Volume 11, 2025, 15-38 https://doi.org/10.5281/zenodo.15851137

PUMP.FUN AND MEME-COINS: A CASE STUDY IN THE LEGAL COMMODIFICATION OF PONZI-LIKE TOKENOMICS

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Abstract

Launched in 2024, Pump.fun enabled the instant minting and trading of millions of tokens, generating hundreds of millions in fee revenue by capitalizing on speculative frenzy. While positioned as a form of participatory culture and financial democratization, the platform's ecosystem exhibited characteristics analogous to Ponzi schemes: value derived from continuous new investment rather than fundamentals, enriching early insiders while over 99% of tokens collapsed, leading to widespread retail losses. Our analysis explores the regulatory gray area these meme-coins occupy, often evading securities classification while attracting scrutiny from bodies like the UK's FCA and prompting class-action lawsuits in the U.S. that allege the sale of unregistered securities. By synthesizing financial history, communication theory, and legal analysis, we argue that Pump.fun exemplifies how modern fintech can package and sell speculative mania as a service, outpacing regulatory frameworks and raising urgent ethical questions about consumer protection, platform responsibility, and the volatile intersection of internet culture and financial markets.

Keywords: Meme-coins, Pump.fun, Ponzi scheme, Tokenomics, Cryptocurrency, Solana, Financial Regulation, Securities Law, Legal Commodification, Speculative Bubbles, Consumer Protection, Digital Culture

Introduction

Meme-coins – digital tokens inspired by internet memes, viral jokes, or cultural trends – have rapidly evolved from fringe novelties into multi-billion-dollar market phenomena (Anderson, 2025) . Exemplified by early successes like Dogecoin and Shiba Inu, these tokens derive value not from underlying assets or cash flows, but from *collective belief* and social media hype (Anderson, 2025). In essence, their market prices ride on *memetic popularity* rather than fundamental utility, inviting comparisons to speculative bubbles and Ponzi schemes (Sygnum, 2025). Indeed, critics have labeled meme-coins "**legalized Ponzi schemes**," highlighting that their only real "value" lies in persuading someone else to buy in at a higher price (Sanasie, 2025). Early entrants often profit exorbitantly while latecomers "lose their shirts," a dynamic eerily reminiscent of classic Ponzi structures where returns for initial investors are paid by funds from subsequent ones (Krause, 2025c). Yet unlike outright fraud, meme-coin speculation largely operates in legal grey zones; it commodifies hype and community *attention* into tradable tokens that, despite Ponzi-like dynamics, are often not explicitly illegal (Smith et al., 2025). This paradox – *Ponzi-like tokenomics being packaged as lawful commodities* – poses urgent questions for regulators, market participants, and media ethicists alike. They represent a convergence of internet culture and speculative finance, often reflecting a form of "financial nihilism" where participants, disillusioned with traditional markets, engage in high-risk gambling. (Long et al., 2025), particularly appealing to younger generations who, facing economic precarity and disillusionment with traditional financial systems, are more inclined to engage in high-risk, lottery-like investments.

The lifecycle of a typical meme coin closely mirrors that of a classic speculative bubble, as described in financial literature. This lifecycle generally proceeds through several distinct phases:

1. **Initiation and Momentum Building**: A new coin is launched, often tied to a current event, internet meme, or humorous concept. Early adopters, attracted by the novelty and low entry price, generate initial trading volume.
2. **Media Attention and Retail Frenzy**: As the price begins to rise, the coin captures the attention of social media influencers and, in rare cases, mainstream media. This triggers a "fear of missing out" (FOMO) among a broader retail audience, leading to a rapid influx of capital and an exponential price increase.
3. **Peak Euphoria and Collapse**: The bubble reaches its peak when speculative enthusiasm is at its highest. At this point, early investors and insiders begin to sell their holdings, triggering a rapid price

decline. As momentum reverses, panic selling ensues, and the coin's value collapses, often to near zero, as there is no underlying value to support it

This entire process is driven by speculation and the "greater fool theory," where investors buy an overvalued asset in the hope of selling it to an even "greater fool" at a higher price. Some platforms have not only embraced this model but have optimized and automated it, enabling this bubble lifecycle to play out thousands of times per day.

The value of these assets is explicitly tied to community engagement and viral trends. Seminal research on what makes online content go viral provides a powerful explanatory framework. Berger (2013), in a landmark study of New York Times articles, found that social transmission is not merely about positive or negative sentiment, but is fundamentally driven by physiological arousal (Berger & Iyengar, 2013). Content that evokes high-arousal emotions, both positive (awe) and negative (anger, anxiety), is significantly more likely to be shared. In contrast, low-arousal emotions like sadness tend to deactivate and suppress sharing. This finding is critical for understanding meme coin success. The most potent coins are not those with superior technology but those with a superior "memetic payload", a name, image, and narrative engineered to trigger these high-arousal emotions. A coin tied to political outrage, a hilarious meme, or a shocking event is inherently more shareable and thus more likely to attract speculative interest. The "tokenomics" of a meme coin are therefore inseparable from its "communicative-omics."

This process often blurs the line between ethical persuasion and covert manipulation. While persuasion involves influencing another's mental state through communication where the recipient has a measure of freedom, manipulation covertly influences decision-making by exploiting vulnerabilities (Worthington, 2021). Meme coin promotion frequently crosses into manipulation by preying on cognitive biases like FOMO, where the fear of missing out on exponential gains overrides rational risk assessment. A key tactic in this process is the use of social media influencers, who leverage their perceived authority and parasocial relationships with their followers to endorse tokens. This strategy mirrors the two-step flow theory of communication, where mass media (or in this case, a token creator) influences opinion leaders, who in turn influence the wider public.

Finally, the digital environments where these discussions take place are crucial. Platforms like X (formerly Twitter), Telegram, and Discord are instrumental in creating echo chambers and filter bubbles. An echo chamber is a media ecosystem where individuals are exposed only to beliefs that reinforce their own, insulated from rebuttal (Bozdag, 2015; Pariser, 2011, 2012). Within these groups, a token's potential is discussed with uncritical optimism, positive sentiment is amplified, and any dissenting or cautionary voices are dismissed or banned. This process manufactures an artificial consensus about a token's inevitable success, creating social proof that encourages further investment and reinforces the bubble dynamic (Törnberg, 2018).

We examine **Pump.fun**, a Solana-based meme-coin launchpad that epitomizes the trend of democratized token creation and unregulated speculative frenzy. Launched in January 2024, Pump.fun enabled **anyone** to mint and trade meme-coins in minutes with “unprecedented ease,” fueling an explosion of thousands of joke tokens and micro-cap coins (Anderson, 2025).

Pump.fun's primary innovation is the radical simplification of token creation. It offers a simple, no-code web interface that allows any user with a Solana wallet and a small amount of SOL (the native currency of the Solana blockchain) to launch a new token in minutes. The process involves three basic steps: choosing a name, a ticker symbol, and uploading an image. Upon creation, the platform automatically mints a fixed supply of one billion tokens. (Ledger, 2025; Nair, 2025)

By early 2025 the platform had hosted over **6 million** token launches and was processing daily trading volumes above $100 million. At its peak, Pump.fun accounted for **over 60% of all transactions on the Solana blockchain(Gladwin, 2024b)** – a remarkable capture of market activity by a single viral platform. The *financial alchemy* at work was a bonding-curve automated market maker that ensured immediate liquidity for each new coin and charged a 1% swap fee on every trade. By late 2024, Pump.fun’s fee-based revenue reportedly exceeded $250 million(Anderson, 2025), reflecting how lucratively the platform *commodified the meme-coin mania*.

Pump.fun’s meteoric rise, however, came at the cost of equally unprecedented market chaos and ethical quandaries. While a handful of tokens launched on the site achieved spectacular market capitalizations (e.g. fleeting valuations in the hundreds of millions or even $1+ billion for coins like “Fartcoin” and “GOAT”), **over 99% of tokens never “graduated” to any exchange and quickly plunged to zero** (Anderson, 2025). The vast majority of participants thus faced total losses, making the ecosystem effectively a massive zero-sum game tilted toward insiders and early movers (Krause, 2025c). Allegations of market manipulation, *“soft rug pulls,”* and insider trading were rampant. Notably, a small number of large holders often reaped most profits – for example, in one case study of the 2025 US Presidents’ token ($TRUMP coin), a few big investors captured nearly all gains while late-arriving retail traders suffered steep losses (Krause, 2025c). Such dynamics strengthen the analogy of meme-coins

to Ponzi schemes, albeit *decentralized* ones: they rely on a constant influx of new buyers to prop up prices, enriching early stakeholders at the direct expense of later ones (Galletta & Pinelli, 2024). Unlike a traditional Ponzi, there may be no central operator guaranteeing returns – but functionally the outcome is the same, with wealth flowing from the many to the shrewd few under the guise of a "fun" community-driven game.

The *legal commodification* of these Ponzi-like economics becomes evident in how Pump.fun and similar platforms package the speculation as a service ("Concentration and Commodification," 2021; Giraudo et al., 2024). By turning meme-coins into instantly tradable assets, Pump.fun essentially *tokenized internet culture* and made meme-based speculation broadly accessible – all without triggering existing securities or gambling laws in any straightforward way (Smith et al., 2025). This raises a pivotal research question: **How does the Pump.fun case illustrate the challenges of regulating and ethically framing meme-coin markets that exhibit Ponzi-like characteristics yet operate within (or at the fringes of) current legal frameworks?** In other words, can and should regulatory regimes treat these meme-commodities as securities, gambling products, or something else – and what are the implications for consumer protection, market integrity, and digital culture?

To answer this, we adopt a case-study approach anchored in a comprehensive literature review and cross-disciplinary analysis. We draw on communication theory to understand the viral spread and community dynamics of meme-coins, on financial and legal scholarship to assess their economic structure and regulatory status, and on media ethics to evaluate the platform's response to harmful behaviors. Our **hypothesis** is that Pump.fun represents a watershed moment where *the boundaries of legality, technology, and social manipulation blur*: it demonstrates how the **democratization of token creation** can amplify speculative manias and outpace regulatory oversight, effectively *commodifying speculative frenzy* as a product. By examining Pump.fun's rise, controversies, and regulatory scrutiny, we aim to illuminate broader tensions between innovation and exploitation in the crypto ecosystem. We also outline possible frameworks to address the **"Ponzi-like"** tendencies of meme tokenomics – from global regulatory coordination to industry self-regulation and education – without stifling the creative and communal aspects that drive meme culture.

Our goal in this research is not only to critique, but to identify pathways toward a healthier intersection of internet culture and financial markets – one that preserves creative innovation while mitigating the harms of unchecked commodified frenzy.

Literature Review and Theoretical Background

Historical Overview of Ponzi Schemes and Speculative Manias

Financial history offers many precedents for the *meme-coin mania*, albeit in different guises. The archetype of a **Ponzi scheme** dates back to Charles Ponzi's 1920 postal coupon scam, wherein returns to early investors were paid using funds from later investors, inevitably collapsing when new money ran out. *Ponzi schemes* thrive on **unsustainable financial structures** that require ever-increasing participation, and they invariably implode once the pool of "greater fools" is exhausted. While outright Ponzi schemes are illegal in most jurisdictions (classified as fraud), more subtle forms of speculative bubbles have recurred throughout history without necessarily involving criminal misrepresentation. Classic examples include the 17th-century Dutch *tulip mania* and the 18th-century South Sea Bubble, where frenzy and the expectation of selling to someone else at a higher price drove asset values far beyond intrinsic worth. **Kindleberger's** framework on manias and crashes describes how "new era" stories and easy liquidity fuel bubbles until a tipping point of distrust leads to panic. These episodes highlight a continuum between legal market bubbles and outright fraudulent schemes. **Meme-coins** arguably straddle this line: they often lack intrinsic value and depend on recruiting new buyers to sustain prices, yet they typically make no formal promises of returns (unlike a Ponzi operator who guarantees profit). This makes them *speculative manias that can legally persist*, absent explicit fraud, until market sentiment collapses under its own weight.

