

# bitsCrunch NFT Wash Trade Report for 2022

22-Feb-2023 (First Version)



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## Disclaimer

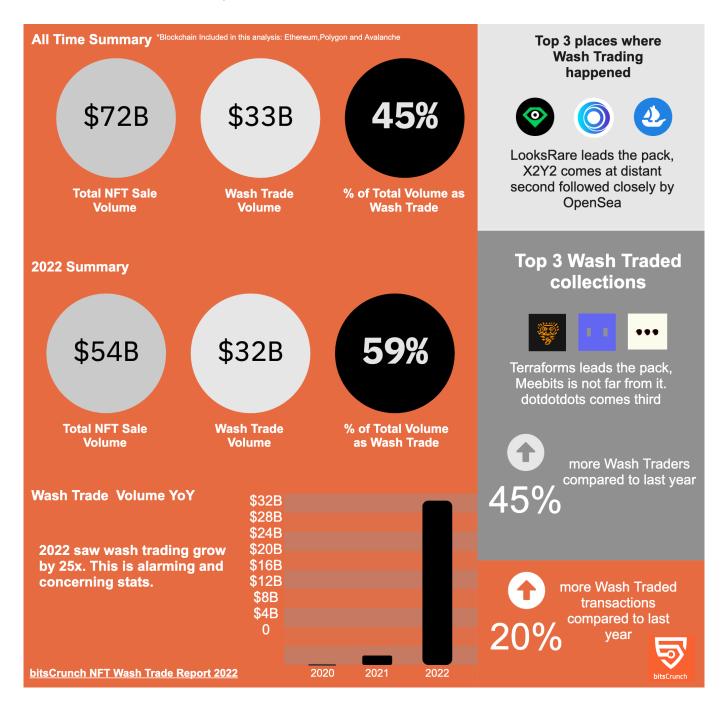
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## Overview

The past year was a rollercoaster ride for the crypto industry as it experienced significant highs and lows. In the first half of the year, almost all blockchains saw a new peak in value, with many reaching all-time highs. However, in the latter half of the year, the market experienced a dip, causing many investors to become cautious. Despite the market volatility, we saw the emergence of new collections and marketplaces within the industry, showcasing the continued growth and innovation within the space. Overall, it was a dramatic year for the crypto industry, with many noteworthy developments and changes.

Here is an overview of the last year:





#### Performance of NFTs in 2022

2022 was a landmark year for the NFT market, as the number of new collections created reached an all-time high. According to our data, 613K new NFT contracts were made, representing an 860% increase from the previous year. Approximately 85.8 million new NFTs were also minted across Ethereum, Polygon, and Avalanche.

These collections were created in various categories, with gaming and sports being the most popular. The gaming industry, in particular, saw a significant surge in NFT-based collectibles and in-game items, with many popular game developers experimenting with the technology.

We also saw the emergence of new types of NFTs, such as virtual real estate, digital art, and virtual collectibles, which further expanded the possibilities of the technology. Additionally, with the increasing adoption of NFTs in the sports industry, we saw the launch of fan tokens, which allowed fans to own a piece of their favorite team or athlete.

Overall, 2022 was a pivotal year for the NFT industry, as it marked a turning point in terms of the number and variety of collections created and the increasing adoption of the technology across various industries.

Top 10 collections of 2022 by sale volume, excluding wash trade volume

Our research shows that Yuga Labs collections have a significant presence in the NFT market, accounting for a staggering \$4.4 billion in trade volume or 19% of the total non-wash traded NFT sales volume for the year 2022.

| collection 🖨       | blockchain ≑   | Sale Volume 🖨 |
|--------------------|----------------|---------------|
| BoredApeYachtClub  | ethereum       | 1.53B         |
| MutantApeYachtClub | ethereum       | 1.13B         |
| Otherdeed          | ethereum       | 952M          |
| Azuki              | ethereum       | 805M          |
| CloneX             | ethereum       | 564M          |
| Moonbirds          | ethereum runch | 554M          |
| CRYPTOPUNKS        | ethereum       | 402M          |
| Doodles            | ethereum       | 367M          |
| BoredApeKennelClub | ethereum       | 249M          |
| Crabada            | avalanche      | 227M          |
| Totals             |                | 21.7В         |

