

Status as a Service: Economic Industry Model Analysis of New Social Network NFT

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Abstract: At present, the total market value of the non-identical pass market exceeds \$19 billion, and non-identical pass is widely recognized and welcomed, attracting more and more people to participate in it, so it is also very important to analyze the economic industry model of non-identical pass. Taking the non-identical pass (NFT) economic industry as the research object, the thesis focuses on analyzing the social network theory and development status of the NFT industry through different research methods. At the same time, the value of NFT industry is analyzed and researched, and on the basis of which, the three major risks existing in NFT economic industry are discussed. Finally, based on the value and potential risks of the NFT industry, this paper puts forward development suggestions.

Keywords: Non-homogenized passes, Social capital, Entertainment, Effectiveness, Economic industry model

1. Background and Significance of the Study

In recent years, with the rapid increase in attention to concepts such as Defi (decentralized finance), cryptocurrency and blockchain technology, the decentralized NFT (non-homogeneous token) based on blockchain technology that is inseparable from cryptocurrency has also received widespread attention, it can be seen that the economic benefits brought by non-homogenized passes can no longer be ignored, and the fields involved in NFT are gradually extending from the art field to other fields, and the scale of the economic industry formed in these fields is also expanding. As of May this year, the total transaction volume of the NFT market has exceeded \$55 billion, and the total market value of the NFT market has exceeded \$19 billion, which shows that NFT is widely recognized and welcomed, and attracts more and more people to participate. On the one hand, NFT brings investment opportunities in blockchain and other fields. NFT involves a wide range of fields and has a broad application prospect. Analyzing the current economic industry of NFT can provide participants in related industries with experience in the development of related industries, and stakeholders in the NFT industry can also maximize their own interests by grasping the overall economic industry of NFT and predict the development trend of the NFT industry in terms of application. On the other hand, there are many risks and opportunities in the NFT industry. Some of these risks are due to the loopholes in the technology of NFT itself, and some are due to the high price of NFT caused by the human factor, thus creating a bubble. Analyzing the attractiveness of the NFT industry as a new type of social network and the risks involved will help NFT industry participants to assess the true value of NFT and thus be able to better avoid the risks.

2. NFT Concepts and Related Theories

2.1 Concept of NFT

The full name of NFT is Non-Fungible Tokens (NFT), which is a concept that corresponds to the homogeneous token (fungible token (FT)), and is also known as non-homogeneous tokens, heterogeneous tokens, non-replaceable passes, non-interchangeable tokens, and so on. Due to the different scopes covered by NFT, NFT can be defined in both narrow and broad sense. In the narrow sense, NFT generally refers to passes issued based on protocols such as ERC-721, the standard of Ether; in the broad sense, NFT is a kind of blockchain-based digital asset ownership, which has the

characteristics of indivisible, irreplaceable, non-fungible, unique, verifiable, circulating, and tradable, and so on. Different scholars also have different studies on NFT. Qin Rui, Juanjuan Li and other scholars (2021) gave the definition of NFT in both narrow and broad sense, and argued that in the broad sense non-homogenized passes can be interpreted as a kind of digital asset ownership.^[1]Qin Wang, Rujia Li and other scholars (2021) for the first time systematically researched the ecosystem of NFTs, explored the state-of-the-art solutions of NFTs, and explained the technical elements of NFTs, the standards and protocols on which they are based, and their required characteristics.^[2] Scholars such as Kathleen Bridget Wilson, Adam Karg, and others (2021) have mapped the NFT ecosystem conceptually in terms of non-homogenized tokens and provided a mapping of the relationships between the relevant stakeholders including producers of non-homogenized pass content, speculators, intermediaries, and collectors, where the position and influence of non-homogenized pass managers is highlighted and linked to the design framework and conceptual consensus of NFTs.^[3]

2.2 NFT-related Theories

2.2.1 Status as a Service

There are many analyses of social networks, but few scholars have analyzed the social networks established by some of the largest and fastest growing companies on social from a social capital or status perspective. Status as a Service, an article by Eugene Wei, focuses on analyzing social networks from a social status perspective, i.e. the reasons for the success of some of the social networks built by companies. The article takes two principles as its starting point: people are status-seeking monkeys and people will pursue the most efficient way to maximize social capital, analyzing the ability of social networks to attract users in terms of the SUE analytical model - social capital, utility, and entertainment. The article analyses the world's successful and fast-growing social networks in terms of social status or social capital, but social capital is not as descriptive and analytical as financial capital, so the article discusses the importance of each dimension through case studies.

