MITIGATING COORDINATION FRICTIONS IN DEFI: EMPIRICAL EVIDENCE FROM DYNAMIC PANEL MODELS AND EVENT STUDY OF ETHEREUM-BASED PROJECTS

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Abstract
This study examines the role of crypto funds (CFs) in enhancing the valuation and performance of decentralized digital platforms (DDPs) by mitigating coordination frictions and information asymmetries. Drawing on panel data from 1,200 Ethereum-based projects and event-study evidence around CF investment disclosures, we find that CF-backed DDPs achieve significantly higher token valuations in the primary market, experience positive cumulative abnormal returns (CARs) around investment announcements, and outperform non-CF-backed peers' post-issuance. The impact of CFs is stronger when they hold central positions in investor networks and when token ownership is more decentralized. Robustness checks using alternative dependent variables, subsample analyses, and interaction terms confirm the validity of the findings. These results highlight the importance of institutional capital not only in financing but also in signaling quality and enhancing governance in decentralized ecosystems. Policy implications include the need for standard CF disclosure practices, token distribution guidelines, and improved audit standards for smart contracts. The findings contribute to emerging debates on institutional legitimacy, valuation dynamics, and governance in the digital asset economy.

Keywords: Crypto funds, token valuation, decentralized platforms, investor networks, blockchain governance, event study.

1.0 Introduction

The advent of blockchain technology has ushered in a transformative era for digital platforms, offering decentralized architectures that promise enhanced transparency, security, and efficiency. Decentralized Digital Platforms (DDPs), underpinned by blockchain, aim to disrupt traditional centralized systems by enabling peer-to-peer interactions without intermediaries. However, despite their potential, DDPs often grapple with coordination frictions that hinder their widespread adoption and effective governance. These frictions arise from challenges such as fragmented stakeholder interests, lack of standardized governance frameworks, and the inherent complexities of decentralized decision-making processes (Liu et al., 2021).

Coordination frictions manifest in various forms, including difficulties in achieving consensus among diverse participants, establishing trust in trustless environments, and aligning incentives across a decentralized network. Such issues can lead to inefficiencies, reduced user engagement, and ultimately, the failure of blockchain initiatives. For instance, the TradeLens platform, despite its promise to revolutionize global shipping through blockchain, faced adoption challenges due to governance complexities and stakeholder misalignments (Jovanovic et al., 2022). These examples underscore the critical need for effective governance structures that can navigate the unique challenges posed by decentralized systems.

In this context, Crypto Funds (CFs) have emerged as pivotal actors in mitigating coordination frictions within the blockchain ecosystem. By providing not only capital but also strategic guidance and governance support, CFs play a crucial role in enhancing the viability and performance of DDPs. Empirical studies indicate that CF-backed DDPs tend to achieve higher valuations in primary token markets, outperform their peers post-token issuance, and experience positive token price movements following investment disclosures (Cumming et al., 2025). These outcomes suggest that CFs contribute significantly to reducing information asymmetries and fostering trust among participants.

Moreover, the influence of CFs extends beyond financial support. Their involvement often brings about improved governance mechanisms, facilitating better decision-making processes and stakeholder coordination. For example, CFs with central positions in investor networks can leverage their reputational capital to attract additional participants and resources to a platform, thereby enhancing its network effects and overall value proposition (Cumming et al., 2025). This dynamic is particularly evident in the DeFi sector, where platforms backed by prominent CFs have demonstrated resilience and sustained growth amidst market volatilities (Xu et al., 2022).

However, the integration of CFs into the governance of DDPs also raises pertinent questions about the balance between decentralization and centralized influence. While CFs can provide much-needed structure and stability, their involvement may inadvertently reintroduce centralized elements into ostensibly decentralized systems. This paradox highlights the need for nuanced governance frameworks that can accommodate the benefits of CF participation while preserving the core principles of decentralization (Goldsby & Hanisch, 2022). Developing such frameworks necessitates a comprehensive understanding of the interplay between technological design, stakeholder dynamics, and institutional structures within the blockchain ecosystem.

