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Non-Fungible Token (NFT's)

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Abstract : Non-fungible tokens (NFT) became the first application of blockchain technology to achieve clear public prominence.The Non-Fungible Token (NFT) market is mushrooming in the recent couple of years. NFTs are tradable rights to digital assets (images, music, videos, virtual creations) where ownership is recorded in smart contracts on a blockchain.an be bound with virtual/digital properties as their unique identifications. With NFTs, all marked properties can be freely traded with customized values according to their ages, rarity, liquidity, etc. Like physical money, cryptocurrencies are fungible, meaning that they can be traded or exchanged, one for another. For example, one bitcoin is always equal in value to another bitcoin. Similarly, a single unit of ether is always equal to another unit. This fungibility characteristic makes cryptocurrencies suitable as a secure medium of transaction in the digital economy.

Keywords: Cryptocurrency Non-fungible tokens Blockchain Metaverse Latency Throughput

1. INTRODUCTION

December 2, 2021, The Merge officially became the most expensive NFT ever sold with almost 30,000 collectors pitching together for a total cost of $91.8m. Just drop a nuke for little attention towards the hike in cryptocurrency assets, especially the NFT's.

Non-fungible tokens (NFTs) seem to have exploded out of the ether this year. From art and music to tacos and toilet paper, these digital assets are selling like 17th century exotic Dutch tulips some for millions of dollars.

In less than half a year by May 16, 2021, hundreds of thousands of NFTs worth over $800 million were traded. Most of these referred to digital art, collectibles, music, in-game items or metaverses. NFTs serve not as a currency, a commodity or a technology but as an asset. NFTs got their first major traction, some of the most popular projects being Cryptopunks and Cryptokitties. The main idea of Cryptopunks revolved around creating a maximum of 10,000 characters on the Ethereum blockchain as a reference to the Cypherpunk community members who were among the first ones to experiment with an electronic peer-to-peer currency much before the formation of bitcoin. Crypto Kitties was the first blockchain-based game where

users could trade, breed, and collect virtual cats. The game got significant media attention and went viral, to the point that some of the rare collectibles were sold for more than 100,000$. It was due to successes like these that investors started giving attention and funding NFT projects. We also hope to determine whether demand shocks in the NFT market affect the pricing of cryptocurrencies. components, protocols, standards, and desired properties; new blockchain-based protocols to trace physical goods; and the implications that NFTs have on the art world, in particular as they allow to share secondary sale royalties with the artist. Empirical studies aiming at characterizing properties of the market have focused on a limited number of NFT collections, such as, CryptoKitties, Cryptopunks, and Axie, or on a single NFT market, such as, Decentralandor SuperRare. These analyses revealed that the digital abundance of NFTs in digital games has led to a substantial decrease of their value, and that, even if NFT prices are driven by the prices of cryptocurrencies, the NFT market could be prone to speculation. Further, it was shown that NFTs valued by experts are more successful, and that, based on 16,000 NFTs sold on the SuperRare market.