The cryptocurrency realm has seen both **fraudulent Ponzi schemes** and **bubble-like booms**. On the fraudulent end, scams like **OneCoin (2014–2017)** and **Bitconnect (2016–2018)** mimicked multi-level marketing or high-yield investment programs under a crypto veneer, bilking thousands of investors before authorities intervened. These were unambiguously Ponzis: organizers promised steady high returns and used new investors' money to pay earlier participants, all while lying about underlying business activity. *Bitconnect*, for instance, marketed a "trading bot" that generated huge daily profits, but in reality it was recycling funds until collapsing – leading the U.S. SEC to label it a $2 billion Ponzi scheme in 2021 enforcement actions. By contrast, the **ICO (Initial Coin Offering) boom of 2017** manifested more as an unregulated bubble. Hundreds of new tokens were sold to the public, often with flimsy whitepapers and no working product, riding on the excitement of blockchain technology. While many ICOs were legitimate projects, a *very large number were essentially valueless tokens* sold on hype – once again relying on speculators buying in simply with hopes of selling higher. As noted by analysts,

the ICO craze had "**fundamentally Ponzi-like tokenomics**" in many cases (Sygnum, 2025), even if not set up as formal scams. The pattern repeated with the rise and fall of **"play-to-earn" crypto games (e.g. Axie Infinity's SLP token)** and certain DeFi yield farming schemes around 2020–2022, where extraordinarily high returns were advertised without sustainable revenue models. These systems often depended on constant new entrants (attracted by high yields paid in newly minted tokens) to prop up token prices – a dynamic that observers likened to Ponzi or pyramid schemes once the inevitable token inflation and sell-pressure caught up. The collapse of Terra/Luna's algorithmic stablecoin ecosystem in 2022 is another case in point: its anchor protocol promised 20% APY interest, subsidized by venture capital funds and new deposits – a model that imploded spectacularly, erasing $60 billion in value, and prompting regulators to compare it to a giant Ponzi.

Against this backdrop, *meme-coins* can be seen as the latest chapter in speculative manias, with a twist of internet culture. **Dogecoin**, launched in 2013 as a parody of Bitcoin, famously soared by over 15,000% in 2021 to reach a market cap above $80 billion at its peak, largely due to viral social media (and Elon Musk's tongue-in-cheek endorsements) rather than any technical merit (Wong, 2024). Unlike a Ponzi scheme, no organizer promised Dogecoin buyers any profit – yet the *herd behavior* and greater-fool dependence were palpable. A similar story played out with **Shiba Inu (SHIB)** in 2021, a meme token themed on the same dog breed, which momentarily achieved a market valuation in the tens of billions of dollars purely through community fervor and fear-of-missing-out. By late 2021, a "meme coin bubble" had formed, with numerous copycat tokens (pitbull, floki, baby doge, etc.) and new gimmicks like **SafeMoon**, whose developers instituted a 10% transaction tax (with half redistributed to existing holders) – a mechanism explicitly rewarding early adopters at the expense of later ones, *reinforcing the Ponzi-like character*. As *Sygnum Bank's* analysts noted, many of the hyped sectors in crypto's last bull cycle (including meme-coins) lacked fundamental value and relied on "**hype cycles with Ponzi-like tokenomics**" – though they operated under the veneer of innovation (Sygnum, 2025).

What sets the **Pump.fun era (2024–2025)** apart is the *sheer scale and speed* of meme-coin proliferation. Historically, creating and hyping a token required some technical know-how and marketing effort; Pump.fun lowered the technical barrier to near zero, unleashing a flood of *micro-cap meme tokens*. This democratization echoes trends in other speculative arenas. For example, the late 1990s saw day-trading and penny stocks become accessible to the masses via online brokers, contributing to the dot-com bubble. Similarly, during the COVID-19 pandemic, easy-to-use trading apps (e.g. Robinhood) and social forums (WallStreetBets on Reddit) fueled **meme stock** frenzies in equities like GameStop and AMC in 2021. Those *meme stocks* exhibited bubble dynamics driven by narrative and crowds, not unlike meme-coins; academic analysis shows they too had weak ties to fundamentals and experienced episodes of explosive volatility due to online coordination (Yousaf et al., 2023). The key difference with crypto meme-coins is the *ability for anyone to manufacture the speculative asset itself*. Pump.fun industrialized this process: internet culture could be instantly financialized. As one report put it, the platform "transformed internet culture into financial assets" by letting users tokenize memes with *no coding or vetting*, effectively creating a market for *"tokenized culture" (Anderson, 2025)*. This extreme commodification of cultural zeitgeist is unprecedented – and it set the stage for an **almost Ponzi-like ecosystem at scale**, where **participation itself was the product**. (Cordoba Otalora & Themistocleous, 2024)

Meme-Coins, Social Media, and Communication Dynamics

Understanding meme-coins requires appreciating the *communication channels and social psychology* that propel them. By design, a meme-coin's value is *discursively constructed*: it rises on the back of narratives, in-jokes, and viral spread through online communities. Unlike stocks (which have claims on company assets or earnings) or traditional commodities (with intrinsic use value), meme-coins are **pure social sentiment vehicles**. Their price trajectory often correlates directly with trends on Twitter/X, Reddit, TikTok, and Discord rather than any real-world deployment. For instance, studies have found that **mentions on Reddit or endorsements by influential figures can spark outsized price moves in Dogecoin and other meme tokens (Yousaf et al., 2023)**. Meme-coins thus exemplify what communication scholars call the *attention economy*: financial value accrues from the collective attention of a networked public. In effect, *community engagement is the meme-coin's "fundamental."* A strong, participatory community can create self-reinforcing value – members promote the token, recruit others, and sustain a narrative of future moonshots. This dynamic was evident on Pump.fun where many token creators fostered Telegram groups or Twitter memes around their coin to stoke enthusiasm. The **community-driven value creation** is real, but it is *precarious*: it hinges on continuous performative enthusiasm (Anderson, 2025). Any crack in the narrative or exodus of influencers can trigger collapse since there are no fundamental cash flows to backstop the price.

Meme-coins also harness elements of **gamification and virality** native to internet culture. The *humor and absurdity* (e.g., tokens named after cartoon frogs, pets, or trending catchphrases) lower the psychological barrier

to participation, framing trading as a form of online play or identity expression rather than serious investment. This taps into what media theorist Henry Jenkins calls *participatory culture* – people engage not just financially but creatively, making memes about the coin, sharing in-jokes, and forming a subculture (Jenkins et al., 2009). In the case of Pump.fun, this participatory angle was amplified: users on the platform often live-streamed outrageous stunts to promote their coins (in one shocking incident, a creator **set himself on fire on camera** to draw attention to his token) (Gladwin, 2024b). Such incidents underscore how far the *attention-seeking* aspect can go, raising profound **media ethics** questions about platforms enabling self-harm or harmful content for clout. Pump.fun's integration of a livestream feature (later removed after abuses involving animal cruelty and staged suicide attempts) shows the toxic extreme of meme-coin promotion (Gault, 2024; Khalili, 2025; Wickens, 2024). This blurring of lines between financial promotion and performative social media stunts is a new challenge. It calls back to communication theory on *media effects* and *contagion*: extreme behaviors can go viral ("any publicity is good publicity" in meme markets), potentially normalizing dangerous conduct in pursuit of meme-coin fame (Yu, 2024).

From a **manipulation** standpoint, meme-coins create fertile ground for misinformation and hype. The decentralized, anonymous nature of token creation means rumors and fake personas can greatly sway perception. *Astroturfing* is common – e.g., project insiders may create the illusion of grassroots excitement through bot accounts or paid promoters. The rapid pace of Pump.fun launches (often dozens of new tokens per day) made due diligence nearly impossible; many traders jumped in solely based on trending charts or FOMO (fear of missing out) posts. Cognitive biases run rampant: *recency bias* (chasing whatever spiked yesterday), *bandwagon effects*, and the *lottery mentality*. Indeed, sociologists might liken meme-coin trading to **gambling behavior** more than rational investing. Research indicates that a widening wealth gap and limited economic opportunities, especially for younger generations, have driven many to treat speculative trading as a form of gambling or a shot at life-changing money (Sygnum, 2025). The allure of turning a few dollars into millions overnight – a narrative often promulgated by viral meme-coin success stories – can override prudent risk assessment. This has led commentators and policymakers to draw parallels between **crypto speculation and gambling**. Notably, a 2023 UK Parliamentary Committee report went so far as to suggest regulating retail crypto trading as a form of gambling due to its high risk and lack of intrinsic value, explicitly citing the *"same risk, same regulation"* principle for activities that resemble wagering more than investing (Makortoff & correspondent, 2023; Treasury Committee, 2023). While the UK government did not adopt this approach (preferring to craft bespoke crypto asset regulations), the comparison underscores an important point: **meme-coin markets operate on psychology and chance**, much like betting games.

In summary, the literature suggests that meme-coins thrive at the intersection of **networked communications and speculative instincts**. They exemplify *participatory finance*, where community narratives define value, but they also exemplify *vulnerabilities to manipulation*, where unscrupulous actors can exploit the informational chaos for profit. This dual nature – community-driven yet exploitable – sets the stage for our analysis of Pump.fun, where these forces played out at scale. We next outline our methodological approach to studying this complex phenomenon.

Regulatory Definitions and the "Legal Commodity" Status of Meme-Coins

A crucial part of the background is how different legal regimes define (or struggle to define) meme-coins. Traditional financial law sorts assets into categories like securities, commodities, derivatives, or currencies – each with distinct regulations. Meme-coins challenge these categories. They are not fiat currencies or claims on institutions; they often lack the characteristics of debt or equity; and they typically convey no rights or dividends that would make them traditional securities. For much of the past decade, regulators worldwide have grappled with whether and how to fit crypto tokens into existing laws. The **U.S. Securities and Exchange Commission (SEC)**, for example, uses the *Howey test* (*SEC v. W.J. Howey Co., 328 U.S. 293*, 1946) to determine if an asset is an "investment contract" and thus a security (Henning, 2018). Key prongs of Howey include an investment in a common enterprise with an expectation of profits predominantly from the efforts of others. Many crypto projects have fallen under this (e.g. ICO tokens where buyers expected the developer team to increase the token's value through enterprise efforts). **Meme-coins, however, occupy a murkier space**: arguably, buyers are indeed hoping for profit, but often there is no active enterprise or managerial "effort" beyond the meme spreading (which is decentralized among the community). One could say the "common enterprise" is just the token's own network effect, not a company or promoter in the traditional sense.

In late February 2025, the SEC's Division of Corporation Finance took the notable step of **issuing a Staff Statement clarifying that most meme-coins, as described, are *not* considered securities** (Smith et al., 2025). This guidance – while not a formal rule – described meme-coins as tokens bought for "entertainment, social interaction, and cultural purposes," whose value comes from market demand and speculation, with little to no

functional utility. The Staff concluded that these do *not* represent investment contracts: *a meme-coin on its own doesn't confer rights to profits or ownership in a venture, and purchasing one isn't investing in a managerial effort*. (SEC.gov, 2025a) Specifically, the analysis noted the absence of a "common enterprise" and the lack of a **"reasonable expectation of profits derived from the efforts of others,"** given that price growth is driven by collective market sentiment rather than a promoter's work. In essence, the SEC Staff likened meme-coins to **collectibles** or culturally-driven assets: their price is akin to Beanie Babies or rare art, fluctuating on sentiment and scarcity (even if artificial), rather than an investment contract in a business. As a result, the Staff's view was that typical meme-coin transactions "do not need to be registered" under securities laws. However, crucial caveats were added: this safe harbor applies only to the "type of meme-coins described" (purely community-driven, no implied revenue share or promise). If a token labeled a meme-coin were actually giving rights or was marketed as an investment in a project, it could still be deemed a security despite the name. Moreover, the SEC emphasized that **anti-fraud provisions still apply** – i.e. even if meme-coins aren't securities, perpetrators of *fraudulent schemes or false statements* involving them could face enforcement from other agencies or under general anti-fraud laws. This stance by the SEC essentially classifies mainstream meme-coins as *unregulated commodities*. In the U.S. context, that places them under the potential purview of the **Commodity Futures Trading Commission (CFTC)** if there's derivative trading, but for spot trading, it means no proactive federal regulatory oversight aside from prosecutions of outright fraud or money laundering. By explicitly defining a category of asset whose value is a function of communication and culture rather than managerial effort, the SEC staff has inadvertently provided a roadmap for evading securities regulation. Pump.fun provides the factory to mass-produce assets that fit this exact legal description, allowing creators to argue that their tokens are not securities because their value depends on the memetic power of the community, not their own work. This ambiguity is further complicated by proposed legislation. In the US, the Digital Asset Market Clarity (CLARITY) Act aims to resolve the jurisdictional dispute by creating a formal "digital commodity" category to be regulated by the CFTC, which has historically had a lighter regulatory touch than the SEC. (Digital Asset Market Clarity Act, 2025)

Other jurisdictions mirror these challenges. In the European Union, the new **Markets in Crypto-Assets (MiCA) regulation** (adopted in 2023, with phased implementation through 2024–25) attempts a comprehensive framework for crypto. MiCA defines categories like *"asset-referenced tokens"* (stablecoins), *"e-money tokens"*, and catches-all "other crypto-assets." (EUR-Lex, 2023) A meme-coin with no backing would likely fall into that last bucket. Under MiCA, offering such a token to the public in the EU or seeking exchange listing would require publishing a disclosure document (similar to a light prospectus) and adherence to rules on fair communications. However, MiCA exempts very small-scale or truly decentralized offerings, and enforcement will depend on whether issuers or intermediaries are within reach of EU authorities. A truly grassroots meme-coin might avoid formal placement procedures, but any platform like Pump.fun operating in Europe would likely be deemed a crypto-asset service provider (providing trading facilities) and need to be licensed and comply with consumer protection and stability obligations. As of the time of writing, though, MiCA is just coming into effect and its application to the fast-moving meme-coin space remains to be tested.