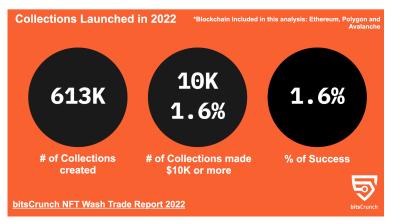
As depicted in the chart above, the top ten collections exclude wash trade, showing BAYC as the clear winner, reaching a staggering \$1.5B. Other notable collections that followed BAYC's impressive performances include Mutant Ape Yacht Club, Otherdeed, Azuki and CloneX. However, When including wash trade volume, the graph shows a slightly different picture of the top ten collections. The below chart shows the top ten collections in the NFT market, including the wash trade volume. It is worth noting that some of the collections from the previous list may not be present in this list due to heavy wash trading patterns evident in some of the collections included in this ranking.



#### Top 10 collections of 2022 by sale volume, including wash trade volume

Our analysis has revealed that wash traders favored NFTs from various collections, including Terraforms, Meebits, dotdotdot, Dreadfulz, More Loot, Loot and others. These collections, in particular, were responsible for a staggering 90% of the total wash trading volume in 2022

| collection \$      | blockchain 🖨   | Sale Volume 🖨 |
|--------------------|----------------|---------------|
| Terraforms         | ethereum       | 12.3B         |
| Meebits            | ethereum       | 9.64B         |
| dotdotdot          | ethereum       | 2.69B         |
| BoredApeYachtClub  | ethereum       | 1.72B         |
| Dreadfulz          | ethereum       | 1.25B         |
| More Loot          | ethereum runch | 1.25B         |
| MutantApeYachtClub | ethereum       | 1.2B          |
| Otherdeed          | ethereum       | 1.1B          |
| Azuki              | ethereum       | 879M          |
| Loot               | ethereum       | 744M          |
| Totals             |                | 54.1B         |



The odds of success are extremely low for NFT collections. Out of all the minted collections, only a mere 1.6% are able to reach a value of \$10,000 or more. And only 0.17% of collections reach a trade volume of \$1 million or more, indicating the highly competitive and challenging nature of the NFT market. These statistics highlight the importance of careful and thorough research and analysis when investing in NFT collections, as the chances of success are

limited and highly selective. The following graphics illustrate the odds of NFT collection reaching different volume buckets, starting from \$100K up to \$1B.





## Wash Trading

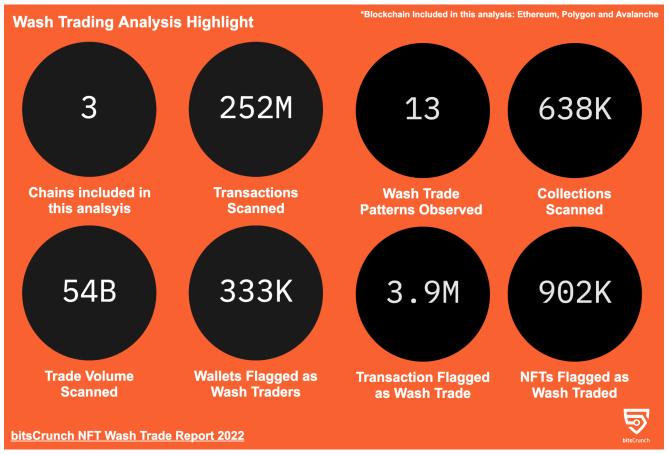
The NFT market in Ethereum alone brought in a total volume of \$54B in 2022. However, a closer examination of the data reveals that a significant portion of this volume may be the result of wash trading. Our forensic analysis estimates that \$31B of the \$54B volume traded on Ethereum is suspected of being wash traded.

Wash trading is a fraudulent activity in which traders collude to create artificial demand for an NFT by repeatedly purchasing and selling it. This practice has serious implications for the NFT market, as it artificially inflates the price and volume of an NFT, leading to market inefficiencies and misinformed investors. In addition, wash trading makes it difficult for marketplaces to accurately measure the growth and reach of their platforms, as they are unable to rely on the reported volume and price as reliable metrics.

Wash trading in traditional securities is often considered illegal in many jurisdictions, but unfortunately, the lack of regulations in the NFT market has allowed the widespread practice of wash trading to go unchecked. NFT marketplaces have not taken adequate measures to address this issue, which could have serious consequences if left unaddressed. If the market does not self-regulate, regulators may step in with stricter regulations that could impede the growth and development of the NFT market.

