

Decentralized Venture Capital: Who Can Benefit from Initial Coin Offerings (ICOs)?

Mason Arditi

Youth Entrepreneurship Association, Santa Monica, CA, USA

Email: masonarditi@yeatoday.org

How to cite this paper: Arditi, M. (2023). Decentralized Venture Capital: Who Can Benefit from Initial Coin Offerings (ICOs)? *Open Journal of Business and Management*, 11, 1440-1453.

<https://doi.org/10.4236/ojbm.2023.114079>

Received: April 8, 2023

Accepted: July 9, 2023

Published: July 12, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

In this paper, we evaluate the potential for blockchain technology to disrupt venture capital. To accomplish this, we compare initial coin offering (ICO) data with initial public offering (IPO) data on different characteristics: 1) accessibility to raise capital, 2) liquidity, 3) investor protection, and 4) equitability. Our objective is to identify: 1) how entrepreneurs may realize value by fundraising through decentralized venture capital and 2) how investors may realize value by investing in tokenized ventures. We find that ICOs may benefit entrepreneurs by increasing access to capital and expanding access for ethnic minorities and geographically restricted entrepreneurs, however traditional ventures are likely to raise more funds than decentralized enterprises. Additionally, ICOs may benefit investors by increasing access to low-budget speculators, yet serve as higher risk investments lacking investor protection. This paper serves as a non-empirical, observational overview of ICOs' key advantages and key shortcomings in venture capital.

Keywords

Blockchain, Venture Capital, Private Equity, Entrepreneur, Investor, ICO, IPO, Cryptocurrency

1. Introduction

Blockchain is a word we've heard come up in a lot of conversations within the past few years. However, the term is commonly misunderstood. In fact, even the Google definition misleads readers: "a system in which a record of transactions made in Bitcoin or another cryptocurrency are maintained across several computers that are linked in a peer-to-peer network." Here, the definition refers to blockchain as something used exclusively for cryptocurrencies like Bitcoin, but this is not the case. Blockchain, simply put, is a technology that makes information stored online more secure. Things like cryptocurrencies are *powered* by this

technology, utilizing its verifiable, secure platform.

For comparison, the Internet was originally used solely as a means of communication for governments in the 1960s (Abbate, 2016). Nowadays though, the applications of the Internet are expansive—Facebook, Google, and Youtube are all examples of the ways that the Internet (a technology) was used for consumers. The case is exactly the same with blockchain. The applications of the technology include cryptocurrency, but also include insurance, supply chain management, government voting structures, and more (Jamil et al., 2019; Kar & Navin, 2021). Just as the network of Internet applications is referred to as “the Web”, this network of blockchain applications is referred to as “Web 3.0”. Web 3.0 describes the idea of a new version of the connected Internet that is built upon the framework of blockchain and token economics, allowing users to control their own data and interact with others while maintaining privacy (Rudman & Bruwer, 2016).

As previously mentioned, fundraising is one of the many sectors that have been reconstructed with blockchain integration. In doing so, entrepreneurs are offered new methods by which they can fund their businesses, investment trusts, and more. Between 2016 and 2019 alone, over 7400 ventures used an initial coin offering (ICO) as a means of funding, raising over \$35 billion USD (Lyandres et al., 2020). For comparison, initial public offerings (IPOs) raised about \$108 billion during the same period (Ritter, 2022). For a technology that was introduced just in 2013 (Feign, 2021), ICOs have gained a significant amount of traction in such a short time. This rapid expansion of this trend prompts the question: What are sources of value under this new system of fundraising for entrepreneurs and investors?

In this study, we’ll address these questions by comparing decentralized fundraising to traditional venture capital to explore how a Web 3.0 funding system may offer improvements over the traditional apparatus. The remainder of this paper will be organized as follows. Section 2 will provide a brief history and context of the development of such technology that led to the induction of ICOs and other decentralized venture capital mechanisms. Section 3 will compare and contrast outstanding literature on related subjects. Next, in Section 4, we will apply our findings to the decision-making process of an entrepreneur and investor. Finally, we’ll recapitulate what we’ve deduced from our analysis and suggest the use of applications for decentralized venture capital in present and future financial systems.

A main feature of this paper is that when referring to decentralized venture capital, we are referring to ICOs. It’s important to note that alternatives to ICOs exist such as security token offerings (STOs), decentralized autonomous ICOs (DAICOs), simple agreements for future tokens (SAFTs), and more (Blockchains, 2018). However, ICOs are the most popular choice for agents in this space, so we focus on them for this paper.

