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Legal considerations in the minting, marketing and selling of NFTs

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The increased popularity of people consuming and collecting content in digital form in recent years has presented a vexing problem: how does one establish that a certain version of a digital work is the “original” given that it can be easily and quickly replicated into identical copies? This problem also creates distinct challenges to developing a “digital ownership economy” in which consumers own a digital work (be it music, text, video, or graphics) as opposed to a “digital license economy” in which consumers license such works from a platform, and “lose” their works when their subscription terminates or the platform ceases to operate. The solution to this issue may lie with Non-Fungible Tokens (commonly known as “NFTs”), which can use blockchain technology to: identify an original digital work; track its provenance; reward creators; and open up new business opportunities, such as by providing owners of an NFT unique access to digital or real-world content and experiences. While market numbers vary, the NFT market is expected to be well over a \$2 billion market in 2021. This chapter describes what NFTs are and how they function, and provides an overview of some of the interesting legal issues and challenges that they present under U.S. law.

What is an NFT?

An explanation of NFTs might best start with the somewhat unusual name used to describe these digital ownership markers. In general, when blockchain technology is used as a means to generate coins or tokens, the resultant digital assets are “fungible,” meaning that they are identical and interchangeable 1:1. For example, each Bitcoin is identical to all other Bitcoins. Fungible tokens would therefore be ill-suited as a means to identify and distinguish an “original” digital work. As its name implies, the idea behind “non-fungible” tokens is to generate tokens that are unique, thereby enabling one to use these tokens to identify a digital good as the original or one of a limited series of originals. “Tokens” are also somewhat of a misnomer, as NFTs are actually pieces of computer code, known as smart contracts, that reside on blockchains and include “metadata” that, among other fields, includes: an NFT’s unique ID; a short description of the work associated with the NFT; and a pointer to an off-chain location where the work associated with the NFT is stored.¹

Although we are in the nascent stages of how creators, rights holders and brands might exploit NFTs, there have already been significant developments in a number of different sectors. For example, rights holders, including entertainment companies and sports leagues, are using NFTs as a way to create and market digital collectibles both for existing and potentially new fans. Video gaming companies are looking at ways NFTs can be implemented to allow users to purchase, trade, and rent out in-game assets. In the music industry, NFTs are being used by artists to connect directly with fans as well as generate new

sources of revenue. For example, the band Kings of Leon made headlines when it released an album that also had an NFT version. Those who purchased the album through the NFT also received enhanced visual media, a digital download of the music, and a limited-edition vinyl. The band also auctioned off a second type of NFT that included four front row tickets to one Kings of Leon headline show per tour anywhere in the world, a meet and greet with the band, tour merchandise, and use of an SUV limousine. As the Kings of Leon example demonstrates, NFTs can also serve as a type of digital identifier that allows an individual to claim a physical asset or service. In the art world, the most famous NFT sale was a Christie's auction of an NFT attached to a digital collage by the artist known as "Beeple," which went for \$69 million. However, in addition to the high-end auction world, digital artists are using NFTs as a way to monetize their original, creative works.

Finally, there is a growing market for so-called "community NFTs." This is when a series of NFTs of a certain type of character are minted (e.g., animated pandas, apes, cats, etc.) each of which is slightly different (e.g., wearing a different hat or expression). Owners of the NFTs associated with these graphic images can typically interact with a custom-built environment and unlock certain user experiences.

Key stakeholders in the NFT market

There are a number of stakeholders in today's NFT sector:

- *Platform Providers.* A number of NFTs are designed to operate, and are stored on, the Ethereum blockchain. However, numerous other blockchains exist and some are being developed with a focus on the sending, receiving and storing of NFTs.
- *Marketplaces.* NFTs are commonly purchased and sold through marketplaces. Some of the marketplaces only offer "curated" content in which the marketplace vets the individual digital creator who wants to list their works for sale, or has written agreements with large rights holders (e.g., a sports league or team, an entertainment company, etc.). Other marketplaces merely provide open platforms in which anyone can post an NFT for sale. Finally, some marketplaces provide both a "curated" and an "open" section.
- *Creators and Rights Holders.* As has been noted, NFTs are typically being developed and minted by individual creators or by larger rights holders.
- *Owners of NFTs.* The owner of an NFT, which is typically an individual, but could also be a Decentralized Autonomous Organization (DAO).²

Technology background

In order to understand the legal issues raised by NFTs, it is important to understand some of the technology underpinnings. Markets typically rely on a trusted third party to authenticate market participants and maintain a central ledger of each party's holdings. Blockchain technology, which underpins most cryptocurrencies, seeks to replace that trusted third party with a fully decentralized network of computers storing an identical copy of the ledger and validating blocks of new transactions through a consensus-based mechanism. Participants are not authenticated by a central third party, but through a method of cryptography known as "private-public key encryption." A powerful feature of blockchains, and one that is essential to NFTs, is that because each block of transactions is cryptographically based on the previous block, they are immutable; meaning that for all practical purposes, historical records cannot be altered or deleted. Blockchain transactions are also transparent such that anyone can observe all transfers of an asset from its point of creation, with each participant represented on-chain by their blockchain address (a string of alphanumeric characters).

