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Social media is influencing the rise of NFTs and Cryptocurrency

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ABSTRACT

Ever since the pandemic years, there has been a global wave in the popularity of Cryptocurrency and Non-Fungible Tokens (NFTs). Even people who don't have much knowledge about the financial world have heard these terms and a significant chunk have heard about it through social media that almost all of us use on a daily basis. The purpose of this study is to analyze the role social media played in making NFTs and Cryptocurrency Mainstream. In this paper, secondary data from previous studies were analyzed and based on a review of the literature on the popularity of NFTs and cryptocurrency from social media, an online survey was conducted in which respondents had to answer three multiple-choice questions. Analysis of secondary data and responses demonstrated that social media fueled the skyrocketing popularity of Cryptocurrency and NFTs. The results are in line with the hypothesis and indicate that social media does play a major role in influencing the popularity of Cryptocurrency and NFTs.

Keywords: Cryptocurrency, Non-Fungible Tokens, Social Media

1. INTRODUCTION

Jack Dorsey, CEO of Twitter and Square, sold his first tweet as an *NFT*, for 1,630.58 *ether* (\$2.9 million). "just setting up my twttr". In recent times cryptocurrencies and NFTs (non-fungible tokens) have gained much popularity. Some people believe that it's the future of finance or the 'next big thing' and there are others who believe that Bitcoin and NFTs are a fad. But, whenever we hear terms like Cryptocurrency, NFTs, Dogecoin, etc., So many questions arise; we think to ourselves: What's the buzz about, and what exactly is it?

Blockchain technology is the backbone of both NFTs and cryptocurrencies. It acts as a digital public ledger and its primary role is to maintain a secure and decentralized record of transactions.

A block in a blockchain is composed of three elements:

- Data,
- Hash
- and a hash of the previous block

The **data** of a block is a structure that contains transactions as

well as metadata about the block. For example, a record of a transaction. Once some data has been recorded in the blockchain, it becomes very challenging to change it as Blockchains are engineered to resist data modification.

A **hash** is a unique code or number for a specific block. Just like fingerprints are used to identify humans, the **hash** is used for identifying a block and its elements.

The **hash of the previous block** is very important. Every block has a hash of its previous block in its data. This feature helps to form a link between blocks for security.

Note: The first block of a blockchain is called genesis also called block 0 and the block preceding the genesis block always has the hash: '0000'.

2. BLOCKCHAIN SECURITY

Two components that make blockchain decentralized and secure are

- Peer-to-peer network
- Hash of the previous block, respectively.

Blockchains have a **peer-to-peer** network. A p-2-p network is essentially a network of a group of devices connected together that helps in carrying out Direct transactions between peers, i.e., no central authority or a third party is involved in this and ensures privacy and security as it eliminates the possibility of a DoS (Denial-of-Service) attack.

To alter data more than 50% of the nodes need to be controlled by authority and carry out a 51% attack, but this would require an enormous amount of computational power and a majority consensus from this network.

The **Hash of the previous block** is important in blockchain security as it makes the hash of a particular block based on the previous block. This forms a link between all the blocks of a blockchain. If someone tries to tamper with the data of a block then the hash will also change, and since the new hash of the tampered block will not match its previous hash which is stored in the succeeding block, the network will reject the altering of

that data.

Blockchains are being used in Cryptocurrency (eg: Bitcoin), Real Estate, NFTs, etc.

Some emerging blockchains are Ethereum, Quorum, Corda, etc.

Coming to **NFTs**.

NFTs stand for Non-Fungible Tokens, meaning they are non-replaceable.

They are considered 'digital assets' which are one of a kind. They are digital, trackable, and traceable options. NFTs essentially give proof of ownership of physical & digital goods. Such as digital art, real estate, videos, music, etc. The most used form of NFTs is in the ownership of digital art. This non-fungible token of ownership is stored on a blockchain.

NFTs can be used as 'assets' on virtual reality platforms. Eg: Meta Platforms, Inc. (FB), Metaverse.

The difference between NFTs and Cryptocurrency is that NFTs are non fungible whereas being transferable or fungible is the main function of cryptocurrency. The aspects that make NFTs attractive to the general public are their uniqueness, non-fungibility, proof of ownership and authenticity, direct-to-consumer infrastructure, and royalties.

Since NFTs are stored on a blockchain they can only be bought via a cryptocurrency, for example, Ethereum. Their price depends on the demand of the market and hence can be traded like physical forms of art.

2. RISE OF NFTS AND CRYPTOCURRENCY

Sales of cryptocurrencies and NFTs have recently increased.

In the modern era, NFTs and cryptocurrency are not cloaked concepts. In 2021, the NFT market was worth roughly \$41 billion, almost equal to the value of the fine art market, while Forbes estimates the cryptocurrency market capital to be \$908 billion.

NFT Rise

In a research paper released in 2012, authored by Meni Rosenfield. She discussed "colored coins" as an alternative to bitcoin. By using a cryptographically sound digital token as evidence of ownership, Colored Coins referred to a class of techniques for representing and administering physical assets on the blockchain.

