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Digital asset market evolution

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Abstract
Since its debut in 2009, the market for digital assets has grown. It exploded in popularity between 2016 and 2018, only to see major setbacks in the following two years. This article provides an analysis of the key phases of the development of the digital asset market and the impacted market players. It shows the state of the ICO, IPO, and IPO markets for blockchain and digital asset firms, and draws comparisons between them. The author delves into the origins of recent data patterns in the development of the digital asset market.

Keywords: digital assets, market, cryptocurrencies, bitcoin

Introduction

The digital asset market is constantly changing. There has been a market for digital assets since since the Bitcoin protocol was released in 20091. In the wake of its meteoric rise in 2016–18, the "crypto winter" of 2018–19 has sent prices crashing down. Changes in the market and shifting objectives among investors may have a significant impact on the ability to finance the development of new digital assets. There are both specific and general ways to characterize digital assets. To be more specific, digital assets are implemented in computer code and rely on certain kinds of computer algorithms known as consensus algorithms in order to initiate and verify transactions. In the widest sense, digital assets may be understood to encompass virtual assets like those seen in video games, and the in-game products that are sold to players can be considered virtual assets. No consensus method for transaction verification or security is required for virtual assets.

When deciding whether or not to conduct an Initial Coin Offering (also known as a "ICO") or the offer, sale, or distribution of a digital asset, one must take into account the applicability of the federal securities laws in the United States. Whether or whether the digital asset is considered a "security" under such statutes is a crucial question. The word "security" encompasses a wide range of financial products, including "investment contracts," stocks, bonds, and transferrable shares. Any digital asset may be subject to federal securities regulations, thus it's important to check whether they have any similarities to products that are considered securities. In this document, we lay forth a method for determining whether or not a certain sort of digital asset is a "investment contract." To establish whether unconventional instruments or arrangements, such digital assets, are securities under the federal securities laws, the Commission and federal courts often use the "investment contract" methodology.

There are key distinctions between fiat currency and digital assets like decentralized cryptocurrencies. Differences in value attachment, supply, and storage medium are significant distinctions. Once backed by gold, fiat currencies now depend on people's faith in their country's economy, government, and central bank to maintain their purchasing power. Cryptocurrencies that are not controlled by a central authority, like Bitcoin, are distinct in principle. As a means of combating inflation, they are often issued in limited quantities. The storage and transmission of cryptocurrency does not need a trusted third party. They are made to function independently of the traditional banking system.

It's no secret that the corporate and financial communities are warming up to the idea of using cryptocurrencies. There are strong arguments on both sides of the issue, with some applauding it and others calling for a ban, with some reporting the biggest financial returns while others reporting the worst economic collapses. This study looks at seasoned private investors in Sweden to see what influences their bitcoin choices. Patterns in investor demographics and tactics, cryptocurrency risk, diversification and hedging options, and government regulation have all been uncovered by prior study. Based on these analyses, semi structured interviews were designed to elicit the investors' rationale for their choices. Because of this, fresh insights on the allocation of private investments in cryptocurrencies and the absence of strategy in these investments have been added to the literature. Governmental laws, the motivations behind these high-risk investments, and the uncertain future of cryptocurrencies were all validated in the research.

Literature review

Pernice, A. I. G., & Scott, B. (2021) [1], In addition to the potential financial benefit from investing in CCs, there are also opportunities to use and acquire more CCs with either no investment at all or a very little one. Mining is the method through which new Bitcoins are generated. Cryptocurrency is "written into existence" via a process known as "mining," which involves "transforming the structure of a bundle of proposed transactions in such a manner that the bundle may be hitched to a chain of previously hitched bundles" and a request for the creation of new tokens (Pernice & Scott, 2021) [1]. Staking, in which the investor locks some quantity of token in order to collect a high interest rate after a specific time period, is another common method of earning passive income from CCs. To

aid the network and facilitate transactions, the CC amount is staked to the blockchain.

F. E. Gunawan and R. Novendra (2017) [5], Folkinshteyn and Lennon (2017), Francisco and Swanson (2018), and Gunawan and Novendra (2017) [5] are only a few of the many studies that have been conducted on the topic of CC's application (2017) [5]. Since this technology has the potential to change and disrupt almost every business, it has been discovered that CCs can be employed and deployed in a wide variety of settings (Sharma & Gupta, 2021; Tapscott & Tapscott, 2018). Today, however, numerous widely-used CCs are utilized primarily as investment possibilities, rather than as a means of exchange like traditional currency. Today, rather than being used as a direct payment mechanism, fiat currency is used to purchase and then resell CCs (Pernice & Scott, 2021) [1]. After first functioning as a payment experiment, CCs have evolved into a valuable kind of digital currency.