The increase in suspected wash trades is particularly prevalent in new NFT marketplaces that offer reward tokens based on the volume traded. These marketplaces incentivize wash trading behavior, making it easier for traders to engage in this fraudulent activity and further skewing the market data.

Therefore, it is crucial for market participants and investors to be vigilant and informed about the potential for wash trading in the NFT market, and to use caution and conduct thorough research before making any investments. By doing so, they can protect themselves from being misled by artificial market data and make informed investment decisions.

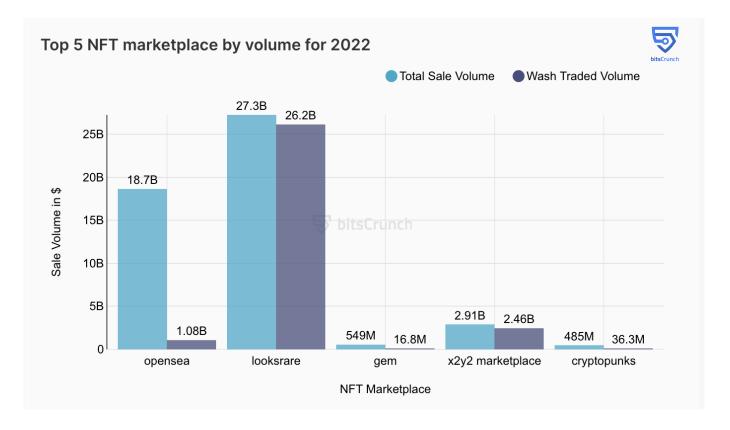




## Wash Trading in Marketplace

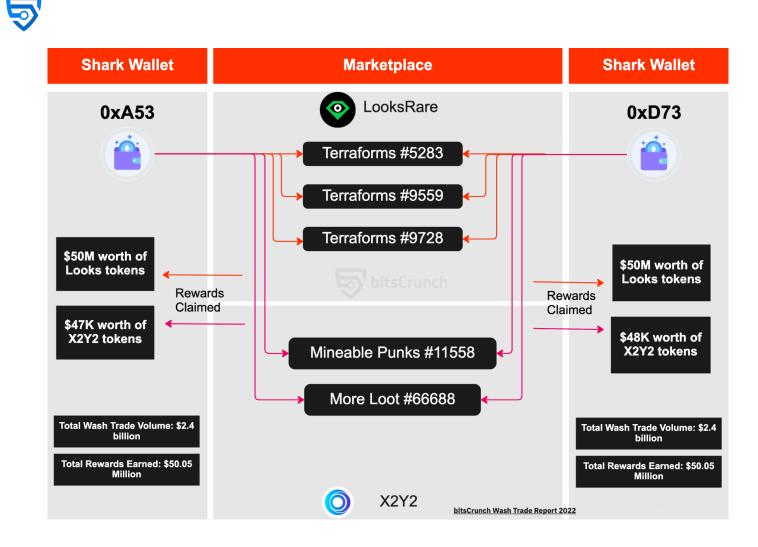
The NFT market saw a surge in the number of new marketplaces emerging in 2022, each offering unique features and token rewards for traders. However, among these new entrants, one marketplace stood out for all the wrong reasons - LooksRare. A detailed study revealed that a staggering 96% of the total volume traded in LooksRare was wash trade volume.

In the case of LooksRare, the marketplace offered loyalty tokens to traders based on the volume of NFTs traded, which made it susceptible to wash trading. As a result, the monthly volume in the LooksRare market exceeded that of even the leading NFT marketplace OpenSea for nearly the first 4 months of the year. The case of LooksRare serves as a cautionary tale for the NFT market and the lack of self regulation.



Our analysis has uncovered that few wallets who collude to artificially inflate the trading volume of NFTs in order to reap rewards offered by the marketplace. The two wash traders, identified by the wallet addresses 0xa53496b67eec749ac41b4666d63228a0fb0409cf and 0xd73e0def01246b650d8a367a4b209be59c8be8ab, were found to be responsible for nearly 18% of the total wash trading activity in the LooksRare marketplace. However, they were not only involved in wash trading between each other but also with other traders in the network.

Furthermore, our investigation shows that the wash traders extended their fraudulent activities to other NFT marketplaces such as X2Y2 and OpenSea. The below graph provides a visual representation of the rewards earned in US dollars by these wallets. The significance of these findings highlights the need for more stringent measures to be put in place to prevent such malicious activities from affecting the integrity of the crypto and NFT market.