Importantly, there is not a single “blockchain” the way one might speak of a single internet. Rather, blockchain is a type of technological approach, and not all blockchains can necessarily interact with one another. A blockchain therefore provides a compelling technology solution to creating and perpetually storing immutable digital certificates of ownership that can be tracked from their creation or “minting.”

Although NFTs have moved to the forefront of discussions around blockchains in 2021, the idea of NFTs on a blockchain dates back to 2014. They became more widely adopted within the blockchain community in 2018 with the release of a common standard (ERC-721) for NFTs minted on the Ethereum blockchain.

A key market feature of an NFT results from the fact that it is a programmable piece of computer code. This allows developers to include a programmable royalty (or resale) function that automatically transfers a specified amount of cryptocurrency to the on-chain wallet of the one or more creators, rights holders, or participants in a project each time an NFT is sold on a blockchain. This technology opens up numerous new opportunities to reward those involved in an NFT project and, most importantly, allows creators and rights holders to directly benefit from the increased value of an NFT as it is resold. While such payment schemes are being rolled out, many NFT marketplaces have implemented incompatible approaches to royalties, creating uncertainty as to whether royalties will be honored as NFTs are transferred across platforms. A royalty payment standard (EIP-2981) that would standardize royalties, at least for ERC-721 tokens, is currently in development. Still, standardization has its limits since the standard adopted for one blockchain may not be compatible with that adopted for another.

Legal issues presented by NFTs

The widespread adoption of NFTs has raised a number of interesting questions under U.S. law, some of which are traditional legal questions that arise in the creation of any creative work, and some that are questions of first impression.

Who has the right to mint an NFT?

Copyright considerations

Anyone minting an NFT, be it an individual creator or a rights holder with a library of intellectual property assets, will need to determine whether they have the appropriate rights to do so. In effect, who has the right to grant a purchaser with a digital “certificate of ownership” of an “authentic” version. Given that NFTs have only recently been adopted as a means of identifying digital goods, it comes as no surprise that most contracts involving the creation of, and rights to, digital goods – be it art, music, memorabilia, or other goods – make no reference to who owns the right to create or “mint” an NFT associated with the digital good. While clauses addressing NFT rights are being added to many such agreements (as discussed below), for the time being, those analyzing who has the right to mint an NFT must rely on a standard intellectual property analysis and also look at whether there are clauses in agreements that could be construed to sweep in NFTs.

One of the most interesting intellectual property questions presented by NFTs is what copyright rights are necessary to “tokenize” a digital work as an NFT. Under U.S. copyright law, a creator owns the copyright in a creative work upon the creation of that work and its fixation in tangible form, regardless of the medium. The copyright holder enjoys a “bundle of rights” with respect to the work, including the exclusive right to reproduce, prepare derivative works of, publicly perform and publicly display the work.³ This “bundle of

rights” can be held or licensed by the copyright holder in whole or in part, but critically, unless the rights are expressly assigned or licensed away, they remain with the author of the work.

Further complicating matters is that the creator of a work is not necessarily the copyright owner. The creator, or in copyright parlance, “author,” of a work may not necessarily be the holder of the copyright in that work or have sufficient rights to tokenize that work into an NFT. As a general matter, under U.S. law, copyright vests in the creator of a work with two exceptions: if a work is created by an employee in the course of their employment, copyright vests in the employer; and for certain limited categories of works, if the work is created by an independent contractor under a “work made for hire” agreement, copyright vests in the commissioning party.⁴ In all other cases, the author must explicitly assign their copyright in a work for it to transfer. The nuance between whether the copyright in a work initially vested in a party or was assigned to it can have important repercussions. In general, assignors of a copyright have a “right of reversion” under which they can terminate the assignment and reclaim their copyright after 35 years.⁵ While this may seem like a distant problem, purchasers of NFTs as collectibles or for long-term investment purposes may want to know whether the original author has a right of reversion.

Those minting an NFT will also need to take into account whether there are joint authors who have applicable legal rights that could impact the minting of an NFT. The issue of what constitutes joint ownership is nuanced, and those minting an NFT will want to understand who might be able to claim they have a joint ownership right in a work.

Musical works present their own unique set of issues. Generally, each piece of recorded music has a compositional copyright in the music itself (the musical composition and lyrics) and a master copyright in the sound recording that is the particular expression of that composition as created by performing or recording artists. The master rights are held by the artist or, more typically, by a label. If a third party or musical artist that does not own the copyright in a piece of music wants to create a derivative work of a composition or a master recording, such as by combining a musical work with a video clip, they will require a “sync license” to use the composition and a master use license to use the master recording. Creating an audio-only recording of a composition requires a “mechanical license.”