The causes of investors' taking up excessive risk in CC investments were investigated by Sun *et al*. (2020) [2]. The results indicated that most investors are middle-aged males from affluent backgrounds with college degrees. According to the data, an individual's desire to be inventive and try new things is the primary motivation for engaging in high-risk investment activity. The results also suggest that investors see the CC market as having less risk than the stock market. This is because CC investors are more used to the stock market, where many institutional investors fight with individual investors, which is seen as harsh competition. Most people believe that small investors have little chance against large, well-funded organizations. While the CC investors recognized the advantages of diversifying their portfolios to include CC, they also recognized the critical significance of understanding the nuances of CC and the laws and regulations that govern them in order to choose the best CC for their portfolios. Furthermore, depending on the investor's goal and portfolio strategy, CC may be used as a tool for risk hedging, speculating, or long-term holding.

According to Andreevich (2021) [3], the Swedish government has not enacted any concrete regulations on the CC market. However, CCs are still subject to Swedish jurisdiction, meaning that punishments for criminal activity and profits are taxed in accordance with Swedish law. Gains, exchanges between CCs and FIAT currencies, and the use of CCs in gaming are all subject to a 30% tax, which is often seen as a very onerous burden that might stunt the growth of CCs in Sweden. Even if the CC market has seen significant growth in terms of technology, use cases, and public interest since the current laws were initially enacted in 2013–2015, Andreevich (2021) [3] argues that they remain in effect. Sweden does not recognize CCs as legal tender, and government authorities are regularly briefed on the risks associated with CC investments and the great prudence with which they should be handled. Triljo, Sweden's only Crypto exchange, published a survey that found less than one percent of Swedes had ever invested in CCs and even fewer do so now. In contrast, Sweden has taken the first step toward national implementation of digital currencies by announcing that the central bank is working on a digital currency of its own, the E-krona. Slowly but surely, blockchain technology is making its way into the country's financial and real estate markets.

Luther (2016) [4], suggests that government backing is crucial for a new financial product to take up. New national currencies are effectively adopted mostly thanks to backing from the government, making this a key distinction between the introduction of new national currencies and the introduction of CCs. When a new currency is introduced, there is often a good rationale for it. This is not always the case with complementary currencies. Cryptocurrencies (CCs) like Bitcoin are designed to be used instead of conventional money. It does not address a pressing problem or demonstrate significant improvement over alternatives to warrant widespread adoption. Without backing from a larger group and with the CCs continuing to be unstable, it won't sway government opinion, and the rules as they stand will stay in place.

Digital asset market

History is littered with examples of markets going through cycles of change and regression. The young digital asset market is no different. This cycle of change and reversal may also be seen in the newly developing market for digital assets.

Bitcoin vs. altcoins

Bitcoin, the pioneer digital asset, was released in 2009 and marked the beginning of the digital asset market. Proof-of-Work, the consensus mechanism at the heart of the Bitcoin blockchain, employs a 256-bit signature safe hash algorithm developed originally by the NSA to verify transactions and generate new blocks via the solution of computationally intensive puzzles.

By its very nature, Bitcoin is resistant to double spending, the fraudulent use of a single currency or token for two separate transactions. Bitcoin enabled anonymous, borderless, cross-border transactions between users with no need for a central authority or bank. In 2010, Bitcoin was first used in a commercial transaction. To explain the technological underpinnings and blockchain technology of Bitcoin, Satoshi Nakomoto wrote the Bitcoin whitepaper. A Bitcoin is a digital representation of a transaction recorded on a distributed public ledger. The miners must agree to include a transaction in the next block. The blockchain is established when each new block is connected to the whole preceding chain. There is no need for a middleman when using a blockchain since all updates to the data are agreed upon by all members of the decentralized network.