However, the groundwork laid through experimentation ultimately paved the way for modern NFTs, so the idea wasn't completely useless.

A new NFT with the name "quantum" was created on the Namecoin blockchain in 2014 by the artist Kevin McCoy.

Thus, many services were built on top of the Bitcoin blockchain. The Counterparty platform (Bitcoin 2.0) was released to make creating digital assets easier. NFTs were adopted by the Ethereum blockchain in 2017, as Bitcoin was built to facilitate decentralized peer-to-peer transactions and does not include tokens of ownership. For the same reason that Bitcoin wasn't designed to hold tokens of ownership, NFTs were adopted by the Ethereum blockchain in 2017. The Ethereum blockchain's NFT

market was pioneered by companies like Cryptopunks and Crypto Kitties. These businesses' establishment marked the beginning of NFTs' meteoric rise.

NFT gaming and metaverse projects were introduced and one of the most popular ones to emerge was Decentraland, a decentralized software built on the Ethereum blockchain. It is a VR gaming platform that deals with users creating, buying, selling, or trading virtual real estate and collecting other such virtual possessions. Users can also play games and interact with each other. The currency of Decentraland is the MANA coin. The tokens of all the items bought, earned, and built are stored on the Ethereum blockchain. Soon, a standard code 'ERC721' was created for NFTs in 2018, and projects like NBA top shots (2020), the sale of Beeple's 'the First 5000 Days' NFT for \$69 million at Christie's auction, and social media influencers helped make NFTs mainstream in 2021. Artists started selling their goods as NFTs and with the introduction of Metaverse and the concept of Web 3.0, NFT demand surged.

Cryptocurrency Rise

Cryptocurrencies are decentralized digital coins whose transactions take place in a secure manner on a blockchain from peer to peer.

The first digital coin was called DigiCash created in the 1980s by David Chaum. Soon many other digital coins were made but they all failed since they were regulated by the government which made these coins vulnerable to hacking or shutting down at any time.

The Bitcoin blockchain officially started on January 3rd, 2009. The users of Bitcoin in its early days consisted of customers from the black market e.g. Silk Road, which was an e-commerce platform for illegal goods but in 2013 the founder, Ross Ulbricht got arrested. Soon Bitcoin gained popularity in the tech industry and in 2015 Vitalik Buterin released Ethereum blockchain. Thereafter, more coins and crypto exchanges started emerging. 2017 was the year of cryptocurrencies. Bitcoin touched \$20,000 and companies wanted to participate in ICOs (Initial Coin Offering). With government support and internet hype, Cryptocurrency became known worldwide and in 2020 and 2021 big leagues such as Paul Tudor Jones and Mass Mutual have invested heavily, even JP Morgan says that bitcoin could have a bright future. Currently, The global crypto market cap is \$1.10T.

3. METHODOLOGY

To verify the rising popularity of Cryptocurrencies and Non Fungible Tokens, we will be analyzing previous studies and using the survey method with the aim of gaining a better understanding of the people's knowledge of NFTs and cryptocurrency acquired via social media.

The survey was a questionnaire conducted online. It consisted of 3 close-ended multiple-choice questions. The survey included a total sample of 115 cases which were included in the analysis.

4. LITERATURE REVIEW

To assess the popularity of NFTs and cryptocurrency from social media, first, we will analyze secondary data. We will see the correlation between Social media reach on NFT valuation.

From this paper, we first study the interaction between user activity on the OpenSea (peer-to-peer marketplace for NFTs) and Twitter platform and its influence on the valuation of NFTs.

The data we will analyze is collected from January 1 2021 to March 30, 2021.

First, we will study the correlation between NFT -related tweets and the open seaplatform.

The majority number of tweets related toNFTs were published in 2021. After plotting the daily number of tweets, it was observed more than half of the tweets were posted less than a day after the NFT creation on theOpen Sea platform. This indicates that right after creating an NFT, people post onTwitter about it to spread its popularity through social media.

A large percentage of the sampled accounts were associated with the NFT in March 2021. Since most Twitter handles are associated with a specific group or cause, this is useful information for us.

An additional factor to consider is the correlation between a user's fame and an NFT's worth.

As per the data, an increase in the number of followers leads to a greater asset value.

After testing accuracy for different combinations of feature sets it was observed that Twitter features like listed count, usernames, the number of likes, replies and the term NFT in Twitter usernames holds high significance as they increased accuracy when combined with Open Sea features.

Predictive models of asset value indicate that the quantity of Twitter followers and the popularity of a user's username have significant effects on the asset's value.

The findings of this study suggest that NFT value is significantly affected by social media features.

We further examine the influence that Elon Musk and other social media stars have on the cryptocurrency market.

One of the most powerful people in the world, Elon Musk, uses Twitter to share his thoughts and opinions with the world. He's

made a fortune trading Bitcoin and othercryptocurrencies. He has also helped spread its use by at one point accepting it as payment for Tesla. In addition, he tweets frequently and candidly about his cryptocurrency holdings.

It's undeniable that the average person's decision-making process is influenced by what they see and hear on social media. In the absence of market knowledge, they are susceptible to being swayed by a tweet and making risky investments.