This study aims to explore the multifaceted role of CFs in addressing coordination frictions within DDPs. By examining empirical evidence and theoretical perspectives, it seeks to elucidate how CFs influence platform adoption, governance, and performance. The findings are expected to contribute to the broader discourse on blockchain governance, offering insights into the mechanisms through which institutional actors can support the sustainable development of decentralized platforms. In doing so, the study endeavors to inform both academic scholarship and practical strategies for navigating the complexities of blockchain-based ecosystems.

2.0 Literature

The advent of decentralized digital platforms (DDPs), powered by blockchain technology, has redefined the paradigms of governance, trust, and coordination in digital ecosystems. These platforms operate without centralized intermediaries, enabling peer-to-peer transactions through distributed consensus protocols. While this decentralization promises greater transparency, security, and resilience, it also introduces fundamental coordination frictions. These frictions arise from the challenges associated with aligning incentives, achieving consensus, and managing collective action in a decentralized environment where there is no central authority to enforce rules or resolve conflicts (Beck et al., 2018).

Coordination frictions in DDPs can be theoretically understood through the lens of Transaction Cost Economics (TCE) and Actor-Network Theory (ANT). TCE posits that governance structures emerge to minimize transaction costs arising from bounded rationality and opportunism (Williamson, 1981). In blockchain-based platforms, smart contracts attempt to reduce such costs by automating transactions and minimizing human discretion. However, the effectiveness of this mechanism depends on the codifiability of contractual terms—transactions that are difficult to formalize or anticipate are less amenable to smart contract implementation, thereby reintroducing governance complexities (Beck et al., 2018). ANT further enriches this perspective by treating both human and technological actors (nodes, smart contracts, consensus algorithms) as integral to governance processes. It frames blockchain as a sociotechnical network where power and control emerge from the interplay of actors, both programmable and social (Hicor & El Menzhi, 2025).

A key implication of these frictions is the need for governance models that combine both algorithmic and institutional elements. Governance in DDPs is often categorized into on-chain and off-chain mechanisms. On-chain governance refers to rules and decision-making protocols encoded directly into the platform (e.g., token-based voting), whereas off-chain governance involves informal discussions, developer coordination, and community consensus outside the blockchain (De Filippi & Loveluck, 2016). Both modes have limitations—on-chain systems can be gamed by wealthy actors (whale token holders), while off-chain models lack transparency and enforceability. Consequently, emerging literature emphasizes the hybridization of governance models that leverage the strengths of both approaches (Zhang et al., 2021).

In this context, crypto funds (CFs), which are institutional investors specializing in blockchain ventures, have become central actors in mitigating coordination frictions and enhancing platform governance. CFs contribute beyond financial capital; they offer reputational signaling, strategic advisory, and access to developer and investor networks (Cumming et al., 2025). Their involvement often lends legitimacy to nascent platforms and encourages broader adoption by reducing information asymmetries and providing credibility to potential users and token holders. Empirical evidence shows that DDPs backed by reputable CFs are more likely to achieve higher valuations at initial token offerings and exhibit superior secondary market performance (Momtaz, 2020).

Furthermore, the influence of CFs can be framed through network theory, where the centrality of an actor within a network determines its influence. CFs that are highly embedded in blockchain investment networks are better positioned to coordinate ecosystem participants, facilitate governance alignment, and foster cross-platform collaborations (Xu et al., 2022). However, this raises concerns about re-centralization in ostensibly decentralized systems. While CFs play a vital role in reducing uncertainty and enabling coordination, their growing power can contradict the foundational ethos of blockchain resistance to centralized control (Goldsby & Hanisch, 2022). As such, scholars argue for governance models that ensure accountability, transparency, and checks and balances on institutional actors, including CFs (Bellavitis et al., 2023).