2. Background

The earliest and most primitive developments of blockchain technology began in

1975 when cryptography papers, such as “New Directions in Cryptography” by Whitfield Diffie and Martin Hellman, were released (Sarmah, 2018; Diffie & Hellman, 1976). However, blockchain as we know it today is largely understood to have been invented by the developer(s) with the pseudonym Satoshi Nakamoto. In 2008, Nakamoto released a whitepaper—a document outlining the goals of a blockchain based project—titled, “Bitcoin: A Peer-to-Peer Electronic Cash System”, which laid out the structure that Bitcoin would be built upon, as well as its applications in global finance (Nakamoto, 2018). A year later, the Bitcoin network was deployed as an open-source framework. The database gained traction as a financial tool for its decentralized nature—by using a global network of computers to verify transactions, it was impossible for a single, central authority like a bank to take control and corrupt figures on the blockchain (Sarmah, 2018). In other words, Bitcoin offered a currency system that could not be manipulated by governments, financial institutions, corporate interests, or malicious actors, hence making it immutable.

The second “Pandora’s Box” of blockchain technology was opened in 2015 when the Ethereum network launched (Sarmah, 2018). The significance of this network was that it paved the road for blockchain to be used for more than just currency. With the use of smart contracts, automated transaction protocols on the blockchain that execute demands between peers without a moderating human agent, the Ethereum network allowed developers to use the secure technology of blockchain for things such as insurance, loans, government, and most importantly for our paper, fundraising (Sarmah, 2018; Jamil et al., 2019; Kar & Navin, 2021). By auctioning off cryptographically secure digital assets, firms could now raise funds in a manner which was previously technologically impossible.

The first ICO, Mastercoin, was actually hosted on the Bitcoin network in 2013, raising 5120 BTC, about \$500,000 at the time (Cryptopedia, 2022). Mastercoin offered a model for new venture capital systems that utilized the democratic nature of blockchain technology by directly connecting the enterprise to speculators without an intermediary. The traditional funding technique for an early business is to first acquire angel investors, then venture capitalists, and eventually host a mass-liquidation event known as an IPO (Lin & Nestarcova, 2019). This process allots for high fees and friction due to the many intermediaries, such as exchange operators, lawyers, auditors, bankers, and crowdfunding platforms like Kickstarter (Tapscott & Tapscott, 2017). Additionally, an IPO requires some assessor, typically an investment bank, to place an initial valuation on the company about to go public. This creates an asymmetry of information and gives undue power to the trusted intermediary. Take WeWork as a case study. At their peak, they were valued at over \$47 billion by SoftBank Group (Subin, 2021). However, once the open market was able to accurately assess the company, their valuation dropped over 93% to just under \$3 billion (Pendergraft, 2021). Though value assessment is based upon company fundamentals

(Rosenbaum & Pearl, 2021), the power of the intermediary can be abused at the expense of investors.

On the other hand, an ICO connects the business directly to their investors, cutting out much of the waste in the funding process, as well as the potential for deep-rooted misvaluation. We go into more detail about the differences between traditional and decentralized venture capital routes in **Figure 1**. Although, these advantages are also met with drawbacks, such as limited legal regulation and the high frequency of ICOs being used to fund scams and/or unprepared businesses (Fische & Momtaz, 2020). However, it can be argued that these are just growing pains in the advent of the new, complex technology. In a nutshell, ICO funding uses technology to replace much of the required trust in the traditional fundraising system, leading to decentralization and democratization of the venture capital process.

Because of Ethereum's smart-contract technology, most ICOs were released on their network, one being Ethereum itself, raising 50 million \$ETH, or about \$17.3 million at the time, 2014 (Cryptopedia, 2022). The largest ICO as of 2022 was EOS, which raised over \$4.2 billion in 2018, more than the sum of the 3 largest VC-funded businesses that year: Uber, Juul, and Epic Games (Hamacher, 2021). By this time, it was clear that ICOs had potential to replace traditional funding methods, and it was implicit that Ethereum was the vehicle for it.