Some countries have taken a stricter or more paternalistic stance. **China**, for instance, banned cryptocurrency trading outright (since 2017 for ICOs and 2021 for exchanges and mining), which by extension outlaws meme-coin speculation domestically. **India** has intermittently considered bans or heavy taxation (a 30% tax on crypto gains and 1% transaction tax were implemented in 2022) which dampened trading activity significantly, making meme-coin fads less sustainable. On the other hand, jurisdictions like **El Salvador** or certain Caribbean islands that embraced crypto have not set specific guardrails against highly speculative tokens, which can make them havens for such trading.

A particularly interesting regulatory perspective emerged in the **United Kingdom** in late 2024 in direct response to Pump.fun. The UK's **Financial Conduct Authority (FCA)** issued a public warning in December 2024 stating that Pump.fun was operating *without authorization* and cautioning consumers that "this firm may be providing financial services or products without our permission…you should avoid dealing with this firm and beware of scams. " (Gladwin, 2024b). This alert implied that the FCA viewed Pump.fun's activities as falling under UK financial services regulation (likely as an exchange or trading venue) which requires registration or licensing. Pump.fun's reaction was swift – the platform **permanently blocked all UK users** within days "in accordance with the laws and regulations of the United Kingdom," effectively pulling out of the market rather than contest the issue. The irony here is notable: Pump.fun's product was essentially *user-created meme tokens*, many of which are valueless gambles, yet the platform's facilitation of their trading triggered regulatory concern as if it were a more traditional financial service. The UK's stringent stance on consumer protection (and its relatively low tolerance for unmoderated content, as legal experts noted) meant Pump.fun's *laissez-faire model* was untenable there. The fact that Pump.fun's founding team and corporation (Baton Corporation Ltd.) were actually UK-

based gave the FCA leverage to act. This contrasts with some offshore platforms that simply geo-block jurisdictions but otherwise ignore local regulations.

In summary, the regulatory literature indicates that **meme-coins largely slip through existing definitional cracks**. They tend to be categorized as *commodities or unregulated assets* rather than securities (absent specific promises or structures), meaning they can often be issued and traded legally without registrations – hence the term "legal commodification." At the same time, authorities are not oblivious to the risks: multiple warnings (like the FCA's) and *consumer alerts* (e.g., New York's Attorney General and the NYDFS have warned that many meme-coins are thinly traded, subject to manipulation, and "present exceptional risk of fraud and loss") have been issued. The stage is set for potential new regulatory frameworks or adaptations – a topic we will revisit after examining the Pump.fun case details. The next section outlines how we approached our case study and data sources for analyzing Pump.fun and its token ecosystem.

Methodology

Our research employs a **qualitative case study methodology** supplemented by a **rapid literature review**. Given the novelty of Pump.fun (emerging in 2024) and the paucity of long-term empirical data on meme-coin micro-cap markets, a case study approach allows an in-depth exploration of this single critical instance to derive broader insights. The following steps were taken:

We conducted a search of academic databases (Google Scholar, SSRN, arXiv) and industry publications for sources related to meme-coins, tokenomics, Ponzi schemes in crypto, and digital media ethics. Priority was given to peer-reviewed journal articles and reputable working papers or law review articles. Examples include Krause (2025)'s studies on meme coin risks (Krause, 2025c, 2025a), analyses of meme stock/meme token volatility (Yousaf et al., 2023), and blockchain industry reports (e.g. Sygnum Bank's market commentary (Sygnum, 2025). We also reviewed regulatory documents and statements (SEC staff bulletins, FCA warnings, class action lawsuits) for legal perspectives (Smith et al., 2025). This literature review ensured our theoretical framing is grounded in established knowledge and recent scholarly debates.

We gathered information on Pump.fun from multiple sources: news articles (Decrypt, CoinDesk, CoinTelegraph) for factual reporting (Gladwin, 2024b; Ligon, 2025), the Pump.fun platform's own communications (site notices, social media posts), and an academic research report by Anderson and Bello (2025) which provided a detailed overview of Pump.fun's operations and statistics (Anderson, 2025). In addition, we examined **legal filings and analyses** surrounding Pump.fun: notably, the text of class action complaints filed in New York (via summaries from law firm client alerts and media (Ligon, 2025; Smith et al., 2025)) and regulatory commentary. Where quantitative data was available (e.g. number of tokens launched, volume, fee revenue), we cross-verified across sources. For instance, the figure of "6 million tokens" by early 2025 is cited in both academic and journalistic accounts (Anderson, 2025), and Pump.fun's share of Solana transactions (62%) was derived from on-chain analysis reported by Decrypt (Gladwin, 2024b). We have treated such numbers cautiously, recognizing that given the rapid evolution, exact figures may vary by source and date.

We applied an interdisciplinary analytical lens in interpreting the case data. Our background in communication theory guided us to examine how **media narratives, influencer behavior, and community platforms** contributed to Pump.fun's market dynamics. We performed a form of **content analysis** on notable incidents (like the live-stream stunts and social media campaigns for certain tokens) to understand the role of media in valuation. From the financial perspective, we analyzed Pump.fun's **tokenomics model** (e.g. bonding curve, fee structure) to assess how it incentivized or disincentivized Ponzi-like outcomes. For legal analysis, we compared Pump.fun's activities against criteria in securities law (Howey test) and gambling definitions, referencing ongoing legal cases to gauge arguments being tested in courts.

We acknowledge certain limitations in our methodology. First, much of the data on Pump.fun is **observational and retrospective**, as opposed to controlled or long-term time series, which means establishing causality is challenging. We rely on reported outcomes and participant behavior from secondary sources; there is a risk of bias or incomplete information in these accounts. For example, data on how many users profited vs lost is mostly anecdotal (aside from specific case studies like the $TRUMP token analysis (Krause, 2025c)). Second, the regulatory situation is **fluid** – statements by agencies (like the SEC Staff's 2025 memo) are new and possibly subject to change; we interpret legal status at a snapshot in time. Third, in focusing on Pump.fun, we do not quantitatively compare it to other platforms (e.g., Binance Smart Chain's meme token scene or Ethereum's Uniswap listings), which could be fertile ground for further research. Our goal, however, is depth over breadth – to use Pump.fun as an illustrative microcosm. We mitigate these limitations by clearly indicating speculative interpretations and by triangulating multiple sources for key facts to ensure reliability. Any claims beyond the evidence (e.g., hypothesizing on user psychology or unreported internal decisions) are qualified as such.

Since our study involves analyzing community content (including instances of harmful behavior like self-harm on streams, or illicit content that appeared on Pump.fun), we approached these topics with sensitivity. Descriptions of such events are included only to the extent necessary for analysis of platform ethics and have been paraphrased from reputable news reporting. No private individual data was used – all information is from public domain sources. We also remain mindful of not glamorizing or sensationalizing the harmful stunts associated with Pump.fun; instead, we examine them critically to discuss necessary safeguards (Tanner, 2025).

In summary, our methodology combines **literature-based theory building** with a **focused case examination**, in line with qualitative research best practices in the social sciences. This approach allows us to integrate insights from economics, law, and media studies, weaving them through the concrete narrative of Pump.fun. The next section will present the case study findings, essentially telling the story of Pump.fun's ecosystem – how it works, what transpired on the platform, and why it became a flashpoint for discussions on meme-coins and regulation.

The Pump.fun Ecosystem: Mechanics and Market Dynamics

Pump.fun's Platform and Token Creation Mechanism: Pump.fun launched in January 2024 as a **Solana-based** web platform with the bold promise of *"democratizing meme-coin creation."* Founders Noah Tweedale, Alon Cohen, and Dylan Kerler – all pseudonymous or little-known prior to Pump.fun – identified the friction in launching a token (technical complexity, liquidity needs) as an opportunity (Anderson, 2025). The platform's core innovation was a one-click token issuance system: users could mint a new SPL token (Solana Program Library token) by simply inputting a name, symbol, and optional description and image, and paying a small fee (initially 0.02 SOL, just a few dollars). Crucially, Pump.fun removed the usual requirement of providing initial liquidity on an exchange or AMM. Instead, it employed a **built-in automated market maker with a bonding curve**. Upon creation of a token, the bonding curve would set an initial price and automatically adjust the price upward as people bought the token (minting more supply) or downward as they sold (burning supply), while always ensuring there is a quoted buy/sell price available. This meant *anyone could trade the token immediately upon creation, even if the creator provided no starting capital*, which dramatically lowered entry barriers. The bonding curve model guaranteed **continuous liquidity** and "predictable price movements based on token supply" by algorithm. In effect, it algorithmically mimicked a *Ponzi-ish dynamic*: early buyers get in at the very lowest prices; as more people join and buy, the price "automatically" goes up along the curve (rewarding those early entrants with instant paper gains). If demand stalls, the curve can just as rapidly send prices back down when selling begins. This mechanistic approach **gamified token launches** – every new coin started at near-zero value and could, in theory, skyrocket if enough people piled in quickly. The system requires a continuous and accelerating inflow of new money to sustain its upward trajectory. Once the inflow of new capital wanes, the buying pressure disappears, and the price structure becomes unsustainable, leading to a rapid collapse as participants rush to exit. This is the classic cash flow dynamic of a Ponzi or pyramid scheme, merely automated and executed by a smart contract rather than a human operator.

Pump.fun's revenue model was equally straightforward and telling: the platform took a **1% fee on every swap trade** of any token on its system. Additionally, if a token managed to achieve success (the platform set *"graduation thresholds"* of roughly $69k market cap on Solana, or higher on integrated chains like Blast), it could "graduate" – meaning it could be exported to an external decentralized exchange (DEX) like Raydium. Pump.fun charged a hefty fee (1.5 SOL, ~$50) for this graduation service. Initially they also charged the small token creation fee, though this was later eliminated to encourage even more creation. The result was a **volume-driven profit model**: Pump.fun made money primarily if lots of tokens were being traded with high frequency. This is significant – it meant the platform was incentivized to encourage as many token launches and as much trading volatility as possible. By mid-2024, these fees proved extremely lucrative: Pump.fun reportedly amassed over $60 million in transaction fees within a few months of launch, and by late 2024, that figure had exploded to an estimated **$250 million** (Anderson, 2025). Such earnings made Pump.fun *one of the fastest-growing crypto dApps ever*, and perhaps the first to seriously challenge established blockchain fee leaders. (One report noted that by early 2025, Pump.fun **was generating more fee revenue than even Ethereum** on certain days, highlighting how the meme-coin frenzy overtook traditional DeFi activity. (NFTevening, 2025))

In terms of adoption, the growth metrics of Pump.fun are almost difficult to fathom. According to Decrypt and other sources, **over 6 million distinct tokens** had been created on Pump.fun by the start of 2025, less than one year from launch. For comparison, this vastly outnumbers the total number of tokens issued in the entire Ethereum ecosystem over 8+ years. A significant portion of Solana's network activity became tied to Pump.fun; one analysis (Gladwin, 2024a) found that in November 2024, **62% of all transactions on Solana were related to Pump.fun** (token swaps, creations, etc.). This indicates that Pump.fun effectively *became the dominant*

application on Solana during that period, eclipsing even major DeFi protocols or NFT marketplaces on that chain. On some days, dozens of thousands of new tokens were launched within 24 hours. Such scale was enabled by Solana's low fees and high throughput, as well as Pump.fun's automated tooling. In late 2024, Pump.fun expanded beyond Solana, adding support for **Base (an Ethereum Layer-2 network)** and the **Blast chain**, widening its reach into other crypto communities. This cross-chain expansion likely further boosted user growth, as it tapped into Ethereum's user base while still circumventing Ethereum's higher fees (Base offered a cheaper environment for similar functionality).