2. DATA AND METHODOLOGY

CryptoPunks are the largest single traded market in

NFTs at time of writing, with approximately $200m traded over its lifetime. The market started in early 2017 when 10,000 unique digital characters were created and registered as individual assets on the Ethereum blockchain. The characters were trading for
$50 to $100 each until around April 2020 when they started a steady inexorable price rise, with prices then exploding in early 2021. By February and March 2021 individual CryptoPunks were trading at between $20,000 and $100,000. NFTs, while traded throughcryptocurrencies, have some very different characteristics to cryptocurrencies, and this is important to bear in mind when trying to understand them. NFTs, on the other hand, are intended as pure assets. Indeed the term non-fungible in the NFT name is the clue to this difference. Fungibility, or interchangeability, is one of the defining characteristics of cryptocurrencies and money in general (one bitcoin is the same as another bitcoin, and one dollar the same as another). The non-fungibility of NFTs is one of the key asset characteristics that is valued. Having said this, anyone active in the NFT market will be aware of the strong crossover between cryptocurrency market participants and NFT market participants. This is partially because to buy an NFT you need to use cryptocurrencies as a means of payment, a non-trivial level of complexity for many people. With that in mind, our study looks at crossover effects between cryptocurrency pricing
and NFT pricing. We expect cryptocurrencies to influence NFT pricing, as, in general, larger markets tend to spillover into smaller related markets (Bhattarai et al., 2020) and cryptocurrencies are a vastly larger market related to NFTs. NFT pricing might also influence cryptocurrency markets, as NFTs and their popularity shows a strong business use case for the blockchain. This, therefore, addresses an open business point about what practical uses there are for the blockchain and the cryptocurrencies built on top of blockchains. With this understanding of the trader crossover between the two sets of markets, this study sets out to examine the interrelationships between cryptocurrencies and NFT markets. Moratis (2021) shows there is a large level of volatility shock transmission between cryptocurrencies, with Bitcoin dominating this transmission. Given the crossover of trading between cryptocurrencies and NFTs, and the potential leading influence of cryptocurrency pricing on NFTs, we investigate if volatility also spills over to NFT markets.

To boost this investigation I further examine whether there is co-movement between cryptocurrency and NFT returns, as co-movement has been shown to be a major feature within cryptocurrency markets. The discovery of links between the two sets of markets would be beneficial to researchers and practitioners alike as we could then examine trends in cryptocurrency pricing for guidance on likely trends in NFT markets. Only one previous study has examined the pricing patterns of NFTs (Dowling, 2021). That study shows, for one NFT market, that pricing does not show signs of basic efficiency, but that there are some emerging signs of changes in pricing behavior. Given the diversity of NFT markets, our study contributes to Dowling, 2021 at a basic level by being a second study in the area and by extending testing to three NFT markets (two new markets). Our primary contribution is showing how NFT pricing relates to cryptocurrency market pricing. We find limited volatility transmission and some strong evidence of co-movement, and this gives a framework for understanding how NFT pricing might develop as the markets mature.

As the chart of the years below shows, (according to nonfungible.com) non fungible tokens transaction volume in 2020 was $251mm, that number became $2bn in just 1Q of 2021.

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3. CONCLUSION

The state of digital artworks has witnessed a paradigm shift making non-fungible tokens and the value instated powered by blockchain backed Ethereum network the new currency

and realty of art providing artists with value addition like traceability and recurring royalties, provenance and an acceptable valuation for digital art merely due to representative ownership which is verifiable over distributable ledger since digital assets can be easily replicated without an iota of loss in value or usability of asset.

In the economic analysis we derived to the conclusion that NFT technology and cryptocurrency are merely facilitators, and value of Ethereum or Wrapped Ethereum currencies are volatile, and Ethereum leaves just a facilitator of technology as fiat currency is converted into ETH and transaction s completed and artists further convert the ETH to fiat currency.

In the legal analysis we derived various implications of policy frameworks and how the pre existing laws such as Information Technology Act, 2000 or Foreign Exchange Management Act can be applied in issues of current blockchain legislations. Also, future policy work recommendations were observed and how various permutations of blockchain and virtual currency laws can be implemented.

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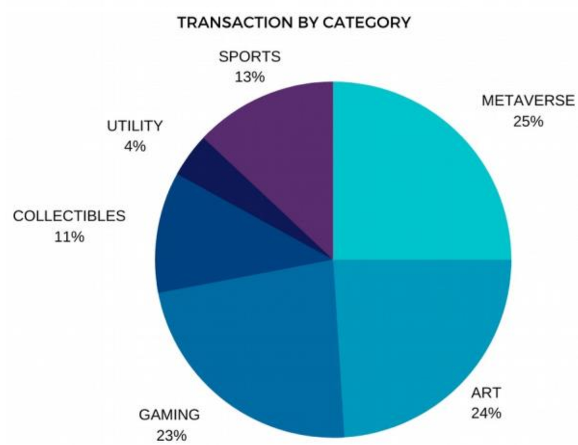

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