The above picture shows how the two wash traders coordinated over several hundred transactions across 3 marketplace to maximize their rewards earnings. They then pooled the rewards into a single wallet before eventually transferring it to an exchange wallet. This wallet is labeled as FTX exchange wallet in ether scan.

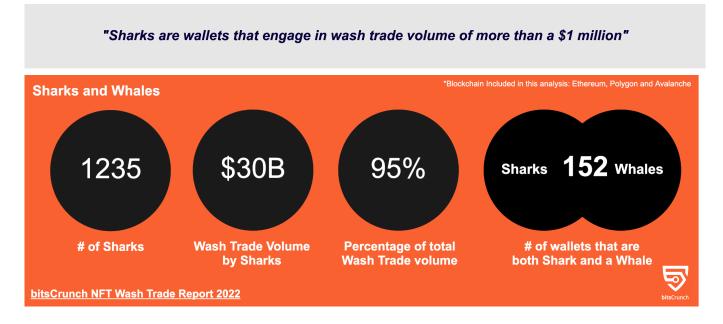
Our analysis highlights that this particular wash trade scenario involved only 3 collections and 5 NFTs, yet it resulted in a staggering 3710 interactions and a trading volume of \$4.8B. This serves as a reminder of the impact that wash trading can have on the NFT market.

However, it's important to note that this is not an isolated case, as our statistics indicate that over 277K traders have engaged in wash trading and that there are a significant number of "sharks" involved in this fraudulent activity. To understand the extent of wash trading in the NFT market, it is crucial to identify these "sharks" and distinguish them from the "whales".



## Wash Traders "Sharks" in blockchain

Our analysis has revealed that the top wash traders, from now named as "Sharks", are responsible for a significant portion of the wash trade volume in the NFT market. To be considered a shark, a wallet must have engaged in wash trades that cumulatively add up to over \$1 million. These powerful sharks have the ability to manipulate the market by artificially inflating demand and prices. On the other hand, Whales are the wallets who hold NFTs worth \$1M or more.



For example, in the Terraform collection, sharks were responsible for an astonishing 99.89% of the total wash trade volume, which stood at a staggering 99.69% of the total volume received in this collection.



This highlights the importance of identifying and curbing the influence of wash trade activity in the NFT market, as it can greatly impact the accuracy of market metrics and harm honest traders and investors.

#### Victims of Wash Trade



Wash trading Sharks have been engaging in a fraudulent scheme of purchasing a large number of NFTs from one marketplace and reselling them at inflated prices. deceivina unsuspecting individuals. This fictitious demand artificially increases the value of the NFTs, leading those who purchased them at the original price to suffer financial losses.

"A Wash Trade Victim is someone who is not a wash trader but ends up buying and holding an wash traded NFT"

According to our analytics, there have been 80K victims who have been affected by the wash trading. These victims have ended up holding about 125K wash traded NFTs, leading to a total estimated potential loss of \$53M. It's important for investors to be cautious and conduct thorough research before investing in any NFTs. This includes looking at the history of the NFT and its creator, checking for any red flags such as excessive volume or price manipulation, and verifying that the NFT is genuine. By being informed and proactive, one can reduce risk of falling prey to wash trading scams and other pump-and-dump fraudulent activities in the NFT market.

| marketplace_name 🌲 | Potential money lost by victims (in \$) |
|--------------------|---|
| opensea            | 36.1                                    |
| cryptopunks        | 3.18                                    |
| looksrare          | 2.331                                   |
| blur               | 5) bitsCrunch 2.01                      |
| x2y2 marketplace   | 1.8M                                    |

An example worth examining is the purchase made by victim 0x5699abeb0d9109a1d6f86be0d8d5b396eafcf286 of NFT #2746 from CloneX for \$786K on Feb 17 2022. The seller of the NFT was the wash trader 0xa7106b4089e6f3f267d23abc02c9a862dcd7316e, who had engaged in wash trading involving the NFT on Feb 16 2022. It's worth noting that the wash trader in question had engaged in wash trades totaling \$48M for the year, indicating a pattern of suspicious trading behavior.