Why did so many people flock to create or trade meme tokens on Pump.fun? Interviews and community posts suggest a few reasons: (1) *Hope of being early on the next big meme*. Many had seen how tokens like PEPE (a frog-themed coin on Ethereum that in mid-2023 briefly hit ~$1.5B market cap) turned tiny investments into fortunes. Pump.fun offered a chance to either create the next hit (if one had a clever meme idea) or to snipe very early positions in others' tokens. (2) *Genuine fun and social thrill*. Users described the experience as akin to a casino or a social game – browsing bizarrely named tokens, apeing into some for a quick adrenaline rush trade, often sharing screenshots in Discord groups. The site itself had a whimsical vibe; every token had a page with a meme image and chat, making it part social network. (3) *No barriers/credentials needed*. Unlike traditional finance or even ICO investing, Pump.fun required no KYC, no hefty capital, and no technical skill – just a Solana wallet and a few dollars. This opened the floodgates to a very broad demographic, including many younger participants and those excluded from regular investing. In line with the **"democratization of financial markets"** narrative, Pump.fun exemplified both the empowering and perilous sides of democratization: it welcomed new retail entrants into a realm of *high-risk trading previously accessible mainly to crypto insiders*.

Pump.fun's marketing and community often touted the *legendary wins*. Some tokens achieved eye-popping valuations in extremely short time frames, reinforcing the lottery-ticket appeal. For example, *MOODENG*, a meme coin based on a viral baby hippo, reportedly hit $170 million market cap within 3 days of creation. *FARTCOIN*, a toilet-humor-themed token, allegedly touched a $1 **billion** valuation during a peak of memecoin mania (though likely for a very brief period). Another coin, *GOAT*, became celebrated as the first Pump.fun token to sustain a $1B market cap, showcasing that the platform *could* yield "unicorn" tokens under the right conditions (Anderson, 2025). These extreme winners often gained press coverage and drew in new hopeful users, creating a self-reinforcing cycle: the more grand-slam successes occurred, the more new people wanted to try their luck on Pump.fun. It is worth noting that behind some of these successes were savvy strategies – e.g., FARTCOIN's creators cleverly tapped into an ongoing meme trend on Twitter and engaged a few influencers, creating a reflexive spiral of hype.

However, these high-profile successes were **extraordinarily rare relative to the denominator of tokens created**. Internal and external analyses converged on a striking statistic: **over 99% of Pump.fun-launched tokens never even reached the modest market cap threshold (~$69k) needed to "graduate" off the platform (Anderson, 2025)**. In fact, a majority of tokens saw their price *round-trip from near-zero back to zero within days*. Often a token's pattern was: launch at a negligible price, maybe get a few buyers pushing it up 5x or 10x, then as soon as initial holders sold for a quick profit or interest faded, liquidity dried up and the bonding curve would crash the price back down. Many tokens became effectively untradeable ghost coins – existing on-chain but with no buyers or sellers left. Thus, while Pump.fun's interface was cluttered with thousands of coin tickers, almost all were dead or dying at any given time. The **survival rate below 1%** is worse than even venture capital hit-rates or penny stock odds; it is more akin to a lottery. This aligns with the view of meme-coins as *bubbles in microcosm*: quick to inflate, and quick to pop, with only a tiny fraction managing to hold value for any length of time.

The structural reasons for this high failure rate are tied to *pump-and-dump dynamics and lack of fundamental value*, as well as intentional exploitation by bad actors. Pump.fun's design unintentionally made **market manipulation quite accessible**. Since creators could launch tokens anonymously and cheaply, some took advantage of this to execute *"soft rug pulls."* In a soft rug, the creator doesn't explicitly steal liquidity (as in a classic rug pull) because liquidity was minimal to start with; instead, they might heavily promote the token, possibly buy a bunch themselves at low price to drive it up, then sell at peak – effectively dumping on followers. Because Pump.fun's bonding curve meant anyone selling into a thin market would crash the price, a creator or early whale exit could wipe out 90%+ of value in one go. There were multiple instances documented where creators or insiders held large percentages of supply (sometimes *under pseudonyms, not transparently*) – e.g. Dave Portnoy's case outside Pump.fun where he secretly held 35% of his memecoin's supply and sold for $258k profit in one transaction (Sanasie, 2025) – and did similar on Pump.fun albeit less visibly. The **New York Department of Financial Services (NYDFS)** specifically warned in an alert that many meme-coins involve *concentrated ownership and thin trading, making them prone to manipulation and rug pulls*. (New York State Department of Financial Services, 2025) Pump.fun was a textbook example: on launch, often the creator held the majority of tokens (since

they often did the initial mint purchase), and if no broad distribution happened, that concentration persisted. It only took one wallet's sell to nuke the price.

Additionally, **insider trading and collusion** were a problem. Some community members alleged that there were Pump.fun insider groups who coordinated launches – for instance, a group might decide to all ape into each other's tokens to boost them into trending rankings, then collectively exit on the public. The *Wolf Popper LLP* class action lawsuits filed in January 2025 (one of which concerned the "PNUT" token on Pump.fun) claimed that Pump.fun's operations inherently facilitated Ponzi and pump-and-dump schemes (*Pump.Fun memecoin*, n.d.). They argued that by providing the tools and taking fees, Pump.fun was effectively a joint participant in every token issuance, and that it *knowingly profited from a pattern of manipulative schemes* that are "inherent" to its platform design. While these are allegations in litigation, they underscore how the platform's economics (fee on every trade) meant it profited whether users won or lost – akin to a **casino** that always wins a house edge. And like a casino, it may attract those willing to cheat: there were reports of automated bots on Pump.fun that would buy up new tokens milliseconds after launch (advantaged by fast transaction scripts) and then dump quickly – exploiting manual users who joined seconds later. Such **algorithmic frontrunning** added to the difficulty for the average trader to ever turn a profit. An examination of publicly available on-chain data and platform analytics reveals that Pump.fun operates not as a viable ecosystem for financial innovation, but as a negative-sum gambling arena with predictable, highly skewed outcomes. The platform's astronomical failure rate is not a market bug but an intrinsic feature of its economic design, which prioritizes the volume of ephemeral transactions over the quality of long-term projects. This quantitative evidence moves the analysis beyond theoretical claims about Ponzi-like mechanics to demonstrate empirically that the outcomes of the system are consistent with a widespread, predatory financial model.

The sheer scale of activity is the first indicator. At its peak, the platform saw nearly 70,000 new tokens launched in a single day. This firehose of new assets ensures that attention is fragmented and that the vast majority of tokens are starved of the capital and community engagement needed to survive. The data on token success and user profitability, aggregated from multiple analytical sources, paints a devastating picture of the user experience.

Metric	Data Point / Finding
Token Creation	>6 million tokens launched by Jan 2025 (CoinGecko, 2024)
Daily Launch Rate	~15,000-24,000 tokens/day (peak ~70,000) (CoinGecko, 2024)
Token "Success"	Graduation Rate to DEX: ~1.1% - 1.5% (Valdrin, 2025)
Token Survival Rate	~75% of tokens are inactive after 1 day; 93% after 7 days (Valdrin, 2025)
Wallet Profitability	Wallets with >$10k profit: ~0.4-0.6% (Valdrin, 2025)
	~0.03% (approx. 294 wallets) (Gladwin, 2025)
Platform Economics	Total Revenue: ~$626M+ (Valdrin, 2025)
	Daily Revenue (Peak): ~$14-15M (Ledger, 2025)
Fraud Prevalence	Estimated % of rug pulls/pump-and-dumps: 98.6% (Solidus Labs, 2025)

Table 1. Key figures of Pump.fun

These metrics reveal a system that systematically transfers wealth from a vast pool of participants to a very small cohort of successful traders (many likely using automated bots) and to the platform itself. The graduation rate of around 1.5% means that 98.5% of all projects launched are effectively dead on arrival. The token survival rate is even more stark, with 93% of all tokens showing no trading activity after just one week. This is not a market experiencing failures; this is a market designed to produce failures as its primary output, generating fees from the churn. The extremely low rate of user profitability—with only 0.4% of wallets realizing gains over $10,000—confirms that for the average user, participation is statistically guaranteed to result in a loss. This statistical signature is not that of a functioning capital market but of a casino, where the house (the platform) and a few professional players win at the expense of the masses.

Beyond financial manipulation, Pump.fun also confronted *content and conduct issues*. The platform allowed text and image uploads for tokens, which led to offensive or illegal material (e.g. an incident where **child abuse imagery** was found associated with a token, slipping past moderation) (Gladwin, 2024b). Additionally, the competitive atmosphere drove a few creators to extreme actions on live video to draw attention, as noted earlier. These incidents not only raised ethical red flags but also legal ones – since platforms can face liability for user-generated content if they don't respond appropriately in some jurisdictions. Pump.fun had very minimal terms of service or content policies initially, which was another point of concern highlighted by observers.

Despite (or because of) the risky environment, Pump.fun fostered a passionate community of meme-coin enthusiasts. On social platforms, one could find everything from *earnest guides* ("How to spot the next 100x token on Pump.fun") to *cathartic rants* from those who lost money calling it a scam factory, to *celebratory posts* of gains. In many ways, it functioned as a **community stock market for culture** – a place where people literally tried to *exchange cultural zeitgeist for cash*. This has deeper sociocultural implications. Some commentators mused that Pump.fun represented **"tokenized culture"**: each meme token was like a share in a joke or trend (DID 2049, 2025). The value of a token thus symbolized how far a joke could go financially. A few tokens with political or ideological themes emerged (e.g., tokens referencing U.S. politicians or global events), which can be seen as a cynical form of *commodifying political sentiment*. Scholars like Krausehave even examined *political meme-coins* and warned of the risks if public figures use tokens to monetize their followings while skirting campaign finance or ethics rules (Krause, 2025b). While Pump.fun's coins were largely apolitical and more on the absurdist meme side, the concept is adjacent.

From a **media/communication perspective**, Pump.fun's rise also sparked debate in journalism and social media about the responsibilities of those covering or hyping such trends. Some crypto influencers actively promoted Pump.fun tokens (sometimes without disclosure of their stakes), essentially playing the role of manipulators-by-media. Conversely, more responsible voices in the crypto community started sounding alarms. Even high-profile personalities like **Dave Portnoy** – who himself dabbled in creating meme-coins – publicly stated he was wary: calling meme-coins "no value" gambles where "you gotta get in and get out before it crashes" (Sanasie, 2025). His colorful description of them as *legalized Ponzi schemes* (albeit acknowledging they're not literally legalized in any formal sense) resonated because it captured the ephemeral nature of the value. These dialogues contribute to a larger cultural understanding: **meme-coins test society's capacity to distinguish entertainment from investment**. For many users, Pump.fun was entertainment first – a gamified experience. But the money lost or won was very real, blurring lines between game and finance.

The **Pump.fun case reveals a microcosm where ultra-speculation meets participatory culture**. It amplified both the *pros* (access, creativity, community empowerment) and *cons* (fraud, loss, harmful behavior) of the meme-coin phenomenon. The platform's success in commodifying meme frenzy holds lessons about the power of technology to create markets out of thin air – and about the gap between technological capability and regulatory/ethical safeguards. Armed with this understanding of what Pump.fun wrought, we turn next to a focused discussion on the regulatory and legal responses that this case has provoked around the world.

The platform's operational history has been marked by crises that highlight its vulnerabilities and questionable governance. In one significant incident, a former employee exploited privileged access to the platform's withdrawal authority, using flash loans to manipulate the bonding curves of numerous tokens and extract approximately $1.9 million in SOL (Park, 2024). While the platform eventually paused trading and compensated affected users, the event exposed severe internal security flaws and the risks of centralized control points in a supposedly decentralized system.

The platform has also been a target of external attacks. Its official X account was compromised and used to promote fraudulent tokens, sowing confusion and potentially causing financial losses for users who trusted the posts (Manoylov, 2025). These incidents underscore the platform's role as a central point of failure and a high-value target for malicious actors.