In order to study this phenomenon, Elon Musk's tweets were organized into categories based on their use of specific keywords.

We found that both the price of bitcoin and the overall engagement with his Twitter account has been on the rise.

Elon Musk's tweet data, including features like tweet count, likes, retweeted tweets, most used words, etc., can shed light on the impact of his messages.

The data shows that the number of tweets Elon Musk sends out correlates positively with the growth of his influence.

We looked at his last three tweets to see if there was a connection between his tweets and the price of bitcoin and found that there were price spikes in the days following his tweets.

Tesla's decision to stop using Bitcoin because of its environmental impact is further evidence of Elon Musk's impact on the value of cryptocurrencies. Shortly thereafter, it became evident that cryptocurrency prices had fallen from their prolonged high.

5. DATA COLLECTION

The questionnaires were distributed via Google Forms. They were three multiple-choice questions with no room for explanation and 115 examples. The primary aim of the poll was to determine how many people first heard about cryptocurrencies through social media.

Everyone who takes part in our survey does so at random.

How did you hear about cryptocurrencies / NFTs?

115 responses

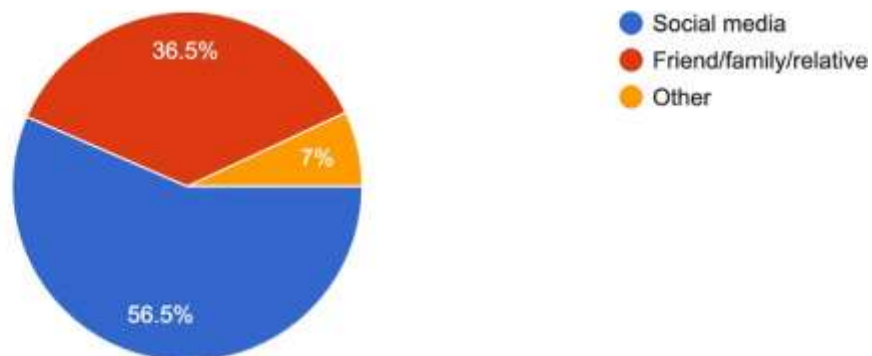


Figure 1.

Our data shows that roughly 60% of respondents were introduced to Cryptocurrency or NFTs through some form of social media. This points to the widespread acceptance of NFTs and cryptocurrency across social media platforms.

Which social medium did you hear it from?

106 responses

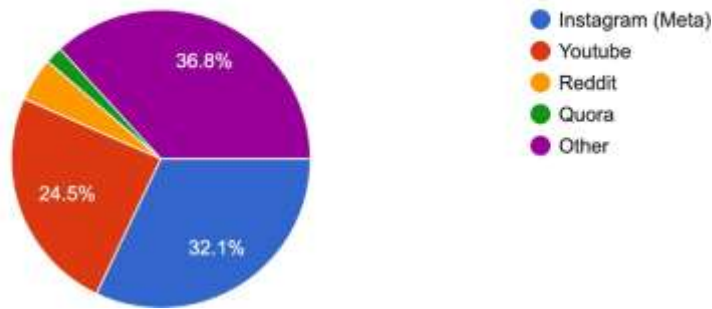


Figure 2.

Three-sixty-eight percent of respondents saw something about it on Facebook, 32.1 percent on Instagram, and 24.5 percent on YouTube.

Have you invested in NFTs/ Crypto after its rising popularity in 2020?

107 responses

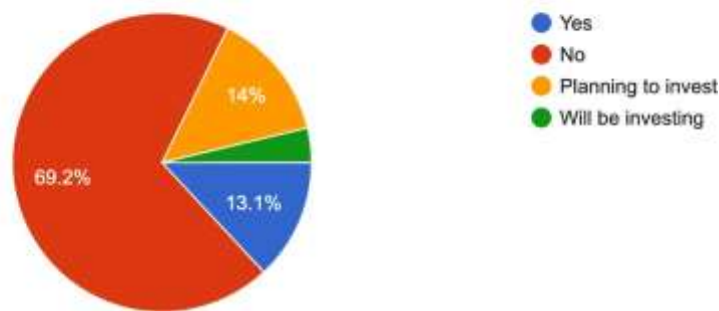


Figure 3

While 69.2% of respondents have not made any investments in NFTs, 30.7% are either active investors or are considering doing so in the near future.

6. SUMMARY & INFERENCE

The results indicate that social media is influencing the rise of NFTs and Cryptocurrency. In recent times the popularity of Cryptocurrency and NFTs has skyrocketed and one of the main sources of this rising popularity is social media.

In this paper, we gave insight into blockchains and NFTs and we analyzed secondary and primary data that supports the hypothesis. It was observed that Twitter and open-sea had a positive correlation when it came to non-fungible tokens and Twitter and socialites influence the price of some cryptocurrencies to some extent. Twitter is a strong platform that plays a key role in pushing discussions about NFTs and cryptocurrencies. We also found that in our survey, the majority of the respondents learned about these unheard concepts from social media.

To conclude, the analysis of data support is in line with the hypothesis.

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