NFT: The Explosive Convergence of Art and Blockchain

By **CHIA HOCK LAI** and **KEVIN PANG**

NFT, the new kid on the block(chain), has generated much interest and hype. Is this the latest digital tulip-mania or a new asset-class with great promise for creators and collectors?

Non-Fungible Tokens, or NFTs, have nothing to do with mushrooms or fungi of any form.

NFTs can be thought of as digital collectables. These cryptographic tokens allow you to truly own a one-of-a-kind or rare digital asset. Each has a unique digital fingerprint that specifies it is an original item. It contains details of its creator, attributes and transaction records; in other words, its provenance, which are easily accessible and verifiable. One NFT is not directly equal or exchangeable with another, thus making it non-fungible.

On the other hand, bitcoins, other cryptocurrencies or money, are fungible, which means that they are fully interchangeable, i.e. one bitcoin is no different to the next, and there is no difference between owning two $5 notes or a single $10 note.

New asset class

NFTs started with the ERC-721 standard, which was implemented on the Ethereum blockchain to allow the creation of unique blockchain-based assets. What started as a means to "certify true ownership" of digital files that can be easily and endlessly replicated became a way for ownership of assets, both digitally and in the real world, to be recorded and certified. The record is stored publicly on a blockchain, a digital ledger securely maintained by thousands of computers around the world.

An NFT can represent almost anything – from digital art to memes, as well as real world items such as artworks, property and even parking lots. The possibilities are endless. Of note, the scarcity of the asset is what accords it value, and this is why it is fast becoming an emerging asset class for trading and investment. This is in contrast to most digital creations, which can be replicated infinitely, have no limit to their supply and therefore do not appreciate in value.

Tulip-mania or the sign of things to come?

US$69.3 million (S$94.5 million). That was how much someone paid to purchase digital artist Beeple's artwork at a Christie's auction in March 2021. Call it tulip-mania or a speculative bubble (back in the 17th century, Dutch investors purchased tulip bulbs at highly inflated prices); is there more to NFTs than meets the eye?

NFTs and the blockchain technology that underpin them make a real difference to creators. They can now monetise their creations and sell them directly to consumers. This allows them to keep their profits and bypass middlemen. The NFT can also be programmed for the creator to receive royalties from subsequent sales of the creation. In addition, NFT social networks facilitate creators to interact directly with "fans" to produce content with the highest demand.

Established and reputable art galleries can also monetise their collection by tokenising them and selling fractions of them to investors.

Although one could be misled into thinking that NFTs are geared purely towards artistic creations, this could not be further from the truth, as similar arrangements can be made for real estate and other investable assets to be minted into NFTs.

Barriers to entry

NFTs give us true ownership of our non-fungible assets. What should have been frictionless and universal adoption, unfortunately, has a rather high barrier to entry. Anyone wishing to acquire NFTs has to first acquire knowledge of using cryptocurrencies and cryptocurrency wallets. Moreover, the idea of acquiring an artistic asset that only exists as lines of code in a computer can be a rather abstract concept to most.

In addition, usually purchasing an NFT art or collectible only confers ownership rights. The underlying copyright and all associated intellectual property rights still belong to the creator of the work, unless those rights are explicitly assigned or transferred to any subsequent purchaser of the work. Buyers beware indeed!

Why NFTs are advantageous

Back in early 2017, John Watkinson and Matt Hall had their first NFT released on Ethereum Blockchain, which was called Crypto Punks. Subsequently, in that year, Crypto Kitties was created and generated a cool US$12.5 million investment.

Minting is the process of creating an NFT. This is developed in an NFT marketplace where a creator will normally upload a digital file which will then be auctioned to buyers. See box, "The Advantages of NFTs".

Leveraging NFTs

2021 is the year of a rapid rise in the popularity of NFTs. Following the historic and record-setting auction by Christie of Beeple's "Everydays: The First 5000 Days", more and more brands and artists alike are joining the trend to release their own NFTs.

Both creators and collectors can leverage the power of NFTs.