The Ethereum network's token Ether, which debuted in 2016, is the second most valuable cryptocurrency behind Bitcoin. In October of 2018, over 200,000 Bitcoin and 500,000 Ethereum were transacted everyday, respectively. Unlike Bitcoin's blockchain, Ethereum's allows for the execution of program logic in each transaction, opening up new possibilities for application. Ether, the cryptocurrency of Ethereum, is a digital token that can be exchanged for access to the network's processing power, allowing its owners to execute programs that make use of the cryptocurrency's utility.

Up until around January of this year, the digital asset market was controlled by a single digital currency: Bitcoin, which was created in 2009. From around 2009 to 2011, fungible cryptocurrencies dominated the market. The first "alt-coin" (an alternative cryptocurrency to Bitcoin) was released into circulation on April 15, 2011.

The development of other fungible cryptocurrency options gradually undercut Bitcoin's market supremacy. Following this, the number of alternative monetary systems increased exponentially between 2017 and 2019.

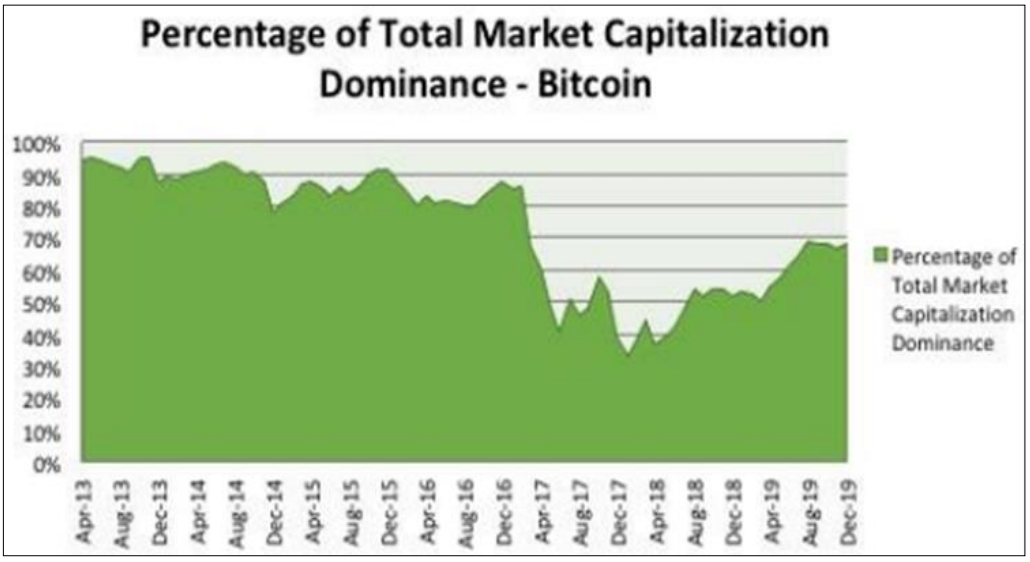

Fig 1: Total market capitalization dominance

Figure 1 shows that the digital asset market began to diversify and expand significantly towards the end of 2014, after the implementation of smart contracts in the Ethereum ecosystem and the ETH currency. Figure 1 shows the resultant precipitous decline in Bitcoin's market share that occurred between 2016 and 2017. There are already more than 2,000 different fungible cryptocurrencies in circulation, thanks to the rapid emergence of new alt-coins on an almost weekly basis.

Initial coin offering

Token sales, also known as initial coin offerings (ICOs), were made feasible by the proliferation of alt-currencies in April 2011 (Figure 1). These are coins that provide an alternative investment option to Bitcoin. Master coin launched the first initial coin offering (ICO) in July 2013.

The popularity of ICOs surged and then abruptly faded. The first initial coin offering (ICO) did not take place until 2012, long after Satoshi Nakamoto had first shown the value of blockchain technology for digital currencies in 2008. However, in the second quarter of 2017, the exponential rise of ICOs overtook venture capital investment of crypto start-ups. The initial coin offerings (ICOs) that sprung out in response to the fast growth and market euphoria of 2017 gradually faded away at the start of 2018, mirroring Bitcoin's price decline.

The growth of the digital asset market can be traced back in large part to the advent of ICOs, which revolutionized the startup financing environment. Initial coin offerings (ICOs) reduced transaction costs and increased capital formation efficiency to new heights. However, in 2018, legacy firms with existing services and products increasingly embraced ICO fundraising to support their business operations, even though ICOs had previously permitted only crypto startups, financial technology startups, and the crypto community to raise cash.

