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Non-Fungible Tokens:
An NFT Primer for Accounting Professionals

Introduction

The digital asset sector continues to develop and accelerate at an ever-increasing rate; NFTs are simply the most recent iteration of the digital asset space. As a result of this increased interest and investment into NFTs, highlighted by the $69 million purchase of crypto art from the artist Beeple, the financial importance of this space continues to grow virtually unabated. Setting aside headlines connected to any single auction, it is worth nothing that according to Reuters, NFT transactions totaled $25 billion in 2021. By any measure NFTs represent a legitimate economic sector that is deserving of policymaker's attention. Despite recent growth, there is no consensus as to how these digital assets should be classified. With the continued interest in the category, establishing and codifying the accounting treatment for these digital assets will be essential. This document is not meant to be an exhaustive analysis, nor is it intended to be an authoritative opinion. Rather, the opinions and considerations expressed within this primer, are comprised from input and comments from members of the Wall Street Blockchain Alliance's Accounting Working Group, and in collaboration with CPA.com, they should be considered alongside other market feedback and commentary as the category matures.

Context

The NFT marketplace emerged into the mainstream conversation in March 2021 with the Beeple auction that generated headlines with its $69 million price tag, turbocharging the nascent category. Virtually overnight the financial markets were introduced to a brand-new digital asset class and sector with the promise to revolutionize yet another aspect of the finance and accounting landscape. Even as 2021 wore on, and the average price per NFT transaction dropped from its previous high of $19 million, the potential and excitement surrounding these digital assets continued to accelerate virtually unabated. This economic sector might have started primarily as artwork and artistic endeavors, but the potential for this digital asset application continues to expand. Perhaps most interesting is the potential for NFTs to move beyond merely digital assets, and to expand into the physical asset space such as commercial real estate and other similar assets.

Reflecting the continued maturation of the digital asset sector, the conversation and debate around NFTs have rapidly emerged as hot-button issues for investors, regulators, and accounting practitioners alike. With OpenSeas NFT transactions topping $5 billion in January of 2022 alone, the economic implications of these digital assets cannot be overstated. Setting aside some of the headlines considering NFTs produced by athletes and entertainers, the adoption of NFTs by more mainstream organizations continue to accelerate. Household names, including decidedly non-crypto firms, such as Coca-Cola and Campbell Soup have successfully leveraged NFTs. More fundamental implications of this continuing spread and proliferation of NFTs will be discussed throughout this primer, but it is safe to say that it is much more than just a fad in digital art or niche collectibles. Virtually every aspect connected to the accounting profession - tax, audit, assurance, and other accounting services - will need to integrate and recognize the growing economic clout of the NFT sector.

What is an NFT?

Before going any further it needs to be stated this document is not written to be all-inclusive, nor to discuss every possible iteration of NFTs. NFTs represent a widely differentiated and rapidly evolving digital asset class and should be treated as such. Always work with professionals that have accounting expertise and are familiar with the specifics of the instrument (in this case an NFT) being discussed.

Beginning this conversation, the first question that seems reasonable to be asked is what exactly is an NFT? While NFTs are indeed members of the digital asset sector, they are unique and distinct from existing crypto assets such as bitcoin and ether, which were both originally designed as a medium of exchange first and foremost. Every single bitcoin is fungible, interchangeable, and can be exchanged for one another without losing value; NFTs do not possess these traits. Specifically, NFTs represent unique and distinct claims on digital or physical assets, with these claims derived and governed by the smart contracts associated with these tokens. As a result of this uniqueness, NFTs cannot be exchanged for one another, cannot be subdivided (unlike crypto assets), and cannot be used as a medium of exchange. Interestingly, NFTs - despite the potential that has appeared in some corners of the NFT market - might be the single highest profile example of how the digital asset economy and fiat economy are becoming increasingly connected.

For the purposes of this conversation, we propose to define NFTs as:

> "A unique, differentiated and non-interchangeable digital asset directly connected to either a virtual or tangible asset, with ownership secured by an immutable blockchain record"

One item that is also worth pointing out is that the NFT holder does not actually possess anything beside the token itself. Framed in that context, it is also important to highlight that there is the potential for fraud or other unethical activity that can arise.

What about the accounting?