The Advantages of NFTs

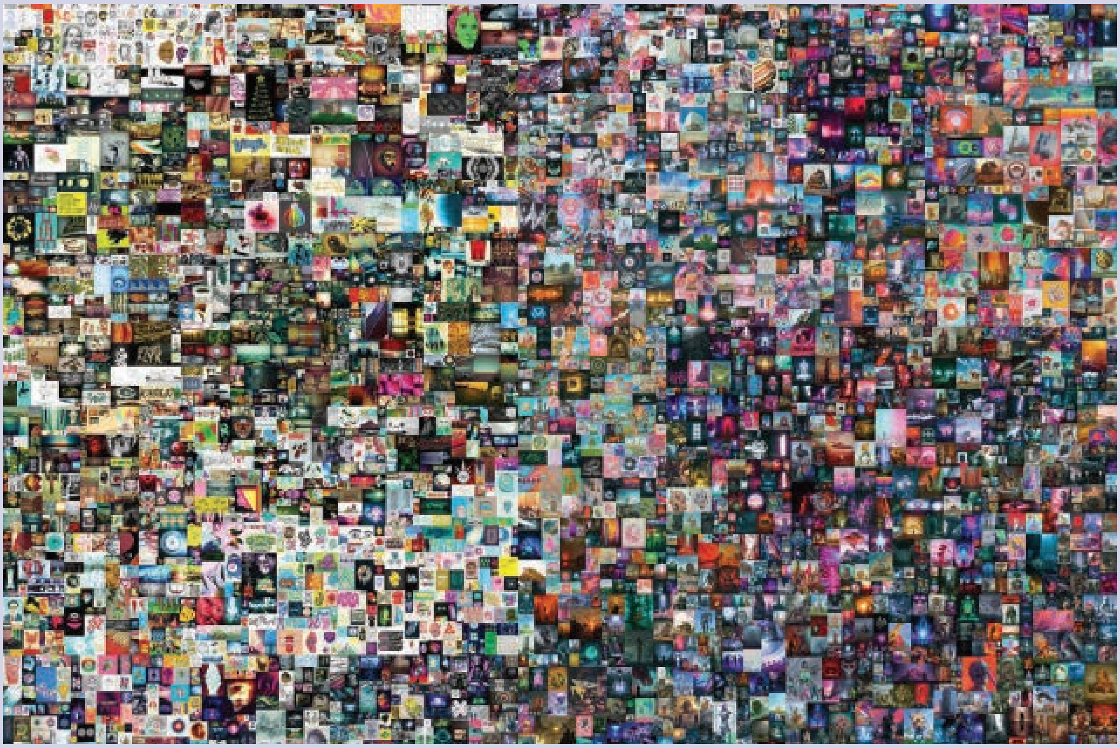
- **Scarcity.** The creator (or developing company which the creator assigned) of the NFT will decide on the number of replicas. The creator may choose to make each NFT unique, thus creating a high scarcity. With the shortage of supply, the price of the NFT might increase in the future if there is more demand for it.
- **Royalties.** NFTs can be set where the creator receives some percentage cut from each sales transaction of the NFT. This will be very profitable in the long run as more hands are being exchanged.
- **Indivisible.** NFTs are normally not able to be broken down into smaller units. They must be sold as a whole unit where buyers pay the full amount. This will be less complicated since each NFT will have only one owner, which addresses accountability.
- **Easily transferable.** NFTs can be easily sold and purchased in specific NFT marketplaces with more convenience than physical assets.
- **Trustworthy.** NFTs are on the blockchain and thus achieve high immutability where the NFT purchases are valid and permanently recorded thus also maintaining ownership rights.
- **Non-interoperable.** NFTs are non-interoperable (e.g. coded as ERC-721 standard in ETH blockchain), and thus the data contained in them cannot be transferred or utilised in other ways.
- **Indestructible.** NFTs are on the blockchain, which is highly secured, and therefore NFTs cannot be destroyed.
- **Unique.** NFTs can also help evaluate the legitimacy of work of art by using blockchain technology since physical art pieces can be easily replicated.

For brands, platforms, artists, and content creators of some sort, NFTs open up a whole new avenue for which they can sell their works. Artists can easily turn their masterpiece, be it a picture, song, gif, etc., into an NFT, which will have several benefits.

Firstly, people can easily verify the authenticity of the NFT in the marketplace as the blockchain on which they are created provides an immutable and transparent record of the ownership. This deters counterfeits and copycats, which preserves the value of the NFT.

Secondly, it is possible to programme royalties into the NFT such that every time it is resold, a percentage of the sale goes back to the creator as royalty. Therefore, creators will also benefit if their NFT appreciates in value or changes hands on the secondary market.

On the other side of the coin, buyers can stand to gain from the appreciation in value of the NFTs. NFTs are inherently scarce; usually, they are unique, or only a small finite number of copies are minted in the collection. For big brands and reputable artists with huge followings, this means that the demand



"Everydays: The First 5000 Days" NFT artwork by Beeple (Image source: Reuters)

far exceeds the supply. This probably leads to a price appreciation in the secondary markets after the launch. Of course, all this is speculation with a risk of financial loss as well.

An investor that supports and invests in a creator who might not be well known now, would benefit from their success in the future.

Speculation aside, an owner can leverage on other utilities of an NFT. Some platforms use it as a form of membership, as well as giving tiered discounts or bonuses on the platform for NFT holders. Other platforms use NFT as a deed to ownership of digital land in which users have free choice on what to use the digital land for.

Another upcoming area is the use of NFT in games. Traditionally, in-game assets belong to the company and are hard to transfer. With in-game assets such as weapons, armour, equipment, etc. minted as NFTs, owners can utilise them in the game and cross over to another game if the ecosystem allows. If an owner does not want to continue playing the game, he would be able to easily trade or sell it in the marketplace, getting some value for the time and investment in the game.

NFT-y outlook

The NFT market looks to continue growing. Over time, more innovative utilities and use cases are expected to emerge. A closer look at the unique utilities each NFT offers can help determine if it is a worthwhile investment.

The verdict is still out, against the fast-changing backdrop. However, there could be ample opportunities available for both creators and collectors to leverage NFTs using a compliant and regulated NFT marketplace. ■

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