To all of its participants, ICOs were a source of unprecedented liquidity. Tokens issued via initial coin offerings (ICOs) may be traded on cryptocurrency exchanges across the world round-the-clock, providing massive liquidity to the underlying company from the very beginning of its existence. Investment liquidity was offered to participants in ICOs at a significantly higher frequency than with any other kind of capital production. By using ICOs, VC firms might reinvest current revenues much sooner in the company's lifetime without going through the lengthy, complicated, and time-consuming procedures associated with an initial public offering (IPO), acquisition, or other late-stage liquidity event.

Venture capital

Despite ICOs' disruptive consequences, venture capital firms stood to gain substantially by engaging in the market for ICOs, which in turn pushed the market for digital assets ahead throughout the ICO boom years. While initial coin offerings (ICOs) posed a threat to the venture capital industry, the early liquidity supplied by cryptocurrencies via ICOs might actually help the business model of VC firms.

The conventional structures of venture capital are challenged by the emergence of ICOs as a means of raising funds. It is very uncommon for traditional venture capital firms to restrict participation to a select number of wealthy individuals who are willing to take a chance on groundbreaking innovations that have not yet been widely publicized. In contrast, ICOs make investing accessible to a wider range of people. Initial coin offerings broaden the range of resources available to startups. Due to the low entrance barrier and global reach of the internet, even very inexperienced investors from all over the globe may participate in an ICO. When compared to conventional venture capital funding, ICOs are a more expedient and preferred option for businesses to raise money because of their lower transaction costs, fewer moving parts, and shorter timelines.

Following the traditional financial sector's disruption by ICOs, venture capital firms have attempted to profit on the disruption from inside the established business model. Startup capital firms may use the quick access to financing that cryptocurrencies provide. To identify the next "unicorn" company, venture capital investors risk large sums of money under the current system. In this kind of investment, the time it takes to complete the various steps leading up to a potential IPO or purchase is quite extensive. In contrast, initial coin offerings (ICOs) enable venture capital firms to capitalize on existing earnings at an earlier stage and give investors with liquidity. If a VC firm has invested in a

crypto startup, it may convert its ICO proceeds into Bitcoin or Ether at any of the cryptocurrency exchanges and then convert those monies into fiat cash using a service like Coins bank or Coinbase. 59 For this reason, VCs are incentivized to put money into blockchain businesses and digital currencies. Investment returns from blockchain startups' native cryptocurrencies far exceed those of traditional asset classes. Ether, Monero, and NEM, to name a few, each had a 2,000% growth in value in 2017 and 2018, while Litecoin saw a 900% increase.