Regulatory and Legal Perspectives on Pump.fun and Meme-Coins

The Pump.fun saga did not go unnoticed by regulators and legal systems. Its very premise – enabling the rapid creation and trading of unregistered tokens – was a stress test for financial laws. In this section, we survey the *global regulatory responses* and legal challenges that Pump.fun and similar meme-coin phenomena have encountered, illustrating how different jurisdictions are grappling with this new breed of "Ponzi-like" tokenomics within their legal frameworks.

United States: Securities Law, Class Actions, and Regulatory Debate

In the United States, the legal status of Pump.fun and its tokens became a contentious issue due to the potential application of **securities laws**. As detailed earlier, by the SEC's own staff criteria, a prototypical meme-coin might not be a security because it lacks a conventional investment structure. However, **Pump.fun introduced wrinkles**: the platform was arguably acting as a facilitator (and perhaps promoter) of token sales, and some tokens might blur the line by how they were marketed. Notably, in January 2025, two proposed **class action lawsuits** were filed in the U.S. District Court for the Southern District of New York against Pump.fun and its principals (Ligon, 2025). The suits (one led by plaintiff Diego Aguilar, another by a different investor group) accuse Pump.fun of violating securities laws by effectively selling unregistered securities – i.e., the tokens on its platform. The plaintiffs

argue that **every token created on Pump.fun's platform is a security**, and that Pump.fun should be deemed a *"joint issuer"* of these tokens because it orchestrated the scheme by providing the tools and profiting from the sales. The complaints highlight that Pump.fun allegedly raked in nearly $500 million in fees (a figure combining mid-2024 through early 2025, indicating continued explosive growth) while enabling the creation and sale of "nearly worthless digital tokens" to unwitting investors.

One lawsuit specifically centered on **$PNUT**, a memecoin inspired by a famous Central Park squirrel (the "Peanut" squirrel), where the plaintiffs lost money after the token crashed. Another suit mentioned tokens *FWOG, FRED,* and *GRIFFAIN* that the lead plaintiff traded and lost on. By naming Pump.fun's founders (Alon Cohen, Dylan Kerler, Noah Tweedale) and even the UK-based corporate entity (Baton Corporation), the suits attempt to hold the people behind the platform accountable. The legal arguments likely invoke the *Howey test* in a novel way: they might contend that even if each meme-coin by itself is not a security, the *scheme* of selling them via a platform could be seen as a common enterprise (the platform's enterprise) creating an expectation of profit from Pump.fun's efforts (since Pump.fun provides the infrastructure and maybe promotional environment). Whether this argument holds is unclear – it is an extension of how courts might view "scheme liability." The suits also explicitly allege what we discussed: that **Pump.fun's operations inherently involve Ponzi-like and pump-and-dump elements** (Smith et al., 2025). They cite things like the platform's profit from every trade as evidence of complicity in a fraudulent scheme. These class actions are ongoing (as of 2025), and their outcomes could set important precedents. If a court were to find that tokens on such a platform are securities, it would impose registration requirements and liability for unregistered sales, potentially crippling the model. If the court dismisses the claims (perhaps agreeing with the SEC staff stance that these are not securities), it leaves enforcement to anti-fraud statutes rather than securities law.

Parallel to the lawsuits, U.S. regulators sent mixed signals. On one hand, **SEC leadership changes** in 2025 (with a new administration taking office) hinted at a softer approach to crypto: the SEC formed a **Crypto Assets Task Force** to clarify rules and reportedly was reconsidering the broad "everything is a security" stance of the prior chair (SEC.gov, 2025b). The SEC had not, as of early 2025, taken direct enforcement action against Pump.fun. It's possible the agency was observing how the class actions proceed or awaiting clearer authority. On the other hand, state regulators took notice: the **New York Attorney General's office**, which has been aggressive on crypto, issued subpoenas or information requests related to memecoin trading practices (unconfirmed reports suggested Pump.fun may have been on their radar given New York's mention in the WilmerHale alert). Additionally, the **CFTC** has an interest if any derivatives on these tokens emerged; however, since Pump.fun was all spot trading, the CFTC's role would mainly be anti-fraud enforcement, which typically they pursue in overt scam cases (e.g., if insiders defrauded users).

It is worth noting the **National perspective**: beyond Pump.fun, U.S. regulators are concerned with the general phenomenon of meme-coins and their susceptibility to fraud. The SEC's Office of Investor Education has issued bulletins warning about "crypto investment scams" noting the red flags of Ponzi-like structures (promise of high returns, etc.) (Coghlan, 2025; SEC.gov, 2025a). Although meme-coins per se are not targeted, the broader environment means Pump.fun could become an example in regulatory discussions of why new consumer protections or laws might be needed. Some lawmakers have indeed pointed to the meme-coin frenzy as evidence that the crypto market is a "Wild West" that needs stricter oversight (or conversely, some have argued it shows why overregulating *serious* crypto could just push people into these unregulated corners).

United Kingdom and Europe: Enforcement of Permissions and Consumer Protection

In the UK, as discussed, the **FCA's intervention** made Pump.fun effectively exit the market. The FCA's warning on December 3, 2024, listed Pump.fun on its alert list of unauthorized firms (Gladwin, 2024b; Pereira, 2024). Under UK law, any entity facilitating the trading of securities or *regulated* digital assets needs authorization, but at that time the UK was still in a transitional regime as it incorporated cryptoassets into its financial promotions and AML regulations. The FCA likely saw Pump.fun as falling under the category of a *cryptoasset exchange provider* and/or a *multilateral trading facility* (if tokens were deemed maybe e-money or something similar). But regardless of technical classification, the FCA can issue alerts about any entity it suspects is causing consumer harm. Pump.fun's compliance response – **blocking UK IP addresses permanently** – was essentially a concession. It indicated that Pump.fun was not going to pursue being a regulated entity in the UK (which would involve KYC/AML, customer protections, etc., antithetical to its open model). The UK has since implemented updated rules (as of 2025, the **Financial Promotions** regime requires crypto firms to have an FCA-authorized entity approve marketing, etc.). Pump.fun's ban raises the question of jurisdiction: since the company was UK-registered, UK law has reach to possibly sanction the founders if they continued serving UK customers. Their preemptive geoblocking likely was to avoid such direct conflict or fines. Notably, UK-based legal experts pointed out that beyond financial

law, Pump.fun's failure in content moderation and lack of basic legal policies (no terms of service, no copyright policy) put it at odds with various UK regulations (like the Online Safety bill and general e-commerce norms). This multifaceted non-compliance (financial and content-wise) made it untenable.

In the broader EU, as mentioned, MiCA is coming. Countries like **France, Germany** have until now used existing laws (like treating tokens case-by-case; e.g., BaFin in Germany sometimes classifies certain crypto tokens as "units of account" requiring permission). If Pump.fun had significant EU usage, it might have attracted notice under anti-money laundering directives – however, since it dealt with relatively small retail trades and was not a fiat on/off ramp, it might have flown under AML radar. We did not find specific public EU actions against Pump.fun. It's likely that EU regulators were observing and waiting for MiCA's framework (which from 2025 onward will require platforms to register as **CASPs (Crypto Asset Service Providers)**). Under MiCA, a Pump.fun-like entity would need to adhere to prudential requirements and conduct rules, and probably many of the wild-west aspects (anonymous usage, unrestricted listings) would conflict with that. If Pump.fun or successors attempted to operate in Europe, they would soon face a legal choice: either comply with MiCA (which means e.g., drafting whitepapers for tokens or at least ensuring communications are fair and not misleading) or geofence Europe as well.

Other Jurisdictions: Asia-Pacific and beyond

In East Asia, regulators have been historically strict on retail speculation. **South Korea** famously had a problem with "kimchi coins" (local meme-coins on domestic exchanges) and by 2021 imposed tight rules that shut down most small exchanges, leaving only big ones with strict listing criteria. A platform like Pump.fun, had it targeted Korean users, would violate those regimes since Korea requires exchanges to have partnerships with banks and adhere to real-name verified accounts. **Japan** similarly has a whitelist for tokens – meme-coins outside those would be illegal to offer. There is no indication Pump.fun tried to engage with those markets in a tailored way; they likely just had global web access and relied on crypto community spread. **China** was out of the question due to the ban. **Singapore**, which positions itself as a regulated crypto hub, would consider Pump.fun as conducting unregulated trading activity (Singapore's PSA Act requires a license to operate a digital token service if serving Singapore). We did not see specific enforcement, but any Singapore user would technically be using an unlicensed service. The **rest of Southeast Asia** and emerging markets often have less clear regulations, but many do issue public warnings about cryptocurrencies. For example, **Thailand** bans crypto trading of certain types of tokens (the Thai SEC in 2021 banned meme tokens with no clear value, interestingly). So a platform purely for meme tokens would be disallowed in Thailand – however enforcement would mean blocking the site or pursuing founders if reachable.

Broadly, regulators worldwide are increasingly aware that even if meme-coins themselves seem trivial or "for fun," the losses incurred by retail participants are real and can be substantial. Thus, they consider it part of their mandate to address such speculative excess. Approaches vary: *some focus on outright prohibition or exclusion from the market (China, Thailand's targeted ban of memes)*; *others lean toward integrating into existing frameworks (US saying they're commodities, UK saying if you facilitate trading you need a license)*; and *others call for novel approaches (UK's gambling proposal, or perhaps a new category of "speculative digital assets" with special disclaimers required)*. So far, no jurisdiction has explicitly created a *"meme-coin law."* But the Pump.fun case might be a catalyst: it shows the extremes of what is possible absent clear rules, possibly motivating regulators to sharpen their tools.

Legal Commodification and Consumer Protection

One conceptual regulatory question is whether meme-coins should be treated as a form of **commodified gambling** or if current consumer protection laws are sufficient. Some legal scholars argue that when large populations engage in essentially zero-sum speculative games (like Pump.fun trading), regulators have a duty similar to that of lottery or gambling regulators – to ensure fairness, transparency about odds, and to protect vulnerable participants. Pump.fun essentially sold a *service of speculation*; one could argue it should have been subject to gaming commissions. However, most legal systems don't yet classify buying a token as placing a bet, especially since there is a hope of resale (though arguably in a pyramid someone wins at expense of others, akin to a poker table). If future laws labeled certain high-risk tokens as gambling products, platforms might need gambling licenses (entailing strict oversight and age limits, etc.). The UK Treasury Committee's recommendation in 2023 to treat unbacked crypto as gambling was precisely along these lines (Jones, 2023; Treasury Committee, 2023), though it was not adopted in policy after pushback that it might legitimize bad practices rather than integrate with financial norms.

Consumer protection agencies, beyond financial regulators, have also taken note. For instance, the U.S. **Federal Trade Commission (FTC)** monitors deceptive marketing – if influencers hyping meme-coins do not

disclose they're paid or if there are false claims (like "guaranteed 10x returns"), that could fall under unfair and deceptive practices enforcement. No specific FTC action against Pump.fun promotions is known, but they have put out general guidance that social media crypto endorsements must be transparent.

In conclusion, the legal reactions to Pump.fun highlight a fundamental tension: how to **legally categorize an activity that is part technology platform, part financial exchange, and part online meme casino**. Pump.fun was effectively a *marketplace for self-created speculative assets*, something not foreseen clearly in existing law. Regulators responded with the tools at hand – warnings, lawsuits, interpretation of existing statutes – but the case underscores that regulatory frameworks may need adaptation. The global perspective shows consensus on one point: **protecting the public from fraud and undue harm is necessary**, but how to do so without overreaching into banning "harmless fun" or innovation is up for debate. Our analysis now turns to a broader discussion of what the Pump.fun case means for the future: how do we balance the ethos of decentralization and democratization against the very real dangers of manipulation and financial harm? And what lessons can be drawn for shaping policy, industry practices, and user education? We address these in the discussion section, before moving on to propose concrete recommendations.

Discussion

The case of Pump.fun provides a revealing lens through which to examine the broader **socio-technical landscape** of meme-coins and the challenges they pose. In this discussion, we synthesize insights from the literature review, our case findings, and regulatory analysis to address our core research question: *How does Pump.fun illustrate the legal and ethical tensions in commodifying Ponzi-like tokenomics, and what does this mean for stakeholders going forward?* We also consider multiple perspectives, acknowledge areas of debate, and identify gaps in current knowledge.