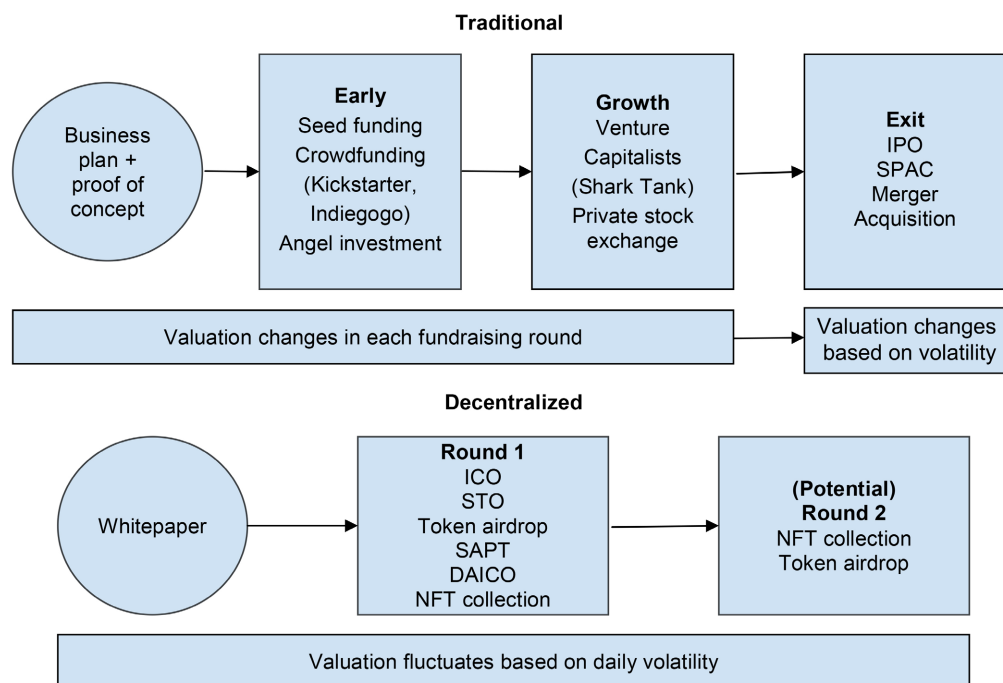


Figure 1. This figure depicts the different fundraising processes for traditional ventures (top) and decentralized ventures (bottom). The former is based on a business plan and, usually, a proof of concept. Further, it features three different stages with different investor profiles in each one. The latter is based on a whitepaper (a less formal business plan) and features a single general fundraising stage, with a potential second one being repeated later.

3. Literature Review

In researching decentralized venture capital, several major themes were highlighted in relevant literature, addressing its benefits and shortcomings. While taking into account the unclear decentralized finance (DeFi) regulation, high volatility in coin markets, high frequency of scams, and the general nuance of a technology that requires more real-world testing, several writers outlined decentralized VC's potential to mitigate corruption, democratize the venture capital space, reduce costs, offer more liquidable options for investors, and diversify investments in both financial and non-financial contribution.

The most apparent standout in the limitations of decentralized VC is the gray area surrounding its regulation. The lack of regulatory oversight and due diligence requirements lead ill-prepared and susceptible investors into the market (Fische & Momtaz, 2020). As an extension of this flaw, scams are frequent in the crypto space and many are known as “rug pulls”, when the founder(s) of a project that used crypto to fundraise drain the liquidity of the token and run off. When anyone is given the ability to fundraise on a global decentralized market, scammers are likely to take advantage of the conditions by misleading or outright lying to potential investors and they often do (Lin & Nestarcova, 2019; Fische & Momtaz, 2020). Often, only a whitepaper written by the founding team is used in place of a proper business plan.

Due to the lower entry requirements for raising capital, decentralized ventures tend to be more successful in fundraising. It's been found that 45% of ICOs were able to raise funds, with a median value of funds raised at \$13 million (Lyandres et al., 2020). In contrast, only 31.7% of startups are successful in raising Series A capital (Rowley, 2016). Though the comparison is not direct, it can be interpreted that investment via decentralized methods are more lucrative than VC, likely due to the lower selectivity of investors. Traditional IPOs are thoroughly vetted for fraud and proper accounting habits, while the same cannot be said for ICOs (Fische & Momtaz, 2020). These lack of regulatory frameworks pertain to the nuance of blockchain technology in general. It's commonly agreed by Tapscott & Tapscott (2017), and Lin & Nestarcova (2019) that regulation in the space is still in an early stage of development. If more oversight were present, vetting of decentralized enterprises would be more common and the trust factor of decentralized investments may likely increase. However, Belinky et al. (2015) see heavy regulatory oversight as an implication to a business's ability to raise capital. The future of ICO regulation is still up in the air and decisions for oversight will likely be left up to governments. In general, a factor like government regulation holding such power over a technology's future proves a dangerous component to decentralized VC, making the future of ICOs variable based on regulatory decisions.

The venture capital space is infamously known for its “closed circle” networks, which are largely limited to Caucasian males (Frey, 2021). Audretsch et al. (2017) concluded that the venture capital market is one with limited access to

ethnic minorities and women, further corroborated by Verheul & Thurik (2001) in their findings that women were less likely to have access to these high net-worth networks in the space. However, studies have found that ICOs led to increased participation from ethnic minorities and geographically restricted founders (Tapscott & Tapscott, 2017; Fische et al., 2022). Their comparison of ICOs to real estate investment trusts (REITs) found that ethnic minority participation was 55.60% in ICOs and 33.12% in traditional REITs. Geography also plays a major role when raising capital—those in wealthier areas are more likely to find the funds that they’re seeking. Traditional VC is geographically restricted (Lin & Nestarcova, 2019) compared to decentralized means, which utilize the Internet in nearly all aspects. Ventures using ICOs were in areas with less wealth (\$42.66 k vs. \$51.20 k GDP per capita) and less college graduates (70.93% vs. 82.47%). However, data showed that disadvantages posed to women in venture capital were not significantly alleviated by ICO use. The authors described their findings in regard to the use of ICOs to democratize fundraising as underwhelming compared to their expectations.