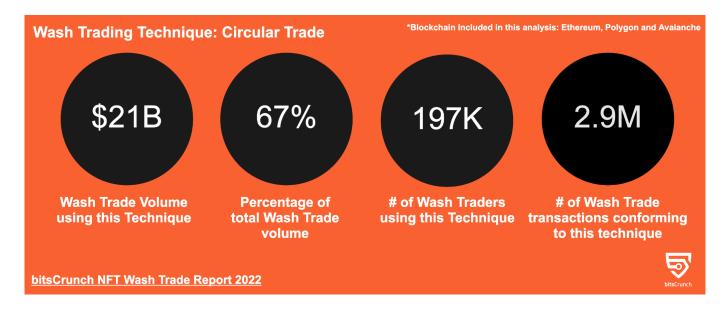
### Wash Trade Patterns

Many techniques have been used by wash traders and below we have listed and explained a few of them. In total we have identified 13 patterns.

#### **Circular Trade**

The "Circular Trade" is a well-known technique used by wash traders, in which the same wallets repeatedly buy and sell the same or different NFT. This practice is employed to artificially inflate the prices of specific NFT and create a false impression of market demand for the NFT or the collection. The process involves the transfer of funds between two wallets to create fake trading volume, making it appear as if the NFT is being actively traded.

However, this type of wash trading can have a detrimental impact on the NFT market. It undermines the integrity of the market by creating false demand, misleading investors and potentially affecting the prices of NFTs. Therefore, it's important to be aware of these activities and take measures to prevent them from damaging the overall market.

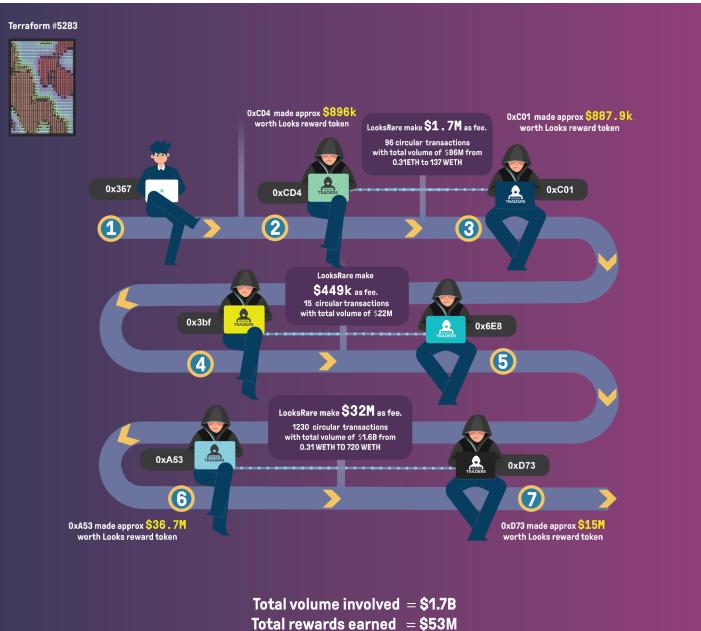


This wash trade pattern is one of the most prevalent and is often carried out by traders who do not attempt to conceal their activity. A wash trade volume of \$21B was created using this technique alone which constitutes for 67% of the total wash trading volume of 2022. It is also the most common pattern employed by wash traders across multiple marketplaces with about 630K wash traders using this technique.

| Top 5 collections affected b | y circular trade | DitsCrunch          |
|------------------------------|------------------|---------------------|
| collection 🗘                 |                  | Wash Trade Volume ≑ |
| Terraforms                   |                  | 8.91B               |
| Meebits                      | 5 bitsCrunch     | 7.13B               |
| dotdotdot                    |                  | 1.95B               |
| More Loot                    |                  | 782M                |
| Loot                         |                  | 546M                |



In the picture below, one can see how two of the biggest wash trading sharks got together and used Terraforms token #5283 to create a fake wash traded volume of \$1.6 billion and earn rewards worth more than \$50 million. They did this by repeatedly selling back and forth 1230 times in the course of 11 months.



Total fee paid to marketplace = \$34M

## Ð

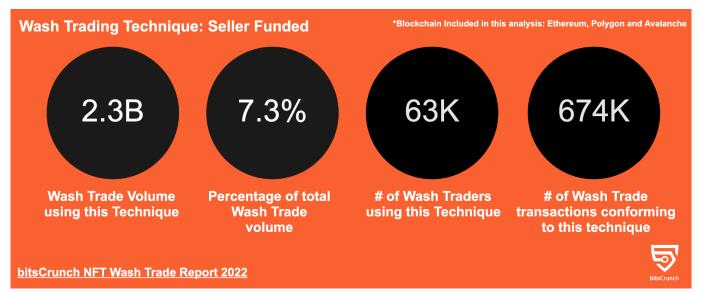
#### **Seller Funded**

In this Wash Trade pattern, the seller provides funds to facilitate the sale of the NFT in the marketplace. This way, the seller infuses capital and liquidity to inflate the volume and the price of the NFT artificially. The example below shows that the seller funded the buyer's wallet an hour before the buyer bought the NFT.

