

MARKETS & INSIGHTS #2

NFT: deciphering a parallel universe



NFTs have been in the news for a few months, but this innovative concept is still in its infancy and is therefore not always very clear. These three letters designate "Non Fungible Tokens": these are unique digital certificates stored in a blockchain¹ registry, and which act as title deeds of digital assets. The main difference between these crypto tokens and others like cryptocurrencies is based on the principle of non-fungibility, i.e. they are not interchangeable. NFTs can be bought and sold, but each NFT represents a unique good with its own characteristics and therefore cannot be considered interchangeable with another NFT representing another unique good.

The primary feature of an NFT is its definitive registration in the blockchain ledger. This inscription makes it possible to establish its authenticity, the traceability of the chain of ownership of a good and the price at which it was exchanged historically. In addition, some tokens include a feature that gives authors of the targeted digital content the opportunity to receive a percentage each time the NFT, and therefore their work, changes hands and, for example, to take advantage of the fact that their work is gaining in popularity over time. Finally, artists can address collectors directly in this way and control their dissemination, while the art market as it is more classically known usually involves intermediaries such as galleries, which have strong decision-making power.

The NFT market in practice

The main blockchain concerned with the creation ("minting"), storage and certification of NFTs is Ethereum, although others such as Flow or Tezos can also host them. To buy an NFT, the most common procedure is to open an account on a blockchain to build a digital wallet and hold cryptocurrencies that will then be used to acquire the token. Some more traditional platforms such as PayPal or even RobinHood, however, now offer the possibility of buying an NFT using your credit card and then transferring it to the blockchain of your choice.

At the same time, a set of marketplaces with various functions has developed. Some allow everyone to sell and buy works, while others are more exclusive. In the latter, artists must be co-opted by their peers in order to sell their works and finance the creation of the related NFT.

The NFT allows its buyer to be the owner of a digital asset and is often accompanied by a license to use it, but the holder of the NFT does not have the copyright of the work. To make an analogy with the traditional art market, a Picasso buyer will own the original work at home and the public will be content to see and buy reproductions of it, while the digital work represented by the NFT generally remains accessible by everyone and not only by its owner.

A wide array of underlying assets

Beyond the digital art market, NFTs have also been created to certify assets such as collectibles, music, sports contracts, intellectual assets, and video game assets. The NBA and its players' union have partnered with a Canadian blockchain called Dapper Labs to develop its own digital platform "NBA Top Shot" which is actually an NFT marketplace on which aficionados can buy, sell and exchange match highlights in the form of short videos. It is in a way the modern version of the Panini albums.

The world of sneakers² is also riding this wave since Nike has for example filed a patent called "CryptoKicks", whose objective is to attach an NFT to a very real pair of shoes. Besides the fact that this guarantees the buyer to actually own a pair of Nike and not a counterfeit, the holders of this type of tokens can then merge two to create a unique pair of shoes. Gucci has also sold a pair of shoes in augmented reality in the form of an NFT; these shoes can be worn on Instagram and Snapchat through a filter.

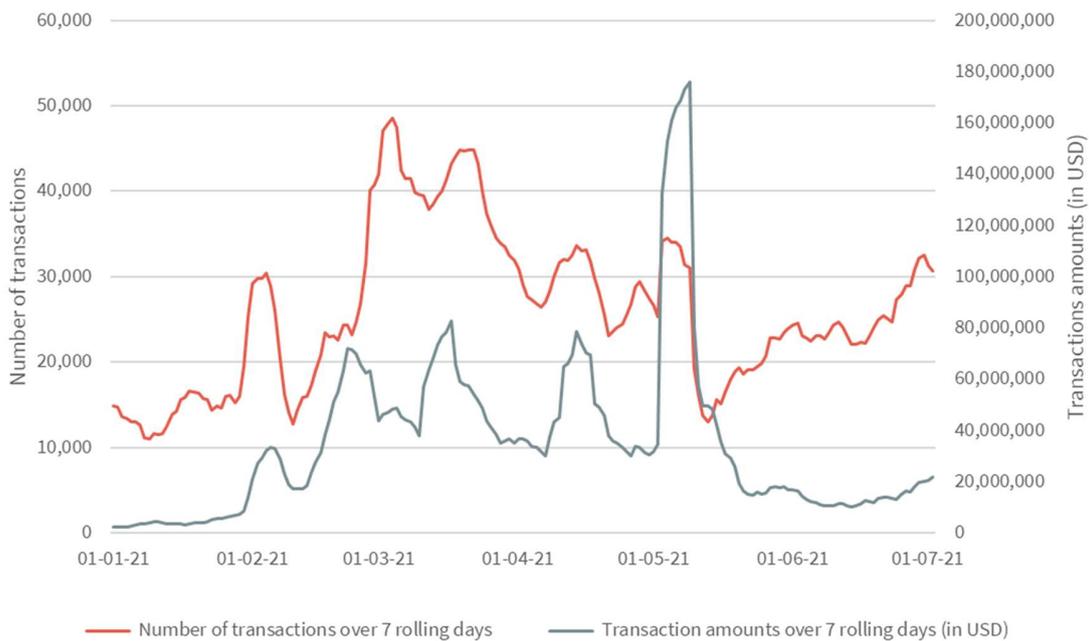
In the academic field, we can also mention the initiative of the University of California UC Berkeley which auctioned NFTs corresponding to the internal disclosure forms that its researchers filled out in relation with two inventions that were then patented and won a Nobel Prize.