Blockchain technology is well-renowned for its automation aspect and, by extension, its reduction of costs. Agency costs are reduced when blockchain and smart contract implementation replace human and third-party input. Estimates vary on potential savings, but Belinky et al. (2015) put the figure at \$15 - 20 billion annually. Santander Bank estimates the savings after blockchain implementation for their company at \$20 billion annually (Tapscott & Tapscott, 2017). Additionally, the consultancy firm Capgemini puts consumer savings at \$16 billion in annual banking and insurance fees (Tapscott & Tapscott, 2017). The use of blockchain for reduced costs has caught traction in the finance and banking center, with JPMorgan Chase, Citigroup, Credit Suisse, and more using the technology for cost minimization (Tapscott & Tapscott, 2017). Due to the increased trust of data on the blockchain, data oversight would be unnecessary and so would the estimated \$500 million spent by large banks yearly on oversight (Belinky et al., 2015). Decentralized autonomous organizations (DAOs) have also reduced their transaction and agency costs by utilizing smart contract automation (Momtaz, 2022). In contrast to the findings of Momtaz (2022), Belinky et al. (2015), Tapscott & Tapscott (2017), and Lin & Nestarcova (2019) predict an increase in agency costs when companies use ICOs to raise capital, due to the lack of traditional VC guidance. This refers to the difference in nature between traditional and decentralized investment—the former usually comes with mentorship and guidance from the investor(s) and/or their firms, known as “treatment effect” (Fische & Momtaz, 2020). The same does not always apply to decentralized alternatives.

As explained earlier, companies and investors using traditional VC have a long road of fundraising before they can see their investments become securitised (usually through an IPO). In most cases, investors have to wait 10 years before they can see their investments liquidate (Lin & Nestarcova, 2019). The

process is different in the case of ICOs—stake in the company is often tokenized and informal markets are commonly formed around these non-fungible tokens (NFTs) (Frey, 2021) which increase liquidity and reduce time to realize profit. This allows for investors to realize gains at much faster rates than they could before. The double-edged sword of tokenized, ergo liquid, ICOs leads back to regulation—it puts founders in a gray position where their assets might have to be classified as securities; this is a problem that can only be resolved when government regulation around cryptocurrencies is made more clear in the future.

4. Methodology

Our method involves a non-empirical, observational approach by comparing ICOs to IPOs in the following categories: likelihood of raising funds, cost of liquidity, investor protection, and equitability. We begin by outlining the incentives of an entrepreneur seeking capital and an investor seeking return on investment. We then apply our findings to the decision-making framework of the entrepreneur and investor and evaluate if certain qualities of decentralized fundraising are more favorable than the traditional system.

4.1. Incentives of the Entrepreneur & Investor

With a basic understanding of the Web 3.0 landscape developed in the previous sections, we now develop a simple theoretical framework to loosely structure the economic incentives involved in fundraising for new business ventures. The entrepreneur can choose between: 1) a traditional IPO and 2) an ICO to grow or expand their enterprise. Similarly, investors can choose between backing traditional IPOs or investing capital in an ICO instead. Each different method has pros and cons. We fortify the basic principles of these arrangements with important details that can help us establish the efficacy of these two methods. We seek to understand when, and for whom, decentralized VC is more beneficial than traditional fundraising.

First we must establish the preferences of each class of actors in this space. Entrepreneurs typically care about: 1) the amount of funding they attract from investors and 2) how much ownership or autonomy in their enterprise they can retain in doing so. All being held equal, it is thought that a proprietor of a firm would prefer to maximize the amount of capital they raise while maintaining as much corporate control as possible. However, the value of higher quality investors impacts this framework, sometimes leading proprietors to pay a premium for more well-connected investment partners. This is a concept we explore in this section.

Investors, on the other hand, care about: 1) their return on investment, 2) the liquidity of their investment, and in some cases 3) the characteristics of the enterprise they are investing in. This third point is shaped by both the information set of the investor as well as what their core values are. For example, some investors might pursue tech firms or emerging markets because they are better informed on their potential for growth (Fische & Momtaz, 2020). Also, an investor

might pursue funding a particular venture if they value its objective or business practices (e.g. if the business is involved in environmental sustainability or progressive social goals). In this case, the investor gains some level of non-monetary reward for allocating money towards an endeavor they care about.

In addition to the welfare of both the investor and the entrepreneur in fundraising activities, a policymaker might also be concerned about the social welfare and distributional implications of the different approaches. Traditional economic models are often criticized for overemphasizing economic efficiency while placing distribution and equity as a secondary concern. Women receive less than 5% of VC funds yet own 30% of US businesses (Fische et al., 2022). Furthermore, women are statistically disadvantaged by their lower likelihood to participate in networks of high net-worth people, “insiders clubs”, as mentioned earlier (Verheul & Thurik, 2001). This is just one instance of distributional inequity in the venture capital industry.