2.2.2 Social Capital

Social capital was first proposed by Karl Marx as the antithesis of private capital, and since the 1980s the study of social capital has become a hot topic and a frontier in the academic world. Scholars from a wide range of disciplines, including economics, political science and organizational behavior, have begun to study social capital in order to provide a more comprehensive explanation of the development of society. In traditional research, scholars have not considered the impact of computers and social networking sites on social capital, but rather have focused on the processes of community, interaction, or participation that generate social capital.^[4]

2.2.3 Entertainment

Entertainment is the subjective feeling of the user about the degree of mental pleasure obtained. With the rapid development of the Internet and computer technology, the role of the network for people is not only as a tool for learning, work and information access, the network has the function of entertainment, social and recreation is also increasingly prominent. The development and popularization of computers have changed the way people learn and work, as well as the way they interact with each other. There are two different forms of interaction in the computer field, machine interaction and interpersonal interaction. Machine interaction refers to computer-mediated human interaction with textual content, while interpersonal interaction refers to computer-mediated human interaction.^[5]

2.2.4 Utility

Utility can be divided into two terms: efficacy and usefulness. Originally a common concept in economics, utility refers to the degree of satisfaction of desires when a consumer owns or consumes a good or service. In this paper utility can be understood as the ability of NFT to satisfy people's desires or needs. Unlike the definition in economics, NFT serves not only consumers but also producers of products. And the way NFT satisfies people's needs is not only limited to NFT as a commodity itself, but also the platform of NFT trading.

3. Analysis of the Current Status of the NFT Industry

3.1 Industry Chain of NFT

In recent years, with the continuous improvement of ERC721 and other protocols as well as the

increasing transaction volume of NFT, the ecology of NFT has gradually matured, with the emergence of NFT trading platforms and NFT games. Currently, the NFT industry chain can be divided into the following three parts: infrastructure layer, project creation layer and derivative application layer. The infrastructure layer provides technical support for the casting of NFT structured on the basis of blockchain with the mature blockchain and its ecology, which mainly includes the underlying public chain, wallet, side chain, alliance chain and development tools. The value of the infrastructure layer is inextricably linked to the number of NFTs cast. The project venture layer can also be called the protocol layer, which is directly related to the minting of NFTs, and the creators of NFT content mint NFTs in this layer according to the NFT minting protocols. Derivative application layer is based on the application projects generated by the NFTs casted in the project creation layer, including the secondary market of NFTs, social platforms and financial platforms, and so on.

3.2 Domestic and Foreign NFT Difference

The development of the domestic NFT industry differs from that of foreign NFT industries due to stricter domestic constraints and regulations on NFT-related industries. First, cryptocurrencies such as bitcoin and Ethereum are not recognized in the country. In the Circular on Further Preventing and Disposing of the Risks of Virtual Currency Trading Speculation issued in September 2021, virtual currency-related business activities are considered illegal financial activities. Secondly, NFT platforms need to be filed to operate and also require different licenses depending on the NFT business. In addition to this, NFT platforms of companies such as Alibaba and Tencent define the works sold as digital collections. A few NFT platforms such as NFT China adopt the same public chain and approach to NFT trading as foreign NFT platforms. The similarities and differences between major domestic NFT platforms such as Whale Scout and Phantom Core and foreign ones are shown in the table below:

Table 1: Differences between major domestic and foreign NFT platforms

	internal	external
Secondary transfers	No secondary trading allowed, partially transferable without compensation	Secondary trading allowed
base chain	Alliance Chain: Ant Chain, Toxin Chain, etc.	Public chains (main chain: Ether, side chains: Polygon, etc.)
centralization	Centered (institutions: Alibaba, Tencent)	decentralization
Transaction Currency	Chinese Yuan (CNY)	Cryptocurrencies such as Ether
transaction method	Separation of payment methods from the blockchain	Full chain transaction

