

THE FUTURE OF NON FUNGIBLE TOKENS (NFTS) : AN ANALYSIS OF
REGULATORY AND COMPLIANCE CHALLENGES
AND OPPORTUNITIES

by

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DEDICATION:

This doctorate is dedicated to Gennady Alexandrovich Vaynerchuk, or more popularly known as Gary V., an American businessman, author, speaker, and internet personality. He is a co-founder of the restaurant reservation software company Resy and Empathy Wines. Vaynerchuk is now more known for his work in digital marketing and social media as the chairman of New York–based communications company VaynerX. Gary has always posited the NFTs have been around longer than cryptocurrency, blockchain, and Bitcoin. Gary has been a loud voice in the NFT space, and the loudest voice in my personal interest in NFTs. Cheers to you Gary, who I technically bought NFTs when I bought new fancy armor to play in Halo Multiplayer over 20 years ago, and for anyone that’s bought a skin or an item in a video game in the last couple decades.

ABSTRACT

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Non-Fungible Tokens (NFTs) over the recent years have jumped into the limelight, making us rethink how we view owning physical or nonphysical items that have value to us. These so called ‘digital assets’ make us constantly question how we can own an intangible item of any sort, in an ever-evolving digital age. NFTs encompass virtually everything we can think of in regard to tangible items, but now intangible, such as contracts, paintings, land, video games, whom attract all of their accompanying creators, artists, facilitators, and collectors, especially for their ability to put the control and power of creation back into their creators hands. What accompanies all of this is a sense of uncertainty, particularly in the regulation and of such assets. Questions about who has the rights to any sort of intellectual property, laws around purchase and sale, and whether the market of NFTs is even legitimate, have all cropped up since the sudden surge of NFT interest starting in 2021. Despite the general pop culture idea that NFTs are just a meme

to be mocked, there is still a need to implement some sort of regulatory framework. This framework would protect investors, reduce risk of investing in such assets, and squeeze out mal actors that seek to take advantage of the burgeoning sector. This is akin to the implementation of the US 'blue sky law' era 100 years ago, where laws were enacted to protect stock market investors. The following these will engage in various methods producing various results, that create a discussion, to analyze this unique area of digital investment and collectables' regulation and compliance, which will reveal the complex nature of generating a safe investment realm for buyers, while simultaneously preserving the rights and overall creativity environment of NFT creators.

KEYWORDS

Blockchain, Minting, Floor, Gas fees, AirDrop, Drop, Ethereum, Burn, Contracts, Dao, Delist, Digital art, NFT, Compliance, Money laundering, Risk assessment, Suspicious activity reporting, AML investigation, AMLID, Know Your Customer, Sanctions, Enhanced Due Diligence

LIST OF ABBREVIATIONS:

NFT - Non-Fungible Token

FT - Fungible Token

DeFi - Decentralized Finance

DAPP - Decentralized Applications

Altcoin - Alternative coins (other than Bitcoin)

Dao - Decentralized Autonomous Organization

CEX - Centralized Exchange

DEX - Decentralized Exchange

ICO - Initial Coin Offering

Fiat - Government issued/backed currency (i.e., USD, AUD, EUR)

KYC - Know Your Customer

KYT - Know Your Transaction

AML - Anti-Money Laundering

EDD - Enhanced Due Diligence

FCC - Financial Crimes Compliance

SAR - Suspicious Activity Report

FED - US Central Bank

TRA - Theory of Reasoned Action

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CHAPTER I: INTRODUCTION

1.1 Introduction

How much would a clipart Jpeg of a Rock sell for? A digital image that appears to of been drawn by a child? Is there any intrinsic value to this? If one were to draw a random scribble on this paper, like below: Let's say it has some value. How do we



regulate such a concept? How do we monitor any transactions between someone giving this item and someone taking this item in return for monetary value? What laws must be enacted for such a concept of selling a scribble to one person, and what laws must exist for a person to legally hold a scribble that has some sort of monetary value attached to it? This is what has inspired the following paper.

These digital images that have sold for obscene amounts are called Non-Fungible Tokens, or NFTs. A 'fungible token' or fungible item can be described as something that can be swapped out for one another, such as a one dollar bill, or a Volvo, or even just a pill of Ibuprofen. A non-fungible token, or non-fungible item, is something that is unique, and cannot be swapped out for something out, such as a person, the Mona Lisa, or a building of any sort. Fungible in a much larger abstract term, for this purpose, is something that can or cannot be substituted. The Oxford dictionary is "something that is fungible can be replaced by something else that is exactly the same". There is no definition of the word 'nonfungible', however the definition from the Oxford dictionary for Non-Fungible Tokens is that of "digital assets that only exist online, whether songs, works of art or even tweets".

Overall; NFTs can be used to represent ownership of digital art or any other unique digital item where ownership is recorded in smart contracts, digital code that is set in motion when certain conditions are met, on a blockchain, a type of global open source accounting ledger that is wildly difficult to hack, edit, or alter. NFTs have recently received enormous attention from both cryptocurrency investors and the media, which begs questions of regulatory oversight and global financial compliance changes (Gutiérrez, Gaitán, Jaramillo, Velasquez, 2022).

1.2 Research Problem

With new asset classes come new regulatory and compliance questions. While NFTs provide investors with a new high tech cutting edge way to own collectables and trade or invest in art, the major question with NFTs is how to regulate them. Cryptocurrency itself, which is the majority of currency used to buy and sell NFTs, is a highly controversial asset, or currency, even still in today's financial markets regarding regulation. Cryptocurrency was designed to not be able to be regulated. A frictionless borderless uncontrollable currency in digital code format, some would call Bitcoin digital 'gold', and thus regulation issues with that abound. To go even further down the crypto regulation rabbit hole we arrive at NFTs, where anything on a computer screen in the form of a creation, such as artwork, games, virtually anything that can be displayed on a screen, can now use digital gold, or cryptocurrency, in order to purchase it. Gold and art are already highly regulated in modern times, so the major problem now is how to

regulate something that acts as art that can be traded for gold that is designed to not be regulated at all?

1.3 Purpose of Research

This study explores the initial issues surrounding regulations of NFTs and then provides mitigating actions and/or remedies for global legal and financial institutions, governments, private businesses, and many other organizations and entities, can take to regulate NFTs. The target recipients of these recommendations are virtually any entity or natural person that touch NFTs, from the private collector of such asset class, all the way up to the leading global international anti-money laundering organization called the Financial Action Task Force (FATF). The implications of these recommendations are for clarity on how to regulate NFTs, by implementing new policy, procedure, and laws.

Specific Aims:

- 1) To explore the current policy, procedures and laws currently in place that are regulating NFTs and keeping them within the legality framework of global financial, legal, and governmental organizations.
- 2) Identifying the gaps where NFTs have been and currently are being taken advantage of from a regulatory and compliance angle.
- 3) Examine solutions to fill said gaps with new or additional policy, procedures and laws, which global financial, legal, and governmental organizations can use to show NFTs are a stable asset class to investors and creators alike.

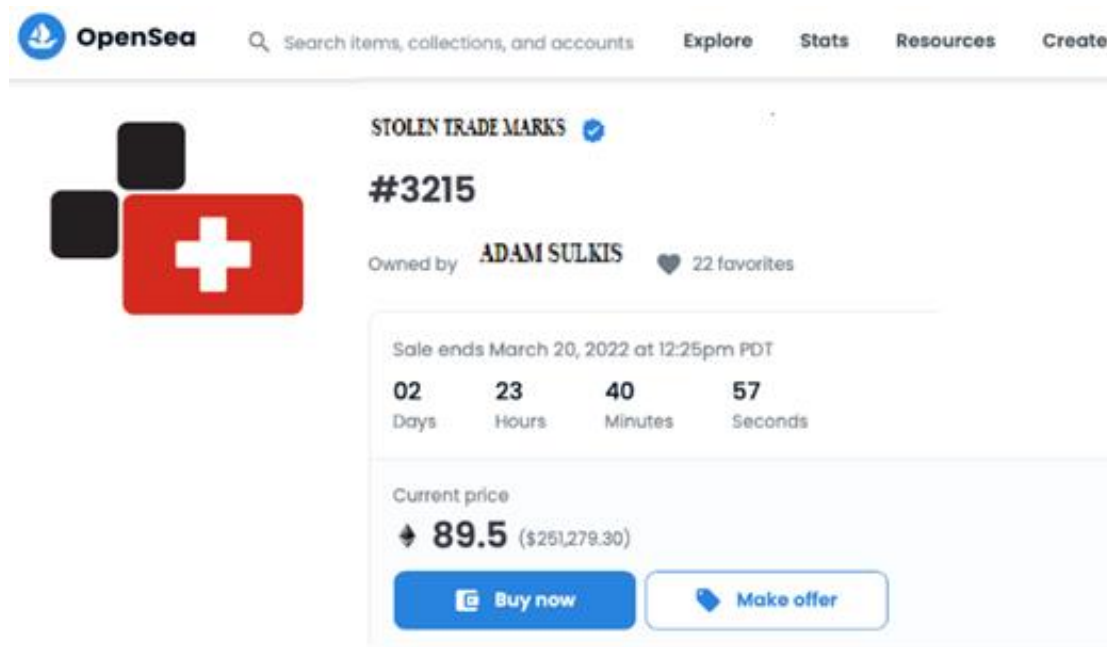
1.4 Significance of The Study

NFTs are often viewed in mainstream culture as not a serious asset class, somewhat of a joke, and often times a ‘meme’. However there has been significant growth in the market: Market size was valued at \$16B in 2019 and was poised to grow from \$21B back in 2023 to \$212B in 2031, growing at a rate of 34% in the period of 2024-2031 (Skyquest Report, 2024). The existing regulatory and compliance frameworks for NFTs are lacking, just like the cryptocurrency sphere in general, with a somewhat vicious cycle permeating in the crypto and NFT space: There is barely any regulation, so they are not taken seriously, so barely any regulation is created. Thus, there is a need to clamp down and formulate comprehensive regulations for NFTs.

The overall academic significance of this analysis aims to contribute to the existing body of research literature on NFTs and overall blockchain, cryptocurrency, and digital asset technological regulation and compliance spheres. It aims to fill legal and regulatory gaps, advanced NFTs Theory of Reasoned Action, and other theoretical frameworks, either already in existence, or that are unfinished.

The practical significance here would be tangible implications for regulators around the world to agree on how to treat NFTs in the compliance space. The policies, procedures, and laws scrutinized here, and then revamped, may provide actionable recommendation for authorities. The more the NFT space is regulated, while still protecting the essence of investing and creating digital asset collectable or art, the more popular NFTs will become, increasing their value, providing investment profit for all stakeholders of the NFT world.

This will segue and transition to provide the industry with significance. The benefits of increased regulation within the NFT space will protect all sides of it, such as collectors, investors, exchanges, companies, organizations, governments, creators and artists, to name just a few NFT stakeholders of the NFT space. Intellectual property rights are a contested issue within NFTs that are rarely solved in modern times. For example, there's nothing stopping one from selling this academic institution's symbol, trademarked or not, as an NFT on a popular NFT sales and exchange marketplace like OpenSea.com:



Too stringent regulations newly put in place, would cause both ends of the marketplace to contract, and essentially push out NFT stakeholders such as the collectors, creators, or platforms they sit on. This is traditionally how increased regulation flows, in terms of the stakeholders of those investment spheres, with pros and cons of increased regulation. There is a fine balance between too much or too little regulation, and the impact this


analysis can have can bring the too little NFT regulation up to just enough NFT regulation, without crossing over into the realm of too much NFT regulation.

The societal significance of the impact of this review would allow modern day investment society and even pop culture to being to respect NFTs, and not view them as scams, highly unregulated, speculative, or just the butt end of crude jokes. If consumer interests are well known to be protected, such as banks that hold money, or stock exchanges that hold stock shares, many would reap the benefits of collecting NFTs, or even just dabbling in the space. This would greatly contribute to a global recognition of NFTs as a legitimate asset class, such as precious jewels or vintage automobiles.

1.5 Research Purpose & Questions

This paper's goal is to explore overall NFT regulation and compliance in its existing form, and make recommendations to overhaul the policies, procedures, and laws, that can improve NFT stature as an asset class for buyers, sellers, exchanges, and governments:

- 1) How can the gaps of NFT regulation and compliance frameworks for policies, procedures, laws be filled, revamped, or overhauled?
- 2) This study puts forth the hypothesis if NFT regulation is increased, and new or more laws, policies and procedures are generated, this will lead to a robust growth in the NFT sector overall.

And to answer the first question in this chapter, of how much money a digital picture of a rock would sell for, it sold \$1.3 million (Sigalos, 2021) = 

CHAPTER II: LITERATURE REVIEW

2.1 Introduction of Theoretical Framework

The underlying principle and purpose of NFTs is actuating and facilitating financial operations with greater verifiability and ownership solidification. It is therefore unsurprising that NFTs can be used in financial transactions as much more than just tradable assets. For instance, NFTs can be used for charity as a vehicle of value being sold through auctions (Mercury.io, 2024). A key theory that will be explored is that if NFTs are regulated more, than this will all other spheres of influence that NFTs touch.

Theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge within the limits of critical bounded assumptions or predictions of behavior. The theoretical framework is the structure that can hold or support a theory of a research study. The theoretical framework encompasses not just the theory, but the explanation about how the researcher engages in using the theory and its underlying assumptions to investigate the research problem (Gabriel, 2008).

NASDAQ describes how there are innumerable other functions NFTs can theoretically have, and understanding how to evaluate revenues derived from them can get messy. This is precisely why the frameworks built into NFT marketplaces, the self-regulation efforts, effectively, are essential (Krión, 2021). Research suggests that the manipulable nature of NFT prices could theoretically help criminals to justify their illicit proceeds to tax authorities on the basis that they are legitimate earnings from NFT trading. Because of this, authorities face great difficulties in establishing genuine criminality (Mondoh, Johnson, Green, Georgopoulos, 2022).

Like in stock market securities legal theory, NFTs can lack, like traditional negotiable titles of credit, literality, and not refer to the full content of rights to be exerted by the holder (Jiménez, Jiménez, 2022), this is one of the many regulatory theories in the securities and finance world that aid us in deciphering the legal status of NFTs and their current regulatory landscape. Typical issues with NFT regulation and compliance theories often leave questions.

Intellectual property rights theories come into play typically when NFTs ownership rights, of any sort, no matter how the NFT functions. On one hand, applying for a patent and trademark is not only a time-consuming and lengthy process but also costly. NFTs have considerable potential in the intellectual property domain. They can promote transparency and liquidity and open the market to innovators who aim to commercialize their inventions (Mojtaba, Bamakan, Nezhadsistani, Bodaghi, Qu, 2022), pushing creators to NFTs for ownership rights. On the other hand, before the widespread application of blockchain-based technologies, the mechanisms in place for verifying ownership of digital assets and thus, means of securing them, remain susceptible to tampering, that translated into significant losses within the NFT space (Rehman, Zainab, Imran, Bawany, 2021). This pushes creators away from NFTs in regards to any ownership rights mechanism.

These ongoing ever evolving theories of regulation are the basis for NFT self-regulation. For example, Ernst & Young recommends that if an organization wants to acquire an NFT marketplace, a party would benefit from performing market integrity diligence ahead of acquisition to gain an understanding of the unconventional risks. Integrity diligence involves an understanding of ethics and compliance policies and procedures to identify existing regulatory controls in that market, and where potential gaps exist and to discover and quantify the impact of violations to both (Massucci, Kyle, 2022).

One cultural and technological adoption theory relevant to NFTs are Gamification. This can be described as NFT games, where in game purchases are NFTs. This is now moderately used and has proven to be an effective tool to attract users and enhance user engagement. For example, Axie Infinity is an online game universe revolving around Pokémon-esque creatures and is recognized as a leader in NFT play-to-earn gaming (Murphy, Velasquez, 2022). Technologies such as virtual reality, artificial intelligence, and blockchain continue to develop rapidly and receive widespread attention from society (Wang, Jiang, Sun, Deng, 2023). It is worthwhile to look at some actual instances of how NFTs have been accepted in various sectors to better comprehend the adoption curves of these technologies. One of the most noteworthy instances is the usage of NFTs in the music business to market exclusive digital goods like VIP experiences and concert tickets. NFTs are also utilized in the art sector to market and sell one-of-a-kind digital artworks and other collectibles. As a result, a new generation of digital artists has emerged who are producing works that are intended to be sold as NFTs (Sneka, 2023).

The handful of theories above greatly contribute to the question of how to regulate NFTs properly. The importance of the diverse range of NFT theories, in combination, provide a strong basis of how to answer the question of how to regulate NFTs, and provide clarity on how to best regulate them going forward. As we add more theories regarding how NFTs work, their usage, and any further outstanding questions about NFTs, one can gain clarity on how to regulate them, to remain safe, and increase protection, for all parties involved in the NFT world. If more theories about NFT usage and their versatility are revealed, the closer regulation of NFTs can be.

2.2 Theory of Reasoned Action: Intro to TRA & NFTs Overview

One of the most popular theories used to explain the relationship between behaviors and attitudes is the Theory of Reasoned Action (TRA). According to the TRA, proposed by Martin Fishbein and Icek Ajzen in the 1960s, a given behavior can be predicted by intentions (like motivations) to engage in that behavior. Behavior-specific attitudes (like evaluations or appraisals) and subjective norms (like perceived pressure to engage in behavior from significant others) determine intentions. Greater behavioral intentions stem from more favorable behavior-specific attitudes and subjective norms (Thompson, Ata, Roehrig, Chait, 2012). TRA is one of the most popular psychological theories used to explain why people think how they think and do what they do.

When the Theory of Reasoned Action was developed by Fishbein and Ajzen, it was an improvement over the information integration theory. Fishbein and Ajzen formulated the theory after trying to determine the differences between attitude and behavior. The first change from the theory is behavioral intention. This theory also acknowledges that there are factors that can limit the influence of attitude on behavior. For example, if our attitude leads us to want to go out clubbing but our bank account is suffering, the lack of money will change that attitude to staying in for the night. Therefore, the Theory of Reasoned Action predicts behavioral intention, an in-between for stopping at attitude predictions and actually predicting behavior because it separates behavioral intention from behavior (Kruger, Suny, Buffalo, 2024). Fishbein and Ajzen built upon existing behavior models of psychology at the time, and formulated what would be the foundations for the TRA.

The Theory of Reasoned Action has been applied and researched in many health-related behaviors such as addictive behaviors (smoking, alcoholism, and gambling), breakfast and fast food consumption. A group of researchers carried out a study to test whether the Theory of Reasoned Action would increase individuals' likelihood of consuming breakfast. The study included an intervention in which participants received an informational program on breakfast consumption promotion. Participants filled in a questionnaire about their attitudes towards breakfast consumption before and after the intervention. Results indicated that subjective norms were a strong predictor of behavior. Participants were more likely to consume breakfast if they believed that those around them were consuming breakfast and that these people around them would want him/her to consume breakfast (Hosseini, Gharghani, Mansoori, Aghamolaei, Nasrabadi, 2015).

Communicating climate risks to vulnerable groups motivating them to take adaptive actions remains a significant challenge in many populations, especially to children. Thus, a study using the TRA suggests that attitude and subjective norms are important for persuasive communication. The study assessed how to apply TRA, its constructs and other relevant factors to predict intention and beliefs to change behavior tendency. Can Tho city, located in the Mekong Delta of Vietnam, was selected as a research location because of its vulnerability to climate change. The results show that, first, TRA was found to be a significant predictor model of children's climate change behavior intentions. Second, attitude had a significant effect on the children's intention to act while videos with subjective norms had not. Third, TRA theory-based treatments were positively associated with changes in children's beliefs on attitude and belief on

social norms towards climate change. In addition, what was discovered, was that past practices, knowledge and gender are further factors that influenced children's behavior intentions, within the bounds of the TRA research and analysis. A theory-inspired design of communication strategy allows the prediction and influencing of intentions. This finding has strong implications for both research and development in South East Asia (Nguyen, Hens, MacAlister, Johnson, Lebel, Tan, 2018).

Another study showed that using the TRA, with increasing efforts in distance learning and growing enrollments, faculty and students were using internet technologies as a medium for learning. However, social networking use in distance learning courses was not a prevalent practice. As the research suggested, distance teaching and learning could benefit from the incorporation of social media technologies. The popularity of social media technologies contributes to the interest in using them in distance courses. The purpose of that study was to investigate faculty intentions for implementing social media into distance learning courses at a major public research university in the southeastern United States through the TRA. Furthermore, students fit the TRA model for positive intentions to use social networking sites, but faculty were not studied in the TRA model. This particular study found distance faculty members' intentions and behaviors were influenced by their attitudes and subjective norms. The implementation of more applications and newer social media technologies was found to enhance distance learning in higher education. (Wright, Breaux, Fisher, Rice, Yates, 2019). This was one of numerous TRA based and related framework studies performed in the last decade.