4.2. Likelihood of Raising Funds

Founders using ICOs often realize a higher success rate in raising capital. Forty-five percent (45%) of ICOs were able to raise funds (Lyandres et al., 2020), with estimates of mean (median) raised at \$13 million (\$4 million). In contrast, only 31.7% of startups are successful in raising Series A capital (Rowley, 2016) with mean (median) of \$22.2 million (\$8 million) raised (Fundz LLC, 2020). In this scenario, we choose to compare ICOs to Series A instead of IPOs in order to more closely resemble early-stage financing, due to the traditionally nascent stage of ICO financing.

4.3. Cost of Liquidity

In comparing the liquidity aspect of investments, we must evaluate the difference in vesting periods between ICOs and IPOs. Almost all IPOs maintain a 180-day lockup period for pre-IPO investors (Field & Hanka, 2001; Brav & Gompers, 2003). However, only 14% of ICOs contain a lockup period (Fahlenbrach & Frattaroli, 2020). The median venture capitalist holds their investment for 8.2 years (Bowden, 2017), whereas 49.3% of ICO investors sell their partial/full investments within 90 days of the initial coin offering (Fahlenbrach & Frattaroli, 2020). It's important to acknowledge that the differences in investment horizons for investors in IPOs and ICOs is likely driven to a large extent by a greater average level of volatility in the ICO space (Lin & Nestarcova, 2019).

4.4. Investor Protection & Regulatory Concern

Almost all (96%) of VC investors own preferred shares, meaning that they would be the first ones to be compensated if the company failed, merged, or was sold (Kaplan and Strömberg, 2003). However, an ICO investor does not have such protective measures in place. The only obligation of the project founder in an ICO is to give their “best try” in keeping their company afloat (Fahlenbrach &

Frattaroli, 2020) without any further rights to protect their investment. This presents significantly more risk to the ICO investor, as they can face 100% loss of investment. This was seen in TerraLuna (\$LUNA), a cryptocurrency stable coin that crashed from its high of \$119.02 to \$1.53. Falling over 99.99%, \$60 billion in value was drained within hours and investors saw their holdings virtually erased (Lee et al., 2023). Hence given the nascent state of ICO investment and an apparent lack of developed contract frameworks of regulatory structures that serve to protect investors, traditional IPO fundraising is most likely a more attractive venue for risk averse investors.

Additionally, rug pulls and scams riddle the DeFi space. In fact, crypto rug pulls accounted for over \$2.8 billion in lost capital in 2021 alone (Brown, 2022). Crypto markets are infamous for their high frequency of scams due to the anonymity granted to many founders behind projects, allowing them to run away with investor funds. Unlike traditional markets, cryptocurrencies and ICOs generally lack protective measures that restrict fraud, exposing investors to misleading founders (Fische & Momtaz, 2020).

4.5. Democratizing Access to Venture Capital

Lin & Nestarcova (2019) found that 55.60% of proprietors benefitting from ICO funding identified as ethnic minorities, compared with 33.12% in traditional REITs. Traditional VC is restricted geographically, posing an uneven playing field for founders in poorer areas. Found in the same study, enterprises using ICOs were in areas with less wealth (\$42.66 k vs. \$51.20 k GDP per capita) and less college graduates (70.93% vs. 82.47%). In contrast, data showed that disadvantages posed to women in venture capital were not significantly alleviated by ICO use.

5. Discussion

5.1. Access to Capital

These results suggest that ventures have a higher likelihood of raising capital in decentralized VC than in traditional VC, however they may not be able to raise as much. The mean and median values of capital raised for traditional VC are likely higher due to the higher concentration of well-funded institutional investors—only 1% of ICOs are backed by SEC-registered institutional investors (Fische & Momtaz, 2020). **Figure 2** outlines these findings visually. These institutional investors add direct and indirect value to a company they invest in, known as “treatment effect” (Bertoni et al., 2011; Lin & Nestarcova, 2019). High-quality investors in ICOs are scarcer as it is a nuanced industry that comes with high risk. However, the institutional investors that do invest in ICOs increase company performance significantly, by 129% on average (Fische & Momtaz, 2020). These findings are in line with those of Fische et al. (2022).