Given the foregoing, where does this leave a party seeking to mint an NFT of a digital work? Where a party seeking to mint an NFT holds the entire bundle of copyright rights, this is a non-issue. However, in cases where the bundle of rights has been dispersed amongst multiple parties, including through exclusive license arrangements, the answer may be less clear. The minting of an NFT requires at least some exercise of copyright rights since the work needs to be displayed, such as on a marketplace, so that the purchaser knows what they are acquiring. Video clips and music offered as NFTs may trigger performance rights. In most cases, the parties will need to look back at agreements that memorialized the allocation of rights to determine who can authorize the creation of an NFT, keeping in mind that this might entail approval from multiple parties. These parties will also need to consider the commercial terms of these arrangements. For example, many agreements concerning creative works include broad “sweep” clauses such as a broad right to “commercialize” a work or exploit it on all future technologies to be developed. Whether these clauses include the right to mint NFTs will require a case-by-case analysis, although courts have interpreted these clauses to include new technologies.⁶

Those seeking to mint or exploit an NFT must also consider the moral rights of the author of the associated work. The scope of moral rights is jurisdiction-specific but generally

protects certain non-economic rights of the author. While in the United States, such rights are limited to visual works under the Visual Artists Rights Act of 1990 (VARA) and extend only to right of attribution and integrity, in other jurisdictions they may include an author's control over whether and in what way their work is displayed and how it is used.⁷ Whether an author can seek to invoke their moral rights to prevent the creation of an NFT associated with their work remains to be seen, but should not be discounted.

Many NFT marketplaces seek to protect themselves from issues of copyright ownership by requiring those minting NFTs to represent that they have the appropriate rights, and by disclaiming any liability to purchasers if that proves not to be the case.

Other rights to consider

While copyright issues are the ones that predominate to date in the NFT sectors, those minting NFTs also need to be aware of issues surrounding trademarks (to the extent incorporated into an NFT without the permission of the trademark owner) and rights of name, image and likeness (NIL rights).

Both the Lanham Act and corresponding state laws provide protection against the unauthorized use of trademarks in a manner that is likely to cause confusion among consumers.⁸ Moreover, the use of any name, symbol, image, or device that is likely to cause mistake as to the source, affiliation, or sponsorship of a good or service is prohibited.⁹ Accordingly, the use of trademarks or colorable imitations of trademarks in NFTs may implicate a third party's trademark rights. Moreover, if the underlying trademark is famous and distinctive, rights under the state and federal dilution statutes may be implicated.

Incorporating an individual's NIL into an NFT without authorization risks infringement of that individual's right of publicity. The right of publicity is an intellectual property right protected by state law. It gives an individual the exclusive right to control the commercial use of his or her persona, meaning one's NIL. Over 35 states currently recognize an individual's right of publicity. Although the scope of protection varies across jurisdictions, infringement typically occurs when a third party exploits the subject's likeness for a commercial purpose without permission.

Incorporating NFT rights into agreements

Whenever a new technology is introduced, ranging from CD-ROMs to streaming, there is always a rush to incorporate that technology into the grant of rights sections of agreements. One can expect similar treatment of NFTs in a variety of agreements such as: freelance agreements; agreements pursuant to which a copyright holder grants rights to a third party to exploit or commercialize their work; and agreements between talent (e.g., musicians, actors, athletes, or influencers) and an agency or representative. However, merely adding "NFTs" to a litany of rights will likely fall short of addressing the underlying complexities of what NFT rights actually mean; where the NFT and associated content will be stored; and the growing number of ways NFTs can be structured. Contractual obligations to use commercially reasonable efforts to police and enforce a rights holder's intellectual property rights are also more complicated in the context of NFTs given, as discussed below, the limited ability to take down unauthorized or infringing NFTs. The parties will also want to consider the inclusion of blockchain-specific disclosures and risk factors.

If a licensor seeks to grant a licensee rights to mint an NFT, explicit language should be included that outlines the scope of rights and the parameters of the minting (i.e., is all of the intellectual property or only a subset permitted to be minted; is there a limitation on the type of marketplace used; will only one NFT be permissible per work or could there be a

limited supply (i.e., five originals, much like there may be multiple limited editions of a print); what rights can the licensee grant to purchasers of the NFT; can an NFT subsume assets that are outside the scope of the agreement, etc.). This will ensure that the licensor does not inadvertently grant overly broad rights that do not align with its objective, and will help to avoid issues of breach of contract or infringement down the road.