As of publication, there is no distinction between accounting for decentralized crypto assets and other digital asset applications such as NFTs. In the face of no digital asset-specific accounting guidance, the market has treated the accounting for NFTs as 1) property for tax reporting purposes, and 2) indefinite lived intangible assets for financial reporting perspectives. The issues connected to these accounting treatments have been documented elsewhere, and so will not be exhaustively detailed here, but neither treatment option seems entirely appropriate.

An issue that can complicate the conversation around accounting for NFTs is the simple fact that there are numerous options and iterations that an NFT can take. For example, if an investor is simply purchasing an NFT connected to a digital asset, or some form of crypto artwork, the accounting treatment - as insufficient as it may be - is at least agreed upon for the most part. If, however, there are NFTs connected to physical assets such as commercial real estate or other tangible physical property, this might raise additional accounting questions. Specifically, if an NFT conveys some sort of ownership or management stake in the project or asset in question, do these tokens - in turn - represent an equity equivalent stake in this instance? If so, this raises the host of questions commonly associated with initial coin offerings (ICOs), security token offerings (STOs), and other tokenized methods of raising capital.

Accounting for NFTs can become further complicated when the idea of earning block rewards or other forms of crypto-denominated income come into play. Since these earnings or other forms of income take the form of fiat or various crypto assets, this might influence the tax and accounting treatment. For example, if an NFT is connected to either physical or intangible assets - such as artwork - that generate royalties or dividends for the content creator/owner, how are these earnings paid out? If they are compensated in fiat currency the tax and accounting treatment should be relatively straight forward. If these earnings, however, are paid out in the form of digital assets (that is, coins or tokens), this can raise certain questions. For instance, if the coins or tokens are classified as utility tokens and are not widely traded, how are these coins valued? These issues about digital asset accounting are not unique to NFTs but do represent a potential stumbling block to wider adoption and utilization.

The tax implications of such an arrangement can quickly become complex and should be assessed on a case-by-case basis in conjunction with a professional familiar with both digital assets and tax matters.

> "Crypto might be a mainstream topic of conversation, but newer iterations such as NFTs are sure to keep CPAs busy for years to come"
>
> **Dr. Sean Stein Smith**, CPA
> Chair - Accounting Working Group, **WSBA**

Drilling down on block rewards

An additional aspect related to NFTs, and block rewards is the tax treatment that is currently applied to these digital assets. As high-profile as some NFTs have become, there are increasingly complicated options available to investors. Specifically, the opportunity for investors (owners) of NFTs to generate income from these investments highlights problems directly connected to inconsistent accounting treatments. Put simply, the current IRS classification of all digital assets, virtual assets, or crypto assets as property creates the following conundrum for creators, investors, and practitioners:

If block rewards, or the payments related to an NFT, take the form of newly created/issued crypto assets, are these payments taxable when accrued by the investor? A parallel can be drawn - directly from the IRS code - that gold or other minerals are only taxed when they are sold to an external party, not simply when they are mined or refined. Building on that, it is possible - as highlighted by the specific facts and circumstances of Joshua and Jessica Jarrett vs. United States - those taxpayers may be overpaying taxes.

A complicated matter to be sure, and one that is just beginning to come to the surface in terms of NFTs and NFT tax planning, but one that could potentially create an obstacle toward broader development and expansion of the digital asset sector.

Ownership Considerations

What do investors actually own?

One question that should be addressed with regards to NFTs is what exactly do investors own when an NFT is purchased? On the surface this seems like a simplistic question, it is a bit more complicated than might otherwise be thought. Digging into a few of the common questions and items that any potential investor should keep in mind include, but are not limited to, the following.

What does an NFT investor own?

A common misconception is that an investor that has purchased an NFT has the exclusive rights to store, use, and potentially monetize the underlying asset; this is not universally correct. While specifics of the NFT transaction will vary - and efforts have been made to standardize exactly what is conveyed - an investor does not own any commercial exclusivity or rights to monetize what has been purchased.

So, what is actually owned?

NFT investors do not convey the rights to the underlying asset or other artwork, but rather have exclusive ownership of the unique and identifiable token. From an accounting perspective this means that the accounting treatment should be similar to the current (albeit not entirely correct) treatment for digital assets. Specifically, this means that for the time being it would seem reasonable to treat NFTs as property for tax purposes and indefinite lived intangible assets for financial reporting purposes as this is the treatment for other digital assets.

What about valuation confirmation?