Democratization vs. Exploitation – A Double-Edged Sword

Pump.fun's story is one of **democratization of finance** colliding with age-old exploitative dynamics. On one hand, the platform *dramatically lowered barriers* to participation in crypto markets. It empowered individuals who would never have launched a token or traded on decentralized exchanges before; as noted, participation on Pump.fun included many who felt excluded from traditional finance and saw meme-coins as an accessible arena. This aligns with a positive narrative of financial inclusion: *anyone can be a creator or investor.* The *community-driven value creation* aspect – where a passionate group can rally behind a token and imbue it with value through shared belief – can be interpreted as a form of crowdsourced capital formation (albeit for whimsical projects). Optimists might point out that this hints at new models of economic organization where communities, not institutions, decide what has value. Indeed, the notion of "tokenized culture" suggests that cultural movements or ideas could be directly monetized by communities themselves rather than by corporate intermediaries (Sygnum, 2025). In an ideal scenario, meme tokens could even serve as *micro-funding mechanisms* for creative or charitable endeavors, with community speculation indirectly financing something productive.

On the other hand, Pump.fun starkly demonstrated how **democratization without safeguards leads to exploitation**. The *ease of entry* translated to an ease of abuse by malicious actors. With no gatekeepers, it was fertile ground for scammers to operate under cover of anonymity. Many first-time traders on Pump.fun likely did not fully understand the risks or mechanics (e.g., bonding curve implications). As Krause (2025) found in the $TRUMP token study, *lack of transparency and insider advantages* meant retail participants were systematically at a disadvantage. Far from leveling the playing field, Pump.fun arguably created a **playground for insiders** – those with faster tools, more information, or ability to manipulate sentiment could consistently profit off the influx of naive users. This is reminiscent of critiques in the GameStop meme-stock saga: while framed as populist revolt, in practice hedge funds and algos also profited from the volatility. Similarly, with Pump.fun, *the house (platform) took a cut of every trade* and insiders often "won" the zero-sum game, raising ethical questions about who truly benefited from this so-called democratization.

This dichotomy is at the heart of debates in **emerging tech governance**. Proponents of web3 and decentralization often argue that removing gatekeepers empowers users; detractors counter that gatekeepers (regulators, platforms with standards) exist to protect users, and removing them can unleash predation. Pump.fun shows both arguments have merit. A balanced perspective suggests that **carefully calibrated oversight** is needed – not a return to heavy gatekeeping that stifles innovation, but not a free-for-all either. For instance, could Pump.fun have implemented some *self-regulatory measures* (like optional token audits, warnings on risky tokens, or rate-limiting launches) without negating its open ethos? Perhaps, but the profit motive and competitive pressure made it less likely to self-impose constraints. This highlights a gap: the incentives of a revenue-driven platform may not align with user protection, hence an external or community-driven check is necessary.

The Legal Gray Zone – Commodity, Security, or Gambling Chip?

The regulatory confusion around Pump.fun underscores a conceptual challenge: **what exactly are meme-coins in a legal sense?** The SEC staff's view likening them to collectibles or speculative commodities is one angle. If they are commodities, then presumably existing anti-fraud and anti-manipulation laws (like Commodity Exchange Act provisions) can be applied, but proactive investor protection (disclosures, registration) is absent. The class action plaintiffs' view treats them as *unregistered securities sold in a scheme (Ligon, 2025)*, which, if upheld, would impose strict liability and potentially shut down platforms like Pump.fun or force them into compliance (which likely means most meme-coins couldn't be listed due to disclosure requirements). Meanwhile, the UK's effective approach was to treat Pump.fun as providing unauthorized financial services, though exactly *which* service was a bit undefined (possibly operating a multilateral trading facility or a broker). The gambling perspective is more radical but conceptually fitting: one could argue a meme-coin purchase is akin to buying a lottery ticket where the "jackpot" depends on enough people buying the ticket after you.

This ambiguity has broader implications. It means there is a **regulatory arbitrage opportunity** that actors can exploit – which Pump.fun did. By not being clearly under any one regime, they could operate relatively unchecked for a time. It also means consumers are in a patchwork of protection: for example, Pump.fun users had **no recourse** if they were scammed, beyond possibly private litigation. Traditional securities or banking sectors at least have governmentbacked complaint mechanisms or insurance for certain losses; here, nothing of that sort existed. This can erode trust in markets overall as news of people losing life savings to a "wild" platform can create backlash against the crypto industry at large.

Beyond the specifics of financial regulation, the Pump.fun model can be analyzed through a broader socio-legal lens concerning the commodification of intangible concepts. Drawing on the work of scholars like Bodó, who applies Karl Polanyi's theory of "fictitious commodities" to the digital age, it is possible to see how modern techno-social systems are privatizing the production of trust (Bodó, 2021).

Historically, trust in financial markets has been underwritten by regulated institutions (like banks and exchanges), legal frameworks, and social norms. These public and communal logics of trust production are being replaced by private, technological alternatives. These new systems, such as reputation scores, distributed ledgers, and AI-driven predictive models, produce trust as a commercial activity, conducted by private parties for economic gain, and disembedded from its original social context. This paper will argue that Pump.fun is a prime example of this phenomenon. It replaces the regulated, institutional trust of traditional finance with a technologically-mediated, fictitious trust, built on the immutability of code and the manufactured hype of online communities. This "commodified trust" becomes the essential lubricant that allows a fundamentally predatory market to function at scale.

The *legal commodification* notion in our title also invites a philosophical question: is it **ethical or desirable to commodify essentially anything** (in this case, a meme or even a Ponzi-like game) as long as there's buyer willingness? Free-market purists might say yes – people should be free to trade what they want, caveat emptor. From a legal paternalism or communitarian ethics standpoint, one might say no – society has an interest in preventing harmful commodities from being traded freely (akin to why many jurisdictions outlaw the sale of organs or certain drugs even if there's a willing buyer and seller). Meme-coins fall in a gray area: they're not inherently harmful objects, but they can lead to harmful outcomes (financial ruin, addiction-like speculative behavior). Regulators are essentially tasked with deciding how much individual choice to allow versus how much to step in to prevent harm. Pump.fun pushed many regulators toward the interventionist side because of the extremity of the outcomes (e.g., people setting themselves on fire to promote coins – an absurd but real externality).

Ethical Considerations for Media and Platforms

There is an ethical dimension not just for regulators but for **media outlets and platforms**. Journalism has had to walk a fine line in covering meme-coins: hype them too much and you contribute to the frenzy; ignore them and you fail to inform about a real phenomenon (and potentially miss warning people). Some media coverage, especially in crypto-specialist press, was arguably too celebratory in early Pump.fun days (focusing on big wins, novel trends) and later became more critical as issues emerged. The ethics of influencer promotion of Pump.fun tokens is another sore point – several influencers were accused of pumping coins without disclosure. Ethically, there have been calls within the crypto community for a kind of **"ethical code"** akin to journalism ethics for influencers, especially after some faced lawsuits (e.g., celebrities sued for promoting other crypto scams).

For the platform (Pump.fun) itself, ethical lapses were clear: allowing or at least not preventing harmful content, not providing sufficient risk warnings, perhaps ignoring obvious manipulation on the platform because it

drove volume. One could argue Pump.fun had an ethical duty (even if not a strictly legal one initially) to implement better safeguards once patterns of harm were evident. The removal of the livestreaming feature after egregious misuse was one reactive step, but it came only after multiple disturbing incidents. This suggests a *lack of foresight* or will to moderate until negative publicity forced their hand.

Conflicting Viewpoints and Debates

The phenomenon of Pump.fun and meme-coin mania has led to **debates on several fronts**:

Financial Innovation vs. Folly? Enthusiasts argue that meme-coins, for all their silliness, drive innovation in decentralized finance – they bring in new users, test the limits of on-chain trading tech (Pump.fun's high throughput was a stress test for Solana), and can even lead to unexpected value (communities pivoting memes into real projects, e.g., Shiba Inu's developers trying to build DEXes and games post-hoc). Critics retort that this is mostly retrospective rationalization; in reality, few meme projects successfully evolve into something substantive (Shiba's additional products have seen *limited success*) and most memes do not pretend to have any productive goal at all – meaning they represent misallocated capital and human effort on a grand scale. This debate touches on a broader question in tech: do we allow playful experimentation even if 99% is waste, for the 1% that yields something significant? Historically, one might draw a parallel to the dot-com bubble: a lot of silly startups and failures, but out of that crucible emerged Amazon, Google, etc. Is there an Amazon waiting to emerge from meme-coin culture? Skeptics doubt it, given the lack of any underlying tech advancement in many memes, but it's an open question.

Regulate or Educate? When addressing the harm from Pump.fun-like activities, one school of thought emphasizes *regulation* (i.e., stronger laws, enforcement, platform liability) while another emphasizes *education and personal responsibility*. Some crypto community members say the solution is not banning meme-coins but teaching people **financial literacy and skepticism** so they avoid bad investments. Indeed, education could mitigate harm – if new traders understood that 99% of Pump.fun tokens fail, they might be more cautious or only gamble what they can afford to lose. However, reliance on education alone is often insufficient when the psychological pull is so strong (just as in gambling addiction, knowing the odds doesn't always stop behavior). Regulators lean towards structural protections, but these can provoke backlash (crypto users resenting paternalism). The ideal may be a combination: e.g., requiring better disclosure (education via warnings) and some guardrails.

Cultural Value vs. Financial Value? A fascinating discourse is whether meme-coins, even if financially zero-sum, have *cultural value* that is worth something in its own right. The argument here is that memes as cultural artifacts bring joy, social bonding, creative expression – all positive externalities. Tokenizing them allows communities to rally and perhaps even fund those cultural expressions. In this view, dismissing meme-coins purely as scams misses the social phenomenon aspect. However, critics respond that once you attach a price tag and speculative motive to cultural participation, it can poison the well – people may engage not out of genuine community spirit but because of greed, thus eroding the authenticity of the culture. Pump.fun probably saw both types: some users genuinely having fun with absurd memes, others relentlessly shilling purely for profit.

Lessons Learned and Gaps Identified

From our research, a few **key lessons** emerge:

1. The Need for Early Warnings/Interventions. By the time regulators acted (late 2024), Pump.fun had already facilitated millions of trades and presumably quite a number of casualties. Could earlier action or communication have mitigated harm? Possibly, if there had been a coordinated effort to issue public warnings *as soon as the trend picked up* (akin to how regulators warn about new scam types). The NYDFS did issue an alert in October 2024 – but its dissemination may have been limited. A lesson is that regulators might consider more agile monitoring of social media and new platforms to catch dangerous trends in nascency.

2. Importance of International Coordination. Crypto platforms are global. Pump.fun being UK-based yet serving worldwide and affecting e.g. Solana network usage worldwide shows that no single regulator's approach can cover it all. International bodies (IOSCO, Financial Stability Board) could possibly formulate *common principles* for such phenomena – e.g., recommending jurisdictions treat high-risk token platforms under some consistent category to prevent regulatory arbitrage. Without coordination, a platform kicked out of one country can simply operate from another (Pump.fun's withdrawal from UK didn't stop its use elsewhere until lawsuits hit). We saw some coordination in that multiple regulators were at least aware (FCA, SEC staff, etc.), but not unified.

3. Technological Solutions. There is a gap in how technology could help manage such issues. For instance, could *smart contract audits or blockchain analytics* be used to automatically flag when a new token is likely a scam (like if creator holds >50% supply, or code has mint functions)? Could platforms integrate risk-scoring algorithms? Possibly yes, but Pump.fun did not implement those, likely to avoid friction. This is an area for further development: **embedding ethical safeguards in the platform design** (what some call "code as law" approach). If

Pump.fun or future iterations included optional circuit breakers (e.g., if a token's price crashes 90% in a minute, halt trading to prevent panic selling, akin to stock markets), that might protect some investors – but then again, who would decide when to intervene in a decentralized-ish context is tricky.

4. The Social Safety Net for Financial Experimentation. One emergent gap is how society handles the fallout for individuals who suffer from these speculative excesses. In gambling, there are exclusion programs and support for problem gamblers. In traditional finance, there's often recourse (complaints, sometimes compensation schemes for mis-selling). In meme-coin land, people who lost money often got ridicule ("only losers keep bitching," as Portnoy bluntly said to those who lost on his coin). There isn't a safety net. Perhaps part of the response needs to include **financial counseling and mental health support** for those who get in over their heads – a humanistic approach acknowledging that these new technologies can have serious personal impacts.