2.2.1 TRA & Other Various Digital Tech

The Theory of Reasoned Action has been used to comprehend digital technology adoption. With the advanced and dynamic growth of technologies, how fast the consumers are accepting technologies depends on a number of factors such as availability of technology, convenience, consumers' need, security etc. Technology readiness refers to people's propensity to embrace and use of new technologies for accomplishing goals in home life and at work, and perhaps socially. Based on individual's technology readiness score and the technology readiness, further classified technology consumers into five technology readiness segments of explorers, pioneers, skeptics, and laggards. This closely correlates with people's behavior and TRA concepts (Lai, 2017).

If a typical TRA component such as behavior intentions, in the context of digital technologies, is to make peoples home life easier, shopping has always been a lynchpin of digital technological adoption. Digital technologies play a vital role in daily human life and significantly influence human attitudes toward the adoption of new and attractive lifestyles. The internet has been widely accepted in every modern society, and the act of purchasing products or services over the internet, known as online/internet shopping, has revolutionized business. With endless development in the retail industry, online shopping defines the massive market growth and provides an effective platform for technology such as high-speed internet. Internet penetration has a major effect on the online buying market, and its acceptance ratio is higher in developed counties than in developing countries (Saleem, Aslam, Kim, Nauman, Khan, 2022).

The TRA explains people's behavior in digital technologies such as online shopping because it reveals how exposure to media information, including digital marketing, influences consumer buying behavior by shaping beliefs and intentions (Yzer, 2023). Another case study of attitudes and subjective norms of specific online behaviors would be that the COVID-19 pandemic resulted in nearly all universities switching courses to online formats. Data was collected from course evaluations. Students reported decreases in live lecture engagement and attendance, with 72 percent reporting that low engagement during lectures hurt their online learning experience. A majority of students reported that they struggled with staying connected to their peers and instructors and managing the pace of coursework. Students had positive impressions, however, of their instructional staff. Majorities of students felt more comfortable asking and answering questions in online classes, suggesting that there might be features of learning online to which students are receptive, and which may also benefit in-person classes (Hollister, Nair, Hill-Lindsay, Chukoskie, 2022).

It is widely known that attitudes towards digital tech typically decides the end users behavior. Social networks and peoples peer influence definitively decide how they use digital technology. There have not been any studies that apply the Theory of Reasoned Action into specifically cryptocurrencies, nor even blockchain technology, as the decision to use or invest in cryptocurrency or even utilize blockchain technology can largely be a technical decision, where one must have financial and/or technological acumen, such as already being a savvy open minded investor or being heavy professionally into technology, such as a computer programmer.

Thus, the TRA has not been widely or well known in regards to digital assets specifically, thus it is challenging to find already published studies or cases on the TRA and cryptocurrency or NFTs. It is however easy to compare digital assets to other digital technologies. For example, the difference between digital currency and digital banking is a well-known household difference. Currency can go inside of a bank account, and thus, holding cryptocurrency on an exchange, such as Binance or Coinbase, is the equivalent to holding dollars or euros within a bank account. The difference is that you can go to a physical bank to remove physical currency, which you cannot perform this action with digital currency held in an account on a digital exchange. This presents a unique challenge for NFTs, especially the most widely popular category of NFTs as used for artwork. If one has a physical painting, they may display it in physical form such as in a museum, art gallery, show, or at their home, even their office. However if this artwork takes the form of an NFT painting, to display the same painting in those same aforementioned locations, they would need a monitor or television screen. This immediately would show to the viewers of this artwork that this is somehow 'less' legitimate than physical artwork, because the viewers of the NFT are just merely watching a screen. This is how the TRA behavior aspect comes into play with peoples attitudes of NFT artwork. However, this is where the opportunity lies. For example, gamers that purchase skins or different types of costumes for their characters within games, cannot display their collection, anywhere outside of that game. Thus, an opportunity of shifting behaviors to positive of NFT artwork, would be acceptance of viewing people's online art galleries.

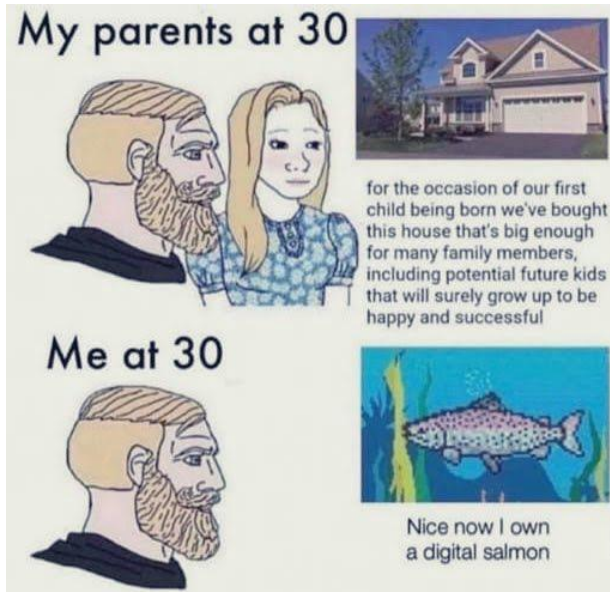
2.2.2 Popular Broad-Based Attitudes With NFTs

The factors shaping attitudes towards NFTs may be how people perceive monetary and cultural value. There is a difference between groups who perceive NFTs in different ways, such as collectors, investors, or artists. Collectors may have various strategies for buying, holding, and selling. This may be similar to what investors do as well. Collectors may also have an attitude of accumulation. Artists attitudes may vary widely different that collectors and investors, where their attitude towards NFTs is more abstract, art and performance based. Artists may seek to generate collections of NFT artworks for quality, or even for quantity.

There is also a certain level of legitimacy and trust that is intertwined with NFTs. Collectors, artists or investors may or may not doubt their legitimacy, depending on the platform they are traded, the entity that produced the NFT, or something along the lines of the sources reputation. Absence of any legal framework can affect perception and attitudes of NFTs. Additionally, NFTs unfortunately have been widely associated with scams and fraudulent activity, further adding to a negative broad based attitude of NFTs.

There are many potential benefits for NFTs once these broad based attitudes have been shaped into a more positive outlook, such as creative freedom, extreme profit potential, or ownership rights. These benefits can influence the various NFT stakeholders in the NFT realm among various demographics, producers and collectors. Additionally, the NFT community itself has a positive attitude within itself, due to some of these stakeholders such as collectors and artists, already achieving widescale success, such as extreme profit, or an artists proliferation of their works, and gaining notoriety.

Psychological aspects that influence NFTs can often be based around meme culture or modern 2024 internet culture. There appears to be a “fear of missing out” (FOMO) in regards to NFT collection due to various NFTs being flipped, or bought and then sold, for extreme profit. There have been widespread endorsements by celebrities for



NFT collection. The list of celebrities, which is non exhaustive, consists of Snoop Dogg, Gary Vaynerchuk, Tony Hawk, Paris Hilton, LeBron James, Grimes, Lindsay Lohan, and Floyd Mayweather (Isige, 2024).

There are also cases where NFT economic growth, such as the potential for extreme profit, have most literally lifted individuals out of poverty. Niyi Okeowo Mohammed is an African NFT artist who has dabbled in numerous aspects of the industry, from photography to graphic design and 3D animation. Niyi started designing in 2009 and he honed his skills throughout the years. His NFT art projects often take time to create. Although, they compensate for the amount of each one. Niyi is one of the artists that exhibited at Art X’s NFT exhibition project titled; Reloading.

He later sold his art Indig Child, for 1.2 ETH (\$4,140 at the time) on the popular NFT marketplace SuperRare. Niyi reports that the lack of middlemen in Africa’s NFT marketplace makes his operations all the heavier. Today his artwork goes for no less than 1.5ETH(\$6500 at the time) (Web3 Africa, 2023). This is how different economic

backgrounds and financial literacy regarding NFTs impact individuals' willingness to invest in NFTs even as artists. While there are economic risks associated with NFTs, such as market volatility and liquidity concerns, artists can still view NFTs with a "nothing to lose" type attitude, and at minimum, they will have produced quality works that will eventually sell, even on a global scale. This is important to artists in especially impoverished parts of the world due to their NFT artwork being put on display globally, and not just limited to physical museums.

Corporations are also reaping the benefits of utilizing NFTs. The sports apparel behemoth Nike has used NFTs as a patent for its digital footwear. Its "Cryptokick" NFT links a digital shoe to its counterpart in the physical world. If you sell your physical shoes you sell their digital equivalent. The NFT also buys owners access to online sneaker forums and can be worn by your avatar as digital fashion in video games such as the popular online game Fortnite (Glaveski, 2024).

Extreme profit has psychologically affected attitudes of NFTs as well. Extreme profit can be defined as profit where possibly your investment doubles, and thus, you invest \$100, and receive another \$100, and your total investment is now worth \$200. A smaller 5% or even 25% yield on an investment is normal in profit situations in the traditional financial stock markets. Phrases like "10X" where someone has made 1,000% on an investment are normal in the NFT profit space. In 2021, Brittany Pierre made over \$109,000 NFTs, of her photography and flipping other NFTs she bought for a profit. But before that, Pierre was struggling to pay rent on her Chicago apartment or afford groceries and bus fare (Locke, 2022).

2.2.3 Typical Norms Within The NFTs Ecosystem

A widespread norm within the NFT sphere is that social networks play a critical role in moving NFTs. Typical social networks that are popular, but not widely popular, such as Reddit or even Discord and Telegram, hold a certain power over NFT culture in regards to trending NFTs. Things can move very quickly with NFTs across platforms for social networking, especially like Twitter. Unfortunately on the outside, action with NFTs across social media, to the financial and/or legal world, can appear like “pump and dump” schemes. However, they are just a reflection of the velocity in which the NFT market as a whole may move.

Regarding the use of influencers; the partnership between NFT influencers and brands is an excellent option for both of them since brands recognize these personalities as experts on their subjects with a relevant voice in their community. There are quite different kinds of NFT marketing campaigns where NFT influencers have become a major key figure for brands' constant pursuit of innovation and revenue. But having the possibility or the interest of including an NFT marketing strategy doesn't necessarily mean brands know how to do it properly. This is the reason why NFT influencers are getting the attention of brands that are looking to jump and dive in this virtual ocean of opportunities. Brands partnering with NFT influencers is essential, especially when the companies are trying to implement crypto and NFTs into their marketing strategies. NFT content creators and artists break down all things NFT related in an easy and entertaining way, which helps them build and engage with their audience (Stargazer, 2024).

The psychological norm of Fear of Missing Out or FOMO drives many to invest in NFTs with a particular sense of urgency, which has appeared to be a norm in the NFT space. Our inherent desire to be part of success stories, particularly within the volatile yet promising digital asset space, fuels this FOMO. Amplified by rapid market growth and sensationalized tales of success, FOMO becomes a powerful force that shapes investor decision-making. Its influence on market dynamics is undeniable, with real-world examples showcasing significant price swings in both crypto and NFTs (Aelf, 2024)

It should be noted that NFTs only achieved popularity in 2021. Two of the most high-profile collections are CryptoPunks and Bored Ape Yacht Club NFTs, which have sold for peak prices of \$24 million and \$3.4 million, respectively. These NFTs have become status symbols, with celebrities such as Jay-Z and Jimmy Fallon owning them (Ehrlich, 2023). NFTs have emerged as a sort of tech-status symbol and investment of the digital age. They combine the exclusivity and sophistication of traditional luxury goods with the potential for significant financial returns. In the tech space, NFTs offer a new and exciting way to demonstrate financial success (Malik, 2023).

An NFT social networking website called "instant messaging virtual universe" or IMVU conducted a survey of participants across various demographics, revealing that over 74% of respondents purchase NFTs primarily for reasons related to status, originality, or visual appeal, while only 13% buy them with the intention of reselling. This data, released amidst a resurgence in NFT markets, underscores the significance of NFTs as a status symbol, particularly among younger users, with the majority aged 18-24 (Binance Square, 2023).

However, the norm of influence of celebrity endorsements on NFT behavior demonstrates the pitfalls of relying on social proof, where perceived legitimacy can drive market success or failure, often leading to hype and the risk of market bubbles. Jimmy Fallon, Justin Bieber, Serena Williams, and her Reddit cofounder husband among celebs being sued over Bored Ape NFT promotions as of 2022. Portuguese soccer star Cristiano Ronaldo has been hit with class-action lawsuit seeking at least \$1 billion in damages for his role in promoting NFTs, issued by the Binance exchange (AP, 2023). Celebrity NFT promotions is an area rife with deception, including, but not limited to, a failure to clearly and conspicuously disclose the promoter's material connection to the endorsed NFT company, as well as the omission of other material information, such as the risks associated with investing in such speculative digital assets, the financial harm that can result from such investments, and the personal benefit(s) the promoter may gain by virtue of the promotion(s) (Huff, 2022).

Norms that typically take place within NFT communities greatly shape the behavior of NFT stake holders and even that of overall crypto stakeholders. This often dictates their actions when it comes to buying selling or holding and NFT (and possibly even beginning to create their own line or collection of NFTs from scratch). Unfortunately this can lead to echo chambers or just herd behavior. Overall, the vast array of norms within the NFT ecosystem have themes of speed and technology combined. Any behavior within the NFT space, such as jumping on an investment of an NFT, can occur in mere hours, and sometimes minutes. This presents opportunities and challenges alike.

2.2.4 Intentions of Various Behaviors With Compliance & NFTs

As NFTs and the crypto ecosystem are variably self-contained from the traditional financial markets, such as banks and the worldwide traditional financial system, there is a typical attitude among NFT stakeholders to attempt to use NFTs, cryptocurrency, and other related mediums as a way to circumvent the typical financial institutions. It is rare for an NFT stakeholder to delve into NFTs or even cryptocurrency in order to “comply” or engage in any sort of “compliance” within the existing traditional financial compliance sphere. This appears to be a complex and roundabout theory, but if one were to look at it from the opposite perspective, one who wishes to not comply with financial regulation, will avoid traditional financial markets, and one who wishes to comply with traditional financial markets, will avoid the cryptocurrency space.

The NFT and cryptocurrency spheres are traditionally “anti-establishment” themed. As such, the voices within the NFT space are anti-traditional finance, and seek to amplify themes and voices of non-compliance. This is a subjective norm within the NFT community, where NFT influencers attempt to sway their audiences away from for example, investing in traditional sports trading cards, and attempt to influence them to invest in digital NFT sports cards. It’s almost as if the norm for the NFT space is that “it’s cool” to invest in NFTs because one becomes somewhat of an “underdog” and they “go against the grain”, and thus are pioneers in the new NFT profiteering sector (Garnett, Murry, Velasquez, 2024). It’s within these echo chambers that there is rarely any room for dissenting opinion, and that dissenting opinion is aiding in disinterest in NFTs, and being compliant with the traditional financial system.

In the field of psychology, cognitive dissonance is described as the mental disturbance people feel when their cognitions and actions are inconsistent or contradictory. This may ultimately result in some change in their cognitions or actions to cause greater alignment between them so as to reduce this dissonance. Relevant items of information include peoples' actions, feelings, ideas, beliefs, values, and things in the environment. Cognitive dissonance is typically experienced as psychological stress when persons participate in an action that goes against one or more of those things (Jones, 2019). Cognitive dissonance is something that is hyper apparent within the NFT community as a whole. The community finds itself in this cognitive dissonance vicious cycle, where the community relishes being compliant with traditional financial laws, thus they turn to NFTs, then the traditional legal financial system views them as unworthy financial community worthy of any regulation or laws. Then, there is a lack of regulation like is seen today. Both sides are reinforced by their contrasting cognitive dissonance. The NFT community wants to be taken seriously, and would profit from this, but the only way to be taken seriously, would be for the traditional financial and legal world to create more regulation and compliance laws around them, which in turn goes against the NFT communities intention of behaviors with compliance of the cryptocurrency sphere and NFT community. In essence, the only way for the very concept of NFTs to flourish outside of the traditional financial world, is for the traditional financial world to clamp down and regulate them. Overall, what the NFT world doesn't want the most, is what it needs the most.

2.2.5 Compliance & Overall Regulatory Sentiments or Environment

While some countries are establishing legislation concerning cryptocurrency, NFTs remain without clear regulations, existing in a gray area. The situation is similar in Asian markets. Two factors contribute to this: 1) the nascent stage of NFT market, and 2) broad and varied potential interpretations of NFT usage. Hence, most countries haven't yet proposed any specific regulations for NFTs. However, two recent developments highlight the increasing need for NFT-related legislation: 1) a surge in money laundering cases involving NFTs, and 2) growing user confusion due to the lack of clear regulations around NFTs. The following countries have begun NFT regulation. South Korea: The country with the highest probability of incorporating NFTs into their regulatory systems, where Taiwan is monitoring the NFT market, and Singapore was the first country to recognize NFTs as an asset class, as well as Japan being another country with various actual regulations to tackle NFTs (Yo, Kim, Lee, 2023).

The overall challenges and gaps for NFT regulations exist in that there are virtually no laws in place, broadly speaking, in modernized, westernized, or active economies, countries, or economic areas, for regulating NFTs, on the scale of regulating traditional investments. There is nothing written into law or legislation, especially in North America, such as Mexico, Canada, nor the US, regulating NFTs. There are laws in existences already that have been loosely applied to NFTs, but are not inherent or specific with how NFTs function. This is the crux of the issue of NFTs as an asset class, as overall, there are no 'hard and fast' laws that properly regulate them, as if they were a stock traded on NASDAQ.

It is readily apparent that the foremost application of the law to NFTs revolves around copyright laws. For example, while no specific source is needed, if one were to do just perform a simple open source internet browser search, on Google, and type in ‘US NFT Laws’ or even ‘US vs. EU NFT laws’, one will receive the first page of hits revolving around Copyright law, and nothing else. While there may be a biased in how Google returns its search results, there are no main results that yield back any specific law tailor made for NFTs that would provide clarity. This is in stark contrast to equities laws or stock market trading laws. For example, searching for “US vs. EU stock market trading laws”, shows multiple legal infractions one could make, their differences between the continents, such as options trading, insider trading, or stock settlement timeframes.

The current intellectual property laws are adequate to deal with concerns about copyright and trademark infringement associated with NFTs, a 112-page long study by the United States Patent and Trademark Office (USPTO) and the US Copyright Office concluded. The study was requested by Former Democratic Senator from Vermont, Patrick Joseph Leahy and Democratic Senator from North Carolina, Thom Tillis, in June 2022. The USPTO and the Copyright Office conducted three public roundtables and solicited comments from interested stakeholders. The offices found that most stakeholders that the current laws were adequate, even though “trademark misappropriation and infringement are common on NFT platforms.” (Singh, 2024). This would show that the US’ NFT regulation and compliance position is not only deficient, it is wholly absent, applying existing laws based off of old technology, to a new and misunderstood technology.

The significance of having clear legal definitions for NFTs and related digital assets was in fact addressed, however if anything it merely increased uncertainty regarding NFT regulation and compliance. In March 2024 the US government, previously more specifically mentioned as the United States Patent and Trademark Office (USPTO) and the US Copyright Office concluded that “current applications of NFT technology do not require changes to intellectual property laws, let alone any new legislation or laws. Furthermore, they determined that incorporating NFTs into their practices is not necessary or advisable at this time. In their report, they acknowledged commenters' views that NFTs may enable artists to secure remuneration for downstream resales of their works; aid trademark owners in expanding their brand appeal; or play a supportive role in the management, transfer, or licensing of intellectual property rights. They also recognized widespread concern that NFT buyers and sellers do not know what intellectual property rights are implicated in the creation, marketing, and transfer of NFTs and that NFTs may be used to facilitate copyright or trademark infringement. The government determined, however, that existing enforcement mechanisms are sufficient to address the infringement concerns and that product transparency and consumer education more appropriately address concerns that fall outside the realm of intellectual property laws” (Vidal, Perlmutter, 2024). This conclusion by the US government challenges balancing the need for innovation in the NFT space with the requirements for regulatory compliance, as in, while there is in fact a need for clarity, they provided no clarity in this report, declaring that no clarity was needed, because existing laws already provide clarity. This essentially creates vagueness in the already unclear NFT regulation space.