Funding txn: 0x987449b1cd4adc0eb0b89310dc5dec5dca18324813db3d8d4fdcfef2f4733aad Buy txn: 0xcb577ac32b6a080529a4b5cb83c3bb7d1d182854f1c1b2dba922d01a7623d59a

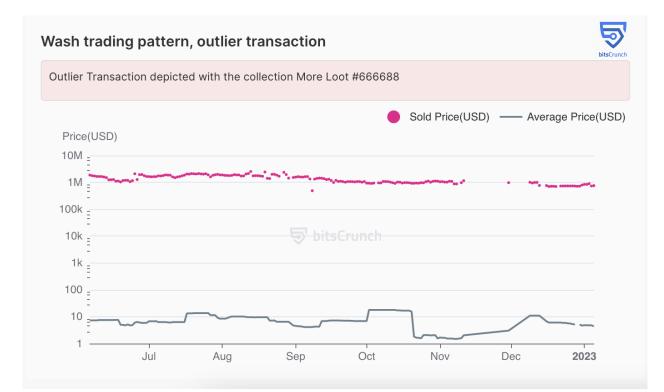
This example shows a seller funding wash trading in the LooksRare marketplace. In this case, the seller and the buyer have conspired to create fake transactions to manipulate the price of the NFT asset. This is accomplished by the seller funding the buyer's wallet, who then conducts fake purchases using the seller's funds. This creates the illusion of high demand and drives up the price. The seller and buyer then sell the asset at the artificially inflated price and split the profits. The total rewards gained by the two involved wallets are estimated to be 12.2 million USD.





#### **Outlier Transaction**

When a NFT is sold at an inflated price outside of the trend, then that transaction is flagged as wash trade. Wash trades occur when two parties agree to trade between themselves, usually for no real economic benefit and often at an inflated price. Outliers like these are easy to spot as they are usually way above the average trading price of the collection.



The chart above compares the selling price of asset #666688 from the More Loot collection to the collection's average price. The chart reveals a significant increase in price due to traders engaging in wash trading. The asset remained inactive for 9 months after its creation on August 4, 2021, until it was purchased by 0XC935AAA23734FCE35843829D2A39C3920172A0D6 for \$6.13 on June 6, 2022. Following this purchase, a series of wash trades occurred, resulting in a sharp price increase. On August 13, 2022, the asset was sold for \$2.5M, which was 263,871 times higher than the collection's average price.

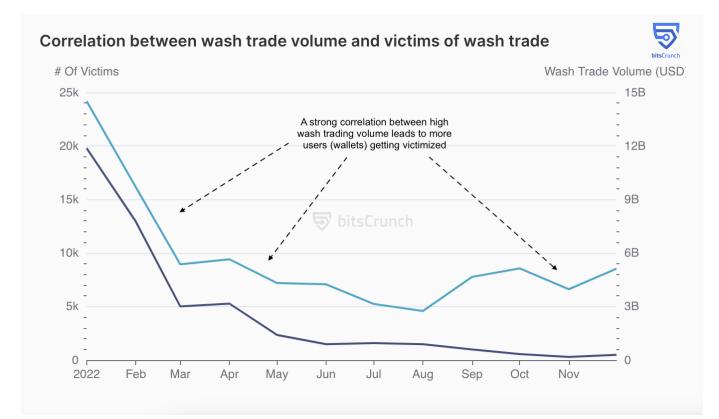




## Effect of Wash Trading on the NFT ecosystem

Wash trading has a significant and detrimental effect on the NFT market. This manipulative practice creates a false perception of demand for NFTs, leading to artificially inflated prices. As a result, inexperienced investors may be enticed to enter the market and purchase overpriced NFTs, exposing them to the risk of significant losses when the bubble eventually bursts. The inflated prices also foster a false sense of security among investors, giving them a false impression that their NFT investments are safe and profitable, when in reality they may be greatly overvalued.