A likely factor for the ease of accessibility for decentralized fundraising for the median venture is the “exaggeration factor” of ICO proprietors, where ICO

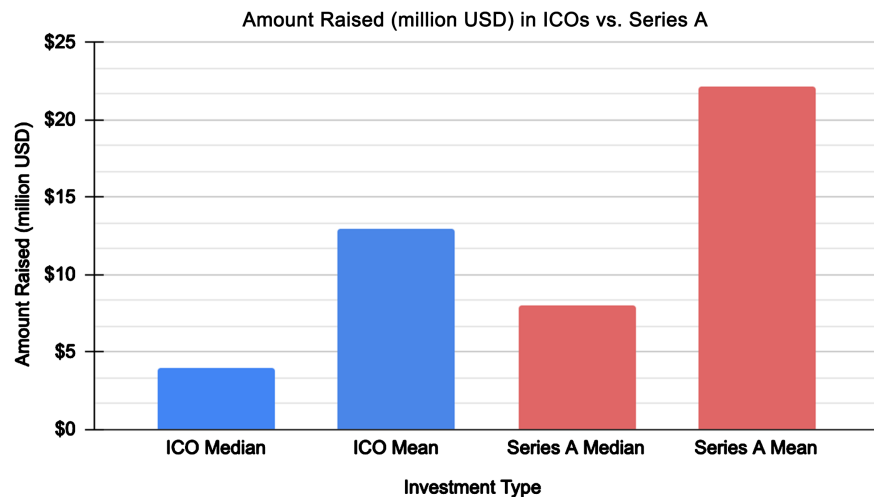


Figure 2. This chart displays the different amounts of capital raised in ICOs versus Series A financing. By comparing median and mean values for capital raised in decentralized ventures and traditional ventures, we can visualize access to different amounts of capital in the two respective markets.

founders are able to raise more capital in a quicker amount of time by inflating their capabilities to investors (Fische & Momtaz, 2020). This suggests that ventures seeking decentralized investment have a lower bar for credibility.

5.2. Liquidity

These results show that decentralized investments are significantly more liquid than traditional investments and notably decrease the horizon of investment for speculators. This may put retail investors in a position to realize value from decentralized investment vehicles, as they have smaller budgets and less time to commit. These findings corroborate those of Lin & Nestarcova (2019) and Fahlenbrach & Frattaroli (2020). We can attribute this increased observation to the informal liquidity pools frequently formed around tokenized assets (Fische & Momtaz, 2020) that empower peers to trade their tokens for assets with a greater market cap (most commonly ETH).

5.3. Investor Protection & Security

Our findings show that traditional markets have substantially more security protocols in place than decentralized markets. Tokenized markets are much more volatile, exposing investors to 100% losses. Furthermore, ICOs lack anti-fraudulent restrictive measures, putting speculators at a higher risk of being misled or outright defrauded by the proprietors of their investments. This is in line with Fische & Momtaz (2020) and Lin & Nestarcova (2019). For risk-averse investors, traditional investment vehicles are optimal.

5.4. Equitability

These results show that blockchain technology does have the capacity to mitigate

the lacking equitability of traditional venture capital markets and level the playing field, for select parties. Ethnic minority and geographically restricted agents realized higher representation in decentralized markets. However, the disadvantages posed to women by “closed-circle” networks (Frey, 2021) do not seem to be alleviated with decentralized venture capital. Economists have yet to discover a more equitable solution for female founders.

5.5. Policy Recommendation

The main concerns regarding security in decentralized investment are namely 1) volatility and 2) the high frequency of scams or “rug pulls,” by which the founder(s) of a venture run away with the partial/full funds of their investors.

The volatility issue follows the trend of the blockchain industry as a whole—high investment volume is made based on speculative expenditure. A substantial portion of interest in digital assets has tended to be based on little more than “hype.” In other words, some of the most successful crypto and NFT ventures have succeeded largely because of extravagant promotion and marketing instead of intrinsic market fundamentals (Fische & Momtaz, 2020). As this is a general market trend that has existed for years, it will be a difficult fix. However, investor due diligence principles still stand in crypto markets, which can offer comfort to individual investors when applied. The present concerns around token volatility may be remedied by the scaling of the crypto industry as a whole. Should more funds be injected into the market caps of decentralized investments, daily fluctuations should stabilize.

The latter concern can be solved via a credit rating agency approach similar to existing entities who assess the quality of various financial assets, such as S&P Global Ratings, Moody’s, and Fitch Group. Similar services exist for cryptocurrencies, like Token Insight, which evaluates a project’s team, business model, market environment, and more. The caveat of Token Insight is that there are major gaps in ratings for recently-listed ICOs. This means that for the investor considering financing a new venture, their resources for security ratings may be limited until a long time after the project’s ICO. This may be an issue that can be solved by the scaling of the blockchain industry—if more demand for ratings were present, Token Insight and similar agencies may implement more extensive ratings. Credit rating agencies increase trust (Chang et al., 2022) and offer investors another layer of due diligence that can protect them from misleading founders in the ICO space (Fische & Momtaz, 2020).