2.2.6 Social Dynamics & Psychology Compliance

NFTs may contribute to wasteful energy use and carbon output, depending on how they are produced. Ethereum is the leading blockchain used to mint NFTs. It transitioned from a Proof-of-Work (PoW) to a Proof-of-Stake (PoS) consensus mechanism on Sept. 15, 2022. The transition, called The Merge, caused a significant reduction in NFT energy use. Blockchain developers and communities are working to find ways to lessen or eliminate the environmental impact NFTs have. Users can lower their impact by choosing blockchains with less energy-intensive requirements. This is an important social dynamic currently within the psychological aspects of NFTs. NFTs leave a carbon footprint at every stage of their existence, but psychological choices and prioritizing eco-friendly practices in how they are created, traded, and stored can offset their potential impact on the environment. Cryptocurrency developers can reduce NFT energy consumption by improving or switching to less energy-intensive blockchain consensus mechanisms. NFT minting and hosting platforms can use blockchains that don't require large amounts of energy (Garnett, Brown, Schmitt, 2024). This can aid in the psychological impact of NFT compliance due to people psychologically being motivated to want to shift to NFTs, as a more ecofriendly way of investing in collectibles.

Consumer protection and e-commerce laws already apply to NFTs, so this provides some psychological safety for the end user of NFTs, such as traders, collectors, or artists. Both NFT issuers and secondary marketplaces need to put appropriate terms of sale in place. These serve to protect their business interests and include provisions addressing warranties, IP rights, liability, applicable law and dispute resolution

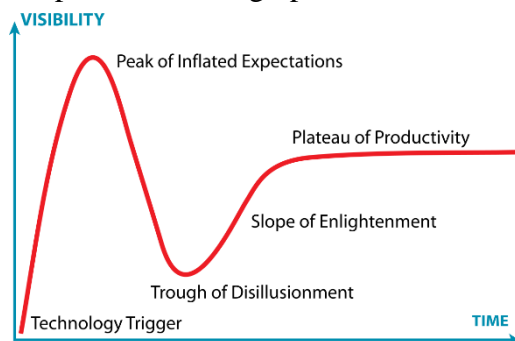
mechanisms. To the extent consumers will be subject to these terms, stakeholders will need to know what consumer protection and e-commerce laws will apply, which will vary from one jurisdiction to the next. Furthermore, marketplaces may be subject to specific regulation which may mandate the inclusion of certain terms in their contracts and processes governing the operation of same (EY Global, 2023). This increased emphasis on IP laws and consumer protection will ease the minds of those on the fence about NFTs, bringing more new investors in the market, increasing the value of the NFT market as whole, a byproduct of the increased psychological safety provided from increased regulation.

Drawing parallels to the blockchain's "Proof of Consensus" technology, where nodes validate transactions, NFTs introduce us to "Proof of Culture." In the grand tapestry of the digital age, the concept of "Proof of Culture" emerges as a revolutionary psychological paradigm, akin to the renowned "Proof of Consensus" underpinning blockchain technology. Just as Ethereum introduced us to a new era of trust and decentralization, NFTs are quietly heralding a transformative era in preserving, sharing, and even trading culture itself. While "Proof of Consensus" ensures the integrity of the blockchain, "Proof of Culture" safeguards the very essence of humanity itself. It is through this fusion of technology and culture that we embark on a profound journey of exploration and innovation. The blockchain's inherent security ensures the authenticity of cultural assets, mitigating the risk of forgery and fraud. "Proof of Culture" guarantees that what you own is the real deal, fostering trust and confidence in the NFT ecosystem, which is an important psychological social dynamic (Salbego, 2023).

2.2.7 NFT Adoption & Acceptance Among Social Circles

Social networks form the basic structure for the diffusion of technologies throughout a society in the modern NFT era. In some cases, for one technology to survive the introduction of another, especially regarding NFTs, the cost of adopting both technologies must be balanced within a narrow, intermediate range. Network theory-based ideas could be particularly effective for promoting technology adoption when information friction serves as the major obstacle to technology diffusion, such as lack of knowledge of NFTs or their laws and regulations. Accurate social network assessment, crucial for the formulation of network interventions, relies on making careful selection out of the many measures of network characteristics. Effective networks should aim to introduce new technologies first to economic persona with high centrality or clustering, sufficient resemblance to average population, and whom are incentivized to communicate with others (Cheng, 2022). This is how to best proliferate NFT awareness among social circles to foster adoption and acceptance, to increase regulation for NFTs, to further legitimize them as an asset class.

The Gartner Hype Cycle charts the path of a new technology through five phases, from when it first enters the market to when a typical business is likely to benefit from its adoption. It uses a graph to show the expectations around a new innovation (the x-axis) to



the value of that innovation over time (the y-axis), then tracks the innovation as it moves through the five key phases of development (Hicks, Steinberg, 2023). Gartner's Hype Cycle

has NFTs at the peak of the hype cycle in 2021 while not even having appeared on the hype cycle in 2020. This looks at the spread of the hype from a social media context by examining all tweets related to #NFT. Communities are highly dynamic in nature which is indicative of a decentralized social movement with no strong leaders. Sentiment regarding NFTs was strongly positive across all communities with no indication of any growing negative sentiment in 2022 as well. The community expanded at exponential rates throughout the period 2021-2022 with the communities becoming more interlinked and sharing more content over time (Mentzer, Price, Powers, Lavrenchuk, 2022).

It is through social media platforms, especially Twitter, that NFTs have gained public notoriety and, in more than a few cases, achieved virality. Twitter accounts for 70% of the total traffic on social media at OpenSea, one of the most prominent marketplaces for buying and selling NFTs. This alone should give us an idea of the importance it has for building NFT adoption and acceptance among social circles as well as public perception around NFTs to attracting potential stakeholders (Vanguard, 2022). The gaming industry has been using NFTs almost since 2011 when Cryptokitties was released and became one of the most popular games of 2018. After Facebook banned cryptocurrency advertising, Twitter became a new home for crypto marketing. And with its recent addition of NFT support, and NFT brands and projects leveraging Twitter Spaces (social audio) NFTs on Twitter will only increase their presence in regards to proliferation among social circles (Fanzo, 2022). This would show a widespread acceptance among online social circles and communities, which is already the foundation for further NFT regulation and compliance.

2.2.8 Factors of Cultural Influences on NFTs

The Internet started out as a one-way information portal but is now everyone's gateway to instant two-way communication. Social media started out as a peer-to-peer network and later evolved to become an advertising and branding tool. It's about what the technology affords and how we use them that transforms them to what we know today (Tan, 2023). Nowadays consumers can express their identities not only through their possessions and buying behavior, but also using social media and digital networks. Digital and offline identity signaling behaviors are intertwined, and the unique features of digital identity signaling behaviors as well as the complexity of identities, including gender, provides useful insights for researchers and marketers (Rogova, Matta, 2023). Macro and micro barriers deprive many worldwide of the benefits of digitization. Ownership and access to digital devices differ due to the Digital Divide within cultures across the world. Even available devices are used differently and sub-optimally across cultures (Papadopoulos, Cleveland, 2022).

NFTs seemingly were born from the critical analysis of prior systems of how artists are paid and how they make their money in life. In normal high-society art culture the moment a digital or physical artist sells a piece they no longer own the rights to it or any royalties in later upselling. Within typical culture, let's say an artist sells a piece at \$16 they are paid for the piece and the buyer/collector takes it, as well as the overall ownership of the piece. The buyer can then in any amount of time place the piece within a private auction or list within a sale at an auction house and sell it for millions of dollars. None of this new profit will go to the artist who made it. They receive no royalties for

their work whatsoever. NFTs have come into existence and more importantly come to the front of the artistic world for this reason among many others. A lot of digital artists think this is like a gateway to freedom from the very suffocating nature of current high-society art culture. It is a sad fact that artists in the modern world have to basically undersell themselves out to their buyers to gain any sort of notoriety, losing the profit margins that collectors have due to different social positioning and connections. The only solution is that the artist has to vie for exposure from their buyers by making websites, low balling prices, creating numerous social media points to gain any sort of traction as a freelance artist. This path is extremely difficult and not even truthfully lucrative for the artist attempting this process. Many artists will still work minimum wage jobs, dead-end commissions, or are manipulated by buyers to make any sort of progress towards a job that can pay for their lifestyles (Kemp, 2023). The concept of NFTs dramatically the typical starving artist norm.

There are many cultural difference across the world in regards to how artists view their work and how their work is viewed by collectors. Risk and innovation regarding NFTs have helped the cultural perception of artists. This still presents challenges of creating global regulatory framework, let alone regional regulatory laws regarding NFTs. There is a wide distance, for example, between western and eastern cultures in regards to artistry of any sort, save for digital artistry regarding NFTs, and how they are regulated. One law in one country may be unacceptable in another country, in the same fashion that, for example, Islam has it's own set of financial codes, or Judaism has it's own set of culinary codes (i.e. Sharia banking and Kosher food service).

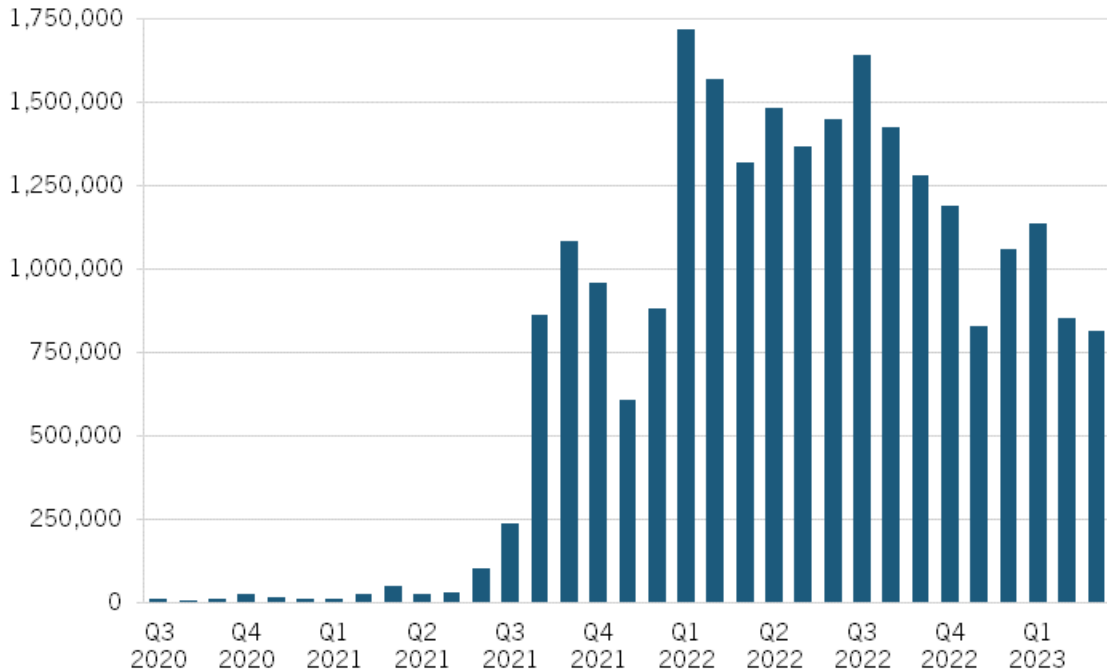
2.2.9 Technological Adoption Theories

One theory that can help us understand the further implementation of NFTs into the regulatory realm, in order for it to flourish, is the diffusion of innovations theory. The diffusion of innovations theory is a hypothesis outlining how new technological and other advancements spread throughout societies and cultures, from introduction to widespread adoption. The diffusion of innovations theory seeks to explain how and why new ideas and practices are adopted, including why the adoption of new ideas can be spread out over long periods. The diffusion of innovations theory describes the pattern and speed at which new ideas, practices, or products spread through a population. The main players in the theory are innovators, early adopters, early majority, late majority, and laggards. In marketing, this diffusion of innovations theory is often applied to help understand and promote the adoption of new products. The diffusion of innovations theory can also be used in areas such as public health to encourage populations to adopt new, healthy behaviors (Halton, Kelly, Perez, 2023).

Early success stories in the adoption of the NFT space highlight the immense potential for creators and investors. One notable example is Beeple's artwork "Everyday: The First 5000 Days," which became one of the most expensive digital art pieces ever sold. Another example is the success of CryptoPunks, a series of 10,000 unique characters fetching millions in sales. These early successes demonstrated the lucrative business opportunities within the NFT market. They also helped attract more artists, musicians, and even sports franchises to explore NFTs, expanding the market and creating various new digital ownership models (Asak, 2024). But the technology remains

popular among early adopters. As shown below, the number of NFTs bought and sold on the popular NFT exchange OpenSea has soared since early 2021, but has decreased some over the past year, likely due to declines in cryptocurrency markets then (Castro, 2023).

(Figure 2.2.9.A)



Adoption of broader Blockchain technology must also be analyzed in order to understand theories of NFT adoption, as the underlying technology of NFTs, blockchain technology, offers enhanced security, traceability, and efficient operations, changing how traditional sectors operate. Blockchain enhances security and transparency in energy transactions, enables peer-to-peer energy trading, facilitates smart contracts for fair exchanges, improves government transparency in finance, land registry, and voting, streamlines hospitality bookings and loyalty programs, provides transparency in sports

performance and contracts, combats ticket fraud, and resolves construction payment issues while ensuring material traceability and quality (Boss, 2024).

2.2.10 Designing Effective Compliance Programs

A comprehensive institutional compliance program is one which integrates and coordinates all significant requirements with which the institution must comply by law, regulation, institutional policy or other binding rule or agreement (Dunkley, 2009). The healthcare industry is one of the most regulated industries. All healthcare professionals and organizations need to follow these regulations to ensure the protection of patient information while upholding superior patient care and preventing fraud. These regulations are comprehensive and cover different aspects of the healthcare business processes. Regulatory health compliance is a set of guidelines and laws that healthcare organizations and providers must adhere to. These compliance regulations must be strictly followed or else those who are in violation will be fined or penalized (Schiffman, 2022). Data privacy is becoming more important and challenging in the digital age. Organizations consider the measures they have in place and develop a secure and well-governed data foundation (Raj, 2024).

It's hard to establish compliance practices from scratch. An NFT marketplace must evaluate the money laundering risks that their specific business is exposed to. Marketplaces need to prepare several documents that are fundamental for a regulated business, such as a risk assessment, AML policies, AML compliance program, customer acceptance policy, etc. Businesses must appoint an AML compliance officer who is

responsible for overall compliance and reporting. All employees must be acquainted with money-laundering schemes to understand how to deal with them. In the future, NFT marketplaces will likely be required to report suspicious activity. NFT businesses must establish a record-keeping system that allows storing user data in a way that's compliant with data protection regulations (Petrov, 2022). To address outstanding risks, the risk assessment recommends several government actions, including: Raising awareness within industry of existing obligations, continuing to enforce existing laws and regulations related to NFTs and NFT platforms; and considering further application of regulations to NFTs and NFT platforms.

Vulnerabilities associated with NFTs and NFT platforms may be exploited for illicit finance purposes, including money laundering, terrorist financing, and proliferation financing. There is no widely agreed upon definition of an NFT given the diverse range of NFT types, uses, and designs. With regards to the market structure, the NFT risks recognize that while the NFT market is growing immensely since 2023, NFT sales peaked in early-to-mid 2022. Since then, sales decreased sharply through the end of 2022, increased again in early 2023, and have since again declined (US Treasury, 2024).

Addressing these risks and challenges requires a proactive approach to AML compliance in NFT marketplaces. Implementing robust Know Your Customer (KYC) procedures, transaction monitoring systems, and suspicious activity reporting mechanisms are vital for detecting and preventing money laundering activities. Collaboration between NFT platforms, regulators, and law enforcement agencies is also crucial to share information and ensure compliance across jurisdictions (Sanctions

Scanner 2024). These are the features of designing an effective compliance program in the context of the NFT digital asset class.

2.2.11 Awareness Campaigns

There must be awareness campaigns for NFTs in terms of showcasing their current regulation, so that stakeholders can be informed about said current regulations. This is important to show the lack of regulation, to spur action into forming new and specific NFT regulation and laws. In the healthcare industry, as previously stated, awareness of regulations and compliance are paramount. For example ethical problems in everyday healthcare work emerge for many reasons and constitute threats to ethics. If these threats are not managed appropriately, there is a risk that the patient may be inflicted with moral harm or injury, while healthcare professionals are at risk of feeling moral distress. Therefore, it is essential to support the learning and development of ethical competencies among healthcare professionals and students. Literature regarding ethics education that promotes ethical competence learning for healthcare professionals and students undergoing training in healthcare professions is typically available in this industry (Andersson, Svensson, Frank, Rantala, Holmberg, Bremer, 2022).

There may be already popular methods for NFT compliance awareness campaigns. Gamified training captures and maintains learner attention in ways never done before. Elements like badges and score bars can make compliance training more interactive, encouraging active learner participation with the content throughout the duration of a course or microlearning. These game like elements and progression

strategies also make the content more entertaining and enjoyable, two words not often associated with compliance training. By transforming routine training into a captivating experience, gamification ensures that learners remain focused and inspired, leading to better retention and real-life application of the material (LRN, 2024). This tool for an NFT awareness campaign would be highly effective. Familiarity with NFTs skyrocketed between 2021 and 2022. Before that, two in three Americans had never heard of NFTs, but now, only 7 percent are unaware of NFTS. Participation has doubled over the same time period, though only about 4 percent of US adults have ever owned NFTs until this point. While the vast majority of people are not ready to purchase NFTs, about 7 percent of non-owners said they'd be likely to purchase in the next 12 months. This equates to as many as 16.3 million potential customers. Only around 15 percent of people believe that NFTs are worth investing in at this time (Vigderman, 2024).

Despite the growing interest in NFTs, many potential users remain unfamiliar with their potential applications. There is a pressing need to educate the market, raise awareness, and provide transparent information about the benefits and risks associated with NFTs. This is crucial for sustainable growth and mass adoption of NFTs, let alone increased compliance and regulation. Complex ecosystems like SourceLess and platforms like wNFT.store are actively supporting educational campaigns and provide user-friendly guides and resources that demystify the world of NFTs for newcomers, however these are not on par with investment educational websites such as Investopedia. Addressing these challenges is crucial for the continued growth and success of the NFT market overall. As the industry evolves, it will be important to keep these issues at the forefront of

discussions and developments (NFT Store, 2023). Awareness campaigns taken on my celebrities or other influencers would be best to spearhead an NFT educational endeavor, whereas they have been more attempting to sell NFTs themselves as of late.

2.3 Human Society Theory & NFTs

Franklin H. Giddings (born March 23, 1855, Sherman, Connecticut, US died June 11, 1931, Scarsdale, New York) was one of the scholars responsible for transforming American sociology from a branch of philosophy into a research science utilizing statistical and analytic methodology. Giddings was noted for his doctrine of the “consciousness of kind,” which he derived from Adam Smith’s conception of “sympathy,” or shared moral reactions. In Giddings’s view, consciousness of kind fostered a homogeneous society and resulted from the interaction of individuals and their exposure to common stimuli. Some critics regarded consciousness of kind as a euphemism for the herd instinct (Brittanica, 1998). Prof. Giddings’s theory of human society is that social phenomena are a product of stimulus reacted to by “pluralistic” behavior, giving rise to consciousness of kind-the “herd instinct” of other writers-from which are derived discriminating association, the ethical code, co-operation and division of labor (Giddings, 1922).

Societal factors, as understood through HST, shape regulatory frameworks and compliance behaviors in the NFT ecosystem. This poses several questions: (1) associations with, knowledge of, and familiarity with notions relevant to digital assets and (2) perceptions of digital assets and attitude towards investing in them. The youngest

generation of current investors, Generation Z, is not insufficient in funds, however their concerns about digital assets come from poor knowledge of cryptocurrencies and NFTs. The skepticism is fueled mostly by the nontangible nature of digital assets. They most commonly associate NFTs with digital works of art, virtual objects, and NFT graphics. Blockchain most often brings to mind notions databases, algorithms, data recording, transaction data transfer, data cloud transactions, cryptocurrencies, cryptography, and decentralized financial systems. These notions regarding HST and Generation Z seem to suggest a certain difficulty with representing (characterizing) the digital ecosystem and virtual reality. The media narrative emphasizes the intangible nature of the digital ecosystem, often depicting it as impalpable and unreal, which does not help with how prospective investors view it (Krol, Zdonek, 2023).