More Importantly, wash trading can also discourage genuine buyers from entering the market, as they may be deterred by the high prices and instead choose to wait for prices to come down. This has a ripple effect on the overall NFT market, stifling its growth and eroding the trust of investors. It is crucial for the NFT ecosystem to address this issue and prevent wash trading to ensure a healthy and stable market for all participants. If the market does not self-regulate, regulators may step in with stricter regulations that could impede the growth and development of the NFT market.



This chart shows the close correlation between wash trading and victim counts. Whenever we had high wash trade it has resulted in more traders becoming victimized by inflated priced assets. This correlation is alarming and another proof that wash trading is bad for the ecosystem. In total we have found about 207K victim wallets have become dormant since they bought an inflated and wash traded asset. These wallets have ceased to trade after that bad experience.



207K victims of wash trading became inactive after they bought a wash traded NFT. These are now dormant and might never come back.



| Average price initiation of Ni 13 in marketplaces due to wash trading in 2022 |                                |                     | bitsCrunch     |
|---|--------------------------------|---------------------|----------------|
| marketplace_name ≑  | % of Average Price Inflation ≑ | # of Transactions ≑ | # of Victims 🗸 |
| opensea   | 78.84                          | 1.5M                | 554k           |
| x2y2 marketplace  | 90.07                          | 18.7k               | 13k            |
| looksrare   | 71.89 bitsCrunch               | 12.6k               | 9.18k          |
| blur  | 67.69                          | 9.59k               | 6.75k          |
| rarible   | 121.1                          | 1.19k               | 889            |
|   |                                |                     |                |

Here is a marketplace specific view on the average price inflation resulting due to wash trading activities. All data seems to indicate that marketplaces are not doing enough to curb this behavior.

Another correlation is the increase in average non-wash trade NFT sale value when wash trading is high. This is a clear indication of how wash trading is used as a way to pump NFT price, this leads to a speculative bubble that can result in financial losses for inexperienced investors. This can also discourage legitimate buyers from participating in the market, leading to a slowdown in its growth and adoption.



Furthermore, widespread wash trading in the NFT market can damage its reputation and undermine trust in the technology and its underlying use cases. It also raises questions about the authenticity and value of NFTs and can discourage potential investors from entering the market. Without proper regulation, the NFT market may continue to suffer from the effects of wash trading, which could eventually lead to regulatory intervention that could be far stricter than necessary.

## **Annual Stats**

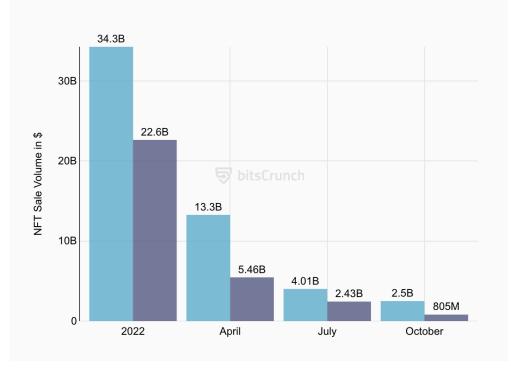
#### Wash Traded Volume



## Comparison of total volume and wash trade volume in NFT market for 2022

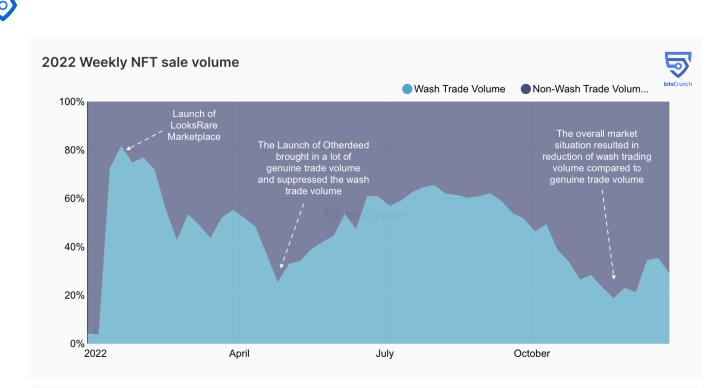


Q1 and Q2 accounted for 88% of the 2022 NFT trade volume along with 90% of the 2022's NFT wash trade volume. Q2 and Q4 had comparatively lower levels of wash trading.

