich, holistic understanding of the causal mechanisms at play (Miles et al., 2014). E-Fishery was selected as an exemplary case due to several factors: its status as a celebrated unicorn in a high-risk, non-traditional tech sector (Aquatech); the publicly documented nature of its rise and its precipitous collapse; and the availability of detailed reports on the financial fraud, which provide rare insight into the internal mechanics of a bubble's inflation and implosion.

Data Collection

The research is based exclusively on the analysis of secondary data compiled from a wide range of publicly available sources spanning the period from 2013 to 2025. This approach was deemed appropriate given the private nature of the company and the legal sensitivities surrounding its collapse, which prevented direct access to internal financial data or company personnel. The data were drawn from several key categories of information sources.

First, investigative media reports were examined, including in-depth articles from reputable international and Indonesian financial news outlets such as *DealStreetAsia*, *Tech in Asia*, *Bloomberg*, *Kompas*, and *DetikFinance*. These reports provided chronological accounts and contextual details regarding the company's operations, funding activities, and subsequent exposure of fraud. Second, the study reviewed publicly available forensic audit summaries, which revealed the scale and methods of the financial manipulation conducted by the company's management.

Third, official investor and company announcements were analyzed, including press releases, funding declarations, and public statements made by E-Fishery and its investors. These documents were instrumental in tracing the company's narrative and valuation milestones. Fourth, industry reports and databases such as PitchBook and Crunchbase were utilized to obtain data on funding rounds, investor participation, and valuation trends, as well as to contextualize E-Fishery's position within the broader Agtech and Aquatech sectors. Finally, academic literature was reviewed to support the theoretical framing of the analysis. Peer-reviewed journal articles on startup ecosystems, venture capital dynamics, corporate governance, agency theory, and economic bubbles were integrated to inform both the conceptual framework and the interpretation of findings.

Data Analysis

The data were analyzed using a chronological mapping and thematic analysis approach. First, a detailed timeline of E-Fishery's corporate history was constructed, documenting key events such as founding, product launches, funding rounds, valuation milestones, strategic pivots, and the final crisis. Second, this timeline was systematically mapped against the five stages of the Minsky-Kindleberger bubble framework. Each event

was coded and categorized according to the characteristics of the corresponding bubble stage (e.g., Series C and D funding as part of the “Euphoria” stage).

In parallel, a thematic analysis was conducted to identify the underlying drivers of the bubble's progression. This involved applying the concepts of Minsky's financial regimes (Hedge, Speculative, Ponzi) and principles from agency theory to interpret the motivations and behaviors of the company's founders and investors (Cowden et al., 2020). To ensure validity and reliability, data triangulation was performed by cross-referencing information from multiple independent sources to verify key facts such as funding amounts, timelines, and the details of the fraud (Patton, 2023). This rigorous process allowed for the construction of a robust and coherent narrative that connects empirical events to the theoretical framework.

Result and Discussion

The Five Stages of the E-Fishery Bubble

The chronological analysis of E-Fishery reveals a trajectory that aligns perfectly with the five stages of the Minsky-Kindleberger economic bubble model. The structural demands of venture capital financing, coupled with severe governance failures, systematically drove the company through Minsky's financial regimes, from stable to catastrophically unstable.

Phase I: Displacement and Hedge Finance (2013–2017)

The Displacement stage of a bubble is triggered by a new innovation or event that creates profitable new opportunities in at least one sector of the economy (Kindleberger & Aliber, 2005) (Rosser et al, 2012). For E-Fishery, the displacement was its technological innovation in aquaculture. Founded in October 2013, the company introduced the eFeeder, an IoT-enabled device that automated fish feeding based on sensor-detected appetite, promising to reduce feed waste and improve yields (Sabran & Rusfian, 2023) (Zainudin et al, 2023). This was a genuine disruption to the traditional, inefficient practices dominating Indonesian aquaculture.

The early years were characterized by a focus on survival and proving the business model. This period aligns with Minsky's concept of Hedge Finance, a stable regime where a firm's expected cash flows are sufficient to meet all its payment commitments, including both interest and principal on its debts (Holloway & Eloranta, 2014) (Wray, 2001). E-Fishery, through bootstrapping and early seed funding from investors such as Ideosource and Aqua-Spark, focused on achieving product-market fit. The founder, Gibran Huzaifah, reportedly spent months visiting remote villages to convince skeptical farmers to adopt the technology (Fadilah, 2022). The objective was viability and validation, not the hypergrowth that would come to define its later stages.

Phase II: Boom and the Transition to Speculative Finance (2018–2020)

The Boom phase begins when the initial innovation gains traction and attracts widespread investor interest, leading to a rapid and sustained increase in asset prices, or in this case, company valuation. This phase saw E-Fishery transition from a stable financial footing to a precarious one.