It should be noted within our human society, that the financial system as a whole, no matter the continent, region, economic zone, country, or even state within a country, is highly regulated. Financial institutions in the US are overseen by an assortment of federal agencies including the FRB and FDIC. State agencies are often involved as well, especially in the regulation of insurance products. The stock market is overseen by both the US Securities and Exchange Commission and its own self-regulatory organizations (Majaski, Rasure, 2020). The EU's institutional set-up is unique and its decision-making system is constantly evolving. The 7 European institutions, 7 EU bodies and over 30 decentralized agencies are spread across the EU. They work together to address the common interests of the EU and European people. In terms of administration, there are a further 20 EU agencies and organizations which carry out specific legal functions and 4

interinstitutional services which support the institutions. All of these establishments have specific roles with interplay between societal expectations and institutional actions in shaping compliance frameworks (EU HQ, 2024).

Regulations within the NFT space can be seen as mechanisms for maintaining social order through the lens of HST. At its core, the primary function of law is to maintain order within a society. Laws establish rules and boundaries that guide individual conduct and interactions. Without law, chaos and anarchy could prevail, leading to a breakdown of social structures and jeopardizing the safety and well-being of individuals. Law is not merely a set of rules; it is a fundamental aspect of civilization. It shapes how people interact, protects their rights, and ensures that justice prevails. Without law, society would lack the stability and order needed for progress. As we recognize the importance of law, we also appreciate the collective effort required to create and uphold a legal framework that fosters fairness, equality, and the well-being of all members of society (Iqbal, 2023). And thus, regulations are designed to align individual behaviors with collective societal goals under the HST.

The world all shifted their lives online in response to the Pandemic. Workplaces, lifestyles and almost everything important can be found in the great digital assembly. Following this watershed upheaval, it's unlikely society will completely return to what used to be normal. It's not surprising the artifacts that have meaning for human society are digital, as its where human society now resides (Malik, 2021). Preserving our cultural heritage is a responsibility shared by societies worldwide. NFTs have emerged as a powerful tool in this endeavor, offering innovative ways to digitize and protect our

collective history. NFTs enable the digitization of cultural artifacts, transforming physical objects into digital assets. This process ensures the longevity of artifacts that may be susceptible to wear and tear over time. NFTs offer a novel way to engage younger generations in the appreciation and understanding of cultural heritage. The interactive and digital nature of NFTs aligns with the preferences of modern learners (Abbas, 2024).

Vincent Van Gogh was a commercial failure. He only sold a handful of his 900 or more paintings during his lifetime, and had to exchange some of his works for food. In 1987, Van Gogh's iconic "Vase with Fifteen Sunflowers" sold at Christie's in London for \$39.9 million. In March 2021, Christie's, Twitter and Polkamon share the headlines in a new explosive trend: the NFT marketplace. Jack Dorsey, co-founder of Twitter, sold his first-ever published tweet for \$2.9 million. Christie's auction house sold a digital collage called "Everydays: The First 5,000 Days" for \$69.3 million (Malik, 2021). This is a testament to the HST's need to preserve cultural artifacts in terms of a digital world.

Shared ethical standards within the NFT community contribute to the development of regulatory frameworks. Global societal trends, such as environmental concerns or social justice movements, impact the regulatory landscape of NFTs. For example, some artists are using NFTs to support environmental causes by donating a percentage of sales from their digital artwork auctions to charities focused on sustainability and conservation efforts. Others are using NFTs to donate proceeds from music sales to non-profit organizations dedicated to providing education and resources for marginalized communities. Moreover, NFTs allow collectors and supporters of social impact initiatives to directly engage with the causes they care about through purchasing

these unique digital assets. This creates an opportunity for building long-term relationships between supporters and organizations tackling critical issues such as climate change, racial injustice or poverty. It is exciting how NFT technology has opened up new avenues for creating both economic value while promoting meaningful social outcomes (Ahmad, 2023). This is how NFTs have opened up new possibilities for artists and collectors to support social justice causes, paving the way for group think to orient itself to a higher morale standard, and they have provided a platform for marginalized communities to share their stories and experiences. Moving forward, it is important for the NFT community to prioritize regulatory and compliance frameworks and ensure that the benefits of this technology are accessible to all legally, safely, and without restriction (Adorjan, 2023).

Regulations must evolve in response to shifts in societal values, technological advancements, and market dynamics. Keeping pace with complex regulatory changes demands a proactive approach. Businesses must arm themselves with advanced compliance management software, train their teams consistently, take additional precautions with AI/ML (artificial intelligence and machine learning) use, and implement immediate policies based on emerging changes. Recovering from hefty fines, legal pitfalls, and reputational losses due to noncompliance or other unethical activities can take years or bring a business to its demise (Ethico, 2024). More regulatory oversight and governance is obviously coming soon in the tech space, but it needn't hinder industry growth or advancement. Partnerships between technology sector firms, lawmakers and

industry bodies can mean opportunities to fast-track innovation while giving customers a more positive high-tech experience (Steinberg, 2022).

Analysis of potential future regulatory trends for NFTs based on anticipated societal changes would include a discernible focus on implementing policies that reduce the environmental impact of NNFT transactions. Both producers and networks are actively looking for methods to lessen their carbon impact and help the industry move towards an environmentally conscious future. There are no significant regulatory deadlines specifically for NFTs in the near future. As NFT adoption accelerates, US agencies like the SEC, IRS, FTC, and Treasury Department are analyzing the need for tailored regulations around securities laws, taxes, consumer protection, and anti-money laundering. Similarly, some NFTs linked to real-world assets, such as real estate or high-value collectibles, that promise future benefits might be classified as securities, subjecting them to stricter regulations. This debate about classifying certain NFTs as securities adds another layer of complexity to the regulatory landscape (Philo, 2024).

The Howey Test has been the legal doctrine for determining whether transactions are investment contracts. Under the Howey Test, a transaction qualifies as a security if it involves an investment of money, it's in a common enterprise, has a reasonable expectation of profit, or if its derived from the efforts of others. Platforms like OpenSea, Blur, Rarible, and others may face pressure from regulators to register as securities exchanges. However, it's anticipated that many of these marketplaces may choose not to comply or be slow in registering (De La Torre, 2023). The potential role of the NFT community in shaping future regulatory frameworks, will show how community-driven

initiatives and collective action can influence the direction of NFT regulation in response to societal changes. This is how the Human Society Theory intersects with NFT compliance and regulation, showing the future of NFT regulation will be driven by the NFT community, and not just a select few in power.

2.4 Summary

In the preceding sections, the theoretical foundation for analyzing NFT compliance and regulation was established, beginning with an introduction to the overarching framework and the Theory of Reasoned Action (TRA). The discussion expanded on how TRA applies not only to NFTs but also to various other digital technologies, illustrating the broad-based attitudes and norms that shape behavior within the NFT ecosystem.

The analysis then delved into the specific intentions behind compliance behaviors, exploring how these intentions interact with broader regulatory sentiments and the social dynamics at play. Cultural influences and technological adoption theories were also examined to understand how NFTs are accepted and integrated within different social circles.

Furthermore, the principles of designing effective compliance programs were reviewed, emphasizing the importance of awareness campaigns in promoting adherence to regulations. Finally, the integration of Human Society Theory was explored to provide a sociological perspective on how collective behaviors and societal structures influence the development and enforcement of NFT regulations.

This comprehensive review lays the groundwork for understanding the complex interplay between societal norms, technological adoption, and regulatory frameworks in the context of NFTs.

CHAPTER III: METHODOLOGY

3.1 Overview of the Research Problem

The emergence of new asset classes brings forth fresh regulatory and compliance challenges. NFTs, which offer a cutting-edge method for owning and trading digital collectibles and art, raise significant regulatory questions. The primary concern centers around how NFTs should be regulated. Much like NFTs, cryptocurrency, the primary medium of exchange for NFTs, remains a contentious topic in today's financial markets, especially in terms of regulation. Cryptocurrency was originally designed to resist regulation, existing as a borderless, frictionless, and uncontrolled digital currency. Bitcoin, often referred to as digital "gold," exemplifies these regulatory challenges. Delving further into the complexities of crypto regulation leads to NFTs, where any digital creation, whether art, games, or other screen-displayed content, can be bought and sold using digital currency. In a world where both gold and art are heavily regulated, the pressing issue becomes how to govern something that functions as art, is traded like gold, and was intentionally designed to evade regulation.

3.2 Operationalization of Theoretical Constructs

In examining the regulatory and compliance challenges within the NFT space, it is essential to translate abstract concepts into measurable elements that can be systematically analyzed. Theoretical constructs such as "compliance intentions," "market behavior," and "subjective norms" are crucial for understanding how the NFT ecosystem operates in the absence of specific regulations. Currently, there are no laws tailored explicitly to NFTs; instead, existing regulations, which often prove inadequate, are broadly applied. To explore these constructs, this study utilizes two primary data

collection methods: a comprehensive review of the current legal landscape and direct outreach to major NFT exchange platforms through email inquiries.

The central premise of this thesis, that the lack of clear regulations hinders the potential of NFTs, but the introduction of targeted regulatory frameworks could enable the market to flourish, necessitates a detailed examination of how these constructs manifest in the present regulatory environment. "Compliance intentions" are assessed through the analysis of the platforms' regulatory frameworks and compliance programs, as requested in the email outreach. These inquiries aimed to understand how platforms navigate existing regulations and identify any challenges or gaps in current practices.

"Market behavior" is evaluated by reviewing the existing laws that are being applied to NFTs, revealing significant gaps in their effectiveness. The reliance on general legal principles rather than specific NFT regulations underscores the challenges in governing this emerging asset class. Finally, "subjective norms" are inferred from the industry's overall approach to regulation, reflecting a broader trend of relying on minimal compliance efforts and general terms, rather than proactively addressing the unique regulatory needs of NFTs. By operationalizing these constructs through the review of current laws and the outreach to NFT platforms, this study illustrates the need for specific regulations tailored to NFTs.

3.3 Research Purpose & Questions

The purpose of this research is to investigate the initial challenges related to the regulation of NFTs and to propose actionable solutions for global legal and financial institutions, governments, private businesses, and other relevant entities. The study aims to provide clear recommendations that can be utilized by anyone involved with NFTs, from individual collectors to influential international organizations such as the Financial

Action Task Force (FATF). These recommendations are intended to clarify how NFTs should be regulated by suggesting the implementation of new policies, procedures, and laws.

Specific Aims:

- 1) **Exploration of Existing Frameworks:** This study seeks to examine the current policies, procedures, and laws that are in place to regulate NFTs, focusing on how these frameworks operate within the global financial, legal, and governmental systems. The aim is to assess the effectiveness of these existing regulations and understand how they contribute to the legal standing of NFTs.
- 2) **Identification of Regulatory Gaps:** Another critical aim is to identify the gaps and vulnerabilities within the current regulatory environment where NFTs are being exploited or left unregulated. By pinpointing these gaps, the study aims to highlight the areas where the existing regulatory frameworks are insufficient or lacking entirely.
- 3) **Proposing Solutions for Regulatory Improvement:** The final aim is to propose solutions that can address the identified gaps through the introduction or enhancement of policies, procedures, and laws. These solutions are intended to help global financial, legal, and governmental organizations create a more robust regulatory environment. By doing so, the study argues that NFTs can be recognized as a stable and legitimate asset class, encouraging greater confidence among investors and creators and ultimately leading to the flourishing of the NFT market.

Research Question: The central research question guiding this study is: How can the current regulatory frameworks be enhanced or redesigned to effectively govern NFTs and promote their legitimacy as an asset class?

Hypothesis: The hypothesis underpinning this research is that the introduction of specific, targeted regulations for NFTs will not only address existing gaps but will also contribute to the growth and stability of the NFT market by increasing trust and legal clarity.

3.4 Research Design

The research design for this thesis is structured to systematically investigate the regulatory and compliance challenges within the NFT space, with a central focus on the absence of specific regulations and the potential benefits that targeted regulatory frameworks could bring to this emerging market. The design is rooted in qualitative methods, allowing for an in-depth exploration of the current legal landscape and the industry's response to regulatory inquiries.

The study begins with a comprehensive review of existing laws that are currently applied to NFTs, despite their inadequacy in addressing the unique nature of this digital asset class. This review is crucial for understanding the gaps in the regulatory framework that leave NFTs vulnerable to exploitation and undermine their legitimacy as an asset class. By analyzing how these laws have been stretched to fit the NFT space, the research aims to identify the specific areas where new, tailored regulations are most needed.

To complement the legal review, the research design incorporates direct outreach to key NFT platforms. The intent behind this outreach is to gather insights from the platforms themselves regarding their approach to regulatory compliance. An email inquiry was crafted and sent to leading NFT platforms, asking them to share their existing

compliance measures, the challenges they face, and their perspectives on the future of NFT regulation. This method provides a practical angle to the research, as it seeks to understand how the industry is currently navigating the regulatory landscape, or in many cases, how it may be circumventing it due to the lack of clear guidelines.

The combination of these two approaches, legal analysis and industry outreach, forms the core of this research design. By first establishing what regulations, if any, are in place, and then comparing this with how the platforms are responding to or ignoring these regulations, the study will provide a comprehensive view of the regulatory environment. The insights gained from these two methods will be analyzed to identify the specific gaps that exist in the current framework and to propose solutions that could fill these gaps.

This research design is particularly suited to the central thesis of this study: that the NFT market currently suffers from a lack of clear, enforceable regulations, and that the introduction of such regulations would not only address existing issues but also help the market to flourish. By focusing on both the legal and practical aspects of NFT regulation, this study aims to provide a well-rounded understanding of the challenges and opportunities that lie ahead for the NFT space. The ultimate goal is to contribute to the development of a robust regulatory framework that can support the growth and stability of NFTs as a legitimate and valuable asset class.

3.5 Population & Sample

The population for this study focuses on leading NFT platforms that hold significant influence within the digital asset market. Given the wholly digital nature of NFTs and the limited understanding of the space even among those familiar with cryptocurrency, it was deemed impractical to conduct interviews or surveys with

individuals. Most people, including professionals in related fields, lack a deep understanding of NFTs, making it unlikely that such methods would yield insights. Instead, the study targets a carefully selected sample of NFT platforms, each playing a crucial role in the broader NFT ecosystem.

OpenSea is one of the largest and most widely used NFT marketplaces, serving as a central hub for buying, selling, and trading NFTs across various categories, including art, collectibles, and virtual assets. Its extensive reach and influence make it a critical platform to understand how existing regulations, or the lack thereof, are navigated by key market players.

Rarible is known for its community governance model, allowing users to create and sell NFTs without intermediaries. The decentralized nature of Rarible presents unique challenges and considerations for regulation, making it an important subject of this study.

SuperRare focuses primarily on high-end digital art, catering to artists and collectors who engage with NFTs as a form of artistic expression and investment. This platform highlights the intersection of art and technology, where regulatory considerations surrounding intellectual property, authenticity, and provenance are particularly pertinent.

Foundation is another platform that emphasizes high-quality digital art, operating similarly to SuperRare in its curation of art and artists. Its approach to supporting emerging artists while maintaining a curated marketplace provides valuable insights into how regulation might impact the art-focused segment of the NFT market.

Nifty Gateway is known for its partnerships with well-known artists and celebrities, operating as a more centralized platform compared to others. Its approach to curation and the sale of exclusive drops brings a different perspective on compliance and

regulation, particularly in terms of how these activities might align with future regulatory frameworks.

Mintable empowers creators by providing easy-to-use tools for minting and selling NFTs. The platform's focus on accessibility and user engagement makes it a key player in the democratization of NFT creation, raising important questions about how regulation could impact small-scale creators and the broader market.

KnownOrigin operates similarly to Mintable, with a focus on empowering creators and promoting the accessibility of NFT creation and trading. The platform's commitment to supporting artists and the creative community adds another layer to the discussion on how regulatory measures might affect smaller platforms and individual creators.

Zora is known for its protocol that allows for the perpetual resale and price adjustments of NFTs, introducing a unique economic model within the NFT space. The platform's innovative approach to market dynamics necessitates a closer examination of how regulatory measures could affect such emerging models.

BakerySwap is a decentralized platform that combines NFT trading with DeFi (Decentralized Finance) functionalities, representing the integration of NFTs with broader blockchain-based financial systems. This intersection between NFTs and DeFi adds another layer of complexity to the regulatory landscape, making it an essential focus for this study.

The sample selection was conducted using purposive sampling, a non-probability sampling method where platforms were deliberately chosen based on their relevance to the research objectives. Given the digital and complex nature of NFTs, it was more practical to engage directly with these platforms rather than attempt to gather insights through more traditional methods such as surveys or interviews with individuals. The

selected platforms were contacted via email, inquiring about their current compliance measures, challenges, and perspectives on future NFT regulations. Although the study encountered limited responses, the platforms' status and role in the market provide valuable insights into how the industry currently operates in the absence of specific regulations.

This sample population of NFT platforms was selected to provide a comprehensive overview of the different approaches and challenges within the NFT market. Given the limited understanding of NFTs among the general population and even among professionals, focusing directly on the platforms themselves was the most effective way to gather relevant data. The insights gathered from these platforms are essential for understanding the current regulatory environment and identifying the gaps that need to be addressed to support the growth and legitimacy of NFTs as a viable asset class.

3.6 Participant Selections

In the context of this thesis on NFT regulation and compliance, the participant selection process focuses on identifying the most relevant NFT platforms to include in the study and the rationale behind these choices. The aim of this research is to explore the current state of NFT regulation and the potential for future regulatory frameworks. Therefore, it was crucial to select platforms that are influential, widely used, and play a significant role in the NFT ecosystem.

The criteria for selecting these platforms centered on their substantial market presence and the range of services they offer within the NFT space. For example, platforms like OpenSea and Rarible were chosen due to their large user bases and high trading volumes, which make them critical players in the market. Additionally, the

selection included platforms that cover various aspects of the NFT space, from art and collectibles to decentralized finance (DeFi) integrations, as seen with platforms like BakerySwap.

The rationale behind these choices was to ensure that the study covers a broad spectrum of the NFT ecosystem. Platforms such as SuperRare and Foundation were selected not only for their popularity but also because they represent specific segments of the market, such as high-end digital art. This diversity in platform selection helps provide a comprehensive view of the different approaches within the NFT market. The accessibility of these platforms for data collection, such as the presence of responsive support channels or published compliance guidelines, was also a key factor in their selection.

In terms of inclusion and exclusion, platforms that are representative of key areas within the NFT market were prioritized. Smaller or niche platforms were excluded if they did not significantly contribute to the overall understanding of the market's regulatory challenges. This selective process ensured that the study focused on platforms with the most significant impact on the NFT ecosystem.

However, there are some limitations to this approach. By focusing on the most prominent platforms, the study may miss perspectives from smaller or emerging platforms that could offer different insights. Additionally, the reliance on platform responses, which were sparse, limits the depth of direct data obtained.

A special note should be made regarding the challenges encountered in contacting certain platforms. Some NFT platforms appeared to be inactive or had significantly reduced operations, making it impossible to reach them for this study, essentially, they were no longer functional in the market. Additionally, this research deliberately avoided conducting interviews or surveys with individuals, as the digital and highly specialized

nature of NFTs means that many people, including professionals in related fields, lack a deep understanding of the space. This reinforces the decision to focus solely on the platforms themselves, as they are the most direct and relevant sources of information for understanding the current regulatory landscape and potential future developments in NFT compliance.

Overall, the participant selection process is critical to the relevance and validity of the research findings. By carefully choosing these platforms, the study reflects the practices and challenges faced by key players in the NFT space, aligning with the thesis that more regulation is needed to help the market flourish. This section justifies why these platforms were the best choices for gathering data and how they contribute to the overall research goals.

3.7 Instrumentation

The instrumentation for this study on NFT regulation and compliance primarily involved direct outreach to key NFT platforms through email, supplemented by initial interactions with automated bot systems. Given the digital nature of NFTs and the complexities they introduce, traditional data collection methods, such as interviews or surveys with individuals, were not utilized. This decision was driven by the recognition that many people, including those in professional fields, may not possess a deep understanding of NFTs. Therefore, focusing on the platforms where NFTs are actively traded was considered the most efficient approach to gather relevant data.

The primary method of data collection was email outreach. A structured email template was developed and sent to a selected group of prominent NFT platforms, including OpenSea, Rarible, SuperRare, Foundation, Nifty Gateway, Mintable, KnownOrigin, Zora, and BakerySwap. The emails aimed to gather detailed information

about the platforms' compliance measures, their handling of existing regulations, and their views on future regulatory frameworks. The questions were specifically designed to explore the challenges these platforms face within the unregulated NFT market and to identify potential areas where new regulations could foster market growth and stability.