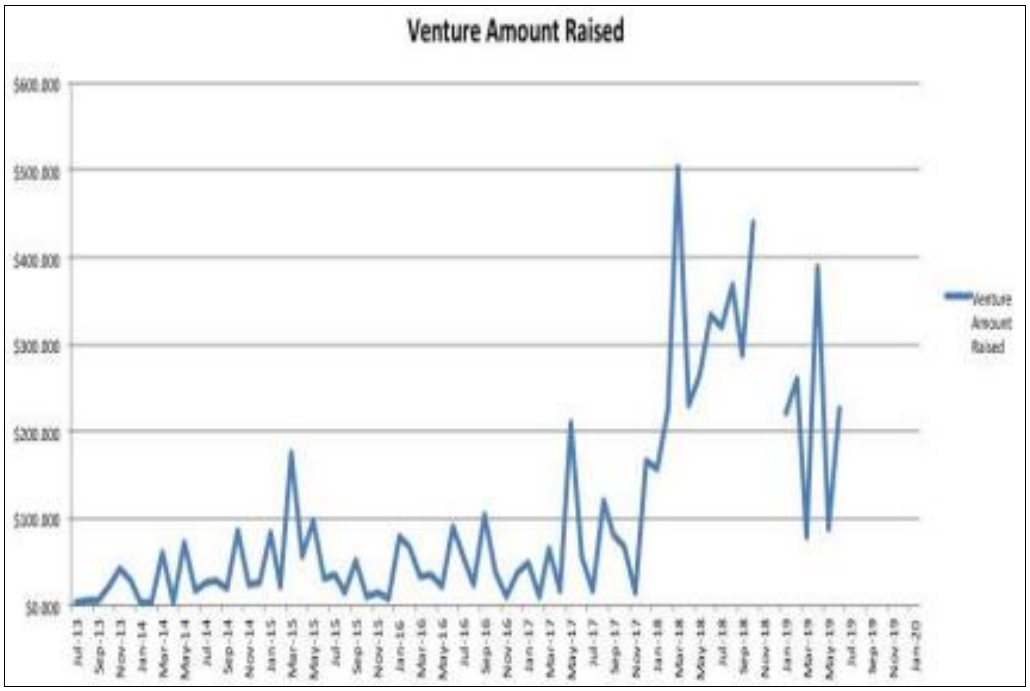

Fig 2: Evolution from 0 to 900 Bil mkt cap in digital assets

The market for digital currencies and the total volume of issued digital currencies are likely affected by the choice of funding method, as equity investments in blockchain startups make it less likely and less necessary for the respective startups to issue digital currencies, at least as a funding source.

Initial exchange offers

The ICO industry almost collapsed in January 2019, prompting the development of initial exchange offerings (IEO). The cryptocurrency exchanges felt the effects of the downward spiraling of ICOs the most and set out to find a solution. As a result, the IEO was established. As a filter for token offers, the cryptocurrency exchange plays a key role in initial coin offerings (IEOs). The issuer has no further contact with the investors after an IEO. Instead, the token offering is vetted by the exchange before it is posted, and investors purchase tokens directly from the exchange.

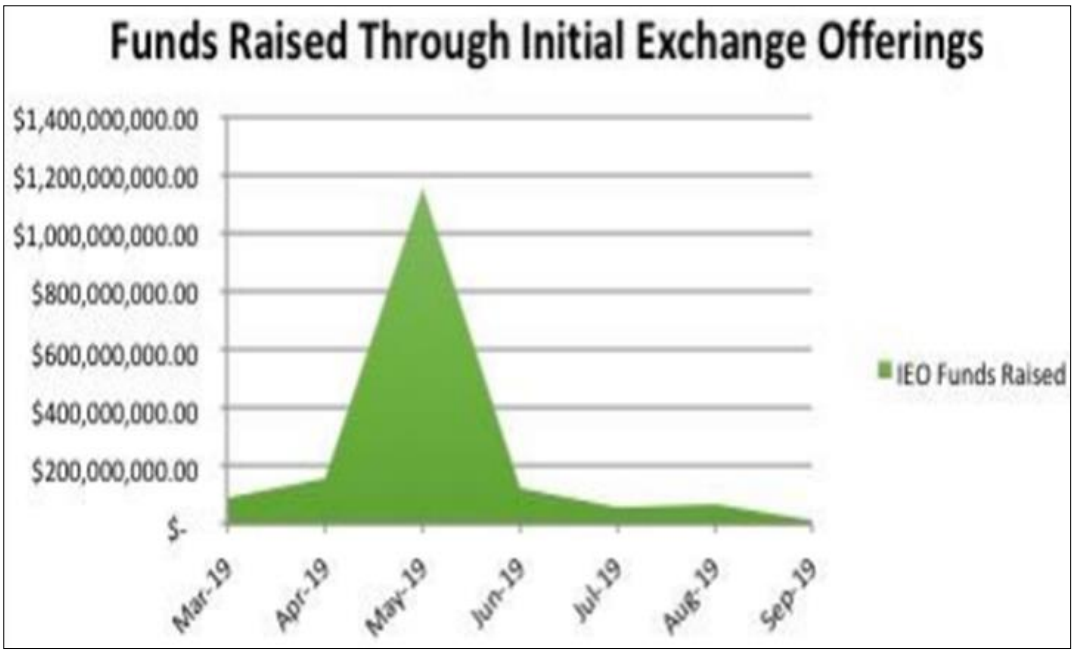

Fig 3: Demonstrates that IEO fundraising was a temporary phenomenon with primary market acceptance from April to June 2019.

Digital asset market evolution

The market for digital assets has undergone a period of rapid development and stagnation due to a number of causes. One of the most important of them is the lingering legal ambiguity that plagues the digital asset market. Global regulators have failed to agree on a unified strategy for governing digital assets. In the case of initial coin offerings (ICOs), for instance, only a tiny fraction of nations have outright outlawed them. Attempts to regulate digital assets have included securities legislation, the ban on exposed financial institutions, the banning of initial coin offerings (ICOs), and official recommendations against consumer engagement.