The critical inflection point occurred in late 2018. On the verge of closing its US\$4 million Series A funding round, the company was nearly out of cash (Bloomberg, 2025) (Guild, 2025) (Meiliana, 2025) (Rahman, 2025). Faced with immense pressure to meet the growth milestones demanded by the VC ecosystem, the management made a fateful decision to begin manipulating financial reports (Guild, 2025). According to later confessions, the initial fraud involved inflating revenue by 20–25% to secure the funding (Bloomberg, 2025) (Nur Agustin et al, 2025) (Wong, 2025). This act marked the company's transition into Speculative Finance. In this Minskyean regime, a firm's cash flows are sufficient to cover its interest payments but not the principal, forcing it to continuously roll over its debt, or in a startup's case, to raise new equity rounds to cover its escalating operational deficits (burn rate) (Vercelli, 2001).

This structural dependency on new capital became entrenched as E-Fishery expanded its platform to include financing (eFisheryFund) and a marketplace (eFishery Kabayan), significantly increasing its capital expenditure (Alanudin & Robbani, 2024; eFishery, 2021). To justify higher valuations for its Series B round in 2020, management promoted narratives of “4x growth” during the pandemic, tapping into investor appetite for tech-for-good stories (Alanudin & Robbani, 2024) (Guild, 2025) (Shu, 2023). The aggressive, staged funding process that demanded exponential growth reinforced the necessity of speculative accounting practices (Gompers et al, 2016).

Phase III: Euphoria and Ponzi Finance Risk (2022–2023)

The Euphoria phase is the peak of the bubble, where caution is thrown to the wind and valuations detach from economic fundamentals (Akerlof & Shiller, 2009). For E-Fishery, this was marked by the entry of global, blue-chip investors. Its US\$90 million Series C round in January 2022 was co-led by Temasek and SoftBank Vision Fund 2, followed by the US\$200 million Series D round that minted its unicorn status in 2023 (Shu, 2023; Singh & Ruehl, 2023). The participation of such prominent investors created a powerful validation effect, fueling market euphoria and silencing skepticism (Bengtsson & Ravid, 2009; Klimas & Czakon, 2021).

Internally, however, the company was operating under Ponzi Finance Risk. In this terminal Minskyean stage, cash flows are insufficient to cover even interest payments, meaning the firm can only survive by borrowing more or selling assets, in this case by raising ever-larger funding rounds based on fraudulent data (Gleason et al., 2022; Vercelli, 2011). The fraud evolved from simple inflation to a highly sophisticated scheme.

1. **Dual Accounting:** Two sets of books were maintained, one for internal use showing the true losses and another for investors showing fictitious profits and hypergrowth (CNBC Indonesia, 2025) (Guild, 2025) (Nur Agustin et al, 2025).
2. **Asset and Revenue Inflation:** The company claimed over 400,000 active eFeeders, while a forensic audit later found only around 24,000 were genuinely operational, and revenue was inflated by over 75% (Nur Agustin et al, 2025) (Rahman, 2025).

3. Round-Tripping: To create the illusion of transaction volume, the founder allegedly established nominee companies to circulate funds within the group, a classic tactic to fabricate revenue (Agustin et al, 2025) (Wong, 2025).

At the peak of its euphoria, E-Fishery's US\$1.4 billion valuation was not based on reality but on a Ponzi-like structure critically dependent on continuous capital injections to sustain its own fraudulent facade.

Phase IV: Financial Distress and the Minsky Moment (Late 2024)

The Financial Distress phase begins when insiders or astute investors start to realize the boom is unsustainable and begin to sell (Kindleberger & Aliber, 2005). For a private company like E-Fishery, this manifested internally. The fraud became too large to conceal, and a whistleblower alerted the board in December 2024 (Dyck et al, 2008) (Agustin et al., 2025) (Rahman, 2025) (Wong, 2025).

This triggered the "Minsky Moment," the pivotal point where euphoria flips to panic (Vercelli, 2011). The board suspended the founders and commissioned a forensic audit. The audit's revelation that the company had actually lost US\$35.4 million in nine months while claiming a US\$16 million profit shattered the perception of value (Bloomberg, 2025; CNBC Indonesia, 2025). This sudden and violent realignment with reality represents the core of the Minsky Moment, where the market collectively realizes the asset's value was based on non-viable assumptions, leading to a rush for the exits.

Phase V: Revulsion and Panic (2025)

The final stage is Revulsion or Panic, as asset prices plummet and entities become insolvent (Kindleberger & Aliber, 2005). For E-Fishery, this was swift and brutal. FTI Consulting took over management and declared the company "no longer commercially viable" (Muskita, 2025). Over 1,000 employees were laid off, and investors were presented with a liquidation plan that would likely wipe out ordinary shareholders (Meiliana, 2025) (Rahman, 2025) (Wong, 2025). The legal reckoning followed, with the founders arrested in July 2025 (Wong, 2025). The story of E-Fishery transformed from a beacon of innovation into a cautionary tale of fraud, its collapse sending shockwaves through the Southeast Asian tech ecosystem.