Automated bot systems on some platforms served as the initial point of contact, routing inquiries to customer support or compliance teams. These bots provided an entry point for further communication but were generally limited to acknowledging the inquiries and offering basic guidance. Despite their limitations, these bots were an essential part of the outreach process, leading to potential follow-up communications through email.

The study also made use of legal databases and resources to examine existing laws and regulations that might apply to NFTs. These resources were critical in formulating the questions used in the email outreach and provided context for understanding the broader regulatory landscape. By analyzing existing legal frameworks, the study aimed to identify gaps in current regulations and propose new policy measures that could address these gaps.

A critical factor in this study was the decision not to conduct interviews or surveys with individuals. This choice was based on the understanding that NFTs, being a highly specialized and digital asset class, are not widely understood outside specific tech and financial circles. Engaging with individuals who may not have a comprehensive grasp of NFTs would likely result in limited or less relevant data. Thus, directly contacting the platforms that are central to the NFT ecosystem was seen as the most effective way to gather the necessary information for this research.

A notable challenge during the outreach process was the inability to connect with certain platforms that appeared to be no longer active or significantly scaled down. These

platforms were essentially out of operation, which further reinforced the focus on contacting the most relevant and operational platforms. This approach ensured that the study concentrated on those entities still playing a significant role in the NFT market, rather than expending resources on platforms that were no longer functional.

Overall, the instrumentation for this study was carefully designed to engage directly with the most relevant sources in the NFT ecosystem. By reaching out to key platforms and utilizing legal resources, the study sought to capture the essential information needed to understand the current regulatory landscape and to identify steps that could support the growth and legitimacy of NFTs as a viable asset class.

3.8 Data Collection Procedures

The data collection procedures for this study on NFT regulation and compliance were designed with a focus on obtaining direct insights from leading NFT platforms. The study relied on systematic outreach through email, supplemented by initial interactions with automated bot systems. The process began by crafting a standardized email template, specifically tailored to address the key research question related to compliance measures and regulatory challenges within the NFT space. This template was sent to a carefully selected group of NFT platforms, chosen based on their influence and market presence. The objective was to gather detailed responses that could illuminate the platforms' approaches to navigating the largely unregulated NFT market.

The email sent to each platform was as follows:

(Figure 3.8.A)

Subject: Inquiry on NFT Regulation and Compliance

Dear [Platform Name] Team,

I hope this message finds you well. My name is Adam Sulkis, and I am currently pursuing a PhD in NFT regulation and compliance. As part of my research, I am seeking to understand the regulatory frameworks and compliance measures adopted by leading NFT platforms. I am reaching out to inquire if you could provide insights into your platform's approach to NFT regulation and compliance. Specifically, I am interested in the following areas:

- 1) Regulatory Frameworks: How does your platform navigate existing regulations related to NFTs?
- 2) Compliance Programs: What compliance measures and programs do you have in place to ensure adherence to relevant laws and regulations?
- 3) Challenges and Gaps: What challenges have you encountered in regulatory compliance, and what gaps do you perceive in current regulations?
- 4) Expert Opinions: Any perspectives or expert opinions your team might have on the future of NFT regulation?
- 5) Documentation: Any relevant documents or guidelines your platform has developed regarding regulatory compliance.

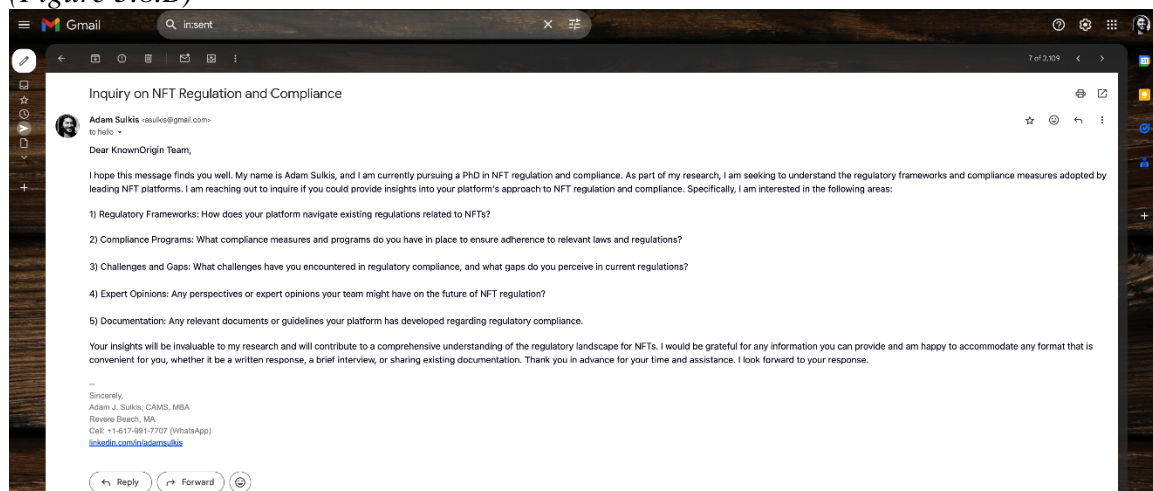
Your insights will be invaluable to my research and will contribute to a comprehensive understanding of the regulatory landscape for NFTs. I would be grateful for any information you can provide and am happy to accommodate any format that is convenient for you, whether it be a written response, a brief interview, or sharing existing documentation. Thank you in advance for your time and assistance. I look forward to your response.

Best regards,
Adam Sulkis


In some cases, where direct email addresses were not readily available, initial contact was made through automated bot systems embedded in the platforms' support sections. These bots provided an entry point for further communication, ensuring that inquiries reached the appropriate teams within the platforms. While the bots themselves offered limited information, they played a crucial role in facilitating subsequent email exchanges.

Throughout the data collection process, consistency was maintained by using the same email template across all platforms, with minor adjustments for platform-specific nuances. This approach allowed for a more streamlined analysis of the responses, ensuring that the data was both relevant and comparable across different platforms. The data collection procedures were carefully designed to align with the study's focus on NFT regulation and compliance. By prioritizing direct communication with key platforms and utilizing standardized methods, the study aimed to gather meaningful insights that would contribute to a deeper understanding of the current regulatory landscape and the potential for future developments in the NFT space. Please see below for email screen shot confirmations:


(Figure 3.8.B)



(Figure 3.8.C)

 Contact For Business

Reach out to us

 Chat with us directly

First name **Last name**

Email

Message

Dear Mintable Team,

I hope this message finds you well. My name is Adam Sulkis, and I am currently pursuing a PhD in NFT regulation and compliance. As part of my research, I am seeking to understand the regulatory frameworks and compliance measures adopted by leading NFT platforms. I am reaching out to inquire if you could provide insights into your platform's approach to NFT regulation and compliance. Specifically, I am interested in the following areas:

By selecting this, you agree to our [privacy policy](#).

(Figure 3.8.D)

[Nifty Gateway](#) > [Submit a request](#)

Submit a request

Your email address

What do you need help with?

Subject

Suggested articles

[An Explanation of Nifty Gateway's Custody Solution](#)

[Wallet Hub](#)

Description

T B I | ☰ ☷ | 📎 🔗 🗨

Dear Gateway Studio Team,

I hope this message finds you well. My name is Adam Sulkis, and I am currently pursuing a PhD in NFT regulation and compliance. As part of my research, I am seeking to understand the regulatory frameworks and compliance measures adopted by leading NFT platforms. I am reaching out to inquire if you could provide insights into your platform's approach to NFT regulation and compliance. Specifically, I am interested in the following areas:

1) Regulatory Frameworks: How does your platform navigate existing regulations related to

Attachments (optional)

[Add file](#) or drop files here

🖼 Screenshot 2024-07-28 at 11.41.30 PM.png ×

Username *
What is your username? (do not include @ symbol please)

ETH Address *
What is your ETH wallet address?

Email Address *
Please provide the email address associated with your SuperRare account - this is used to confirm your identity.

Issue Type *

Other

Subject

Description

Dear SuperRare Team,

I hope this message finds you well. My name is Adam Sulkis, and I am currently pursuing a PhD in NFT regulation and compliance. As part of my research, I am seeking to understand the regulatory frameworks and compliance measures adopted by leading NFT platforms. I am reaching out to inquire if you could provide insights into your platform's approach to NFT regulation and compliance. Specifically, I am interested in the following areas:

- 1) Regulatory Frameworks: How does your platform navigate existing regulations related to NFTs?
- 2) Compliance Programs: What compliance measures and programs do you have in place to ensure adherence to relevant laws and regulations?
- 3) Challenges and Gaps: What challenges have you encountered in regulatory compliance, and what gaps do you perceive in current regulations?
- 4) Expert Opinions: Any perspectives or expert opinions your team might have on the future of NFT regulation?
- 5) Documentation: Any relevant documents or guidelines your platform has developed regarding regulatory compliance.

Your insights will be invaluable to my research and will contribute to a comprehensive understanding of the regulatory landscape for NFTs. I would be grateful for any information you can provide and am happy to accommodate any format that is convenient for you, whether it be a written response, a brief interview, or sharing existing documentation. Thank you in advance for your time and assistance. I look forward to your response.

Link *
Where issue is visible - provide an etherscan link to the contract/token if issue isn't visible.

Do you have more than 1 link to share with us?

No

(Figure 3.8.E)

3.8.1 Data Management

Data management for this study was adapted to suit the unique nature of the information (or lack thereof) gathered from NFT platforms. Unlike traditional studies with extensive participant data, this research focused on the minimal and non-traditional data obtained through digital interactions. The data collection involved two primary sources: screenshots of conversations with automated bots on NFT platforms and a small number of email responses from the platforms. These interactions were documented and organized.

To manage the data, all screenshots from bot interactions were securely stored in a designated digital folder, organized by platform name. The few email responses received were similarly archived, with each response preserved in its original form. This straightforward approach ensured that even the limited data was handled with care, enabling effective comparison and analysis. Given the digital nature of the data, no advanced data analysis software was necessary. However, the use of basic tools like Microsoft's common productivity suite helped maintain organization and ensured easy access to the data. All files were backed up on an external storage device to prevent data loss and ensure the study's findings could be reliably referenced.

In terms of public laws, including existing regulations that could be applied to NFTs, these were not managed or stored within the study, as they are publicly accessible information. The focus of this research was on identifying the absence of specific NFT laws rather than managing existing regulations. The lack of NFT-specific laws itself became a critical finding, highlighting the regulatory gaps that currently exist in this emerging field. The most significant finding in this data management process was the notable absence of substantive responses or relevant NFT-specific regulations, a

discovery that underscores the nascent state of NFT regulation and the challenges in engaging with platforms on this issue.

3.9 Data Analysis of Platform Emails

The data analysis process for this study reflects the challenges and limitations faced when attempting to engage NFT platforms on the topic of regulatory compliance. The responses from these platforms, or the lack thereof, reveal significant gaps in the industry's readiness to address emerging regulatory demands. Efforts to collect data involved reaching out to leading NFT platforms such as OpenSea, Rarible, SuperRare, Foundation, Nifty Gateway, and Zora. The majority of responses received were automated acknowledgments, with very few substantive follow-ups. For example, SuperRare simply provided a standard confirmation that the inquiry was received:

"Your support request has been received and your ticket number is HELP-2492. Please do not resubmit your issue. If you wish to follow up with SuperRare about this, you can contact us through any of our support channels and share your ticket number."

Zora similarly responded with an acknowledgment of the inquiry, followed by an unrelated customer service survey:

"Thank you for contacting Zora Customer Support. We have received your ticket and will reply as soon as possible."

These responses highlight a common theme across the platforms: a lack of engagement and a reliance on automated systems that fail to address specific inquiries related to regulatory and compliance issues. OpenSea, the most prominent NFT marketplace, provided a particularly telling response. When contacted, OpenSea's support team declined to engage on regulatory matters, instead directing the inquiry to their Terms of Service:

"Thanks for reaching out. I'm sorry to say that the support team is unable to assist or disclose sensitive trust and safety processes. You can refer to our Terms of Service, which may provide helpful insights to your questions. Note that we are unable to highlight any sections or provide additional context about our Terms of Service."

This response reflects a broader trend within the NFT industry, platforms are cautious about discussing regulatory issues, likely due to the ambiguity surrounding current NFT laws. OpenSea's reluctance to provide specific guidance underscores the industry's strategic avoidance of these complex topics, which are compounded by the lack of clear legal frameworks for NFTs. In addition to email responses, bot interactions on platforms like OpenSea further underscore the challenges of obtaining meaningful regulatory information. These automated systems, designed primarily for basic customer service inquiries, were ill-equipped to handle the complexity of compliance questions. One such interaction with OpenSea's bot exemplifies this issue. The conversation, which began with a straightforward inquiry about regulatory compliance, quickly devolved into a predefined script focused on reporting intellectual property violations. Despite repeated attempts to steer the conversation toward regulatory concerns, the bot remained locked in its preset responses, eventually directing the user to file a report rather than addressing the original question.

Bot: *Hi there! How can we help?*

User: *Safety concerns*

Bot: *It looks like you'd like to report a safety concern. What exactly do you need help with?*

User: *Report an intellectual property claim*

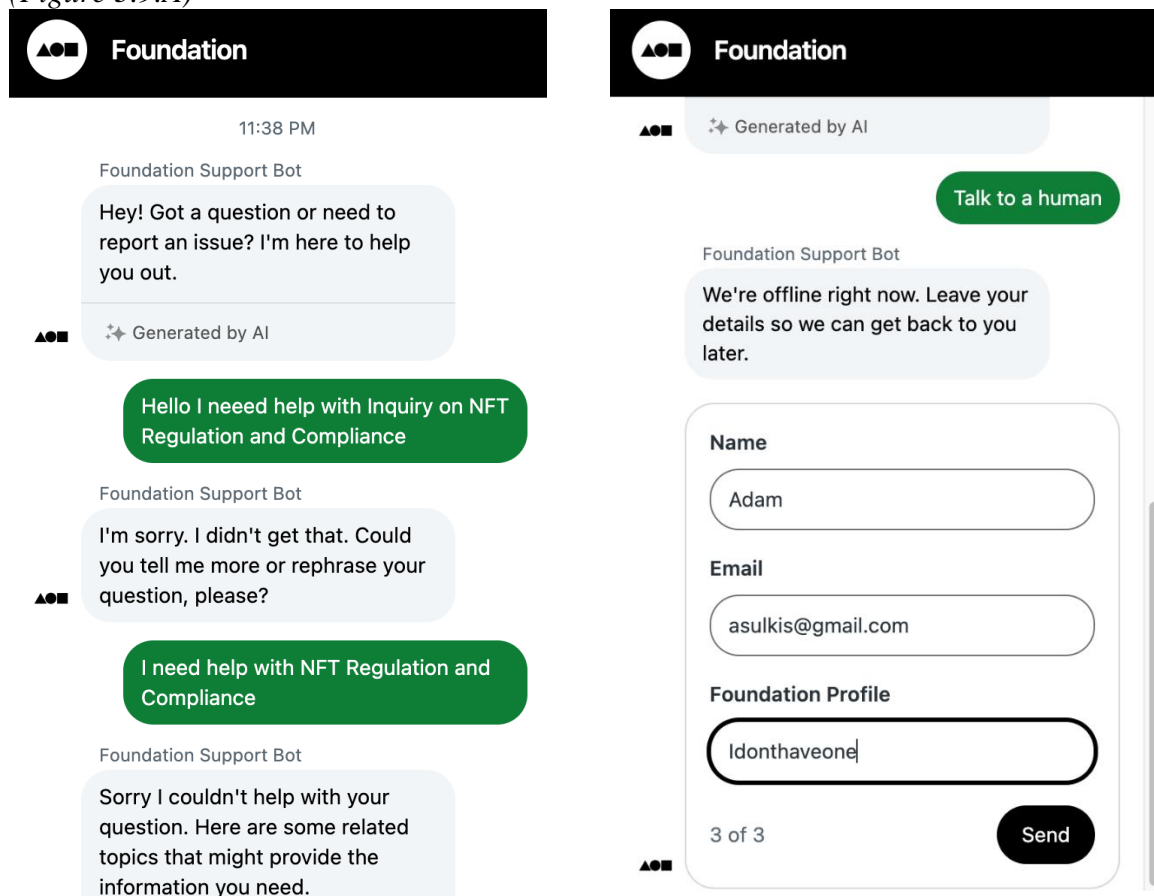
Bot: *It looks like you'd like to report an intellectual property claim. Pursuant to the Digital Millennium Copyright Act (DMCA), OpenSea maintains a notice and takedown process for alleged copyright infringement. In accordance with this U.S. federal law,*

OpenSea allows users to report content if they believe that it violates their copyright. For more information about what to expect with this process, please review our Help Center article. Do you still want to proceed with filing a report?

User: Yes, file a report

As the interaction continued, the bot repeatedly prompted for details relevant to filing a DMCA claim, completely bypassing the regulatory compliance inquiry. This outcome reveals the limitations of current customer support systems within NFT platforms, particularly when handling complex questions that fall outside the scope of standard issues.

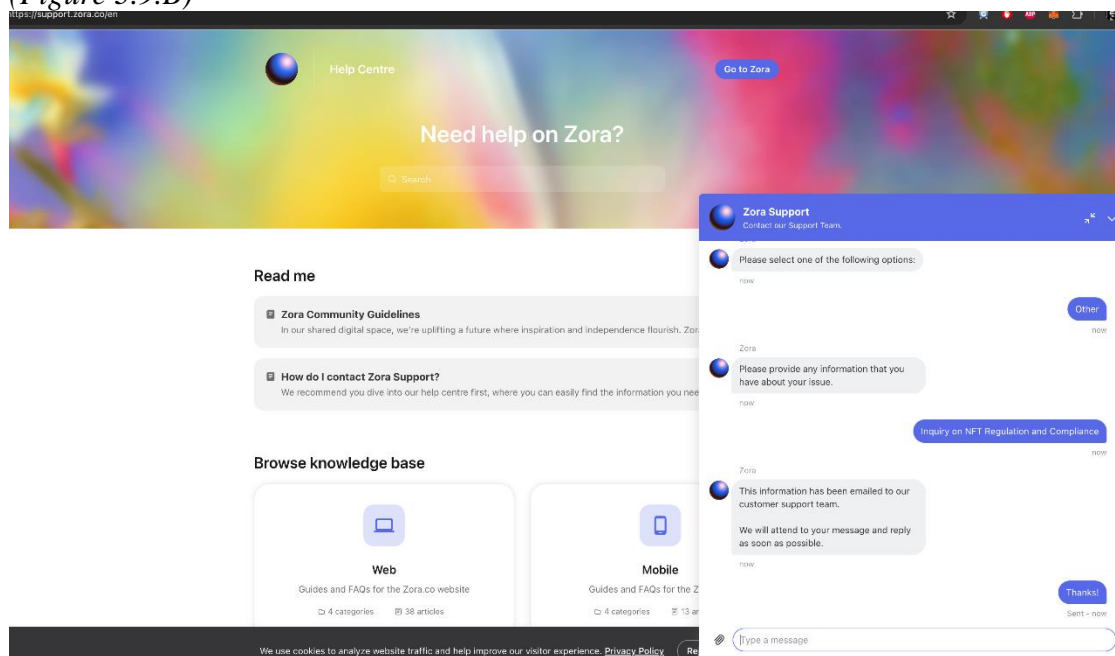
(Figure 3.9.A)



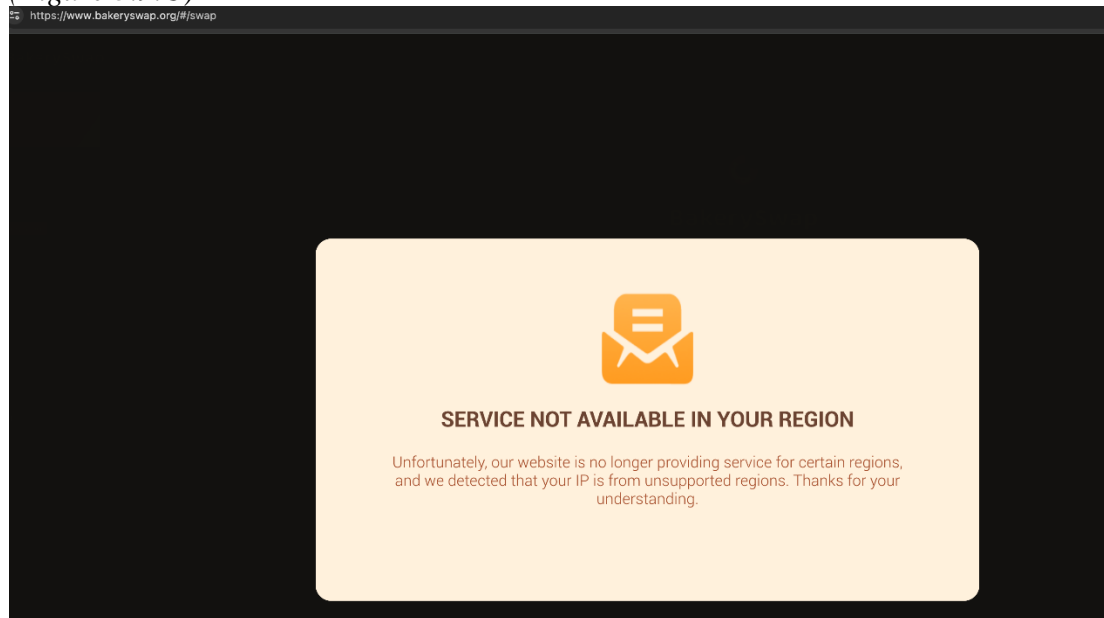
This is a separate bot interaction that followed a similar pattern of providing predetermined responses, demonstrating the systemic challenges in gathering regulatory data from these platforms. Despite the user's attempts to extract information, the bots were constrained by their programming and unable to offer any substantive guidance.