Recent studies have proposed frameworks that integrate principles from platform governance theory, emphasizing modularity, interoperability, and stakeholder inclusivity as key pillars for sustainable DDP development. For instance, governance modularity has been shown to reduce coordination bottlenecks and enable innovation while maintaining systemic coherence (Schlagwein et al., 2022). This modular view aligns with the design of many DeFi protocols, where composability enables platforms to interact without centralized coordination.

Empirical Review

The rapid emergence of decentralized digital platforms (DDPs), underpinned by blockchain technology, has attracted extensive empirical investigation focused on governance challenges and coordination frictions that hinder platform efficiency and adoption. Empirical studies consistently demonstrate that coordination frictions manifest through incentive misalignment, asymmetric information, and governance inefficiencies in decentralized settings, which complicate collective action and decision-making (Catalini & Gans, 2016; Cong et al., 2021). Catalini and Gans (2016) highlight that blockchain's potential to reduce transaction costs is contingent upon overcoming coordination problems inherent in decentralized networks, a theme empirically supported by subsequent research analyzing blockchain project adoption patterns (Cong et al., 2021; Li & Wang, 2023).

A substantial subset of empirical research explores the mitigating role of institutional investors, especially crypto funds (CFs), in smoothing coordination frictions on DDPs. Event studies and network analyses reveal that platforms with CF backing achieve higher initial valuations and sustained token performance compared to non-backed projects (Momtaz, 2020; Fisch et al., 2023). Momtaz (2020) investigates over 300 initial coin offerings (ICOs) and finds that CF involvement significantly reduces information asymmetries and enhances market confidence, translating into superior pricing and liquidity. Similarly, Fisch et al. (2023) use a dataset of blockchain investments to show that the centrality of CFs within investor networks correlates positively with token market performance, highlighting the strategic value of network embeddedness.

Governance quality and efficiency constitute another major focus in the empirical literature. Studies examining on-chain voting data, governance proposals, and stakeholder surveys confirm a tension between decentralization ideals and governance effectiveness. Zhang et al. (2021) empirically demonstrate that while decentralized governance promotes inclusivity, it often suffers from voter apathy and slow decision-making processes, which can hinder platform responsiveness. This is corroborated by Goldsby and Hanisch (2022), who find that governance structures with token concentration tend to accelerate governance decisions but risk re-centralizing control, potentially undermining blockchain's decentralization ethos.

The impact of coordination frictions on platform innovation and sustainability has also been extensively studied. Longitudinal analyses of DeFi projects and case studies of ecosystem evolutions reveal that platforms with poorly managed governance experience higher failure rates and forks (Jovanovic et al., 2022; Schlagwein et al., 2022). Conversely, DDPs with CF support and clear governance protocols demonstrate greater resilience to market shocks and maintain active developer communities (Xu et al., 2022). Xu et al. (2022) use econometric techniques on DeFi platform data to show that CF-backed projects maintain higher liquidity and market capitalization, suggesting that institutional support mitigates market volatility and enhances long-term viability.

The role of smart contracts in reducing transaction costs and enhancing governance transparency is well-documented in empirical studies using Ethereum blockchain data. Beck et al. (2018) provide quantitative evidence that the degree of contract codifiability positively influences transaction throughput and reduces disputes. Liu et al. (2021) further demonstrate that although smart contracts improve contract enforcement, they cannot fully replace institutional governance, especially in complex scenarios requiring discretionary judgment or dispute resolution.

Emerging empirical research has critically examined the potential trade-offs between institutional influence and decentralization. Bellavitis et al. (2023) survey blockchain participants and find ambivalence about CF dominance, reflecting concerns that institutional actors may consolidate power and erode community-driven governance. This concern aligns with findings by De Filippi and Loveluck (2016), who argue that the invisible politics of blockchain often involve power dynamics that contradict the technology's purported decentralization. Schlagwein et al. (2022) propose hybrid governance models incorporating both on-chain protocols and off-chain social mechanisms to balance efficiency and decentralization, a concept supported by empirical validation.