Among the future applications that are already discussed, Ethereum argues that NFTs could be used as collateral for bank loans in a few years.

The only limit to the field of possibilities seems to be the human imagination and the potential market is therefore immense.

NFTs in numbers

History of NFT's global transactions



Source: nonfungible.com, as of 06/07/2021
Past performance is not a reliable indicator of future results

The NFT market has developed well in recent months, particularly in connection with the rise of the exchange of collectibles, whose sales volumes are nothing to be ashamed of compared to those of works of art, and which generate a colossal secondary market.

Driven by growing media coverage and the attraction of some investors, the number of NFT transactions has accelerated significantly since the beginning of the year. As far as the amounts of the operations are concerned, they tend to be quite volatile, but the general trend is upward and sometimes shows spiked due to exceptional sales.

Examples include the sale of the first tweet by Jack Dorsey, the founder of Twitter, for more than \$2.9 million, the sale of an NBA Top Shot for nearly \$400,000 or the record sale in March at Christie's of a digital work by artist Beeple entitled "Everydays – The first 5000 days" for \$69.3 million after a \$100 starting price. For a trial run, it was a tremendous hit since it was the first sale of a purely digital work, moreover paid in cryptocurrencies. Beeple joins Jeff Koons and David Hockney in the clan of highly rated artists with the third largest sale of an artist in his lifetime.

Controversies

Many voices have recently been raised to warn of a speculative bubble in the NFT market, and the history of transactions shows that this is a very volatile activity. This is evidenced by the fact that the amount of transactions collapsed after mid-May, even though the volume remained in a stable range.

Another phenomenon that is pointed out by critics of NFTs and cryptocurrencies is their terrible consequences on the environment. If this accusation mainly concerns cryptocurrencies, it finds a new relay with the boom of NFTs. Indeed, such transactions require extraordinary energy consumption and the creation of tokens also leads to a massive emission of greenhouse gases. The environmental impact is difficult to quantify since each platform has its own operation and the "production" chain is complex. According to some estimates though, NFTs have, on average, a carbon footprint equivalent to more than one month of electricity consumption by a European resident. If users are often unaware of this pollution from which they are physically distant, the carbon balance of this activity is undeniably bad.

This is mainly due to the fact that the procedure on which the entire cryptographic system is currently based is the "Proof of Work" (PoW), which aims to prevent malicious computer uses. PoW requires blockchain users to solve very complex mathematical puzzles and is deliberately very energy intensive to discourage malevolent users.

Various solutions are put forward to solve the carbon problem of these activities. Firstly, carbon offsetting programmes are proposed by some operators, but this seems insufficient.

The plan to introduce the Proof of Stake (PoS) procedure as an alternative to PoW is more promising due to its limited energy impact. This method is implemented by the NBA Top Shot platform and Ethereum has repeatedly announced considering its use. This change in procedure requires convincing a majority of users to adopt this new *modus operandi*, otherwise the blockchain risks decreasing very quickly to the benefit of another.

In addition to the use of PoS, a technique allowing transactions to take place outside the chain is being considered. Finally, the idea of using green energy to produce the electricity used by these operations is progressing.

If we expect an improvement on the part of the platforms, the shift towards a greener ecosystem looks set to be mainly initiated and led by the authors of content, who are taking the matter in their own hands. Beeple has for instance indicated that he would now produce "carbon neutral" or even "carbon negative" art by investing in renewable energies, environmental projects, or technologies to combat the negative effects of CO2 emissions.

Time will tell if the NFT universe succeeds in overcoming the ecological pitfall and in proving its usefulness beyond a simple fad. In any case, from the point of view of the financial investor, it should be borne in mind that this is a market in which valuations are based solely on demand and that demand does not depend on a set of fundamental, technical or economic factors.

1. Distributed databases, secured by cryptography
2. Sports shoes, sneakers

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