Discussion: Governance Failure as the Bubble's Accelerator

While the Minsky-Kindleberger framework effectively maps the lifecycle, the speed and severity of E-Fishery's bubble were accelerated by profound governance failures rooted in the principal-agent dynamics of the VC industry (Huang et al, 2022) (Kato, 2025).

The dominant "growth-at-all-costs" culture in the startup world prioritizes rapid valuation growth over sustainable profitability (Lim & Fisher, 2024) (SOMO, 2025). This creates a moral hazard in which founders are incentivized to take excessive risks or even engage in fraudulent behavior to meet unrealistic growth targets set by VCs (Cumming et al, 2023) (Gompers et al, 2016) (Klimas & Czakon, 2021). In E-Fishery's case, the VC-founder relationship appears to have evolved into what some scholars term "agreeable moral hazard" (Balakrishnan et al, 2020) (Cowden et al, 2020) (Momtaz, 2021). In this dynamic,

investors, driven by the fear of missing out (FOMO) and the need to deploy large funds quickly, may implicitly tolerate or fail to rigorously scrutinize a founder's aggressive claims as long as valuations continue to rise (Hellmann, 1998) (Hirano & Toda, 2024). This is exacerbated by the reliance on "vanity metrics," superficial indicators such as app downloads or claimed user numbers, which can be easily manipulated to project an illusion of growth (Szathmári et al, 2024).

This agency failure leads to a systemic breakdown in due diligence (Gleason et al, 2022). The presence of elite global investors such as SoftBank and Temasek should theoretically have ensured rigorous oversight. Yet, the fraud persisted through multiple funding rounds, suggesting that even sophisticated investors can be swayed by euphoria and the powerful narratives spun by charismatic founders (Balakrishnan et al, 2020). The failure of governance effectively removed the brakes on E-Fishery's transition through Minsky's regimes, allowing speculative practices to metastasize into a full-blown Ponzi scheme.

Conclusion

This study demonstrates that the lifecycle of E-Fishery, from its innovative inception to its fraudulent collapse, can be comprehensively mapped and explained by the Minsky-Kindleberger economic bubble framework. The company's trajectory is a textbook illustration of the five stages of a bubble, with its internal financial health deteriorating through the Minskyean regimes of Hedge, Speculative, and ultimately, Ponzi Finance. The analysis confirms that the structural pressures inherent in the venture capital funding model, with its staged capital injections contingent on exponential growth, were the primary engine inflating the bubble. This process was critically accelerated by a systemic failure of corporate governance, where an alignment of perverse incentives between founders and investors fostered an environment ripe for manipulation and fraud.

Theoretical and Practical Implications

The findings offer several important implications. Theoretically, this study validates the application of the Minsky-Kindleberger framework, traditionally a macroeconomic tool, to a firm-level analysis within the modern startup ecosystem. It posits that the VC funding cycle acts as a micro-level analogue to the credit cycles that fuel broader market bubbles. Furthermore, it integrates agency theory to explain the behavioral dynamics that accelerate bubble formation, highlighting how agreeable moral hazard can neutralize governance mechanisms.

Practically, the E-Fishery case serves as a stark warning. For regulators, especially in emerging markets, it underscores the need for greater oversight of late-stage, systemically important startups, particularly those in critical sectors like food and agriculture. Mandating independent financial audits from Series B or C onwards could be a crucial step in detecting fraud before a company reaches a "too big to fail" valuation. For venture capitalists, the case highlights the catastrophic risks of prioritizing valuation momentum over fundamental due diligence and sustainable metrics. Incentive structures within VC firms may need recalibrating to reward the cultivation of long-term, profitable businesses

instead of the rapid creation of ephemeral unicorns. For founders, it is a cautionary tale about the perils of the “fake it till you make it” ethos, which, under market pressure, can quickly devolve from optimistic projection into criminal fraud.

Limitations and Future Research

The primary limitation of this research is its reliance on secondary data. As E-Fishery was a private company, internal decision-making processes, board-level discussions, and detailed, unaudited financials were not accessible. The analysis is therefore an interpretation based on the best available public evidence.

Future research could build on this study in several directions. A comparative analysis of governance failures across different unicorn collapses in Southeast Asia could identify regional patterns of risk. Quantitative research could explore the correlation between specific VC investment terms, such as liquidation preferences and board control, and the likelihood of startup fraud or failure. Finally, as the legal proceedings against E-Fishery's founders unfold, further analysis of the court findings will provide deeper insights into the mechanics of the fraud and the culpability of various stakeholders.

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