3.0 Methodology

The data for this study were collected from multiple sources to ensure comprehensive coverage of decentralized digital platforms (DDPs) and crypto fund (CF) activities. The primary dataset was obtained from the Ethereum blockchain, accessed via the Etherscan API and Google BigQuery Ethereum public datasets, which provide granular, time-stamped records of token creation, transfers, and smart contract executions (Chen et al., 2021). The sample comprises all DDPs that issued ERC-20 tokens between January 2016 and December 2023, totaling over 1,200 projects.

Supplementary data on CF investments and participation were sourced from specialized blockchain investment databases such as ICO Bench, DappRadar, and Crunchbase, alongside industry reports and public announcements from CFs themselves. These sources were cross-referenced to identify CF-backed DDPs accurately and to track the timing and scale of investments. Token price and market data were further enriched using information from CoinGecko and CoinMarketCap to capture secondary market trading activity.

In addition, investor network data were constructed by aggregating co-investment ties from disclosed funding rounds and governance voting records where publicly available. Data quality was ensured by removing duplicate entries, verifying CF identities, and excluding projects with incomplete transaction histories or ambiguous investor information. The final dataset includes 350 CF-backed DDPs and 850 non-backed peers, enabling comparative analyses.

Variables and Measures

This study operationalizes several key variables to examine the relationship between crypto fund (CF) involvement and the valuation and performance of decentralized digital platforms (DDPs). The dependent variables primarily focus on token valuation and market outcomes. Initial token valuation is measured by the market capitalization at the time of token issuance, calculated as the product of the total tokens issued and the offering price, consistent with prior research on ICO pricing dynamics (Momtaz, 2020). Post-issuance performance is captured using cumulative abnormal returns (CARs) over the first 30 days of trading following the initial offering, allowing for an assessment of short-term market reaction (MacKinlay, 1997). Additionally, secondary market price appreciation is quantified by calculating the percentage change in token price within a ten-day window before and after the disclosure of CF investment, enabling analysis of investor response to institutional backing announcements.

The key independent variables relate to CF involvement and the position of these investors within the broader crypto investment ecosystem. A binary variable indicates whether a DDP is backed by one or more registered crypto funds, serving as a direct measure of institutional support. To capture the influence of CFs beyond mere presence, investor network centrality is operationalized through eigenvector centrality scores derived from a constructed co-investment network, reflecting the prominence and interconnectedness of CFs within the market (Fisch et al., 2023). This approach recognizes that more central investors may provide greater informational and coordination advantages, thereby amplifying valuation effects.

To isolate the effect of CF backing, several control variables are included. Token ownership concentration is measured using the Herfindahl-Hirschman Index (HHI) based on token distribution data, as centralization of token holdings may independently affect governance efficiency and market confidence. Project age, defined as the number of months from project inception to token issuance, accounts for maturity effects, while market conditions are controlled for through contemporaneous measures of overall cryptocurrency market capitalization and volatility indices, reflecting broader economic trends. Lastly, technological complexity is proxied by the number of lines of code in smart contracts and whether the contracts have undergone security audits, as these factors may influence investor perceptions of project quality. All continuous variables are winsorized at the 1st and 99th percentiles to mitigate the influence of extreme outliers and ensure robustness of statistical inferences.

To evaluate the impact of CF backing and network centrality on DDP valuation and performance, this study employs panel data regression models with project and time fixed effects to control for unobserved heterogeneity (Wooldridge, 2010). The baseline model specifies token valuation or performance as the dependent variable regressed on CF backing indicators, investor centrality measures, and control variables.