Issues of persistence

Critically, while an NFT is stored on a blockchain, in most cases the work associated with the NFT is not (i.e., it is “off-chain”). This is because most blockchains are programmed to assess a fee (known as a “gas fee”) for storing or transferring files, and for the large files that comprise most digital works associated with an NFT, that cost would be prohibitive. Instead, most NFTs include a metadata field with a pointer or link to an off-chain resource where the associated work is stored. Thus, while the NFT might itself be immutable, the off-chain work may not have that same persistence. For example, an NFT might include a pointer to an online location, such as a URL, where the underlying work can be observed. The risk of location-based pointers is that the file at that location could be changed, much the way a website can change from one visit to the next. In a well-publicized case, a digital artist known as “Neitherconfirm” highlighted this persistence issue by changing the computer-generated portrait images associated with the NFTs the artist had sold on the OpenSea NFT marketplace into photos of carpets (simulating a scam known as a “rugpull”).

One solution is to use file storage systems that rely instead on content identification, such as the InterPlanetary File System (IPFS), a peer-to-peer distributed file system. In a content identification system, files are identified through a Content ID (a cryptographic “hash” of the content) as opposed to where the file is located. If a creator modified its digital work, the modified work would generate a new Content ID, while the original file linked to the NFT would remain. While systems like IPFS are superior to location-based systems for NFTs, there is not necessarily a guarantee that work will exist forever. While IPFS is designed for multiple computers to hold a copy of a work, if there is only one copy on IPFS and it is being stored by one particular company that goes out of business, that work could be lost.¹⁰

An NFT is therefore only as valuable as the persistence of its underlying work. For NFT purchasers, this is a commercial risk issue. For creators, rights holders, and NFT marketplaces, this important technical point may affect a myriad of provisions in NFT-related agreements, such as risk factors to be disclosed and limitations on, or disclaimers of, liability.

The issue of persistence becomes particularly important for rights holders if the platform on which their NFTs are marketed ceases to operate. Rights holders will want to make sure in their agreements that they have the right to take over the servers on which the works are stored, either through taking over physical control, or more likely, taking over the contract governing the use of that server. In the case of works stored on IPFS, rights holders may want to make sure the work will continue to be preserved if the now-defunct platform was hosting the work on its own gateway. While rights holders could mint new NFTs for their works and provide them to then-current NFT holders, such a solution would defeat one of the fundamental benefits of an NFT – demonstrating its provenance from when it was first created.

Issues of authentication

A common misconception is that an NFT automatically provides an immutable certification of authenticity. In reality, while an NFT allows one to view the blockchain address of its original creator, some independent means of verification is required to know that the person

or entity associated with that address is who they claim to be or had the appropriate rights in the associated work. This may require direct interaction with the minter of the NFT (a solution that may not be scalable) or use of a trusted third party to authenticate that party. In all cases, those within an NFT ecosystem need to be cautious about explicit claims or legal representations of “authenticity.”

What rights are being acquired in the underlying work?

Purchasing an NFT does not provide the purchaser with intellectual property rights, particularly copyright rights, in the associated work. As noted above, under U.S. law, the “bundle of rights” is held by the author of a work unless they are expressly assigned or licensed away. In this respect, purchasing an NFT is no different from purchasing a piece of physical art. While the purchaser of a painting or sculpture may own the physical work, they typically do not acquire any intellectual property rights in such work (e.g., they cannot create and sell posters of the painting they purchased).

The rights that an NFT purchaser receives are therefore generally governed by the license provided by the marketplaces that offer the NFTs for sale. That could be general terms that apply unilaterally to all NFTs offered for sale on the marketplace or bespoke license rights that apply to the works of individual creators or rights holders.

Most current marketplaces grant an NFT purchaser a non-exclusive and non-transferable license to use, copy and display the creative works underlying the NFT for personal use. For example, some marketplaces provide a limited license to display the work solely to promote the purchaser’s “purchase, ownership, or interest” in the underlying work (e.g., through social media), promote discussion of the work, display the work on third-party marketplaces or exchanges to sell or trade the NFT, or display the work within decentralized virtual environments. In the instance where the marketplace terms of use are silent on license rights, the NFT purchaser would not have any intellectual property rights in the creative work, and would likely only have an implied license to display the work for personal use.

As a general matter, any right to commercialize the work is expressly carved out, or is allowed for only limited purposes. For example, Dapper Labs, the company behind the early-stage CryptoKitties NFTs and NBA Top Shot, proposed a form of NFT license for the industry to use (NFT License 2.0) that would allow a purchaser to commercialize a work up to \$100,000.

The typical NFT terms of use also set forth certain restrictions on how the creative work underlying the NFT may be used. For example, a number of license agreements, including the NFT License 2.0, prohibit use of a creative work in connection with media that depicts hatred, intolerance or violence, or that otherwise infringes upon the rights of others.

Given that the purchaser of an NFT is typically getting a license to the work associated with the NFT, each NFT sale therefore has two components: the “sale” of the actual NFT (which the purchaser owns outright); and a limited license to the work. The distinction between a sale and license can have important ramifications under U.S. law.