5.6. Suggestions for Future Research

The Web 3.0 space stands in a prime position to innovate many global industries. In many ways, it already has, and it’s important for individuals to understand that operators can benefit from Web 3.0 even if they cannot exploit ICO funding and related means. Smart contracts, blockchain data storage, and dissemination are all technologies that can be applied to reduce costs, save time, in-

crease credibility and security, and optimize company functions. The key takeaway from this study is that decentralized venture capital mechanisms, most notably ICOs, offer entrepreneurs and investors a new channel that may disrupt their investment or business development strategy.

This study adds to a growing research literature on the efficacy of innovative, decentralized funding practices enabled by emerging technology and organizational structures. Our discussion thus far also raises important questions that offer viable directions for future research. It's important to note that the nature of decentralized venture capital correlates strongly with adaptability. Traditional VC is limited to strict laws that define the different stages of the fundraising process. However, new methods have presented themselves via smart contracts that are flexible in their legislation and structure. For example, an ICO can be coded to combat problems presented to traditional ICOs, like investor protection. One of the largest concerns for decentralized VC is the future state of regulation by governmental agencies across global jurisdictions, which cannot be predicted at present day. It's also worth noting that large gaps are apparent in decentralized funding data. More data needs to be gathered on ICO statistics in order for concrete conclusions about the benefits and disadvantages of decentralized VC to be made. For example, in order to accurately assess the extent to which ICOs decrease executive control cost, increase fundraising success rate, and increase liquidity for investors, more economic measures on the outcomes from ICOs must be gathered. Such data may include retention of executive control post-ICO, average holding periods of digital assets, and the viability of informal decentralized markets. Finally, in order to more accurately assess the impact of this technology, further research ought to focus on the causal effects (i.e. not simple correlations) of decentralization on democratization of finance. For empirical data on ICOs, refer to the studies conducted in [Fische & Momtaz \(2020\)](#), [Fische & Momtaz \(2020\)](#), [Fische et al. \(2022\)](#), and [Lyandres et al. \(2020\)](#).

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Abbate, J. (2016). *Inventing the Internet*. The MIT Press.
- Audretsch, D. B., Lehmann, E. E., & Wirsching, K. (2017). Female Immigrant Entrepreneurship in Germany. In A. N. Link (Ed.), *Gender and Entrepreneurial Activity* (pp. 46-68). Edward Elgar Publishing.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3060427
- Belinky, M., Rennick, E., & Veitch, A. (2015). *The Fintech 2.0 Paper: Rebooting Financial Services*. Finextra.
- Bertoni, F., Colombo, M., & Grilli, L. (2011). Venture Capital Financing and the Growth of High-Tech Start-Ups: Disentangling Treatment from Selection Effects. *Research Policy*, 40, 1028-1043. <https://doi.org/10.1016/j.respol.2011.03.008>

- Blockchains (2018). *Alternatives to ICO: How Else Can Blockchain Startups Raise Fund?* 101 Blockchains. <https://101blockchains.com/alternatives-to-ico/>
- Bowden, A. P. (2017). *VC Investing Still Strong Even as Median Time to Exit Reaches 8.2 Years*. VentureBeat. <https://venturebeat.com/entrepreneur/vc-investing-still-strong-even-as-median-time-to-exit-reaches-8-2-years/>
- Brav, A., & Gompers, P. A. (2003). The Role of Lockups in Initial Public Offerings. *The Review of Financial Studies*, 16, 1-29. <https://doi.org/10.1093/rfs/16.1.0001>
- Brown, M. (2022, September 23). *What Are the Biggest Crypto Rug Pulls in History?* CryptoVantage.com. <https://www.cryptovantage.com/news/what-are-the-biggest-crypto-rug-pulls-in-history/>
- Chang, K., Li, Y., & Shim, H. (2022). Corporate Social Responsibility and Credit Rating around the World: The Role of Societal Trust. *Financial Review*, 57, 863-891. <https://doi.org/10.1111/fire.12314>
- Cryptopedia (2022). *Initial Coin Offerings: The Ethereum ICO Boom*. Gemini. <https://www.gemini.com/cryptopedia/initial-coin-offering-explained-ethereum-ico>
- Diffie, W., & Hellman, M. (1976). New Directions in Cryptography. *IEEE Transactions on Information Theory*, 22, 644-654. <https://doi.org/10.1109/TIT.1976.1055638> <https://www-ee.stanford.edu/~hellman/publications/24.pdf>
- Fahlenbrach, R., & Frattaroli, M. (2020). ICO Investors. *Financial Markets and Portfolio Management*, 35, 1-59. <https://doi.org/10.1007/s11408-020-00366-0> https://link.springer.com/article/10.1007/s11408-020-00366-0?error=cookies_not_supported&code=1777398c-8e52-4d7f-8865-081983d4f4f4
- Feign, A. (2021). *What Is an ICO?* <https://www.coindesk.com/learn/what-is-an-ico/>
- Field, L. C., & Hanka, G. (2001). The Expiration of IPO Share Lockups. *The Journal of Finance*, 55, 471-500. <https://doi.org/10.1111/0022-1082.00334>
- Fische, C., & Momtaz, P. (2020). Institutional Investors and Post-ICO Performance: An Empirical Analysis of Investor Returns in Initial Coin Offerings (ICOs). *Journal of Corporate Finance*, 64, Article ID: 101679. <https://doi.org/10.1016/j.jcorpfin.2020.101679>
- Fische, C., Meoli, M., & Vismara, S. (2022). Does Blockchain Technology Democratize Entrepreneurial Finance? An Empirical Comparison of ICOs, Venture Capital, and REITs. *Economics of Innovation and New Technology*, 31, 70-89. <https://doi.org/10.1080/10438599.2020.1843991>
- Frey, T. (2021). *Next Up—Decentralized Venture Capital*. Futurist Speaker. <https://futuristspeaker.com/business-trends/next-up-decentralized-venture-capital/>
- Fundz LLC (2020). *Recently Funded Startups Database/Real-Time Funding Updates: Fundz*. <https://www.fundz.net/>
- Hamacher, A. (2021). *The 10 Biggest ICOs: Here's Where the Money Went*. Decrypt. <https://decrypt.co/53950/the-10-biggest-icos-heres-where-the-money-went>
- Jamil, F., Hang, L., Kim, K., & Kim, D. (2019). A Novel Medical Blockchain Model for Drug Supply Chain Integrity Management in a Smart Hospital. *Electronics*, 8, 505. <https://doi.org/10.3390/electronics8050505>
- Kaplan, S. N., & Strömberg, P. (2003). Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts. *The Review of Economic Studies*, 70, 281-315. <https://doi.org/10.1111/1467-937X.00245>