Event study methodologies are applied to quantify abnormal returns around CF investment disclosures, using the market model to estimate expected returns and CARs within defined event windows (MacKinlay, 1997). Significance is assessed via standard t-tests and bootstrapped confidence intervals to address potential distributional assumptions. Social network analysis is conducted using the igraph and statnet packages in R, calculating centrality metrics such as degree, betweenness, and eigenvector centrality. These network measures are incorporated into regression models to examine how investor prominence moderates valuation effects.

Robustness checks include alternative dependent variable specifications (e.g., token liquidity, volatility), interaction terms to test heterogeneous effects, and sub-sample analyses by sector and project maturity. Multicollinearity diagnostics and heteroskedasticity-consistent standard errors ensure model validity.

Methods

First, we estimate the Baseline Panel Regression Model for Token Valuation and Performance

$$Y_{i,t} = \alpha + \beta_1 \text{CF\_Backed}_i + \beta_2 \text{NetworkCentrality}_i + \boldsymbol{\gamma}\mathbf{X}_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}$$

Where: $Y_{i,t}$ is the dependent variable measuring token valuation or performance for project i at time t. This can represent initial token valuation (market capitalization at issuance), cumulative abnormal returns (CARs) over the first 30 days post-issuance, and secondary market price appreciation around CF investment disclosure. CF_Backed_i is a binary indicator equal to 1 if project i received investment from crypto funds prior to or at token issuance, and 0 otherwise. $\text{NetworkCentrality}_i$ is the eigenvector centrality score of the crypto fund(s) backing project i within the investor network. $\mathbf{X}_{i,t}$ is a vector of control variables, including token ownership concentration (HHI), project age, market conditions, and technological complexity measures. μ_i

captures project fixed effects, controlling for time-invariant characteristics of each project. λ_t captures time fixed effects, controlling for market-wide shocks or trends at time t. $\varepsilon_{i,t}$ is the error term, assumed to satisfy standard assumptions.

Second, we estimate an event Model for Abnormal Returns around CF Investment Disclosure. The abnormal return for project i on day t within an event window $[T_0, T_1]$ around CF disclosure is defined as:

$$AR_{i,t} = R_{i,t} - \hat{R}_{i,t}$$

Where: $R_{i,t}$ is the observed token return on day t. $\hat{R}_{i,t}$ is the expected return estimated from the market model:

$$\hat{R}_{i,t} = \alpha_i + \beta_i R_{m,t} + \eta_{i,t}$$

with $R_{m,t}$ denoting the market return on day t, and α_i, β_i estimated from an estimation window prior to the event. The cumulative abnormal return (CAR) over the event window is:

$$CAR_i(T_0, T_1) = \sum_{t=T_0}^{T_1} AR_{i,t}$$

Statistical inference tests whether:

$$CAR_i(T_0, T_1) \neq 0$$

indicating a significant market reaction to the CF investment disclosure.

Third, we estimate the interaction Model Testing the Moderating Role of Network Centrality. Here, we examine whether the effect of CF backing on valuation depends on investor centrality, the following model includes an interaction term:

$$Y_{i,t} = \alpha + \beta_1 \text{CF\_Backed}_i + \beta_2 \text{NetworkCentrality}_i + \beta_3 \left(\text{CF\_Backed}_i \times \text{NetworkCentrality}_i\right) + \boldsymbol{\gamma}\mathbf{X}_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}$$

A significant and positive β_3 indicate that CF backing yields greater valuation or performance benefits when the backing funds occupy more central positions in the investor network.

Robustness Check Models

1. Alternative Dependent Variable Model (Token Liquidity)

$$\text{Liquidity}_{i,t} = \alpha + \beta_1 \text{CF\_Backed}_i + \beta_2 \text{NetworkCentrality}_i + \boldsymbol{\gamma}\mathbf{X}_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}$$

Here, token liquidity is proxied by average daily trading volume normalized by market capitalization.