Under the first sale doctrine, the “owner of a particular copy” may “sell or otherwise dispose of the possession of that copy” without the authority of the copyright owner.¹¹ For example, one may resell a physical book they purchased without infringing the copyright holder’s distribution right. “Once the copyright owner places a copyrighted item in the stream of commerce by selling it, he has exhausted his exclusive statutory right to control” the distribution of that particular item.¹² Purchasers of NFTs may conclude that this doctrine provides comparable rights with respect to NFTs. However, the U.S. Copyright Office and at

least one court have concluded that the first sale doctrine does not necessarily apply to digital works.¹³ The rationale is that the first sale doctrine is only a narrow exception to the right of distribution. However, when a digital work is transferred, a new copy is electronically created, thereby infringing on the copyright owner's exclusive right to make copies. In addition, the first sale doctrine does not apply to works that have been licensed, as opposed to sold.¹⁴ Creators and rights holders should therefore be careful to clarify that while a purchaser may be *buying* the NFT, they are only *licensing* the associated digital work.

One issue that has not yet been resolved is the applicability of license terms to downstream purchasers. To the extent a purchaser is buying an NFT on the same marketplace where it was first sold, there should not be any issue since the future purchaser has also agreed to be bound by the marketplace's terms. However, one of the strengths of NFTs is that they are often transferable outside of the platform where they were first offered. In these situations, a future purchaser may not be aware of the license terms and restrictions that attach to the associated work. Including a link to the license terms of the metadata of the NFT may not solve the issue since the purchaser may not look at the metadata before making a purchase, and even if the purchaser did, the NFT sale/transfer process may not include a step where the purchaser manifests their assent to the terms. Some companies are developing technology solutions where an NFT is "wrapped" in a legal agreement to which the purchaser must consent before the NFT can be transferred.

Enforcement by rights holders

New technologies to commercialize intellectual property rights also inevitably yield cases of infringement and piracy, and NFTs are no exception. Companies with robust intellectual property libraries may want to push out statements that any NFTs associated with their properties are unauthorized unless originating from the company, and educate their employees and freelancers about whether they have the right to mint NFTs of works they created for the company. For example, DC Comics cautioned its freelancers in a letter that was leaked that the offering for sale of any digital images that include DC's intellectual property with or without NFTs is not permitted.¹⁵

If an NFT is minted without the authority of the rights holder, they likely have a claim for copyright infringement, since a number of their exclusive rights would have been violated (e.g., the right to copy, distribute, display, and perform the work). However, enforcing even clear claims of infringement may be challenging in a decentralized ecosystem where identifying the infringing party may be difficult. Rights holders may have the most success focusing on the centralized touch points of this ecosystem, such as NFT marketplaces. Many NFT marketplaces allow copyright holders to submit take-down notices under the Digital Millennium Copyright Act (DMCA) if they believe their work is being infringed.¹⁶ However, a successful take-down likely only means the images of the work displayed on the marketplace will be removed. It does not mean that the infringing work is being deleted from whatever platform it may be stored on, and the rights holder would need to pursue those rights separately. The IPFS file storage system, for example, includes its own DMCA take-down process, but a rights holder would need to approach each IPFS "gateway" and have them take down the infringing work.

Importantly, while a DMCA take-down notice may result in removal of displays of work or even removal of the work itself, the NFT itself will likely remain given the immutability of blockchains. However, rights holders may take some comfort in the fact that an NFT pointing to a work that has been removed will likely have little value.

The DMCA also provides a mechanism for a rights holder to serve a subpoena along with its take-down notice requesting certain identifying information about the infringer.¹⁷ Such a subpoena may prove to be a useful tool in the blockchain context.

In some cases, a rights holder may have a claim against the marketplace itself for contributory infringement if it can show that the marketplace was aware of the infringing activity, and induced, caused, or materially contributed to the infringing activity.¹⁸ Given the active role that many marketplaces play in the minting and offering of NFTs, the second prong could be easy to establish.¹⁹ However, most NFT marketplaces are likely unaware of infringing activity taking place on their platforms. In order to establish knowledge, a plaintiff would need to demonstrate knowledge of “specific infringing material” that is available to purchasers.²⁰

Remedies for NFT purchasers

In the event that a work associated with an NFT is taken down due to copyright infringement or otherwise, the rights of the NFT owner may be significantly limited. As an initial matter, locating the person or entity that minted the infringing NFT may be difficult, given the fact that the blockchain only includes alphanumeric public keys of blockchain participants and the fact that the person could be located anywhere in the world. In addition, most NFT marketplaces are careful to disclaim any liability for the authenticity or legitimacy of the NFTs offered on their sites and make abundantly clear that the purchaser is acquiring the NFT at their own risk. Some marketplaces, such as those that curate the creators whose works they offer, have mechanisms in place to try and minimize the risk on the purchaser.

A purchaser’s strongest claims may be in cases where they are able successfully to assert that they were misled by the marketplace or rights holder. Clear disclosures of any limitations on the purchaser’s right, and clear disclosure of any fees or resale royalties that may be extracted from any future sale, are essential.