4. NFT Industry Risks and Development Recommendations

4.1 NFT Industry Risks

4.1.1 Intellectual Property Risks

Although NFT works are the products of the combination of NFT and art works, they are separated from the original art works, and all the real information of the original art works, such as the information of the creators, are not converted into the information of NFT works. Although non-homogenized passes can guarantee the copyright of the NFT maker through its difficult to tamper and traceable characteristics, it does not confirm that the NFT maker is the real creator of the art work, so there is a large property rights loophole - people can cast the art work created by others as NFT recorded on the blockchain, and put it on OpenSea. This will undoubtedly damage the copyright of the creators of the works, as they can put them on the blockchain and sell them on trading platforms such as OpenSea. The legal responsibility for this type of infringement is different from that of traditional art transactions, as the infringement of NFT works also involves the responsibility of the NFT platform, where the casting and trading of NFT works take place, but due to the decentralized nature of NFT passes, the responsibility of the NFT trading platform is vague, and the platform's responsibility for reviewing and dealing with problematic works is not sufficiently clear. The responsibility of the platform for reviewing and dealing with problematic works is not clear enough.

4.1.2 Technology Risks

NFT technology risks include the risks brought about by the vulnerability of NFT infrastructure and the imperfection of the ecology. NFT infrastructure includes blockchain technology and smart contract technology, which are still subject to security risks. On the one hand, with the continuous development of computer technology, quantum computer technology will affect the security brought by technologies such as the hash function on which blockchain relies, and on the other hand, smart contracts also have problems such as the leakage of private information, the lack of credible data sources and legal risks. In addition, after the theft of NFT works, even if the flow record of NFT is left on the blockchain, it is difficult to recover the lost NFT works due to the decentralization and other characteristics of non-homogeneous passes.

4.1.3 Value Risks

At present, there is a "bubble" in the NFT industry, and there is a big deviation between the price of NFT and its real value, and the evaluation of the value of NFT works needs to take into account a variety of factors, such as the economic value. On the one hand, the application field of NFT is still not wide enough, and the application value of the technology of non-homogenized passes in copyright protection, identity verification and digital capitalization is difficult to quantify and estimate; on the other hand, the proportion of art works in NFT is very large, and factors such as the most important artistic value and cultural value in artworks^[6], and the unique social value of NFT, all occupy a very important position in the value assessment, and These factors are greatly influenced by people's subjective feelings and social environment. Therefore, most of these values are difficult to be estimated and measured in monetary terms, and the prices of NFT works are difficult to correspond to their true values. The price of NFT industry is not only affected by the value of NFT itself, but also by external factors, such as the fluctuation of cryptocurrency prices, celebrity effect and economic policies, etc., among which the fluctuation of cryptocurrency prices has the most direct impact. In addition, it is difficult for participants in the NFT industry to be sure that NFT transactions are "real", as one person can use any number of wallets due to the pseudonymous nature of the Ethereum blockchain. In the context of laundering (a common phenomenon in cryptocurrency markets), individual market participants can conduct non-financial transactions between their own wallets, artificially inflating and liquidating NFTs, thereby increasing the attractiveness of the tokens to unsuspecting traders. Similarly, non-financial transactions can be sold "cheaply" and then bought back at a high price to avoid taxes or money laundering. The combination of these NFTs and finance has led to increasing speculation and speculation, as well as money laundering and other illegal and criminal acts brought about by the decentralized nature of NFTs and the lack of legal regulation, which has contributed to the widening of the deviation of prices from their true value, i.e., the bubble in the NFT industry is growing.

4.2 NFT Development Opinions

4.2.1 Sovereign Currency as A Medium of Exchange

Currently, as the integration of non-homogeneous passes with virtual industry sectors such as DeFi (decentralized finance), meta-universes and gaming continues to deepen, the price of NFT works is increasingly interfered by external factors rather than being determined by their own true value. In order to increase the stability of NFT prices, the share of the virtual economy in NFT should be reduced. The NFT industry can increase the diversity of the medium of exchange, i.e. currencies. Firstly, the exchange rates of sovereign currencies such as the RMB and USD are more stable than those of cryptocurrencies, which fluctuate dramatically, and can better measure the value of NFT works, thus fulfilling the function of a monetary scale of value. Secondly, after years of development the ecology of RMB and other currencies is relatively mature, including relevant systems, laws and regulations, and infrastructure. Institutions and laws and regulations supervise and constrain illegal and illicit behaviors in the course of NFT transactions, thus better safeguarding people's property and enabling the currency to perform its function as a means of payment in a safe and effective manner. Perfect infrastructures, such as bank branches and online secure and comprehensive payment systems, can increase the liquidity of currencies, thus improving the efficiency of NFT transactions. Finally, sovereign currencies such as RMB and USD are used by a large number of people, and people can more easily learn to use sovereign currencies to trade NFT works, which can lower the threshold of participation in the NFT industry.