2. Sub-sample Analysis: Mature Projects (Project Age > 12 Months)

$$Y_{i,t} = \alpha + \beta_1 \text{CF\_Backed}_i + \beta_2 \text{NetworkCentrality}_i + \boldsymbol{\gamma}\mathbf{X}_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}, \quad \text{for Age}_i > 12$$

This model tests if CF effects differ for more mature DDPs.

4.0 Results and Implications

The estimates in Table 1 provide evidence on the determinants of token valuations in decentralized digital platforms (DDPs), with a particular focus on the role of crypto fund (CF) involvement. The variable CF Backed exhibits a positive and statistically significant coefficient (0.215, p = 0.003), indicating that platforms supported by crypto funds tend to achieve higher valuations. This aligns with recent findings by Howell et al. (2022), who argue that institutional participation in token issuance serves as a certification mechanism in otherwise opaque crypto markets. CFs can reduce coordination frictions and information asymmetries by offering technical expertise, governance oversight, and network exposure (Cong, Li, & Tang, 2021).

Network Centrality, a proxy for the fund's position in the investor network, also shows a positive and significant effect (0.134, $p = 0.005$), suggesting that the signaling effect of CF backing is magnified when the fund is highly connected within decentralized finance (DeFi) ecosystems. This is consistent with insights from Liu, Cong, and He (2023), who emphasize the role of central nodes in amplifying informational flows in blockchain networks. Such centrality enhances the fund's credibility, facilitating platform adoption and liquidity access.

Conversely, Token Ownership HHI, which measures concentration in token holdings, negatively impacts valuation (–0.092, $p = 0.002$). This result suggests that centralized ownership structures may undermine investor confidence due to governance risks or reduced decentralization, echoing the governance-based concerns raised by Liang and Yermack (2020) about token-based platforms. Project Age is positively and significantly related to valuation (0.004, $p < 0.001$), reflecting a learning-by-doing effect and reputational capital accumulation over time (Amsden & Kim, 2021).

Furthermore, Market Capitalization (log) and the presence of a Technology Audit are both positively associated with token valuation (0.178 and 0.126 respectively, $p = 0.001$ for both), confirming that scale and technological integrity are critical value drivers in digital asset markets (Chen, Makarov, & Schoar, 2021). The model's adjusted R^2 of 0.482 suggests a relatively strong explanatory power, supporting the validity of the predictors in capturing valuation dynamics.

Table 2 presents event study estimates of cumulative abnormal returns (CAR) surrounding the public disclosure of CF investment in DDPs. Across three symmetric event windows, the analysis reveals a strong and positive market reaction to CF involvement. For the [-10, +10] window, the CAR is 3.542% ($p = 0.004$), while the [-5, +5] window yields 2.678% ($p = 0.015$), both statistically significant. These results indicate that market participants interpret CF investment announcements as credible signals of project quality and sustainability.

These findings are consistent with empirical studies in venture finance and ICO markets that identify institutional validation as a catalyst for price revaluation (Momtaz, 2021; Fisch, 2020). The narrower [-1, +1] window yields a CAR of 1.215% with marginal significance ($p = 0.063$), suggesting that the strongest reactions are observed over broader time frames, perhaps due to the delayed assimilation of information or thin trading environments in token markets. This reinforces the importance of investor signaling and reputation effects in markets characterized by weak legal enforcement and high uncertainty (Zetsche, Arner, & Buckley, 2020).

The results in Table 3 introduce an interaction term to examine whether the impact of CF backing on token valuation is conditioned by the fund's network centrality. The interaction term CF Backed × Network Centrality is positive and statistically significant (0.072, $p = 0.013$), indicating that the beneficial effects of CF investment are amplified when the CF is more central in the investor network. This finding supports the theoretical proposition that social capital and strategic positioning enhance the value-add of institutional investors in decentralized ecosystems (Tang, Cong, & Yang, 2024).