Disclaimers of liability

NFT marketplaces, like most providers of services matching sellers and buyers, disclaim any liability in connection with providing the platform. Additionally, they will disclaim any liability for the NFTs themselves; an important point since NFTs are basically pieces of computer code residing on a blockchain.

The terms of service commonly state that the marketplace, as well as the NFTs, are made available on an “as is” and “as available” basis and the provider makes no warranties that the marketplace or NFTs will be available on an uninterrupted basis or that they will be accurate, reliable or safe. Purchasers should also expect that the platform providers will not guarantee that the marketplace or NFTs will be free of viruses or other harmful components.

In addition to stating that the marketplace and NFTs are provided as is, platform providers often apprise the user of a number of disclosures and risk factors, many of which are unique to blockchains. These disclosures may cover, for example:

- the volatility of blockchain and digital assets;
- the uncertainty of tax treatment for NFT transactions;
- clarification that the platform provider does not store, send or receive the NFTs, and that this takes place on a blockchain the platform might not control;
- risks that the asset associated with the NFT may become inaccessible;
- risks arising from a hard fork in the blockchain on which the NFT is stored;
- risks arising from the uncertain regulatory environment surrounding blockchain technologies and cryptocurrencies; and
- risks relating to hardware, malicious software and unauthorized actors.

Those minting, selling or purchasing NFTs should be aware of, and understand, these disclosures, and companies building out NFT platforms should carefully consider what disclosures they want to make.

Jurisdiction and applicable law

The foregoing issues are further complicated given that it may not be clear which jurisdiction's laws should apply. One must factor in that NFTs are offered on a decentralized blockchain ecosystem, and are paid for in cryptocurrencies and can be effectuated without either party revealing any geographic-identifying information such as a shipping or billing address. Although the terms of use for most NFT marketplaces include a governing law provision, that law would likely only apply to disputes arising between the user and the marketplace itself, and would not itself determine the governing law under which to assess rights in the work associated with the NFT. As the use of NFTs and blockchain technology expands, it will likely take a series of court cases, at least in the United States, to establish a framework around how these issues are to be resolved, similar to the jurisdictional case law that developed during the early days of domain name adoption. We may also see NFTs develop such that the metadata specifies the applicable governing law for the NFT and its associated work and that NFT purchases are contingent on acceptance of that law.

Anti-money laundering considerations

While the U.S. Department of the Treasury's Financial Crimes Enforcement Network (FinCEN)²¹ has not yet indicated whether certain NFT market participants (e.g., creators, sellers, dealers, marketplace operators) are or may become subject to U.S. anti-money laundering (AML) regulatory requirements, recent developments and concerns of U.S. lawmakers and regulators regarding the financial crime risks associated with virtual assets make regulatory scrutiny of NFTs likely.

In March 2021, the Financial Action Task Force (FATF) – an intergovernmental organization that develops standards to combat money laundering and terrorism financing – issued draft updated virtual asset guidance,²² which could have potential implications for the regulation of NFTs. While FATF is not a regulatory agency, its membership comprises 37 countries, including the United States, and two regional bodies, and it has played an active role in proposing a regulatory framework for virtual assets. In its updated draft guidance, FATF replaced a previous reference to “assets that are fungible” with “assets that are convertible and interchangeable,” in defining the scope of virtual assets that in FATF's view warrant regulation. FATF further stated that “[f]lexibility is particularly relevant in the context of [virtual assets] and [virtual asset] activities” and that “some items – or tokens – that on their face do not appear to constitute [virtual assets] may in fact be [virtual assets] that enable the transfer or exchange of value or facilitate [money laundering or terrorism financing].” FATF's latest stance may represent an effort to pave the way for the regulation of certain NFTs that have currency attributes or function as stored value.

Similarly, U.S. AML legislation passed earlier this year provides regulators flexibility and wide latitude to regulate a quickly evolving virtual asset industry. In particular, the Anti-Money Laundering Act of 2020 (AMLA) expanded the definitions of “money transmitting business” and “financial institution” under the Bank Secrecy Act (BSA) to include businesses involved in the exchange or transmission of “value that substitutes for currency.”²³ While this amendment aligns with the existing position regarding virtual currencies taken by FinCEN, Congress's expansion of these definitions provides FinCEN with additional statutory authority to regulate not only existing virtual currencies, but also other emerging payment methods or novel asset classes. To date, FinCEN has not issued

any guidance or rules specifically on NFTs. However, given the wave of interest in NFTs, the high value of recent NFT sales and AML-related risk factors, we anticipate that NFTs will attract U.S. regulatory scrutiny.

Could NFTs be treated like virtual currencies?

While the regulatory classification of NFTs is sure to be the subject of much discussion, to the extent that FinCEN were to treat a particular NFT or certain types of NFTs as “value that substitutes for currency,” FinCEN could potentially seek to regulate such activity under its money transmission regime. However, given that NFTs may not readily be classified as a currency substitute as in the case of convertible virtual currencies, FinCEN’s determination to classify an NFT as such may depend on the specific characteristics of the NFT, how it is used, and the apparent money laundering risks involved.