When everything is said and done, the development of the digital asset market remains influenced by market maturity and the expertise of investors. Markets that are still developing, like the digital assets market in 2020, have a hard time luring institutional investors and venture capitalists because of their lack of track records in the industry. Investment choices in the digital asset market are more challenging for those without substantial operational knowledge, particularly in a volatile market. Potential profit margins in such developing areas may only be slightly offset by the difficulty of attracting large numbers of institutional investors.

The digital asset market is dynamic and always changing. Figures 2 and 3 show that the digital asset market is expanding rapidly, but its volatility and lack of maturity make it difficult to predict how it will develop in the future.

Market volatility

When all relevant information is considered, an asset's true worth is the present value of the payoffs. Due to the lack of a consistent stream of income and the ambiguity around Bitcoin's very origins, its value is often miscalculated. Although Bitcoin is employed as a means of exchange by certain companies, others argue that it fails in these other roles due of its volatility and lack of inherent value. The aura of technical mystery surrounding Bitcoin mining is key to its speculative and affinity value. Because Bitcoin is primarily valued for speculation, the cryptocurrency is susceptible to bubbles.

Investors have a lot of anxiety about the price volatility of digital assets. Investing in Bitcoin or Ethereum may provide profits much in excess of 100% daily, as has happened on occasion. Bitcoin's price rose from around $0.09 in the middle of July, 2010 to more than $19,000 by the end of 2017. In 2016, Bitcoin's price rose by 122%, and in 2017, it rose by 1360%. Bitcoin's value dropped by 65%, from about the middle of December 2017 to the beginning of October 2018, to around $6,500. Since its inception on August 7, 2015, the price of an Ethereum token has risen from $1.33 to $228.96 as of October 1, 2018. 124 The price of Ethereum rose sharply from 2015 to 2018, but dropped dramatically from January to October of 2018.

The media has the potential to boost the price and volatility of digital assets. Coincident with the Eurozone debt crisis discussions between Greece and the tripartite committee created by the European commission, the European Central Bank, and the International Monetary Fund in October 2011, the correlation between Bitcoin and the S&P 500 weakened marginally. The correlation between the Standard & Poor's and Bitcoin increased during the Cyprus debt crisis in March 2013. Between October 27, 2015 and November 7, 2015, Bitcoin's price increased by almost 70% as a result of a string of positive news stories. Media reports of a "widespread fraud" involving Ethereum's creator caused the cryptocurrency's market value to temporarily drop by $4 billion. Bitcoin and Ethereum prices are often impacted by news coverage of cyber-security problems in digital asset exchanges.

Funding source volatility

Figure 4 shows how digital asset startup financing mechanisms are evolving. As can be seen in Figure 4, there was initially a strong preference for supporting ICOs but this decreased over time, perhaps favoring venture capital investment in the blockchain business. Figure 4 demonstrates that between March 2017 and June 2018, ICOs were the most popular method of blockchain industry funding. Figure 4 demonstrates that ICO investments were initially more prevalent in the blockchain business, but that this tendency was reversed in October 2018 and the months that followed.