One trend that has seemingly gone unnoticed or under-discussed in the potential growth surrounding the NFT marketplace is the fact that counterfeiting and forgeries are still legitimate concerns in this sector. NFTs are, to reiterate, a method by which the unique and distinct token can be traced to a specific owner, but do not necessarily convey ownership over the underlying asset. Additionally, there is still a need for manual and non-crypto policies to be put in place to prevent fraudulent goods from being inserted within the initial NFT minting process.

In other words, internal controls need to be in place to prevent non-existent physical or digital assets (fraudulent assets) from serving as the underlying asset for an NFT.

One additional point that needs to be explored is what exactly the use case or goal that will be linked to the NFT in question; asset appreciation, royalty or dividend distribution and payment, or some sort of governance application? Clearly the earnings and use cases associated with other assets does - in turn - drive some of the valuation metrics and conversations of said assets. It would be illogical to expect that NFTs operate completely differently from existing financial assets and instruments. For example, if an NFT itself is just a conduit to direct royalty payments a discounted cash flow valuation method could reasonably be used to determine fair market value.

Outside of this simplistic approach, however, there is a more fundamental question that needs to be addressed: how are any assertions (such as valuations and audits) applied to NFTs?

What about NFT audits?

Any comprehensive conversation about NFTs should also consider how these tokens will be audited, verified, confirmed, or otherwise authenticated, and that also plays a role in how these digital assets are to be valued. Put simply, if the NFT in question cannot be attested to, audited, or otherwise verified, this will negatively impact the value and liquidity of this specific NFT moving forward. Specifically, one of the core issues that needs to be assessed is how frauds and other fraudulent versions of digital assets are prevented from entering the blockchain and transactional landscape. One way of conceptualizing the challenges facing NFT audits is the audits of crypto assets that are still relatively difficult for practitioners. NFT audits, in this context, refer to the audit of the digital asset itself, including smart contract functionality, attestation of the underlying asset, and other issues linked directly to the specific asset in question. NFTs, due to the unique and differentiated nature of these assets, create an additional layer of potential complexity.

It is important to understand that the actual asset that is acquired and owned by the investor is not the underlying asset itself, but just the token. This is all well and good, but upon further inspection raises the following question: does this specific token represent any ownership interest or connection to the underlying asset? The short answer is, unless otherwise specified, no. There certainly are efforts underway, most publicly by Dapper Labs and NBA Top Shots, to expand and clarify the ownership rights of token holders, but that is the exception and not the rule. Rather, and even though the NFT itself is connected to and secured by an underlying blockchain, there is still a definitive risk of potential fraud and other unethical activity.

> "NFTs are a dynamic iteration of crypto, and practitioners need to be aware of what the implications are for their clients going forward"
>
> **Dr. Sean Stein Smith**, CPA
> Chair - Accounting Working Group, **WSBA**

Combating this risk takes the form of traditional identification and provenance verification, which while satisfactory, does raise questions similar to those associated with traditional physical artwork. It is worth pointing out that while NFTs are themselves connected to an underlying blockchain, and therefore secured by the integrity of that platform, the actual artwork itself is not embedded onto the blockchain proper. To put it another way, while the NFT itself is secured and protected by the blockchain, the actual artwork itself still needs to be verified in a traditional manner. This point links back to the earlier discussion around potentially fraudulent assets serving as the underlying asset for a specific NFT. As NFTs move away from being exclusively connected to digital artwork, and connect to virtual real estate, or tangible real estate and other physical assets, the verification of the underlying asset will only increase in importance.

Tangible NFTs

As of this analysis the vast majority of NFTs and associated services were connected to virtual or otherwise intangible assets, with a trend toward the establishment of the so-called "metaverse" well underway. For the context of this discussion the phrase metaverse can be summarized as a virtual representation of real-life interactions in a 3-D environment where individuals and institutions can engage in commerce, transactions, and other endeavors. This concept has been showcased in mainstream media previously, such as the movies Tron and Ready Player 1, will have served as examples as to how such a reality might come to be. Fascinating as such a possibility is, the reality is that NFTs have much broader applications and use cases outside of virtual reality applications.

For example, if a building or other type of real estate connected project is tokenized or connected to an NFT process, what are the potential implications of such a development? Considering that these tokens are connected to tangible assets, with the risks and obligations that tangible assets entail, this will also complicate the valuation and reporting conversation for these tokens. Some questions that will have to be addressed, or at least considered during the valuation process are as follows:

1. What is the relationship between the individual tokens and the ownership rights of these token holders?

2. Will the ownership – and valuation related to this ownership – be linked directly to the number of tokens issued by the organization or will some other relationship be utilized?