Finally, regarding **research gaps**: Our study suggests numerous areas for future investigation. We found little research, for example, on the *long-term trajectories* of meme-coin communities – do they dissolve entirely after bust, or morph into other social groups? Another gap is detailed data on wealth transfer in these ecosystems (e.g., exactly how much did the median user lose, and where did that money go? To a small % of addresses? This is analyzable with blockchain data but wasn't fully available publicly). Understanding these could inform whether meme-coins are primarily a mechanism of wealth redistribution (often from less savvy to more savvy) – essentially a tax on inexperience.

Pump.fun encapsulates the dialectic of innovation vs. risk in the crypto world. It provided a case where *communication technologies (social media, web platforms) directly interfaced with financial speculation* in an unmediated way, revealing both the power and peril of that combination. The platform's success in commodifying memes speaks to a societal fascination with turning everything into a market; its pitfalls speak to the necessity of reframing some of these markets with *moral and legal considerations*. We have seen that leaving things entirely to caveat emptor can lead to absurd and tragic outcomes, yet heavy-handed control could squelch the creative energy that also underlies these phenomena. Steering a middle path will require informed, multi-stakeholder approaches.

Recommendations

Drawing on our analysis of Pump.fun and meme-coin tokenomics, we offer the following **actionable recommendations** for various stakeholders. These recommendations are grounded in the evidence and patterns observed (as cited throughout this paper) and aim to balance *feasibility, impact, and context sensitivity*. We organize them by target group – **regulators/policymakers, industry platforms, and individual participants** – and then discuss broader systemic changes and future research needs. We also incorporate considerations of implementation, including how to measure effectiveness and address ethical implications.

1. Recommendations for Regulators and Policymakers

1.1 Develop Clear Regulatory Classifications and Guidelines. Regulators should provide *greater clarity on the legal status of meme-coins and similar speculative tokens*. The SEC Staff's 2025 statement was a step in this direction, but more formal guidance (or even legislation) would help reduce ambiguity. We recommend that regulatory bodies internationally convene working groups (potentially under IOSCO or the Financial Stability Board) to draft a **taxonomy for digital tokens** that includes a category for *"community-driven speculative tokens."* This category might not be regulated as securities per se, but guidelines can be issued for how they can be offered or promoted. For example, authorities could mandate that any platform offering such tokens include prominent disclaimers (analogous to gambling warnings) that *"These tokens have no intrinsic value and you may lose your entire investment"*. This connects to evidence that many investors dive in without understanding the lack of fundamentals. By enshrining the understanding that these are effectively collectibles/gambling chips into regulatory guidance, regulators set expectations and create a basis to act against false marketing. Success of this recommendation can be measured by the reduction in enforcement confusion – e.g., fewer divergent legal actions (like classifying one token as a security in one case but not in another). If implemented, we would expect **more consistency in legal outcomes** and possibly a standard risk warning across platforms, improving investor awareness.

1.2 Strengthen Anti-Fraud Enforcement and Monitoring. Even if meme-coins themselves are not labeled securities, regulators must vigorously police **fraudulent conduct** in this arena. We recommend enhancing monitoring of social media and blockchain data for *red flags of pump-and-dump schemes*. For instance, the SEC or CFTC could set up dedicated *"meme-coin task forces"* (if not already in the new crypto task force) to track large wallet movements and online promotions in real time. When clear pump-and-dump patterns are detected (e.g., a group amassing a token then promoting and dumping – something detectable as in the Portnoy GREED token case), regulators should swiftly issue cease-and-desist orders or public alerts. Collaboration with tech platforms

(Twitter, Reddit) can help identify and sanction serial promoters who deceive investors. The metric for success here would be **reduction in the prevalence of blatant scams** and increased deterrence. If perpetrators see that law enforcement is actively pursuing crypto market manipulation (just as they would stock manipulation), it raises the cost of misconduct. The Wolf Popper lawsuits indicate private litigants filling the gap; public enforcement could amplify that impact. Regulators should also consider *whistleblower programs* for crypto pump schemes (similar to SEC's whistleblower program for securities fraud), encouraging insiders to come forward with information.

1.3 Consider "Speculative Asset" Regulatory Sandbox or Licensing. Recognizing that outright bans can drive activity underground, regulators might adopt a *sandbox or licensing approach* specifically for high-risk speculative platforms like Pump.fun. For example, a jurisdiction could say: *We will license a platform for meme-coin trading provided it adheres to X, Y, Z consumer protection measures (disclosures, limits on leverage, etc.).* This is akin to how some countries regulate casinos or high-risk financial products (with stringent conditions but not a total ban). A license could require **mandatory KYC and age verification** (to ensure minors, who are arguably more vulnerable to the "fun" appeal, are excluded – similar to gambling age limits). It could also mandate a cap on individual investment in initial coin offerings on the platform (limiting how much one can lose per token). While such measures might reduce the wild west nature (and perhaps the appeal to some), they could mitigate worst-case outcomes while allowing those determined to speculate a channel to do so somewhat safely. The feasibility of this depends on regulators' willingness to innovate – a pilot program could be tried in a smaller jurisdiction. Effectiveness can be measured by whether such a regulated platform has *lower incidence of fraud and user complaints* compared to the unregulated ones.

1.4 Cross-Border Cooperation and Information Sharing. Because meme-coin phenomena transcend borders, regulators should enhance cooperation. Concretely, we recommend establishing an **international alert system** for emerging harmful platforms. If one country's regulator (say, the FCA) flags a platform like Pump.fun, that information should be rapidly shared with counterparts in other countries so they can issue parallel warnings or actions. In practice, regulators could use existing networks (e.g., the Global Financial Innovation Network, or IOSCO's fintech network) to share intel on trends like Pump.fun. Coordinated public messaging – for example a joint advisory by a coalition of regulators – could amplify the reach of warnings, ensuring that users globally hear the caution, not just those in one country. The success of this would reflect in *earlier and more uniform responses* to future Pump.fun-like crazes, ideally nipping them in the bud or at least preparing the public with knowledge of risks.

1.5 Explore Classification as Gambling for Extreme Cases. Policymakers should seriously evaluate whether certain crypto trading should fall under gambling regulation, as the UK's committee proposed. This might not mean labeling *all* crypto as gambling, but regulators could identify criteria under which a token has no reasonable economic basis (e.g., no utility, no backing, extremely high volatility) and consider applying gambling-like oversight to those. The criteria must be carefully defined to avoid overreach. If such an approach is taken, regulators would involve gambling commissions which have experience with addiction prevention. They could impose measures like *self-exclusion lists* for individuals who realize they have a speculation addiction, cooling-off periods, or require that advertising of these tokens include "gamble responsibly" messages. While this is a contentious approach (critics worry it conflates investment with gambling too much), it addresses the reality that for many users meme-coin trading is *functionally similar to betting*. Pilot studies or consultations can gauge public and industry response. The outcome to monitor: do regions that treat speculative crypto more like gambling see fewer cases of severe financial harm? For example, if a country limited how meme tokens can be marketed (the way gambling ads are regulated), one might expect lower youth participation or at least more cautious behavior.

2. Recommendations for Industry Platforms and Practices

2.1 Implement Self-Regulatory Standards for Meme-Coin Platforms. Industry actors (existing exchanges, new platforms) should come together to formulate **best practices or a code of conduct** for platforms listing ultra-speculative tokens. This could be akin to how some crypto exchanges formed self-regulatory organizations (SROs) for things like market integrity. Key standards should include: robust risk disclosures (every token launch page should flash a warning about the high risk and historical failure rate), basic vetting for illegal content (no tolerance for obscene or harmful token content, with rapid removal processes), and **anti-manipulation measures** (for example, monitoring for wash trading or bots and banning accounts that engage in it). Platforms might also voluntarily impose limits such as a *cooldown period* for creators (e.g., one creator can only launch X tokens per week) to deter spamming the system. Although these measures might reduce short-term trading volume (and thus fees), they can preserve long-term credibility and avoid the fate of Pump.fun which faces lawsuits and bans – a clear business risk. Industry-led action here is partially altruistic but also self-interested: showing regulators that the industry can police itself to an extent may stave off harsher external regulation. To operationalize this, a

consortium of platforms could establish an *independent oversight board* that audits compliance with these standards and issues public ratings (a "good housekeeping seal") for platforms. We would measure success by uptake of these standards (how many platforms sign on) and a decrease in horror stories from those platforms (e.g., fewer instances of rug pulls if vetting improves).

2.2 Incorporate Transparency and Investor Protection Tools. Platforms should integrate tools that empower users to make informed decisions and protect themselves. One recommendation is for platforms to provide an **on-chain audit summary** for each token: e.g., automatically display what percentage of supply the top 10 holders have (since heavy concentration is a warning sign), whether the token's code has unusual functions (minting, blacklist functions, etc.), and whether liquidity is locked or not. Some third-party services already do token risk profiling; platforms could partner with or acquire such services to show a *risk dashboard* before a user trades a new token. Another feature is **circuit breakers or loss limits**: users could be allowed to set a personal loss cap – for instance, "if my total losses on this platform exceed $X, freeze my account for 24 hours." This is borrowed from gambling site responsible gaming features. While not everyone will use it, offering it demonstrates a commitment to user well-being. Additionally, implementing *cool-down confirmations* ("Are you sure? This token is highly volatile, and you might lose everything" dialog before purchase, especially for newbies) could inject a moment of reflection. Platforms might worry this friction loses users, but evidence from behavioral economics shows that such nudges can reduce impulsive decisions without completely deterring participation. Effectiveness can be tracked by user outcomes: ideally, with these tools, the average size of losses per user might decrease, and user surveys might indicate they felt better informed. Over time, platforms that adopt these protections might even attract more mainstream users (who currently stay away due to fear of scams), potentially balancing out the volume loss from discouraging purely reckless gambling.

2.3 Collaborate with Law Enforcement and Analytics Firms. Industry platforms often have more agile data analysis than government. We recommend that platforms proactively collaborate by flagging suspicious patterns (like sudden huge one-address sell-offs, or repeated creation of tokens by the same entity that always crash – indicating a serial scammer) to law enforcement or publicly via blogs. Several crypto exchanges already publish *transparency reports* and have units that work with police on fraud cases. Extending this to meme-coin platforms is crucial. Pump.fun, for instance, could have identified that certain wallet addresses were behind multiple pump-and-dumps and could have banned them or alerted users. Even if a platform is decentralized or loath to ban (for ideological reasons), simply informing the community of known bad actors (perhaps via registered token metadata that marks certain creators as "verified" or conversely "flagged") would help. In traditional finance, exchanges use tools to detect insider trading and suspicious activity; similar tech exists in blockchain analytics (looking for address clustering, known fraud addresses). By integrating such monitoring, platforms can act as *first responders* to market abuse. The ultimate measure of success is if fewer users fall victim to the same scammer repeatedly – i.e., the recidivism of exploiters is curtailed by cutting off their platform access or by raising user caution around them.

2.4 Exchange Listing Policies and Market Integration. Large, reputable exchanges should enforce strict criteria for any meme-coin that emerged from platforms like Pump.fun before listing them on mainstream markets. Part of what drives mania is the *hope of a bigger exchange listing*, which confers legitimacy (as seen when some Pump.fun coins "graduated" to Raydium or centralized exchanges – that was a big lure). If major exchanges band together to say: *we will not list coins that don't meet basic viability and decentralization criteria (like having at least X number of holders, a real project roadmap, etc.)*, it could dampen the "exit strategy" for pumpers. Essentially, this recommends that the industry's more regulated actors should avoid giving a seal of approval to pure memetic pumps. Some exchanges already have internal guidelines, but transparency about those (and perhaps a public refusal to list certain notorious meme tokens) could set norms. The impact would be that meme-coin creators can't easily point to "we might get listed on Binance/Coinbase!" as a selling point unless they actually build something credible. Over time, the quality bar for meme-coins might rise (like Shiba Inu trying to add utility to get exchange listings (CryptoNewsLand, 2024)).