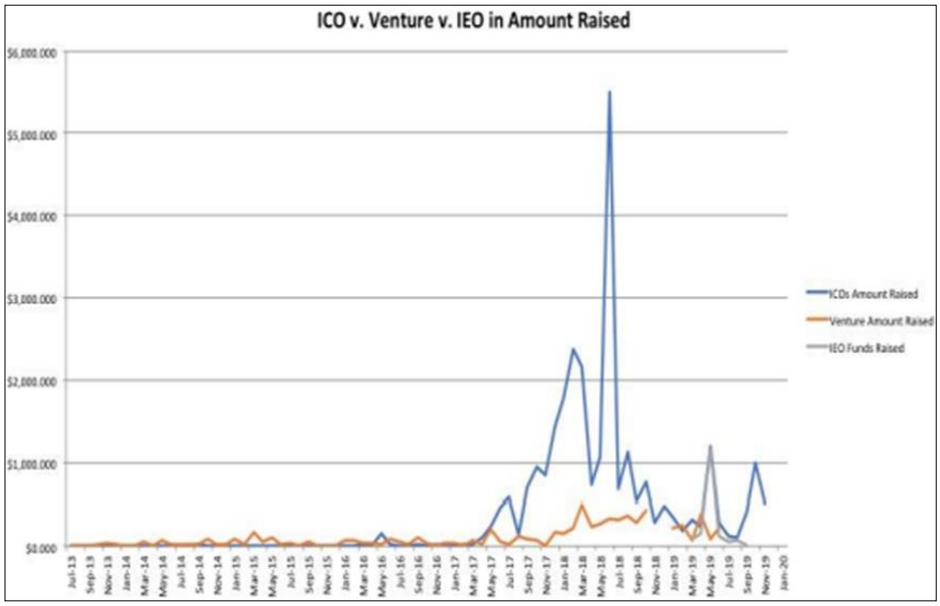

Fig 4: Combined ICO v. Venture v. IEO in Amount Raised

Fundraising for digital asset firms has shifted from ICOs to venture capital, although for a brief period of time (Figure 5), initial exchange offerings were a new outlet for funding. Figure 4's data is limited, but it implies that until the key countries clarify the legislative environment as it applies to ICOs, the appealing aspects of ICOs may continue to motivate certain issuers and investors to join in that market.

Several reasons account for the ebb and flow of investor interest in businesses dealing with digital assets. Lacking market maturity, difficulties with early-stage investments, ICO lockups in 2018 and 2019, the high cost structure of ICOs, and continuous regulatory uncertainty are just a few of the many concerns that are outside the scope of this article.

Government involvement

Although CCs are decentralized and are managed by blockchain technology, which theoretically eliminates the need for government participation, the question of government engagement is still important to bring up when discussing CC investments. This is the area where people's views diverged the most, both in terms of the benefits and drawbacks of direct government intervention and the potential consequences of such action. Most respondents thought that the CC market could thrive with little or no intervention from the government. Since decentralization is a cornerstone of CC, government intervention seems counterproductive. Sweden's high CC profit taxes are another factor discouraging investment there.

Clearly, Swedish investors feel deterred from investing in CCs for no good reason. One contributor also mentioned that Sweden may be less appealing to investors than other nations because of its location and the differences in taxation between them.

"So, yes, I would gladly pay a nominal tax on it for whatever cause that could be. Withdraw it to regular money, such as a country's currency. However, I believe that the 20-30% that some nations are taking is excessive. It's as if their only goal is to benefit financially at the expense of others. Still, I think that." Person 1 Involved

But there are also tax implications to consider. It all comes down to where you call home on this globe. It is possible to make a number of tax payments. The Fourth Involved Party

Participants acknowledge the necessity for both regulation and taxation; however, they tend to think the latter is too burdensome and the former might benefit from a better understanding of the CC market. Concern that governments may move too slowly to adapt to CCs was raised by one of the attendees. The participant thinks restrictions are important, but they need to be put in place quickly so that the CC market can stabilize before people start making rash choices because it's greater than they thought it would be.

Investment strategy

The participants' investing strategies were as varied as their setup options. All of them, however, engaged in direct bitcoin trading or acquisition. Not everyone had a well-defined investing strategy; other people invested only for curiosity or experience. This suggests that they were unable to settle on a plan for investing in the CC market at that time. However, the majority of participants (82%) only invested a tiny percentage of their total portfolio in CCs.

Most people have between 5 and 20% of their capital in CC assets. This is consistent with the finding that many contributors lacked a concrete approach to financial planning. Similarly, the majority of these people were just investing for the thrill of it.

Conclusion

Many factors may influence whether or not an individual decides to put money into CCs. When examining the statistics, however, it becomes clear that a major cause of investment reluctance is a lack of resources and knowledge, as well as a fear of taking on substantial risks. One of the main reasons why individuals stop investing in CCs after making a first investment is the government's lack of support for the sector. Investors may not get the full benefits of CC investments due to high taxation and slow uptake. At first, the interviewees appeared to be against having the government become involved. In spite of this, the findings suggest that investors in CCs are strongly opposed to the fact that governments are unfriendly towards CCs, even if they are not against government regulation and engagement. Therefore, the evidence implies that investors prefer it when the government adopts and accepts CCs rather than attempting to restrict CC investments and CC growth. Based on the evidence, we can also conclude that this would increase our individual usage of CCs. According to these numbers, the future of CCs is promising. From what we can see, the use of CCs is on the rise. Yet, the prospect of widespread adoption of CCs in the near future is remote. In light of the evidence, it seems clear that businesses, governments, and the general public need to do more to embrace, use, and comprehend CCs before they can be fully incorporated into our daily lives.

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