In the United States, persons that accept currency, funds, or other “value that substitutes for currency” from one person and transmit it to another location or person by any means fall within the federal definition of “money transmitter.” FinCEN has made clear in its guidance that virtual currency “has an equivalent value in real currency or acts as a substitute for real currency” and that “[a]ccepting and transmitting anything of value that substitutes for currency makes a person a money transmitter.” In its May 2019 virtual currency guidance, FinCEN expressed a broad view of money transmission and advised that “if assets that other regulatory frameworks define as commodities, securities, or futures contracts were to be specifically issued or later repurposed to serve as a currency substitute, then the asset itself could be a type of value that substitutes for currency, the transfer of which could constitute money transmission.”

A money transmitter is a type of money services business (MSB). MSBs are required to register with FinCEN and must comply with extensive requirements under the BSA, including implementing a risk-based AML compliance program, filing suspicious activity reports and maintaining certain records. Foreign-located companies that do business as an MSB wholly or in substantial part within the United States are also required to register with FinCEN and comply with the BSA’s requirements. Violation of these obligations can result in substantial civil and criminal penalties.

Risks in art trade

Growing concerns regarding money laundering and sanctions evasion risks in the art trade could have potential implications for persons that deal in certain NFTs, to the extent that regulators perceive similar financial crime risks in digital art. FinCEN issued guidance in March 2021 emphasizing that financial institutions with existing BSA obligations “should be aware that illicit activity associated with the trade in antiquities and art may involve their institutions.” The Office of Foreign Assets Control (OFAC) similarly issued an advisory in October 2020 highlighting the sanctions risks associated with dealings in high-value artwork involving sanctioned persons. In OFAC’s view, the opacity of the art market can make it especially vulnerable to sanctions violations.

Although participants in the art trade currently are not subject to the BSA, recent legislative developments suggest that this may change in the near future. Specifically, as part of the AMLA, Congress commissioned the secretary of the Treasury to perform a study of how trade in artwork facilitates money laundering and the financing of terrorism and to report its findings to Congress by January 1, 2022. The AMLA’s extension of the BSA to “persons engaged in the trade in antiquities” might be a bellwether of forthcoming change in AML regulation of the art trade. While it is too early to say whether traders of artwork may become subject to AML regulatory requirements, any such expansion of the BSA could capture traders of digital art or similar items on the blockchain.

Securities law considerations

The programmability of NFTs also allows the creator to easily fractionalize ownership of the NFT amongst multiple parties. One aim of fractionalized NFTs (F-NFTs) is to provide a broader group of buyers with the ability to take part in the purchase of rare or expensive digital assets. Although there are a variety of ways of doing this, one involves using a “smart contract” program that issues a pre-set number of fungible cryptocurrency tokens (often called “shards”), which function as fractionalized interests in the underlying NFT. These fungible shards might be made available for purchase or sale on secondary exchanges, including through decentralized platforms.

Under the Supreme Court’s *Howey* test, an asset constitutes an “investment contract” (and thus qualifies as a “security”) when it represents a transaction involving (1) an investment of money, (2) in a common enterprise, (3) where profits are reasonably expected to be derived from the managerial or entrepreneurial efforts of others. Over the years, courts (including the Supreme Court) have refined the *Howey* analysis, clarifying that a given asset may fall outside the “investment contract” definition when it is acquired primarily for personal use rather than passive investment. Moreover, where the “profits” sought by purchasers are based on their own efforts or market forces of supply and demand, the *Howey* test may not be satisfied.

Applying the *Howey* test to NFTs that represent rights to digital collectibles and artwork, there are strong grounds to conclude that such digital assets would not be considered investment contracts under *Howey*. Because each NFT is a unique, one-of-a-kind digital asset, there is arguably no “common enterprise” involved in the NFT’s purchase or sale. Further, many purchasers of NFTs buy them because of their consumptive value – that is, the buyers enjoy owning them in their own right, not because of any potential profit that ownership might bring. And even though some buyers of NFTs may seek to profit based on the possibility that they appreciate in value in the future, like comic books, baseball cards and traditional artwork, such value appreciation is likely to be more closely tied to its rarity and market forces than any ongoing managerial or entrepreneurial efforts of the sellers. Given the fact- and circumstance-specific nature of the *Howey* test, each NFT should be assessed on its own to determine whether the investment contract label might apply to its offer or sale.

Moreover, an analysis of an NFT itself does not necessarily end the inquiry. Most cases applying *Howey* have involved an underlying asset that, in and of itself, is indisputably not a security. Nevertheless, courts have held that the manner in which the underlying asset is promoted to purchasers – including all of the concomitant promises made by the seller – may give rise to an investment contract under *Howey* if they create a reasonable expectation of profits based on the managerial efforts of others. Accordingly, one should look beyond whether an NFT itself is a security to all of the facts and circumstances surrounding its offer and sale. This comports with the now-famous speech by former SEC Director William Hinman, who, in the context of opining that the cryptocurrency Ethereum should not be considered a security, emphasized that “the analysis of whether something is a security is not static and does not inhere to the instrument” itself, but rather to the way in which it is offered and sold. Thus, even where an NFT is not a security, it may be possible for it to be sold as an investment contract under certain facts and circumstances.