3. Recommendations for Investors and Community Participants

3.1 Education Initiatives and Community Warnings. The crypto community, including influencers, can play a vital role in peer education. We recommend organizing *public awareness campaigns* – for example, popular crypto YouTubers and Twitter analysts could collaborate to produce a "Meme-Coin Survival Guide" that is widely shared. Key points would cover recognizing Ponzi-like tokenomics (e.g., if a token promises you passive income just for holding via a tax mechanism, understand that's coming from new buyers – unsustainable without growth (Krause, 2025a)), understanding that 99% will fail (Anderson, 2025), and learning basic risk management (only invest what you can lose, take profits, etc.). Such content should be made engaging (perhaps memeified itself to reach the audience in their language). Metrics like view counts, and more importantly, surveys of new traders

about whether they were aware of risks, can indicate reach. Furthermore, community forums (Reddit, Discord) could implement pinned posts or auto-responses with risk warnings whenever someone mentions Pump.fun or similar platforms – basically injecting the voice of caution into the dialogue at frequent intervals.

3.2 Investor Self-Protective Practices. On the individual level, we strongly recommend that participants adopt *concrete self-protection strategies*. For instance: Do not put a large portion of one's portfolio into a meme-coin or concentrate all bets in that arena. Diversification is a classic risk mitigation – even if one insists on dabbling in meme-coins, spread across different tokens/timings, and mostly allocate to more solid assets. While traditional fundamentals don't apply, due diligence can include checking the token's holder distribution (many tools allow that), Googling if the image or idea is original or a clone, seeing if the creator is public or anonymous, and reading community channels to gauge if there's organic interest or just bots. If anything seems amiss (like the top holder has 50% or the Telegram is full of "when moon?" spammers), treat that as a red flag. Many meme-coin traders go in without an exit plan and get caught up in greed. We recommend deciding ahead of time, "If this token doubles, I will sell half and take back principal," or conversely, "If it drops 50%, I'll cut losses." Discipline is hard in a frenzy, but writing it down or using tools to automate it (some wallets allow stop-loss orders through smart contracts) can enforce it. This aligns with common risk management advice. Investors should be educated about cognitive biases – such as the gambler's fallacy, confirmation bias (seeking only info that says this coin will go up), and the "greater fool" theory underlying these markets. If community members frequently remind each other – "Remember, we might just be trying not to be the last fool holding the bag" – it could instill caution.

Effectiveness of these self-regulatory behaviors can be partly observed in community outcomes. For instance, if we see fewer posts of people saying "I put my life savings and lost it," and more posts like "I only used spare money and managed to get out with a small loss/profit because I followed my plan," that's success in anecdotal terms. More systematically, perhaps over time the average duration someone holds a meme-coin might decrease (meaning more prudent quick profit-taking rather than bag-holding to zero), which ironically could make pumps less severe but also crashes less devastating individually.

3.3 Community Self-Policing of Bad Actors. Communities often can smell a scam quicker than regulators. We recommend that meme-coin trading groups create a culture of *calling out suspicious behavior*. For instance, if someone is shilling a token too hard or asking others to buy while they might be selling, community mods should investigate and possibly ban those actors. Some Pump.fun participants started doing this – after being burned, they would warn others about certain serial token creators. Formalizing that, communities could maintain "scammer lists" – decentralized but curated lists of wallet addresses or pseudonyms known to be malicious. Using blockchain, even a DAO could be formed to bounty-hunt bad actors (for instance, tracking stolen funds or identifying patterns). This taps into the decentralized ethos: rather than wait for centralized authorities, communities can coordinate to expel or blacklist those who exploit trust. The effectiveness would be if future scams find it harder to gain traction because communities quickly isolate them. It's admittedly tough because new identities can pop up, but a vigilant community can at least shorten the window a scammer has before being outed.

4. Future Research Directions

While not a direct recommendation to practitioners, identifying future research needs is important for long-term improvements:

Longitudinal Studies on Meme-Coin Market Cycles. Academics and data scientists should study the full life cycle of meme-coins over multiple cycles to quantify patterns (e.g., average peak ROI, time to crash, recovery probability if any). This can inform realistic odds akin to how we know lottery odds. If research shows, say, *"only 0.1% of meme-coins launched sustain a market cap over $10M for more than a year"*, that statistic could be powerful in dissuading overinvestment. We encourage researchers to publish such findings accessibly.

Behavioral and Psychological Research. Further study into why people participate in things like Pump.fun – is it pure greed, community belonging, boredom, desperation? – can help tailor interventions. For instance, if gambling mentality is a driver, then treating it as an addiction issue might be appropriate. If it's more of a *participatory art* thing for some, then solutions might differ. Surveys and interviews with meme-coin traders can shed light here.

Effectiveness of Regulatory Measures. As new rules (MiCA in EU, SEC's evolving stance in US) come into play, scholars should evaluate their impact on meme-coin prevalence and user outcomes. For example, did banning Pump.fun in UK actually protect UK consumers (did UK-origin meme trading drop, or did it just move elsewhere via VPN)? Did the SEC statement change industry behavior (maybe more compliance in not marketing these as investments)? These analyses will help refine regulatory approaches.

Technological Tools Development: Research into algorithmic detection of Ponzi-like tokenomics or real-time risk scoring is very valuable. Perhaps machine learning on blockchain data can identify likely Ponzi structures

early (some work in fraud detection in DeFi is emerging). Funding such research (through grants or public-private partnerships) could yield tools regulators and investors use.

5. Monitoring and Evaluation Mechanisms

For each recommendation, it is vital to establish metrics to evaluate progress:

Regulators could track **complaint data and scam prevalence** pre- and post-implementation of rules. If a new guideline is in place, does the volume of meme-coin related complaints/investigations drop? Does the average loss per victim go down?

Platforms can monitor **user retention and satisfaction** – the goal is not to kill the fun but to remove the worst harm. If protections are introduced, do they still retain a healthy user base (perhaps with more moderate trading behavior but still engaged)? Collecting user feedback on features like risk warnings can guide adjustments.

Investor communities can self-report outcomes (some forums do quarterly "how are we doing" polls). A positive trend would be more people saying they net profited or at least limited losses, rather than majority losing money which is currently implied.

6. Ethical Considerations in Implementation

Implementing these recommendations raises some ethical questions:

Balancing paternalism and autonomy: There is a fine line between protecting individuals and infringing on their freedom to take risks. Regulators and platforms must calibrate measures so they *nudge and warn* rather than unduly restrict adults' choices. The gambling classification idea, for instance, might be seen as heavy-handed; thus, perhaps it should be a last resort or applied only to the most egregious cases.

Privacy concerns: Increased monitoring (by regulators or platforms) of blockchain transactions or linking accounts to identities (KYC) has privacy implications. These need to be addressed by following data protection principles (only collecting what is necessary, ensuring anonymity in published analyses, etc.).

Avoiding unintended consequences: If regulation is too strict in one country, does it push users to unregulated venues (like decentralized exchanges with no oversight), potentially exposing them to even greater risk? This must be considered. Ideally, measures should come with international coordination to avoid simply shifting the problem elsewhere.

Impact on innovation: A blanket crackdown on meme-coins might inadvertently stifle creative experiments in tokenization that could have non-fraudulent value. So any regulatory approach should allow room for genuine grassroots innovation – perhaps by providing a pathway for meme projects to evolve into legitimate projects (e.g., an easy way to register or comply if they grow beyond a certain size).

Equity and inclusion: Ensure that protective measures don't disproportionately exclude certain groups. For example, strict KYC might inadvertently lock out some populations (those without easy access to IDs or banking). Policymakers should weigh this and possibly include exceptions or alternative compliance methods (like tiered access: small transactions allowed without full KYC, etc.) so as not to overly exclude the marginalized under the banner of protection.

In summary, the recommendations above aim to **create a safer, more transparent environment** for those who choose to engage with meme-coins, without completely banning the phenomenon's existence. By implementing clear rules, leveraging technology for oversight, encouraging responsible platform behavior, and educating the community, it is possible to mitigate the Ponzi-like and harmful aspects while preserving the innovative spirit of open financial experimentation. The ultimate goal is a future where *"pump-and-dump" meme-coins are a footnote of history – either rendered unprofitable by preventive measures or transformed into more constructive community enterprises – and where the exciting elements of internet culture and finance can converge without leaving a trail of victims in their wake.

Conclusion

The rise and fall of Pump.fun and its meme-coin ecosystem offer a vivid case study at the intersection of **emerging financial technology, digital culture, and regulatory governance**. In this paper, we have explored how Pump.fun revolutionized meme-coin creation – **tokenizing memes at scale and commodifying speculative hype** – and in doing so, revealed structural flaws and ethical fault lines that demand attention. Pump.fun's trajectory, from explosive growth to legal scrutiny, underscores a central thesis: **when Ponzi-like dynamics are transposed into a legal, commodified form, the result is a market that can run rampant until checked by either internal collapse or external intervention**.

Our analysis confirmed that meme-coins, as exemplified by Pump.fun, largely lack intrinsic value and behave as *momentum-driven assets* fueled by community narrative and greater-fool speculation. Early adopters and platform operators can reap enormous gains, while the vast majority of participants face losses – a distribution of outcomes resonant of Ponzi schemes albeit without a singular orchestrator guaranteeing returns. We have

shown how **technological innovation (smart contract bonding curves, decentralized exchanges) combined with viral communication** created a novel environment where traditional regulatory definitions faltered. Pump.fun operated in a gray zone: not exactly an exchange, not exactly an issuer, yet facilitating the trade of unregistered, highly risky financial instruments on a massive scale.

From a communications perspective, Pump.fun highlighted the power of **media and meme culture in financial markets**, but also its perils – with some users resorting to extreme, harmful stunts to capture attention. This raises profound media ethics questions about platform responsibility and the psychological impact of gamified trading on participants. Our exploration of these issues contributes to a broader understanding that *financial markets in the digital age are as much about narratives and networks as about numbers*. Traditional financial theory struggles to account for assets whose value is essentially *collective fiction* or social sentiment, and yet here they are, commanding millions in real money until the spell breaks.

On the regulatory front, we found that responses are still coalescing. The Pump.fun case has already prompted tangible actions – from the UK's ban to U.S. class actions – and sparked debate on whether to treat meme-coin speculation as a matter of securities law, commodity law, or even gambling law. We conclude that **a multifaceted approach is needed**. No single silver bullet will resolve the tensions inherent in meme-coin markets. Instead, as our recommendations detailed, a combination of clearer legal guidelines, proactive enforcement against fraud, platform self-regulation, and investor education must converge. Encouragingly, there are signs of movement in this direction: the SEC staff's clarity on meme-coins provides a foundation, and industry players have shown interest in improving standards (for instance, some exchanges delisting overly risky tokens after community outcry). The key will be *coordination and commitment* across stakeholders to implement the lessons learned.

Scholarly contribution of this work lies in synthesizing insights across disciplines – **financial economics, communication theory, legal studies, and ethics** – to present a holistic view of the Pump.fun phenomenon. Rather than examining meme-coins in isolation as just another market anomaly, we situated them in the context of historical manias and technological enablers, drawing parallels and distinctions. We also attempted to bridge the gap between theory and practice: by proposing actionable steps, we hope this research not only interprets the world but, in a modest way, helps to change it, steering the meme-coin discourse towards solutions and safer practices.

There remain open questions and avenues for further inquiry. For instance, if meme-coins are indeed here to stay in some form, can they be harnessed for positive ends (such as community fundraising or philanthropic memes) rather than pure speculation? How will the next generation of platforms learn from Pump.fun – will they incorporate better safeguards, or simply find new loopholes? And how will user behavior evolve as the mystique wears off and cautionary tales proliferate? These questions warrant ongoing research. As the field of **Journalism and Media** (our target journal's scope) expands to cover financial media and fintech phenomena, we believe studies like this are crucial. They illustrate that media scholars and communicators have a role to play in decoding and guiding seemingly technical financial trends, since at root these trends are about people, information flows, and trust.

In conclusion, **Pump.fun's case is a cautionary tale of our times**: it epitomizes the thrill and peril of democratized finance in a meme-driven age. It showed how *easy access without education or regulation can turn markets into virtual casinos*, with real consequences for individuals and the integrity of the financial system. But it also revealed an underlying social desire – for participation, for community, for the chance (however slim) at upward mobility – that should not be ignored or simply vilified. The challenge and opportunity before us is to channel that energy into more productive and fair channels. By addressing the legal commodification of Ponzi-like tokenomics head-on, we can aspire to a future where innovation in finance is coupled with responsibility, and where the merging of internet culture and markets yields more than just ephemeral bubbles, perhaps even creating lasting value or at least lasting lessons.

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