These interactions highlight the critical deficiencies in using automated systems to manage inquiries about NFT regulation. The bots' inability to engage with nuanced topics like compliance and regulation underscores the lack of preparedness within the industry to address these growing concerns.

(Figure 3.9.B)



(Figure 3.9.C)



3.9.1 Existing Laws Population & Selection

In exploring the legal landscape surrounding NFTs, it is essential to identify and assess the existing laws in both the US and the EU that could apply to NFTs. Given that NFTs are a relatively new technology, there are no laws explicitly designed to regulate them. However, several existing laws and regulations could theoretically be applied to NFTs. For the purposes of this study, these laws are considered as the "population" from which we draw our analysis. The selection of these laws is based on their relevance to the key issues in NFT regulation, such as intellectual property rights, anti-money laundering (AML), and securities regulation. Below is a ranked list of these laws, from most relevant to least relevant, along with a brief explanation of their potential applicability to NFTs.

United States Laws:

Securities Act of 1933 and Securities Exchange Act of 1934: These acts regulate the offer and sale of securities in the US. If an NFT is deemed to be a security (based on factors like the Howey Test), it would fall under these regulations, requiring issuers to register with the SEC or qualify for an exemption. This is the most relevant set of laws given the ongoing debates about whether certain NFTs could be classified as securities.

Anti-Money Laundering (AML) Regulations - Bank Secrecy Act (BSA): The BSA requires financial institutions to assist government agencies in detecting and preventing money laundering. NFT platforms that facilitate transactions could be required to comply with AML obligations, making these regulations highly relevant to the NFT space.

Digital Millennium Copyright Act (DMCA): This law is critical for addressing intellectual property concerns in NFTs. The DMCA provides a mechanism for copyright holders to request the removal of infringing content, which is highly applicable to NFTs that represent or link to copyrighted digital works.

Uniform Commercial Code (UCC) - Article 2 and Article 2A: These sections of the UCC govern sales and leases of goods. While not originally designed for digital assets, they could apply to NFTs in terms of the transfer of ownership and the definition of goods in commercial transactions.

Tax Code - Internal Revenue Service (IRS) Guidance: The IRS has provided guidance on the taxation of cryptocurrency, and by extension, this could apply to NFTs as well.

Understanding how NFTs are taxed is crucial for compliance in the digital assets space.

EU Laws:

Fifth Anti-Money Laundering Directive (5AMLD): The 5AMLD extends AML regulations to virtual currencies and custodial wallet providers. NFT platforms could fall under this directive if they are considered as virtual asset service providers (VASPs), making it the most relevant EU regulation.

Markets in Financial Instruments Directive II (MiFID II): MiFID II governs financial markets in the EU and provides a framework for the regulation of financial instruments. If NFTs are classified as financial instruments, this directive could apply, requiring compliance with stringent regulatory standards.

General Data Protection Regulation (GDPR): GDPR applies to any entity processing personal data of EU citizens. Although not directly targeting NFTs, platforms that collect personal data as part of NFT transactions must comply with GDPR requirements, particularly regarding data privacy and security.

Directive on Copyright in the Digital Single Market: This directive strengthens copyright enforcement across the EU. It is particularly relevant to NFTs that involve digital content, ensuring that copyright holders' rights are protected in the NFT ecosystem.

Directive on Consumer Rights: This directive covers consumer protection in digital contracts and sales, which could extend to NFTs, especially when dealing with non-professional buyers. This law is relevant but less critical than others, as it primarily affects the consumer aspects of NFT transactions.

The laws listed above were selected based on their direct or potential applicability to the regulation of NFTs. The ranking reflects the perceived relevance of each law to the issues most pertinent to the NFT space, such as securities regulation, anti-money laundering, and intellectual property rights. The top-ranked laws are those that have the most significant impact on the NFT market, either through direct application or through the influence they could exert on the regulatory environment. Lower-ranked laws, while still relevant, are less directly connected to the core issues of NFT regulation but are included to provide a comprehensive understanding of the potential legal landscape. This "population" of laws will form the foundation for subsequent legal analysis, where we will explore how these laws might be interpreted or adapted to better govern NFTs.

3.9.2 Laws Data Instrumentation & Collection

For the analysis of existing laws relevant to NFTs, the data collection process was straightforward, given that all necessary information was publicly available. There was no need for specialized data collection tools or instruments beyond the use of a standard internet-connected computer. The primary method involved researching and reviewing publicly accessible legal databases, government websites, and relevant legal documents through search engines. The process was largely driven by gathering information from authoritative sources that provide insights into existing US and EU laws that could apply to NFTs. As such, the instrumentation for this section was minimal, involving basic

research tools such as web browsers and search engines, highlighting the readily available nature of the legal data pertinent to this study.

3.9.3 Data Analysis of Existing Laws of NFTs

The Securities Act of 1933 in the United States and the Markets in Crypto-Assets Regulation (MiCA) in the European Union were selected for analysis due to their pivotal roles in shaping the regulatory landscape for NFTs. These laws, while initially designed for broader financial markets, have direct implications for the burgeoning NFT sector, making them essential for understanding current and future regulatory challenges (Rev, 2020).

The Securities Act of 1933 in the US already plays a crucial role in the regulation of NFTs, particularly when these digital assets are classified as securities. The Act requires any offering or sale of securities to be registered with the Securities and Exchange Commission (SEC), unless an exemption applies. This registration process involves the disclosure of significant information to investors, ensuring transparency and protection against fraud. NFTs that are marketed with the expectation of profits derived from the efforts of others may fall under the definition of a security according to the "Howey Test," which is used by the SEC to determine whether an asset is a security. Consequently, platforms and individuals involved in the sale of such NFTs must comply with the registration and disclosure requirements set forth by the Securities Act of 1933, ensuring that investors receive adequate information about the risks and benefits associated with their investments (Kenton, Anderson, Rubin, 2024).

Under the Securities Act of 1933, the application to NFTs also includes the enforcement of anti-fraud provisions. The Act prohibits the dissemination of false or misleading information in connection with the offering or sale of securities, which is

directly applicable to NFTs that are treated as investment contracts. This means that creators, issuers, and platforms dealing with NFTs that qualify as securities must adhere to stringent advertising and marketing practices to avoid potential legal liabilities. Moreover, the Act's enforcement mechanisms, including civil and criminal penalties, serve as a deterrent against fraudulent activities in the NFT market. As the SEC continues to monitor the NFT space, the application of the Securities Act of 1933 ensures that the market operates within a legal framework designed to protect investors and maintain market integrity (Rev, 2020).

In practice, the Securities Act of 1933 is applied to NFTs by requiring platforms to conduct thorough assessments of the NFTs they list, ensuring compliance with federal securities laws. This includes determining whether an NFT qualifies as a security and, if so, ensuring that the necessary registration and disclosure obligations are met. Failure to comply with these requirements can result in significant legal consequences, including enforcement actions by the SEC. As a result, the Securities Act of 1933 plays a pivotal role in shaping the NFT market in the US, providing a regulatory foundation that seeks to balance innovation with investor protection (Kenton, Anderson, Rubin, 2024).

Similarly, the Markets in Crypto-Assets Regulation (MiCA) in the European Union already exerts influence over the NFT market by establishing a comprehensive regulatory framework for digital assets. Although MiCA is primarily designed to regulate cryptocurrencies, its provisions extend to NFTs, particularly those that exhibit characteristics similar to traditional financial instruments. MiCA classifies crypto-assets into various categories, and NFTs that fall under these classifications are subject to the regulation's requirements. For instance, if an NFT is deemed to function as a utility token or an asset-referenced token, it must comply with MiCA's rules on transparency, consumer protection, and market integrity. This means that platforms facilitating the

issuance or trading of such NFTs must adhere to specific obligations, including the provision of clear information to users, the implementation of anti-money laundering measures, and the maintenance of adequate capital reserves (van der Linden, Shirazi, 2023).

MiCA also applies to NFTs by mandating that service providers, such as exchanges and wallets, register with national regulatory authorities and comply with the regulation's operational standards. This includes ensuring the safekeeping of users' assets, preventing conflicts of interest, and providing accurate and timely information to regulators. The regulation's application to NFTs aims to prevent market abuse and protect consumers from the risks associated with investing in digital assets. By imposing these requirements, MiCA seeks to create a harmonized regulatory environment across the EU, reducing legal uncertainty and fostering a safer market for NFTs.

Furthermore, the implementation of MiCA has already begun to shape the NFT market by encouraging platforms to establish robust compliance frameworks. This includes conducting due diligence on the NFTs they offer, ensuring that they meet the regulatory criteria set forth by MiCA, and maintaining open communication with regulatory authorities. As MiCA continues to be enforced across the EU, its application to NFTs is expected to become more prominent, guiding the development of the market and ensuring that it operates within a legal framework that promotes transparency, consumer protection, and financial stability (van der Linden, Shirazi, 2023).

Both the Securities Act of 1933 and MiCA represent foundational legal frameworks that already influence the NFT market in the US and EU, respectively. Their application to NFTs underscores the importance of adapting existing regulations to address the unique characteristics of digital assets, ensuring that the market can evolve within a structured and legally compliant environment.

3.10 Research Design Limitations - Emails & Laws

The research design for this study, which centered on email outreach to NFT platforms and the analysis of existing US and EU laws, presents several limitations. The email responses were minimal, with most platforms either not responding or providing generic information, limiting the depth of primary data collection. This lack of engagement constrains the insights that could be gained directly from industry participants. Similarly, the analysis of existing laws faced limitations due to the absence of specific NFT regulations, relying instead on broader financial and digital asset laws that may not fully address the unique aspects of NFTs. These limitations highlight the challenges in gathering comprehensive data in an emerging and under-regulated field, emphasizing the need for further research as the regulatory landscape evolves.

3.11 Conclusion

In this chapter, we outlined the methodology employed to explore NFT regulation and compliance, focusing on two primary research methods: direct email outreach to leading NFT platforms and a thorough analysis of existing US and EU laws. The email outreach served to gather firsthand insights from industry platforms, though responses were limited, reflecting a broader challenge in the space. Simultaneously, the legal analysis highlighted the applicability of existing regulations like the US Securities Act of 1933 and the EU's MiCA regulation to NFTs. These methods collectively provide a robust foundation for understanding the current regulatory landscape and identifying gaps where new regulations could be developed to support the growth and legitimacy of the NFT market.

CHAPTER IV: RESULTS

4.1 NFT Regulation Research Question

The emergence of NFTs as a revolutionary digital asset class has introduced a myriad of challenges for regulatory bodies across the globe. Unlike traditional financial instruments or even other digital assets like cryptocurrencies, NFTs represent unique items that range from digital art to music, virtual real estate, and beyond. This uniqueness, coupled with the decentralized nature of blockchain technology, presents significant regulatory hurdles. The core research question driving this study is: How can existing regulatory frameworks be adapted to effectively govern the NFT market, ensuring compliance while fostering growth and innovation?

This question arises from the pressing need to address the lack of specific regulations governing NFTs. While there are established laws for art, intellectual property, and financial transactions, NFTs blur these lines by creating a digital medium that can represent a vast array of assets. The existing laws often fall short in providing clear guidance on how NFTs should be regulated, leading to a legal grey area that can be exploited. Therefore, this research question seeks to explore how these regulatory gaps can be bridged.

The research delves into two primary methods of data collection: the analysis of existing laws applicable to NFTs and the outreach to leading NFT platforms to gather their insights and practices regarding regulation and compliance. By examining the intersection of current legal frameworks and industry practices, this study aims to provide a comprehensive understanding of where the regulatory landscape currently stands and how it can evolve to meet the unique challenges posed by NFTs.

This research question is not only timely but also critical for the future of the NFT market. Without a clear regulatory framework, the NFT space remains vulnerable to

misuse, ranging from intellectual property theft to money laundering. At the same time, overly stringent regulations could stifle innovation and deter investment in this burgeoning market. Therefore, striking the right balance between regulation and innovation is crucial, and this research aims to contribute to this ongoing discourse.

The exploration of this research question also involves understanding the perspectives of key industry players, NFT platforms like OpenSea, Rarible, and SuperRare, regarding their current compliance measures and the challenges they face in navigating an unclear regulatory environment. The responses (or lack thereof) from these platforms provide valuable insights into the industry's readiness for regulatory oversight and highlight the areas where further legal clarity is needed.

Moreover, the study examines the existing legal frameworks in the US and the EU, analyzing how laws like the US Securities Act of 1933 and the EU's Markets in Crypto-Assets Regulation (MiCA) could be applied or adapted to the NFT market. These laws serve as starting points for understanding how regulatory principles can be translated into actionable rules for NFTs. However, the unique nature of NFTs demands that these laws be reinterpreted and possibly revised to address the specific challenges of this digital asset class.

The research question guiding this study is crucial for laying the groundwork for future regulatory developments in the NFT space. By addressing this question, the study seeks to provide a roadmap for regulators, industry players, and stakeholders to navigate the complex and evolving landscape of NFT regulation and compliance. The insights gained from this research will be instrumental in shaping policies that protect consumers, ensure market integrity, and promote the sustainable growth of the NFT market.

4.1.1 Introduction to Results for Emailing

The examination of NFT regulation and compliance necessitated a strategic approach to gathering data from key stakeholders within the NFT ecosystem. To achieve this, the research design prominently featured direct outreach to major NFT platforms through email communication. This method was chosen for its ability to solicit specific insights and responses from entities at the forefront of NFT transactions, providing firsthand accounts of current practices, challenges, and perspectives on the evolving regulatory landscape.

The decision to focus on email outreach as the primary data collection method was driven by several factors. First, the NFT space is largely digital, with major platforms operating entirely online. These platforms are the gatekeepers of NFT transactions, and they hold crucial information about how NFTs are being handled within existing legal frameworks. As such, contacting these platforms directly allowed the research to bypass intermediaries and avoid the potential dilution of information that might occur through secondhand sources or broader surveys.

Moreover, the nature of NFTs, being inherently tied to blockchain technology, meant that the most relevant data would come from those who are actively managing these digital assets. Engaging with the platforms directly through email also provided an opportunity to obtain detailed responses tailored to specific inquiries about regulation and compliance. This method was seen as the most efficient and effective way to gather pertinent information given the nascent state of NFT regulation, where much of the knowledge resides with those who are shaping and navigating the market on a daily basis.

The email outreach was meticulously crafted to cover a wide array of topics pertinent to NFT regulation. The queries included questions about the platforms' current regulatory practices, compliance challenges, and their views on future regulatory

developments. By structuring the emails in this way, the research sought to gather comprehensive data that would shed light on the existing regulatory environment and highlight the gaps and opportunities within it.

The results of this outreach, however, were mixed. While some platforms responded with useful information or directed the researcher to relevant resources such as their Terms of Service, many either did not respond at all or provided minimal engagement. This outcome underscores one of the challenges of researching a rapidly evolving field like NFTs, where regulatory practices are still in flux and platforms may be reticent to share detailed information due to legal uncertainties or competitive concerns.

Despite these challenges, the responses that were received offered valuable insights into the current state of NFT regulation. They revealed a cautious approach among platforms, with many relying on existing legal frameworks while awaiting more concrete guidance from regulators. This response pattern highlights the need for more robust and tailored regulatory frameworks to provide clarity and confidence for both platforms and users in the NFT space.

The email outreach component of this research served as a critical tool in gathering data directly from key industry players. While the response rate varied, the information obtained through this method provided a foundational understanding of how NFT platforms are currently navigating the regulatory landscape. This introduction sets the stage for a deeper analysis of the findings, which will be discussed in the subsequent sections.

4.1.2 Platforms Information

In the pursuit of understanding the current state of NFT regulation and compliance, this study reached out to several key NFT platforms that have established themselves as central players within the digital asset market. These platforms vary in their focus, audience, and approach to the NFT ecosystem, providing a broad spectrum of data that is invaluable to this research. Below is a detailed overview of each platform, including relevant statistics and the specific areas of interest that were explored.

OpenSea

Overview: OpenSea is the largest and most widely used NFT marketplace, operating as a central hub for buying, selling, and trading NFTs. It caters to various NFT categories, including digital art, collectibles, gaming assets, and more.

Market Influence: As of 2024, OpenSea accounts for a significant percentage of the global NFT market, with over 2 million active users and billions in monthly trading volume.

Regulatory Focus: The platform's approach to compliance was of particular interest due to its size and the diversity of assets traded. OpenSea's response included a referral to their Terms of Service (ToS), which provides insights into how they manage legal and compliance challenges.

Key Statistics:

- Over 2 million active users
- Monthly trading volume exceeding \$3 billion
- 200+ categories of NFTs available, (Makori, 2023).

Rarible

Overview: Rarible operates as a decentralized NFT marketplace with a community governance model. Users can create, buy, and sell NFTs without intermediaries, offering a unique perspective on regulatory challenges within decentralized systems.

Market Influence: Rarible has grown rapidly since its inception, with an active user base of over 1 million and a strong presence in the digital art and collectibles sectors.

Regulatory Focus: The decentralized nature of Rarible presents specific challenges for regulation, making it a critical platform for this study. The platform initially directed inquiries to their legal department, though no substantial follow-up was received.

Key Statistics:

- 1 million+ active users
- \$500 million+ in total trading volume
- Community governance token (RARI) for decision-making (Cooling, Draper, 2024).

SuperRare

Overview: SuperRare focuses on high-end digital art, offering a curated platform for artists and collectors who engage with NFTs as a form of artistic expression and investment.

Market Influence: With a strong emphasis on quality and exclusivity, SuperRare has positioned itself as a leading marketplace for digital fine art.

Regulatory Focus: The platform's response was limited to an acknowledgment of the inquiry, with no further substantive input. However, SuperRare's curated model raises

questions about intellectual property rights, authenticity, and the regulatory frameworks that may apply.

Key Statistics:

- \$150 million+ in total sales
- Over 2,000 artists featured
- Average sale price of NFTs: \$5,000 (Sankrit, Lim, 2024).

Foundation

Overview: Foundation is another platform that emphasizes high-quality digital art, similar to SuperRare. It has gained popularity for supporting emerging artists and offering exclusive drops.

Market Influence: Foundation has become a respected name in the NFT art world, with a growing user base and significant sales figures.

Regulatory Focus: Foundation's response included a referral to their support articles, but no detailed compliance measures were shared. The platform's focus on exclusivity and curation presents unique regulatory challenges.

Key Statistics:

- \$100 million+ in total sales
- 1,500+ artists supported
- Average NFT price: \$3,500 (Rodeck, Adams, 2024).

Nifty Gateway

Overview: Nifty Gateway is known for its partnerships with prominent artists and celebrities, operating a more centralized platform compared to others. It offers curated NFT drops and is known for its user-friendly interface.

Market Influence: With a strong connection to mainstream culture, Nifty Gateway has facilitated several high-profile sales, contributing to the popularization of NFTs.

Regulatory Focus: The platform's response was limited to an acknowledgment of the inquiry. Given its centralized nature and high-profile collaborations, Nifty Gateway's approach to compliance is a key area of interest.

Key Statistics:

- \$300 million+ in total sales
- Partnerships with over 50 high-profile artists
- Frequent NFT drops with a global audience (Ganguly, 2024).

Mintable

Overview: Mintable empowers creators by providing tools for easy minting and selling of NFTs. It is a platform designed to democratize NFT creation, making it accessible to a broader audience.