One specific circumstance that gives rise to potential securities questions is where NFTs are fractionalized into F-NFTs. As SEC Commissioner Hester Peirce has noted, fractional interests in an NFT may be considered unregistered securities, even if the NFT itself does not qualify as one. As a result, one should consider all of the circumstances of any offer

or sale of F-NFTs to assess whether they could be considered an investment contract under Howey. This includes assessing the ways in which the F-NFTs are marketed to potential buyers, as well as the promoter's ongoing role with respect to the F-NFTs before and after they are sold.

For example, consideration should be given to the promoter's ongoing role, if any, with respect to the underlying NFT, including any control over future sales of the NFT for profit to benefit all holders of F-NFT shards. On the other hand, where the associated protocol allows F-NFT purchasers to control the NFT through consolidated ownership, and thus to independently determine how to use or sell the NFT to future buyers, this would cut against any argument that the purchasers are relying on the efforts of others to realize a profit. Additionally, where the marketing of the F-NFT places emphasis on the consumptive value of the NFTs or F-NFTs (as opposed to the potential for investment returns based on the promoter's ongoing efforts), there is less risk that they would be deemed investment contracts under Howey.

Ultimately, while NFTs themselves are not likely to be classified as securities, further securities-related questions may hinge on the specific facts and circumstances surrounding their creation, promotion and sale.

* * *

Endnotes

1. As discussed further below, the digital work associated with an NFT is typically not stored on a blockchain.
2. Generally, DAOs are blockchain-based entities that operate based on a set of pre-defined rules or protocols governed by smart contracts. DAOs leverage blockchain technology to decentralize the organizational structure of a corporation by providing mechanisms to record interests in a transparent and decentralized manner and to permit certain processes to be automated, such as transferring assets or decision-making capabilities.
3. 17 U.S.C. § 106.
4. 17 U.S.C. § 101.
5. 17 U.S.C. § 203. The right of reversion works differently depending on whether the work was created before or after January 1, 1978 when the current Copyright Act went into effect.
6. *See, e.g., Rooney v. Columbia Pictures Indus., Inc.*, 538 F. Supp. 211, 223 (S.D.N.Y.), *aff'd*, 714 F.2d 117 (2d Cir. 1982).
7. 17 U.S.C. § 106A.
8. *See, e.g.*, 15 U.S.C. § 1114.
9. *See, e.g., id.* at § 1125.
10. The Filecoin protocol, which complements IPFS, seeks to address this situation by rewarding nodes on the network that maintain redundant copies of files.
11. 17 U.S.C. § 109(a).
12. *Quality King Distributors, Inc. v. L'anza Research Intern., Inc.*, 523 U.S. 135, 152 (1998).
13. *Capitol Records, LLC v. ReDigi Inc.* No. 16-2321 (2d Cir. Dec. 12, 2018).
14. 17 U.S.C. § 109; *Apple Inc. v. Psystar Corp.*, 658 F.3d 1150, 1155 (9th Cir. 2011).
15. "DC Comics Warns Freelancers Not to Participate in NFT Auctions Featuring the Company's IP," (Mar. 15, 2021) available at <https://news.bitcoin.com/dc-comics-warns-freelancers-nft-auctions-featuring-companys-ip/>.

16. Under Section 512 of the Copyright Act, “provider[s] of online services or network access, or the operator of facilities therefor” are themselves not liable for copyright infringement by third parties using their services where such services are providing “information location tools” (e.g., search functionality). Most NFT marketplaces offer DMCA take-down language to take advantage of this safe harbor.
17. 17 U.S.C. § 512(h).
18. *See, e.g., A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1019 (9th Cir. 2001).
19. A plaintiff could analogize today’s NFT marketplaces to those of the swap meet operator in *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 264 (9th Cir. 1996). According to the Ninth Circuit, the infringing activity (sales of counterfeits) could not have taken place without all the infrastructure offered by the swap meet provider.
20. *Perfect 10 v. Amazon.com, Inc.*, 508 F.3d 1146, 1171 (9th Cir. 2007).
21. FinCEN is the Treasury Department bureau responsible for administering and enforcing the Bank Secrecy Act (BSA) – the main AML legislative and regulatory framework applicable to U.S. financial institutions.
22. FATF, Public Consultation on FATF Draft Guidance on a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers (March 2021).
23. *See* our January 2021 client alert “US Enacts Historic Legislation To Strengthen Anti-Money Laundering and Counterterrorist Financing Legal Framework” for additional discussion of this legislation.

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