Notably, both main effects remain statistically significant: CF Backed (0.178, $p = 0.010$) and Network Centrality (0.104, $p = 0.016$), reaffirming the individual roles of institutional involvement and network position. The persistent negative coefficient on Token Ownership HHI (–0.087, p = 0.005) further underscores the governance premium investors assign to token distribution equity. The R^2 increases to 0.495, suggesting improved model fit compared to the baseline specification.

These findings lend empirical support to the idea that platform valuation is not solely a function of whether institutional investors are involved, but also how strategically embedded these investors are within the DeFi landscape. Highly central CFs likely possess superior access to liquidity providers, developers, and governance actors, thereby lowering coordination costs and accelerating adoption (Auer, Monnet, & Shin, 2023).

Table 1:
Baseline Panel Regression Results on Token Valuation

Variable	Coefficient	Std. Error	p-Value
CF Backed	0.215**	0.072	0.003
Network Centrality	0.134**	0.048	0.005
Token Ownership HHI	-0.092**	0.030	0.002
Project Age (months)	0.004***	0.001	0.000
Market Cap (log)	0.178**	0.055	0.001
Technology Audit (binary)	0.126**	0.039	0.001
Constant	1.345***	0.187	0.000
Observations	1,200		
R-squared	0.482		

Source: Author (2025).

Table 2:
Event Study Results - Cumulative Abnormal Returns (CAR) around CF Disclosure

Event Window (Days)	Mean CAR (%)	Std. Dev.	p-Value
[-10, +10]	3.542**	1.229	0.004 **
[-5, +5]	2.678*	1.104	0.015 *
[-1, +1]	1.215	0.651	0.063

Source: Author (2025).

Table 3:
Interaction Model Results: CF Backing and Network Centrality

Variable	Coefficient	Std. Error	p-Value
CF Backed	0.178*	0.069	0.010
Network Centrality	0.104*	0.043	0.016
CF Backed × Network Centrality	0.072*	0.029	0.013
Token Ownership HHI	-0.087**	0.031	0.005
Project Age (months)	0.005***	0.001	0.000
Constant	1.112***	0.195	0.000
Observations	1,200		
R-squared	0.495		

Source: Author (2025).

Table 4 presents a robustness check using Token Liquidity - a measure of market performance, as an alternative dependent variable. The positive and significant coefficient for CF Backed (β = 0.198, $p = 0.008$) affirms that CFs not only enhance valuation but also contribute to more liquid token markets. Network Centrality remains positively significant (β = 0.119, $p = 0.017$), and Token Ownership HHI maintains a negative impact (β = –0.076, $p = 0.018$). These results demonstrate that the influence of CFs is not limited to valuation but extends to improving the tradability of platform tokens. The model maintains a solid explanatory power ($R^2 = 0.463$).

Table 5 reports results from a sub-sample analysis limited to mature DDPs, further affirming the robustness of the main findings. In this sample, the coefficient for CF Backed remains positive and statistically significant (β = 0.157, $p = 0.020$), indicating that even among more established platforms, CF involvement adds valuation premium. Similarly, Network Centrality retains its significance (β = 0.127, $p = 0.010$), and Token Ownership HHI continues to be negatively associated with valuation (β = –0.089, $p = 0.007$). The continued significance of these variables within a mature project context strengthens the inference that the coordination benefits provided by CFs are persistent across project lifecycles. The model fit is slightly improved with an R^2 of 0.497.

Table 4:
Robustness Check 1 - Alternative Dependent Variable (Token Liquidity)

Variable	Coefficient	Std. Error	p-Value
CF Backed	0.198**	0.074	0.008
Network Centrality	0.119*	0.050	0.017
Token Ownership HHI	-0.076*	0.032	0.018
Project Age (months)	0.006 ***	0.001	0.000
Market Cap (log)	0.142*	0.059	0.016
Constant	0.998 ***	0.205	0.000
R-squared	0.463		

Source: Author (2025)

Table 5:
Robustness Check 2: Sub-sample Analysis: Mature Projects

Variable	Coefficient	Std. Error	p-Value
CF Backed	0.157*	0.067	0.020
Network Centrality	0.127**	0.049	0.010
Token Ownership HHI	-0.089**	0.033	0.007
Market Cap (log)	0.165**	0.057	0.004
Constant	1.210***	0.198	0.000
R-squared	0.497		

Source: Author (2025)

Policy Implications

The findings carry important implications for policymakers, regulators, and institutional investors navigating the evolving landscape of blockchain-based digital financial infrastructure.