Market Influence: Mintable has gained traction as an accessible platform for new creators, with a growing community of users.

Regulatory Focus: The platform's emphasis on accessibility and user engagement brings up considerations about how regulatory measures might impact smaller creators. Mintable did not provide a detailed response to the inquiry.

Key Statistics:

- 500,000+ NFTs minted
- 100,000+ active users
- Integration with Ethereum and other blockchains (Ascent, 2024).

KnownOrigin

Overview: KnownOrigin is another platform focused on empowering creators, with a particular emphasis on digital art. It has a curated marketplace and offers tools for artists to showcase and sell their work.

Market Influence: KnownOrigin has built a reputation for supporting digital artists, with a loyal user base and a steady flow of sales.

Regulatory Focus: The platform's approach to compliance, like others, remains largely unexamined due to limited responses. However, its role in promoting digital art makes it an important subject of this study.

Key Statistics:

- 50,000+ NFTs sold
- 20,000+ active users
- Partnership with major digital artists and galleries (Draper, 2024).

Zora

Overview: Zora is known for its protocol that allows perpetual resale and price adjustments of NFTs. It offers an innovative economic model that challenges traditional notions of ownership and value in the NFT space.

Market Influence: Zora has introduced new dynamics to the NFT market, with a growing number of users and an increasing number of NFTs being traded.

Regulatory Focus: Zora's innovative approach necessitates a closer look at how regulatory frameworks could adapt to or stifle such emerging models. The platform did not provide a detailed response to the inquiry.

Key Statistics (Zora Continued):

- \$50 million+ in total sales
- Unique resale protocol attracting attention
- Increasing adoption among artists and creators (Graw, 2024).

BakerySwap

Overview: BakerySwap is a decentralized platform that integrates NFT trading with DeFi functionalities. It represents the merging of NFTs with broader blockchain-based financial systems.

Market Influence: BakerySwap has attracted a niche audience interested in both NFTs and DeFi, contributing to its unique position in the market.

Regulatory Focus: The integration of DeFi and NFTs presents complex regulatory challenges that are not yet fully addressed by existing laws. The platform did not respond to the inquiry.

Key Statistics:

- 100,000+ NFTs traded
- Integration with DeFi protocols
- Significant community-driven development

The platforms outlined, OpenSea, Rarible, SuperRare, Foundation, Nifty Gateway, Mintable, KnownOrigin, Zora, and BakerySwap, represent a diverse cross-section of the NFT ecosystem. Each platform serves a unique role within the NFT space, ranging from large-scale, user-driven marketplaces like OpenSea and Rarible to highly curated, art-focused platforms such as SuperRare and Foundation. These platforms vary in their approach to community governance, blockchain support, and the types of digital assets they facilitate, offering a comprehensive overview of the current NFT landscape.

4.2 Summary of Findings of Emailings

OpenSea:

- Referred to their Terms of Service for regulatory and compliance information.
- Unable to provide additional context or highlight specific sections of the ToS.
- Offered assistance with technical questions only.

Rarible:

- Initially directed to contact their legal department via a provided email.
- No follow-up or response received after reaching out to the legal department.

SuperRare:

- Received an automated confirmation of the inquiry with a ticket number.
- No further communication or detailed response provided.

Foundation:

- Provided a ticket ID and directed to generic articles on their support website.
- No specific information related to NFT regulation and compliance was offered.

Nifty Gateway:

- Sent an acknowledgment of the inquiry with a promise to review by the support team.
- Directed to the Help Center, but no detailed follow-up or direct answers were given.

Mintable:

- No response received after initial inquiry submission.
- Platform did not engage further or provide any regulatory insights.

KnownOrigin:

- Similar to other platforms, no follow-up or detailed response after the initial contact.
- Provided no information regarding regulatory frameworks or compliance.

Zora:

- Sent an acknowledgment email followed by a request for feedback on the customer service experience.
- No detailed response on compliance or regulatory measures was provided.

BakerySwap:

- No response or acknowledgment received from the platform.
- No engagement or information on regulatory compliance was offered.

This summary captures the overall lack of substantive engagement from NFT platforms regarding regulatory and compliance queries, with most responses being limited to automated messages or referrals to general resources. The most notable interaction was with OpenSea, where the response directed us to their Terms of Service without providing further guidance or specific details. Given this, a deeper examination of OpenSea's Terms of Service is warranted to understand how they address, or fail to address, key regulatory and compliance issues in the NFT space.

OpenSea Terms of Service Analysis - NFT Laws, Regulations or Compliance:

The analysis of OpenSea's Terms of Service reveals significant insights into the current state of NFT regulation, or rather, the lack thereof. As one of the largest NFT marketplaces, OpenSea's Terms of Service (ToS) play a crucial role in how NFT transactions are governed. However, upon review, it becomes evident that these ToS provide minimal regulatory guidance or compliance frameworks specific to NFTs. The platform explicitly states that it is not a financial institution, exchange, or broker, distancing itself from responsibilities traditionally associated with such entities. This disclaimer highlights the platform's intent to operate outside the boundaries of established financial regulations, which poses a challenge in the context of existing laws such as the US Securities Act of 1933 and the EU's Markets in Crypto-Assets Regulation (MiCA).

OpenSea's ToS emphasize the decentralized nature of their service, asserting that they do not hold custody or control over the NFTs or blockchains with which users interact. This stance effectively places the onus of compliance, legitimacy, and authenticity on the users themselves. By doing so, OpenSea avoids entanglement with more stringent regulatory requirements, such as those related to securities under the US Securities Act. The platform's Terms also avoid directly addressing how their operations align with emerging regulations like MiCA, which seeks to create a comprehensive framework for digital assets in the EU. Instead, the ToS focus on user conduct and intellectual property concerns, leaving significant gaps in the broader regulatory and compliance landscape.

The absence of detailed compliance protocols within OpenSea's ToS reflects the broader ambiguity in NFT regulation. While the platform outlines user responsibilities and provides general disclaimers, it stops short of offering concrete guidelines that align with traditional regulatory frameworks. This lack of alignment with established laws like the Securities Act and MiCA raises questions about the platform's preparedness to adapt to future regulatory developments. As the NFT market continues to grow and attract scrutiny from regulators, the current approach taken by OpenSea, as evident in their ToS, may need to evolve to meet the demands of a more regulated environment. Analysis of OpenSea's Terms of Service underscores the need for more robust and clearly defined regulations specific to NFTs. As platforms like OpenSea continue to operate with minimal regulatory oversight, the risk of legal ambiguities and non-compliance increases, highlighting the importance of establishing comprehensive NFT regulations that can provide clarity and protection for all parties involved.

4.2.1 Conclusion of Emailings

The email outreach conducted across various NFT platforms has underscored the significant gaps in the current regulatory framework for NFTs. Despite targeting some of the most influential platforms in the industry, the responses received were minimal and largely uninformative, often redirecting inquiries to general Terms of Service rather than providing specific insights into regulatory compliance. This lack of engagement from the platforms suggests a broader issue within the NFT ecosystem, where the absence of clear regulations has led to a reliance on vague and non-committal responses. The overall conclusion drawn from this effort is that, while the NFT market continues to expand, the platforms themselves remain largely unprepared or unwilling to address the critical need for regulatory clarity. This further reinforces the central thesis that without more defined regulatory guidelines, the NFT space risks remaining in a legal grey area, which could hinder its long-term legitimacy and growth.

4.3 Introduction to Results for Legal Analysis

In this section of the thesis, we focus on the legal analysis conducted to understand how existing US and EU laws, as well as the terms of service (ToS) of major NFT platforms like OpenSea, relate to the regulation and compliance of NFTs. Our exploration into this area was driven by the central research question: "How do current legal frameworks impact the regulation and compliance of NFTs, and what gaps exist that may need to be addressed to support the growth and legitimacy of this emerging asset class?"

Given the lack of specific NFT regulations, we examined broader financial and securities laws to determine their applicability to NFTs. The US Securities Act of 1933 and the EU's Markets in Crypto-Assets Regulation (MiCA) were identified as the most

relevant legislative frameworks. These laws, though not explicitly designed for NFTs, offer potential guidelines for how NFTs might be regulated under existing financial laws. Our analysis aimed to highlight how these laws are currently applied and the implications for NFT platforms and users.

In addition to statutory laws, the terms of service of leading NFT platforms were scrutinized to understand how these platforms approach legal compliance, user responsibilities, and the protection of intellectual property. OpenSea's ToS, in particular, provided insight into how a major player in the NFT market navigates the absence of formal regulation, setting a precedent for self-regulation within the industry.

The findings from this legal analysis will be presented in the following sections, providing a detailed examination of how current laws and platform-specific terms influence the NFT ecosystem and outlining the gaps that exist in the regulatory landscape. These findings are crucial in shaping the recommendations that will be made in the concluding chapters of this thesis.

4.3.1 Background on US & EU Laws Selected

The US Securities Act of 1933 was selected for analysis due to its foundational role in regulating securities within the United States, despite its original design being far removed from the digital assets of today. This law mandates transparency and full disclosure to protect investors in the securities market. In the context of NFTs, the Securities Act provides a framework that could be extended to these digital assets, particularly when NFTs are structured in ways that resemble traditional securities. By analyzing the Securities Act, we sought to understand how its principles could be applied to NFTs, potentially classifying certain NFTs as securities and thereby subjecting them to stringent regulatory oversight.

The EU's Markets in Crypto-Assets Regulation (MiCA) was chosen for its specific focus on the burgeoning field of digital assets, including cryptocurrencies and other blockchain-based assets like NFTs. MiCA represents one of the most comprehensive regulatory frameworks aimed at addressing the unique challenges posed by digital assets in the EU. Its provisions seek to create a harmonized regulatory environment across member states, offering legal clarity and fostering innovation while ensuring consumer protection and market integrity. By examining MiCA, we aimed to explore how its regulations might directly influence the NFT market in Europe and how this framework might serve as a model for global regulatory standards in the NFT space.

4.3.2 Summary & Conclusion of Findings of Legal Analysis

The legal analysis of the US Securities Act of 1933 revealed several critical insights into how existing securities laws might intersect with the burgeoning NFT market. While the Act was originally crafted to govern traditional financial securities, its broad definitions and regulatory requirements have implications for NFTs, particularly those that might be seen as investment vehicles. Our analysis highlighted that certain NFTs, especially those marketed with the promise of future financial returns or those that involve fractional ownership, could potentially be classified as securities under the Act. This classification would subject them to extensive regulatory scrutiny, including the necessity for proper registration and disclosure to protect investors. However, the application of the Securities Act to NFTs is not straightforward, and there remains significant ambiguity regarding which NFTs would fall under its purview. The lack of clear guidelines from regulatory bodies like the SEC creates a challenging environment for NFT platforms and creators, who may unwittingly find themselves in violation of

securities laws. Our findings emphasize the need for updated regulatory guidance that explicitly addresses the unique nature of NFTs and their role in the digital economy.

In the context of the European Union, our analysis of the Markets in Crypto-Assets Regulation (MiCA) provided a comprehensive understanding of how the EU is approaching the regulation of digital assets, including NFTs. MiCA is designed to create a unified regulatory framework across EU member states, offering clarity and consistency in the regulation of crypto-assets. Unlike the US Securities Act, which requires a more interpretive approach to apply to NFTs, MiCA specifically addresses the unique challenges posed by digital assets. Our findings indicated that MiCA could significantly impact the NFT market by imposing stringent requirements on issuers, service providers, and platforms. These include obligations related to transparency, consumer protection, and the prevention of market abuse. MiCA's proactive approach to regulating the crypto market, including NFTs, provides a potential model for other regions looking to create similar frameworks. However, the regulation is not without its challenges, particularly in balancing innovation with consumer protection and ensuring that the regulatory environment does not stifle the growth of the NFT market. Our analysis suggests that while MiCA provides a more tailored approach to NFTs than US law, it still leaves open questions about how these regulations will be practically enforced across diverse NFT use cases.

4.4 Overall Results Via Hypothesis

The overall results of this chapter align closely with the central hypothesis that introducing more explicit and tailored regulations for NFTs will help the space flourish. Our detailed analysis of the responses from the leading NFT platforms, alongside the legal frameworks of the US Securities Act of 1933 and the EU's MiCA, highlighted the

current regulatory gaps and the challenges faced by both platforms and regulators. The findings from the email outreach indicated a general lack of concrete regulatory guidance from the platforms themselves, reinforcing the notion that the NFT market operates in a largely unregulated space. Meanwhile, the legal analysis demonstrated that while existing laws like the Securities Act and MiCA could be applied to NFTs, they are not perfectly suited to address the unique characteristics and risks associated with these digital assets. The ambiguity and uncertainty in both the US and EU regulatory landscapes suggest that without more specific regulations, the NFT market may continue to face hurdles that could limit its growth potential. Therefore, the results of this chapter strongly support the hypothesis that clear and comprehensive regulatory frameworks are necessary to ensure the sustainable development and maturation of the NFT market.

CHAPTER V: DISCUSSION

5.1 Discussion of Results regarding Research Question

The central research question driving this thesis focused on the relationship between regulatory frameworks and the potential flourishing of the NFT market. Specifically, the hypothesis proposed that the absence of clear and specific regulations for NFTs has created uncertainty and challenges that hinder the sector's growth, whereas the introduction and implementation of appropriate regulations would provide the necessary structure for the market to thrive.

The results gathered from both the email outreach to NFT platforms and the legal analysis of existing US and EU laws provide a nuanced perspective on this hypothesis. The general lack of response or the deferral to vague Terms of Service by the platforms indicates a significant gap in the current regulatory landscape. This lack of engagement from major players in the NFT space suggests a broader reluctance or unpreparedness to confront regulatory challenges head-on. It underscores the notion that, without a regulatory framework, platforms may be operating in a gray area, uncertain of how to navigate potential legal risks and compliance requirements.

On the legal front, the analysis of the US Securities Act of 1933 and the EU's Markets in Crypto-Assets Regulation (MiCA) highlighted that, while these laws provide a foundation for financial regulation, they do not fully address the unique characteristics and challenges posed by NFTs. The existing laws were not designed with digital assets in mind, and their application to NFTs is, at best, an imperfect fit. This further supports the hypothesis that without specific regulations tailored to NFTs, the market remains vulnerable to legal ambiguities, which can stifle innovation, deter investment, and ultimately limit the sector's potential. The results strongly support the initial hypothesis. The lack of clear, dedicated regulation creates an environment of uncertainty that

hampers the growth and development of the NFT market. The findings suggest that the introduction of targeted, well-crafted regulations would likely provide the clarity and stability needed to foster a thriving and sustainable NFT ecosystem.

5.1.1 Interpretation of Email Findings

The email outreach to leading NFT platforms was a pivotal component of the research, designed to provide direct insights into how these platforms navigate the murky waters of NFT regulation and compliance. While the method itself may appear straightforward, its significance cannot be understated. The direct nature of email communication offered an opportunity for 1:1 engagement with the platforms, allowing for the possibility of obtaining firsthand information that could illuminate their approaches to regulatory challenges. However, the actual results were less than encouraging. The overwhelming lack of substantial responses from the platforms underscores a critical issue within the NFT space: a pervasive reluctance or inability to engage in discussions about regulatory matters. This silence speaks volumes about the current state of the industry. The platforms' tendency to either deflect inquiries or refer back to generic Terms of Service indicates that they may be either unprepared or unwilling to confront regulatory questions directly. This response, or lack thereof, highlights a significant gap in transparency and accountability within the industry.

Furthermore, the choice to utilize email as a primary research method was not merely a convenience but a strategic decision rooted in the belief that direct communication would yield the most accurate and relevant data. The fact that this method led to minimal engagement suggests that the platforms themselves are not equipped to handle regulatory inquiries in a meaningful way. This could be indicative of

broader issues within the industry, such as a lack of established protocols for regulatory compliance or a deliberate attempt to avoid engaging with potential legal scrutiny. The findings from the email outreach reveal a crucial aspect of the NFT ecosystem: despite its rapid growth and increasing prominence, the industry remains largely unregulated and, perhaps more concerningly, uninterested in regulatory discourse. This poses significant risks for the market's future, as the absence of meaningful dialogue between platforms and regulatory bodies could lead to unforeseen challenges and vulnerabilities. In essence, while the email outreach may have seemed a simple approach, it was, in reality, the most direct and revealing method for assessing the industry's stance on regulation.

5.1.2 Interpretation of Legal Analysis

The legal analysis of existing US and EU laws, specifically the Securities Act of 1933 and the Markets in Crypto-Assets Regulation (MiCA), was a critical component of this research, serving as the primary alternative method to direct communication with NFT platforms. Despite the seemingly straightforward approach of examining these laws to see if they might apply to NFTs, the complexity and relevance of this method should not be underestimated. The analysis revealed significant gaps in the current legal framework, which is primarily designed to govern traditional securities rather than digital art or collectibles like NFTs.

The US Securities Act of 1933, for instance, is geared toward regulating securities and ensuring transparency in financial markets. However, its application to NFTs, which are digital assets often representing art, music, or other unique items, is tenuous at best. NFTs do not inherently fall under the category of securities, and applying this law to NFTs involves a significant degree of interpretation and speculation. The research

highlighted that while the Securities Act could potentially be stretched to cover certain types of NFTs, particularly those with investment-like characteristics, it does not directly address the unique nature of NFTs as digital collectibles. This underscores the inadequacy of existing financial laws to fully encapsulate the nuances of NFTs.

Similarly, the EU's MiCA, which is more directly focused on regulating digital assets and cryptocurrencies, does not explicitly address NFTs either. While MiCA provides a framework for regulating crypto-assets, its focus is on assets that can be used as a means of payment or for investment purposes. NFTs, which are often singular, non-fungible items with cultural or artistic value, do not fit neatly into these categories. The analysis showed that although MiCA is more adaptable to the digital landscape than the US Securities Act, it still lacks specific provisions for the unique characteristics of NFTs.

This legal analysis method was not merely an exercise in identifying potential overlaps between existing laws and NFTs; it was a necessary exploration of the limitations and challenges that arise when trying to apply outdated or tangentially related laws to emerging technologies. While some may view this approach as an easy way out, avoiding more complex or empirical research methods, it was, in fact, a crucial alternative to direct engagement with platforms. The absence of specific laws governing NFTs mirrors the broader challenges faced by regulators in adapting to the fast-evolving digital landscape. The findings emphasize the urgent need for new regulations that can adequately address the unique aspects of NFTs, rather than forcing them into existing legal frameworks that were never designed with digital art or collectibles in mind.

Reaching out to lawyers, legislators, political officials, tax professionals, and accountants would have been irrelevant in the context of this study for several reasons. Firstly, the primary focus of this research was on understanding the current state of NFT regulation directly from the platforms that operate within the space, rather than from

external interpretations or potential future legal perspectives. Engaging with these professionals would likely result in speculative responses about how laws could be applied to NFTs, rather than providing concrete, actionable insights into how existing laws are currently being navigated by NFT platforms. Moreover, given that there are no specific laws governing NFTs, such outreach would likely have yielded generalized discussions on existing financial regulations rather than offering specific, practical solutions for the NFT space. Additionally, the rapidly evolving nature of the NFT market means that any legal or regulatory interpretations would quickly become outdated, rendering such consultations less valuable than direct input from the platforms themselves, which are actively shaping the space in real-time. This further emphasizes the necessity of the chosen research methods, focusing on the platforms' current practices and the existing legal frameworks, rather than theoretical or future-oriented legal interpretations.

5.1.3 Implications for The NFT Market

The absence of specific, enforceable rules governing NFTs creates a unique environment where the movement of assets through NFTs can be conducted with a high degree of financial flexibility. This flexibility, while appealing to many in the industry, carries both positive and negative implications for the market as it stands. On the positive side, the lack of stringent regulations allows for rapid innovation and the creation of new financial products and services within the NFT space. Creators, collectors, and investors can operate with fewer constraints, exploring the full potential of NFTs without the need to navigate complex legal frameworks. This freedom has enabled the NFT market to grow rapidly, attracting a wide range of participants, from individual artists to major

corporations. The ease with which assets can be moved through NFTs also facilitates liquidity and can lead to increased market activity, driving further growth and investment.

However, this regulatory vacuum also presents significant challenges. The lack of clear rules leaves the market vulnerable to various forms of exploitation, including fraud, money laundering, and other illicit activities. Without established guidelines, it is difficult to enforce accountability, and bad actors can take advantage of the opacity to engage in unethical or illegal practices. This not only puts individual participants at risk but also undermines the overall integrity of the market. Moreover, the absence of regulation creates uncertainty for legitimate businesses and investors, who may be hesitant to fully engage with NFTs due to the potential for future legal repercussions or changes in the regulatory landscape. The implications for the NFT market, therefore, are multifaceted. While the current regulatory environment offers opportunities for growth and innovation, it also exposes the market to risks that could hinder its long-term development. The lack of rules provides both freedom and danger, creating a complex landscape that participants must navigate with caution.