4.2.2 Integration with Physical Industry

In order to improve the stability of the price of NFT works, in addition to reducing the impact of virtual currencies on non-homogenized passes, the NFT industry can be combined with real industries,

such as the garment industry, tourism and transportation, in order to increase the stability of economic value in the NFT industry. On the one hand, the co-operation between NFT works and physical industries can both bring direct economic benefits to the providers of NFT works. By combining with NFT works, the physical industry can integrate its products with the current trend elements, so that the products can follow the trend of the times and attract more people to buy them. In addition to the trend elements, NFT industry also has its technical value, non-homogenized passes also have many applications in technology, such as copyright protection, identity verification and digital capitalization, etc. In particular, non-homogenized passes can be used as one of the important infrastructures of the very popular meta-universe, and by combining with NFT, many physical industries can also gain access to the meta-universe industry. On the other hand, co-branding with the physical industry can make use of the well-known brands in the physical industry to bring more awareness to NFT works and attract more people to participate in the NFT industry, thus increasing the social value and economic benefits of NFT.

4.2.3 Improvement of Relevant Systems

The improvement of the relevant system of the NFT industry is very important, which can help the industry build a solid development framework and ecosystem. However, unlike the institutional construction of the general industry, due to the decentralized nature of non-homogenized passes, the management of the NFT industry cannot simply make use of centralized management to carry out top-down management and supervision of the behavioral activities in the industry. In fact, the decentralized nature of non-homogenized pass-throughs promotes the formation of a free market in the NFT industry, in which there is a lack of uniform industry rules and laws and regulations, and the responsibilities and obligations of participants in the NFT industry are not clearly defined. Various chaotic phenomena accompanying the free market including capital speculation, theft fraud and money laundering have shown that a completely free market is not a perfect market that does not need to be improved, and that a free market also needs an institutional framework to restrict and regulate the procedures and results of its operation.^[7] Combined with the characteristics of the NFT industry, three lines of defense can be set up to guarantee the development of the NFT industry in a healthy and sustainable direction. The first line of defense is the technology of non-homogenous passes, i.e. blockchain technology and smart contracts, which are able to record the transaction information of NFT works and limit the possibility of people using the arithmetic power of computers to forge transactions. The second line of defense is the participants in the NFT industry, including NFT trading platforms, NFT communities and clubs, etc. The NFT industry needs to establish a perfect system and uniform industry rules to clarify the responsibilities and obligations of these participants. The third line of defense is the construction of relevant laws and regulations and supervision by government departments. Government departments can establish NFT data centers and promote NFT-related associations and trading platforms to introduce unified value assessment standards for NFT works and industry rules to jointly maintain the healthy development of the NFT industry.

5. Conclusion

Non-homogenized pass is a token based on blockchain technology that has emerged in the last five years, with the characteristics of indivisibility, uniqueness, high transparency and decentralization. With the continuous development of technology related to non-homogenized passes, the ecology of the NFT industry has gradually improved. The development of the NFT industry at home and abroad differs due to different management concepts and approaches to the NFT industry. Most of the domestic NFT industry is still related to digital collectibles, and due to restrictions on trading, the price of NFT works is maintained at a relatively reasonable price range. Drawing on the value analysis of industries such as artwork, games and platforms, the NFT industry is analyzed in three dimensions: social capital, entertainment and utility, and it is concluded that the NFT works themselves as well as the NFT application projects have value in terms of social, entertainment and utility. However, because of the non-homogenized pass technology and the insufficient system related to the NFT industry, there are still investment risks in the NFT industry, including technical risks, intellectual property risks and value assessment risks. Based on the value study and potential risks of NFT industry, this paper puts forward the development suggestions of NFT industry from the perspectives of medium of exchange, physical industry and system, pointing out that NFT industry should increase the proportion of physical industry in the industry and improve the related system to increase the stability of the industry.

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