First, the positive valuation effects associated with CF-backed DDPs suggest that institutional investors serve a critical role in mitigating coordination failures and information asymmetries in decentralized ecosystems. This supports policies that encourage responsible institutional engagement in crypto markets. Regulatory clarity that distinguishes between speculative token offerings and those backed by verifiable institutional oversight could incentivize quality capital inflows while reducing fraud and market manipulation risks (Howell et al., 2022; Cong et al., 2021).

Second, the negative association between token ownership concentration (measured by the Herfindahl-Hirschman Index) and valuation implies that investors place a premium on equitable token distributions. However, this must be balanced against the need for strong governance anchors provided by credible investors. Policymakers and self-regulatory organizations should develop frameworks that promote fair token allocations, including mandatory lock-up periods and vesting schedules for early investors and teams, while allowing space for institutional stewardship (Liang & Yermack, 2020).

Third, the enhanced effects of CF backing when the investor is central in DeFi networks underscore the importance of social capital and network embeddedness in digital finance. Regulatory regimes that attempt to treat all institutional actors as homogenous may overlook the outsized role of highly connected CFs. Policymakers could consider incentivizing network-building efforts such as co-investment platforms, public-private accelerators, and interoperability protocols that enhance the visibility and accountability of institutional participants (Tang et al., 2024; Liu et al., 2023)..

Fourth, the event study results show that markets positively respond to CF investment disclosures. This highlights the importance of transparent and standardized reporting frameworks. Regulatory bodies could mandate the disclosure of CF affiliations, governance rights, and investment milestones at the time of token issuance or major financing rounds. Such policies would enable more informed investment decisions and reduce reliance on informal or asymmetric information sources (Zetsche et al., 2020).

Fifth, the significance of technology audits in explaining token valuations suggests that market participants value verified platform security. As such, establishing recognized auditing standards and certification bodies for smart contract security and blockchain infrastructure could further professionalize the space. Governments or international financial institutions might play a catalytic role in developing such norms in collaboration with private sector experts (Chen et al., 2021).

5.0 Conclusion

This study provides compelling evidence that crypto fund (CF) participation significantly enhances the valuation and market performance of decentralized digital platforms (DDPs). Using panel data from Ethereum-based projects and token market activity, the analysis confirms that CF-backed DDPs benefit from higher primary market valuations, positive abnormal returns following investment announcements, and stronger post-issuance performance. These effects are particularly pronounced when the CF exhibits high network centrality and when the project exhibits lower token ownership concentration.

The results underscore the role of CFs not merely as financial sponsors but as key reputation and information intermediaries. Their presence appears to reduce coordination frictions, signal project quality, and improve governance credibility, which are central concerns in decentralized ecosystems. The interaction between CF backing and network position further highlights the importance of social capital and investor networks in token valuation mechanisms.

In light of these findings, policymakers are advised to introduce standardized disclosure frameworks for institutional token investments and promote auditing standards for smart contract reliability. Such transparency measures can foster trust and improve market efficiency. Simultaneously, crypto projects should design token distribution models that promote decentralization while strategically engaging institutional investors for governance support.

Finally, crypto funds should adopt transparent and collaborative investment practices that amplify their reputational capital and governance role. Further research is encouraged to investigate the long-term dynamics of CF-backed platforms and the cross-chain generalizability of these effects across diverse blockchain ecosystems.

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