Building on this, establishing, and valuing the connection between the NFT and the underlying physical asset, will also produce additional questions for practitioners. For example, if the tangible NFTs are connected to real property, or commercial property, does bifurcating this ownership change any related debt covenants, valuations, or tax considerations? If a tangible token does indeed convey ownership, or a governance sharing agreement, how is this shared governance or ownership communicated and documented? In addition, is this documentation shared with the appropriate legal and real estate experts? Tangible NFTs might still be - at this point - a conceptual idea or concept but are an iteration of NFTs that will certainly be coming to the mainstream sooner rather than later. Tokenizing or fractional ownership are not inherently new nor innovative ideas, and NFTs leverage blockchain technology to make the tracking, record keeping, and valuation of these fractional shares simpler and more efficient.

NFT Valuation Considerations

Starting off the conversation around NFT valuation, before diving into specific valuation approaches and methodologies, there are several higher level, and blockchain specific, considerations that should be a part of the valuation process. Firstly, what blockchain is this NFT connected to? The majority of NFTs are connected to the Ethereum blockchain, which continues to move to the forefront in terms of digital asset innovation, but this might not always be the case. Secondly, are the tokens themselves held on-chain or off-chain? If the tokens are held on-chain this usually means that the meta-data associated with the NFT is both embedded directly into the smart contract that governs the token whereas off-chain tokens usually have that meta-data held separately. Why does this matter? This matters because on-chain data means that 1) the token will last - and have value - if the underlying blockchain is operational and being used, 2) that the token, smart contract, and meta-data all must be in compliance with the standards of that underlying blockchain.

As NFTs continue to migrate from the niche-like digital asset application and tool to a mainstream asset class utilized by musicians, athletes, and organizations alike, determining the correct valuation methodology is something that needs to be established. The first factor to be considered is the reality that there are existing accounting guidelines and standards that can - and should - be leveraged, specifically FASB ASC 820, Fair Value Measurement. Level 1, 2, and 3 valuation guidelines are already utilized for assets that are more or less liquid or actively traded. To that end, it would make sense to apply a similar methodology when attempting to value the NFT marketplace, which consists of thousands of digital assets that have been developed since 2020. As the digital asset space, and especially NFTs, continue to develop and expand in value, the importance of valuations will only increase.

An additional factor that should be taken into account is the process by which the valuations of different NFTs are going to be determined. While there are some exchanges and platforms that host NFTs that are liquid, widely traded, and how fair market value is readily determinable, that is not that the case for every single NFT in the marketplace. While the digital assets themselves might be new that does not mean that the process to determine which exchange or marketplace needs to be reinvented. The IRS 2019 FAQs related to how practitioners and users can determine the valuation for various digital assets the process to identify which exchanges can be used are readily available. Put simply, the exchanges or platforms that are either the most liquid, most transparent, or regulated by U.S. agencies can and should be used to obtain reliable valuations on a continuous basis.

An additional consideration when attempting to accurately and consistently value NFTs is the matter of establishing ownership and control over the NFT in a comparable manner. For example, an individual or institution can create a new crypto wallet in a matter of seconds, which can be used as a cut-out or other mechanism to obfuscate the record of ownership. Questions such as this will most likely lead to accounting and audit professionals having to partner and collaborate with information technology professionals to ensure that ownership is indeed verified. Additionally, and from a bigger perspective the seemingly simple question of whether or not the asset exists must be addressed as well. Humorous anecdotes about individuals taking pictures of NFTs to claim ownership aside, establishing a consistent and widely applicable process to confirm the existence of the tokens themselves, along with the underlying asset, is an integral step in the valuation process.