- Kar, A. K., & Navin, L. (2021). Diffusion of Blockchain in Insurance Industry: An Analysis through the Review of Academic and Trade Literature. *Telematics and Informatics*, 58, Article ID: 101532. <https://doi.org/10.1016/j.tele.2020.101532>
- Lee, S., Lee, J., & Lee, Y. (2023). Dissecting the Terra-LUNA Crash: Evidence from the Spillover Effect and Information Flow. *Finance Research Letters*, 53, Article ID: 103590. <https://doi.org/10.1016/j.frl.2022.103590>
- Lin, L., & Nestarcova, D. (2019). Venture Capital in the Rise of Crypto Economy: Problems and Prospects. *Berkeley Business Journal*, 16. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/berkbuj16>
- Lyandres, E., Palazzo, B., & Rabetti, D. (2020). *ICO Success and Post-ICO Performance*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3287583
- Momtaaz, P. P. (2022). Some Very Simple Economics of Web3 and the Metaverse. *Fin-Tech*, 1, 225-234. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4085937 <https://doi.org/10.3390/fintech1030018>
- Nakamoto, S. (2018). *Bitcoin: A Peer-to-Peer Electronic Cash System*. KlausNordby. https://www.klausnordby.com/bitcoin/Bitcoin_Whitepaper_Document_HD.pdf
- Pendergraft, G. (2021). *The Rise and Fall of WeWork*. SAGE Publications. <https://doi.org/10.4135/9781529763621>
- Ritter, J. R. (2022). *Initial Public Offerings: Updated Statistics*. Warrington College of Business, University of Florida. <https://site.warrington.ufl.edu/ritter/files/IPO-Statistics.pdf>
- Rosenbaum, J., & Pearl, J. (2021). *Investment Banking: Valuation, LBOs, M&A, and IPOs*. John Wiley & Sons.
- Rowley, J. D. (2016). *The Startup Funding Graduation Rate Is Surprisingly Low*. Mattermark. <https://mattermark.com/startup-graduation-rate-surprisingly-low/>
- Rudman, R., & Bruwer, R. (2016). Defining Web 3.0: Opportunities and Challenges. *The Electronic Library*, 34, 132-154. <https://doi.org/10.1108/EL-08-2014-0140>
- Sarmah, S. S. (2018). Understanding Blockchain Technology. *Computer Science and Engineering*, 8, 23-29. <http://article.sapub.org/10.5923.j.computer.20180802.02.html>
- Subin, S. (2021). WeWork Shares Jump More than 13% in Public Markets Debut after SPAC Merger. *CNBC*. <https://www.cnb.com/2021/10/21/wework-goes-public-through-spac.html>
- Tapscott, A., & Tapscott, D. (2017). *How Blockchain Is Changing Finance*. Harvard Business Review. https://capital.report/Resources/Whitepapers/40fc8a6a-cdbd-47e6-83f6-74e2a9d36ccc_finance_topic2_source2.pdf
- Verheul, I., & Thurik, R. (2001). Start-Up Capital: “Does Gender Matter?”. *Small Business Economics*, 16, 329-346.