5.1.4 Challenges & Limitations

Lack of Regulatory Clarity: One of the primary challenges in this study was the lack of clear regulatory frameworks specifically tailored to NFTs. As NFTs operate at the intersection of digital assets, intellectual property, and financial instruments, existing laws and regulations, such as those governing securities or commodities, do not always apply neatly to NFTs. This ambiguity made it difficult to draw definitive conclusions about compliance and regulation, as the legal landscape is still in flux.

Platform Non-Responsiveness: A significant limitation was the non-responsiveness of many major NFT platforms to our outreach efforts. Despite numerous

attempts to engage these platforms in discussions about their compliance strategies and regulatory challenges, the responses were minimal or non-existent. This lack of cooperation limited the depth of the data collected and left many questions about platform practices unanswered.

Rapid Market Evolution: The NFT market has grown exponentially in a very short period, outpacing the development of legal and regulatory responses. This rapid evolution means that any analysis or conclusions drawn from this study may quickly become outdated as new technologies, market practices, and regulatory initiatives emerge. The speed at which the market changes presents a constant challenge for researchers attempting to keep pace with developments.

Global Jurisdictional Differences: NFTs operate across international borders, involving participants from various legal jurisdictions with different regulations and enforcement practices. This global nature creates a complex legal environment where a single NFT transaction may be subject to multiple, sometimes conflicting, regulatory regimes. The study faced challenges in accounting for these jurisdictional differences, especially given the limited data on how platforms and users navigate these complexities.

Ambiguity in Legal Interpretation: Given the novelty of NFTs, there is a lack of precedent in how existing laws, such as the US Securities Act of 1933 or the EU's MiCA, apply to them. Legal interpretations are still developing, and courts have yet to establish clear guidelines on how NFTs should be treated under existing laws. This ambiguity posed a challenge for the study, as the legal landscape remains speculative rather than definitive.

Technological Challenges: The decentralized and pseudonymous nature of blockchain technology, which underpins NFTs, presents unique challenges for compliance and regulation. Traditional methods of enforcement, such as tracking

transactions or verifying identities, are difficult to apply in the context of NFTs. This technological barrier complicates efforts to regulate the market effectively and was a significant limitation in assessing compliance mechanisms.

Lack of Standardization: The NFT market lacks standardization in terms of how NFTs are created, traded, and managed. Different platforms have different protocols, smart contract standards, and governance models, making it challenging to assess the market as a whole. This lack of uniformity adds another layer of complexity to the study, as the findings may not be universally applicable across all platforms.

Economic and Market Risks: The volatility of the NFT market, driven by speculation and fluctuating cryptocurrency prices, presents economic risks that complicate regulatory efforts. These market dynamics, combined with the potential for significant financial losses, create a challenging environment for establishing stable and effective regulations. The study had to account for these risks, which added another layer of complexity to the analysis.

Scalability Issues: As the NFT market continues to grow, scalability becomes a significant concern, both in terms of technology and regulation. The study identified challenges related to the scalability of blockchain networks, which may struggle to handle increasing transaction volumes. Similarly, regulatory frameworks may find it difficult to scale effectively to address the global nature of the NFT market, presenting a limitation in the study's ability to predict future regulatory outcomes.

Inadequate Legal Precedents: The lack of legal precedents specifically related to NFTs makes it difficult to predict how courts will interpret existing laws in the context of NFTs. This limitation affected the study's ability to provide definitive conclusions about the legal status of NFTs and the potential for future regulation.

5.2 Re-evaluating the Hypothesis

After conducting a comprehensive analysis of both the email responses from NFT platforms and the existing legal frameworks in the US and EU, it is clear that the initial hypothesis of this study, suggesting that the lack of regulation hinders the NFT market's growth and stability, while the introduction of regulation could lead to a flourishing sector, has been largely validated. The absence of direct, meaningful engagement from platforms and the lack of specific legal guidelines underscore the hypothesis that the current unregulated environment creates uncertainty and potential risks that may deter broader adoption and sustained market growth.

The findings from the email outreach revealed a reluctance or inability among NFT platforms to openly discuss compliance measures or regulatory challenges. This opacity suggests that without a clear regulatory framework, platforms are either unprepared to address compliance issues or are operating in a space where ambiguity is tolerated, if not encouraged. This aligns with the hypothesis that regulation is necessary to provide a foundation upon which the NFT market can grow in a legitimate manner. The analysis of existing legal frameworks demonstrated that while these laws have provisions that could be applied to NFTs, they are not specifically designed for the nuances of digital assets. This gap in regulation reinforces the hypothesis that without legal structures, the NFT market is vulnerable to misuse, which could stifle its long-term potential.

The research supports the hypothesis that the NFT market, in its current unregulated state, faces significant challenges that could hinder its development. However, with the introduction of targeted regulations, there is potential for the market to stabilize and grow, ultimately benefiting creators, investors, and platforms alike. Thus, the thesis is confirmed: regulation is not only beneficial but essential for the flourishing of the NFT sector.

5.2.1 Theoretical Implications

The findings of this research have significant theoretical implications, particularly for the application of the Theory of Reasoned Action (TRA) in the context of NFT regulation and compliance. The TRA suggests that individuals' behaviors are influenced by their attitudes toward a behavior and the subjective norms surrounding it. In the case of NFTs, the absence of clear regulatory frameworks has created an environment where attitudes toward compliance are ambiguous, and subjective norms are often shaped by opportunistic or exploitative behaviors. Without regulation, there is a tendency for individuals and platforms to engage in questionable activities, as the lack of oversight creates opportunities for bad actors to thrive.

Conversely, the introduction of clear and enforceable regulations could establish a positive feedback loop, or a virtuous cycle as opposed to a vicious circle, where individuals and platforms are encouraged to engage in ethical and compliant behaviors. As regulations are implemented, they would likely lead to a shift in attitudes, where compliance becomes the norm, and responsible behavior is rewarded. This shift would not only reduce the prevalence of harmful activities but also foster trust and stability within the NFT market, encouraging broader participation and innovation.

Thus, the theoretical implication is that regulatory frameworks serve as crucial mechanisms for guiding the behaviors and attitudes within the NFT ecosystem. By providing clear rules and consequences, regulations can transform the NFT space into a more secure and trustworthy environment, promoting a self-reinforcing cycle of good practices and positive outcomes.

5.2.2 Practical Implications for Regulators & Platforms

The research conducted in this thesis highlights critical implications for government regulators at both local and national levels, as well as for NFT platforms operating within the US and the EU. The current lack of specific regulations for NFTs creates a regulatory vacuum that leaves both regulators and platforms in a precarious position. For government officials, the absence of clear rules implies a significant challenge in ensuring market integrity, protecting consumers, and preventing illicit activities such as money laundering and fraud.

For NFT platforms, the lack of regulatory oversight presents both opportunities and risks. On one hand, the absence of strict rules allows for greater flexibility and innovation, enabling platforms to experiment with new models and attract a wide range of users. However, this freedom comes with the risk of reputational damage and potential legal liabilities. As public scrutiny of NFTs increases and calls for regulation grow louder, platforms may find themselves facing legal challenges or backlash from consumers who feel unprotected in a largely unregulated market.

For consumers, the lack of regulations implies uncertainty and risk. They are left without clear recourse in cases of fraud, intellectual property violations, or other disputes. This situation can erode trust in the market, potentially stifling its growth and limiting broader adoption. Therefore, it is in the best interest of both regulators and platforms to proactively engage in discussions about potential regulations that can provide a balance between innovation and consumer protection.

5.3 Comparative Analysis Between US & EU Approaches

When comparing the approaches taken by the United States and the European Union toward NFT regulation, it becomes clear that both regions have adopted different

strategies, reflecting their broader regulatory philosophies and legal frameworks. In the US, the approach has been largely reactive, with existing laws, such as the Securities Act of 1933, being applied to NFTs in a piecemeal fashion. This reflects a broader trend in US regulation, where new technologies are often shoehorned into existing regulatory structures rather than being addressed through new, tailored legislation. This approach has left significant gaps in the regulatory landscape, particularly concerning how NFTs are classified and regulated, and has resulted in a lack of clarity for both platforms and users.

The US Securities and Exchange Commission (SEC) has primarily focused on whether NFTs can be considered securities under the existing framework. This determination hinges on the application of the Howey Test, which assesses whether an asset constitutes an investment contract. However, the unique nature of NFTs, often serving as digital representations of art, collectibles, or other non-fungible assets, complicates this analysis. The US approach has been criticized for its lack of specificity and adaptability, which has left many in the NFT space uncertain about their legal obligations and the potential risks of enforcement actions.

In contrast, the European Union has taken a more proactive stance by attempting to create a new regulatory framework specifically for digital assets, including NFTs. The Markets in Crypto-Assets Regulation (MiCA) represents the EU's effort to establish comprehensive rules for digital assets, aiming to provide legal clarity and consumer protection while fostering innovation. MiCA is designed to cover a wide range of crypto-assets, including those that do not fall under existing financial regulations. However, despite this ambitious attempt, the regulation still faces challenges in adequately addressing the nuances of NFTs, particularly in distinguishing between utility tokens, payment tokens, and NFTs as unique digital assets.

While the US approach is characterized by a reliance on existing laws, the EU's approach reflects a willingness to develop new regulatory frameworks. However, both approaches have significant shortcomings. The US has yet to provide clear guidance that addresses the unique characteristics of NFTs, leaving many market participants in a legal gray area. On the other hand, while the EU's MiCA regulation is a step in the right direction, it remains a work in progress, and its final form may still fall short of fully addressing the complexities of the NFT market. In summary, the US approach is more conservative, focusing on the application of existing laws with minimal adaptation, whereas the EU is attempting to create a more comprehensive and forward-looking regulatory framework. However, both regions face significant challenges in effectively regulating NFTs, with the US struggling to adapt its existing laws to new technologies and the EU grappling with the practicalities of implementing a new regulatory regime.

A significant challenge with the US approach to NFT regulation is that many of the securities laws being applied are decades old, with some dating back nearly a century. For instance, the Securities Act of 1933, which is often cited in regulatory discussions around NFTs, was enacted in the wake of the Great Depression to address issues in the stock market that contributed to the economic collapse. Similarly, the Securities Exchange Act of 1934, which established the SEC, was designed to regulate stock exchanges and protect investors in a financial environment vastly different from today's digital economy (Kenton, Estevez, 2023). Historically, the US has been slow to update its financial laws to keep pace with technological advancements. For example, the Investment Advisers Act of 1940 (Kagan, Battle, Munichiello, 2021) and the Investment Company Act of 1940 (Chen, Stapleton, Ma, 2023) are still in use today, despite the dramatic changes in financial markets and instruments. This reliance on outdated laws makes it difficult to address the unique challenges posed by new technologies like NFTs.

CHAPTER VI: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary & Implications

The exploration of NFT regulation and compliance undertaken in this thesis has illuminated significant gaps and challenges within the current legal frameworks governing digital assets. Through an extensive analysis of both US and EU laws, as well as direct engagement with leading NFT platforms, the research has revealed the absence of specific and comprehensive regulations tailored to the unique characteristics of NFTs. This lack of clear guidelines has led to a regulatory gray area, where platforms and users navigate a complex landscape with little consistency or legal certainty.

The findings suggest that while the NFT market continues to grow rapidly, the absence of robust regulatory structures has created vulnerabilities, including potential legal disputes, market instability, and risks related to fraud and intellectual property rights. The implications of this research underscore the urgent need for policymakers to develop and implement regulations that address these challenges while fostering innovation and growth within the digital asset space. The study's insights also highlight the critical role of international cooperation in establishing a cohesive regulatory environment, as NFTs are inherently borderless, transcending traditional legal jurisdictions.

The implications of this research extend beyond the immediate NFT market, touching on broader issues of digital asset regulation, consumer protection, and the evolution of financial technologies. The findings serve as a call to action for regulators, industry stakeholders, and academics to engage in a collaborative effort to shape the future of NFTs in a way that ensures both their sustainability and their potential to revolutionize various industries.

6.2 NFT Law Recommendations

In light of the unique characteristics of NFTs, which are intangible, borderless digital assets that often straddle the line between property and financial instruments, there is a pressing need for tailored regulatory frameworks. The existing laws in various jurisdictions, while helpful as a foundation, are not adequately equipped to address the specific challenges posed by NFTs. This section proposes new, NFT-specific laws, complete with typical thematic legal law nick names, that draw on existing legislation but are adapted to the distinct nature of these digital assets. These recommendations aim to provide clarity, protect consumers and creators, and support the sustainable growth. It should be absolutely noted the technical names and nicknames listed below are purely fictitious, hypothetical, and are only recommendations specific to this thesis.

United States

Digital Asset Securities Act (DASA) - Nickname: "CryptoCanvas Act"

Reasoning: Named after the popular NFT platform Foundation, which focuses on digital art, this act emphasizes the regulation of NFTs as valuable digital "canvases" that require structured oversight.

Application: The DASA would require that NFTs, if classified as securities, comply with specific SEC regulations tailored for digital assets. This includes registration and disclosure requirements that are unique to the intangible and borderless nature of NFTs.

Content Creator Rights Act (CCRA) - Nickname: "Beeple's Law"

Reasoning: Inspired by the artist Beeple, whose NFT sale broke records, this law focuses on protecting digital creators' rights, recognizing their work as valuable digital assets.

Application: The CCRA would modernize the Digital Millennium Copyright Act (DMCA) to apply specifically to digital content associated with NFTs. This ensures that creators have clear rights over their digital works, including resale rights and royalties within the NFT ecosystem.

Virtual Asset Integrity Act (VAIA) - Nickname: "ChainGuard Act"

Reasoning: Reflecting OpenSea's role as a major NFT marketplace, this law ensures that the integrity of blockchain transactions is maintained across the virtual landscape.

Application: The VAIA would expand the Bank Secrecy Act (BSA) to include NFT platforms, requiring them to implement robust Anti-Money Laundering (AML) and Know Your Customer (KYC) procedures. This is crucial for maintaining the integrity and security of virtual assets in a decentralized environment.

European Union

Digital Asset Data Protection Regulation (DADPR) Nickname: "MetaSafe Regulation"

Reasoning: Named after Metakovan, the buyer of Beeple's \$69 million NFT, this regulation safeguards personal data associated with NFTs, much like the precious digital assets it protects.

Application: The DADPR would adapt the General Data Protection Regulation (GDPR) to specifically cover data associated with NFT transactions. This ensures that personal data within the NFT space is protected, with clear guidelines for storage, transfer, and consent.

Creative Works Digital Rights Directive (CWDRD) - Nickname: "RareRights Directive"

Reasoning: Taking its name from SuperRare, the platform known for high-end digital art, this directive focuses on ensuring that creators' rights are securely managed in the NFT space.

Application: The CWDRD would modify the EU's Directive on Copyright in the Digital Single Market to address the specific needs of NFTs. It ensures that creators retain control over their digital works, including how they are used, displayed, and sold in the NFT market.

United Kingdom

Digital Financial Instruments Act (DFIA) - Nickname: "MintMarket Act"

Reasoning: Named after Mintable, the platform empowering creators, this act governs NFTs as financial instruments, ensuring they are treated with the seriousness they deserve.

Application: The DFIA would adjust the UK Financial Services and Markets Act 2000 to classify certain NFTs as financial instruments, subjecting them to appropriate financial regulations. This includes rules on trading, investment, and consumer protection within the NFT marketplace.

Intellectual Property Digital Markets Act (IPDMA) - Nickname: "CryptoCopyright Act"

Reasoning: Reflecting the importance of intellectual property in the digital age, this act mirrors the role that KnownOrigin plays in promoting original works within the NFT market.

Application: The IPDMA would update the UK's Copyright, Designs, and Patents Act 1988 to encompass NFTs, ensuring that digital creators have enforceable rights and protection against infringement in the NFT space.

Singapore

Digital Payment Asset Regulation Act (DPARA) - Nickname: "LionChain Regulation"

Reasoning: Inspired by Singapore's symbol, the lion, this regulation ensures that NFT transactions are as strong and secure as the nation's reputation in the financial world.

Application: The DPARA would adapt Singapore's Payment Services Act to regulate NFTs as digital payment tokens, ensuring that all transactions involving NFTs meet the country's high standards for financial security and consumer protection.

China

Digital Commerce Regulation Act (DCRA) - Nickname: "GreatWall Act"

Reasoning: Named after the Great Wall of China, symbolizing strength and protection, this act aims to safeguard consumers in the fast-growing NFT market within China.

Application: The DCRA would modify China's E-commerce Law to regulate online platforms facilitating the sale of NFTs. It would ensure that these platforms operate within strict guidelines to protect consumers and maintain market order.

Implementation and Timeline: The adoption of these new laws will require a coordinated effort from governments, industry stakeholders, and international organizations. The complexity and novelty of NFTs mean that the legislative process will

likely be protracted. In the United States, it could take anywhere from five to ten years for the Digital Asset Securities Act and related laws to be passed and fully implemented, depending on the legislative priorities of Congress. In the European Union, the process may be slightly faster due to the region's proactive approach to digital regulation, with new laws potentially coming into effect within three to five years. In countries like Singapore and China, where the regulatory environment is more centralized and adaptable, these laws could be introduced and enforced within two to four years. However, the global nature of NFTs means that international cooperation will be essential for these laws to be effective, and the overall timeline for full implementation could span a decade or more.

6.3 Future Research Recommendations

As we look toward the future of NFT laws, it is crucial to recognize the dynamic and evolving nature of the digital landscape. The fictitious laws proposed in this study serve as a starting point, but they underscore the need for ongoing research to keep pace with technological advancements. Future research should explore the implications of these laws, if any of them of any similarity came into existence, examining how they impact various stakeholders, including artists, platforms, investors, and consumers. Additionally, there is a pressing need to investigate the global harmonization of NFT regulations, considering the borderless nature of blockchain technology. Researchers should also delve into the ethical considerations surrounding NFT transactions, particularly in areas such as intellectual property rights, data privacy, and the environmental impact of blockchain usage. By continuously assessing the effectiveness of regulatory frameworks and their adaptability to new challenges, future research can contribute to the development of a more robust and equitable NFT ecosystem.

6.4 Reliance on US & EU NFT Sphere

The focus of this research on the US and EU NFT spheres is rooted in the regions' advanced regulatory frameworks and their leading roles in the global financial landscape. These two regions have historically been at the forefront of creating and enforcing financial laws, setting precedents that other parts of the world often follow. Given their influence, examining how the US and EU approach NFT regulation provides valuable insights into the potential future direction of global NFT compliance.

While regions like Asia, Africa, Australia, and South America are emerging in the technological space, their regulatory environments are not yet as developed, particularly in the context of digital assets. This research deliberately narrowed its focus to the US and EU, as they represent the most immediate and impactful arenas for legal development in the NFT space.

It is vital that the US and EU accelerate the development and implementation of these laws, as their leadership will set the stage for the rest of the world to follow. As NFTs and cryptocurrency inherently transcend national borders, establishing clear and consistent regulations in these key regions is crucial for the eventual unification of laws across borders. This unification will help create a more stable and predictable environment for NFTs globally, ensuring that the borderless nature of these digital assets is met with a cohesive legal framework that can be adopted worldwide.

6.5 Conclusion

The journey of this PhD thesis has been an exploration into the uncharted territory of NFT regulation and compliance, delving into a digital frontier that continues to evolve at a rapid pace. Throughout this research, we have navigated the complexities of a market that operates beyond traditional borders and defies conventional legal frameworks. The examination of existing US and EU laws has illuminated the challenges posed by NFTs, revealing gaps in current regulations and the urgent need for a new legal approach tailored to this unique asset class. By engaging directly with the platforms and analyzing the relevant legal frameworks, this thesis has underscored the importance of establishing clear guidelines that can support the growth of the NFT market while safeguarding the interests of all participants. The findings suggest that while NFTs offer tremendous potential, their future success hinges on the development of a robust and adaptable regulatory environment that can keep pace with innovation and foster trust within the digital ecosystem. This research serves as a call to action for policymakers, regulators, and industry leaders to collaborate in crafting a regulatory landscape that not only addresses the challenges of today but also anticipates the needs of tomorrow.

Please note: There were no survey's nor interviews conducted, thus no survey cover letters, signed informed consents, nor interview guides will be attached.

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