Valuation Takeaways

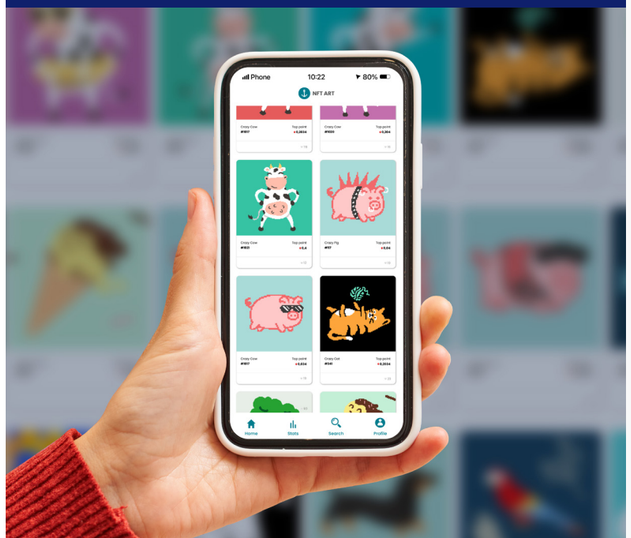
The questions and open items around NFTs, of which there are many, need not be limited to relatively straight forward discussions around accounting and tax issues, nor should they be constricted to conversations that only connect to digital assets. Taking a step back from the minutiae of the accounting and financial conversations there is no doubt that the NFT landscape continues to expand and develop on a continuous basis. Clearly there is going to be a multitude of digital assets - of all kinds - that are created and distributed through the marketplace, but there are several core themes that any practitioners should keep in mind moving forward.

Firstly, the valuation issues created by NFTs are not uniquely new nor restricted only to NFTs or other digital assets. Rather, attempting to value and accurately report on both liquid - but new - or illiquid assets represent questions and issues that are not anything new. While existing accounting rules and frameworks do not yet include crypto-specific information there are tools and approaches that can - and are - used to value and report on the vast array of financial instruments that exist. Why not borrow from, and integrate within, existing accounting rules related to financial instruments such as commodities or other widely traded assets with a centralized locus of control? That approach, simplistic as it might sound at first glance, would enable a more accurate, consistent, and comparable financial reporting outlook for NFTs (as well as other digital assets).

Further, the valuation considerations are not as niche as might have previously been discussed, given the rise of the metaverse. It is too early to forecast how exactly the metaverse will evolve overtime, but the fact that one of the largest corporations in the world - Meta (the parent company of Facebook) is investing so heavily and actively in this sector should illustrate how significant this space can conceivably be. In order for this idea to fully manifest itself, however, there is going to be a need for a secure method for both transacting and recording the information stored therein.

Blockchain and digital assets have certainly been discussed quite a bit in regards to the metaverse, but NFTs have a unique role to play. Connecting back to the underlying idea of NFTs as an immutable and traceable method for tracing and confirming ownership of certain digital assets, this linkage becomes clear. In an entirely virtual world and ecosystem the need for a cryptographical method to secure and conduct transactions is going to be necessary. In this sense the valuation of NFTs can quickly become a material item for both individual and institutional investors.

> "While NFTs do fall under the same crypto umbrella as Bitcoin, there are fundamental differences that CPAs need to understand"
>
> **Dr. Sean Stein Smith**, CPA
> Chair - Accounting Working Group, **WSBA**



Summary

The NFT sector of the digital asset marketplace is yet another example of the dynamic and innovative nature of this space. That said, it is going to be increasingly important for practitioners to understand the tax and financial reporting implications of these digital assets for both individuals and institutions. NFTs are just one of a slew of relatively new blockchain and digital asset applications that currently have the same accounting treatment as bitcoin - which in and of itself is dealing with an accounting paradigm that is not entirely defined. Although NFTs might have come to the attention of the mass market just recently, the implications of tokenized assets, artwork, and other such items are going to be far ranging and multifaceted going forward. That said, the accounting questions that continue to forestall wider adoption and utilization of other blockchain technologies are also present in the NFT sector. Whitepapers and primers like this document have an important role to play in the continued maturation of these, and other new blockchain based use cases and applications.

Conclusions

NFTs have rapidly become a digital asset topic and subset that dominates the accounting, tax, and financial reporting conversation as it pertains to digital assets more broadly. Bitcoin, for all the headlines that it continues to generate and excitement that those headlines in turn create, is potentially old news at this point, at least as far as accounting questions are concerned. NFTs, by their nature, create an array of questions that are dissimilar to those raised by bitcoin and other more traditional crypto assets. How can a valuation methodology and framework be developed - must less implemented - for an asset class that consists entirely of unique and distinct assets? What this paper has attempted to address is to raise questions, possibilities, and potential paths forward to assist practitioners seeking to advise clients in this space. The bottom line is that, at this point, there are far more questions than answers with regards to NFTs, but that does not mean that the profession has no way forward. To that contrary, and highlighted throughout this piece, there are existing rules and codifications that can - and should - be used to report, value, and accurately represent the value that this fast-moving asset class can bring to the digital asset ecosystem.

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1345 Avenue of the Americas, 27th Floor
New York, New York 10105

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