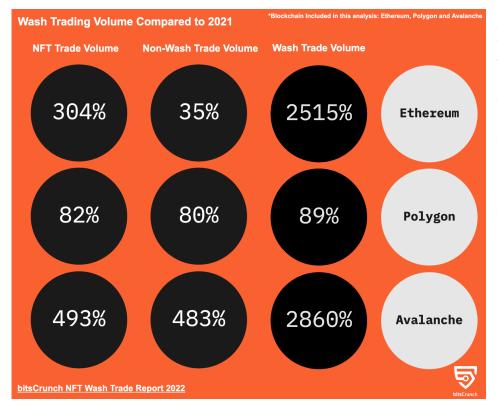


Wash trading was at the peak during the first half of 2022, particularly Q1 saw the most, accounting for 75% of all the wash trading volume of 2022.

This can be largely attributed to the launch of the new LooksRare marketplace and its rewards program for traders. Traders were incentivised to create trading volume in exchange for the looks token reward. This drove the wash trading Sharks to take advantage of and earn millions of looks tokens in exchange for the creation of fake and wash traded volume.



| Distribution of NFT trade volume by Blockchain |                |                     |
|--|----------------|---------------------|
| blockchain 🗘                                   | Total Volume ≑ | Wash trade volume ≑ |
| ethereum                                       | 52.9B          | 31.1B               |
| polygon  | 5 bits842Mch   | 195M                |
| avalanche                                      | 319M           | 594k                |
| Totals   | 54.1B          | 31.3B               |



As seen above, Ethereum is the most popular blockchain for NFT trading by volume out of the three chains taken for analysis. It contributed to 99% of the total NFT traded volume for 2022.

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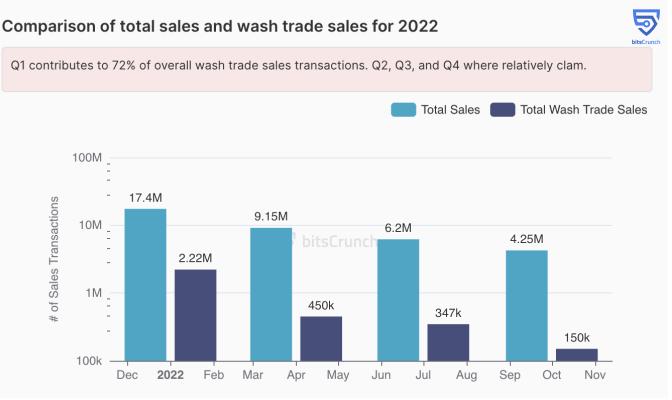
This popularity and liquidity also translated into YoY Wash Trade volume growth. It was observed at a staggering 2515% increase compared to 2021.

## Wash Traded Transaction



Only a small percentage of the transactions were wash trades but those were mostly high value transactions. 2.4% of the trades were responsible for 59% of volume in the NFT market.

Before buying an NFT it is important to look at the transaction history of the token.



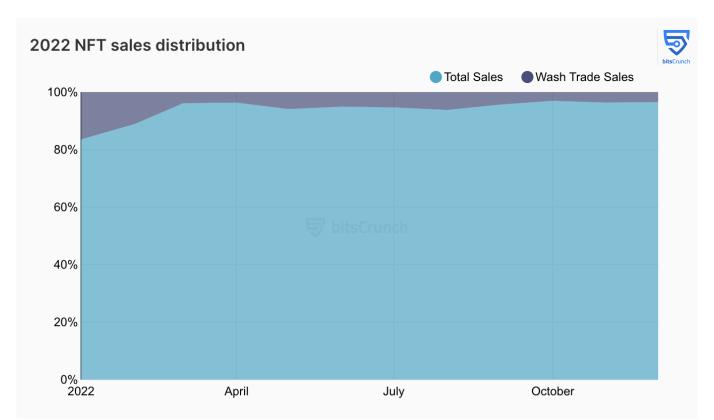
| Distribution of w | ash trade sales by blockcha | ain       | bitscrunch    |
|-------------------|-----------------------------|-----------|---------------|
| blockchain 🗘      | Total Wash Trade            | e Sales ≑ | Total Sales 🗸 |
| ethereum          | ज्ज bitsCrunch              | 671k      | 18.4M         |
| polygon           |                             | 2.49M     | 18M           |
| avalanche         |                             | 3.19k     | 601k          |



#### Top 10 collections of 2022 by wash trade sales

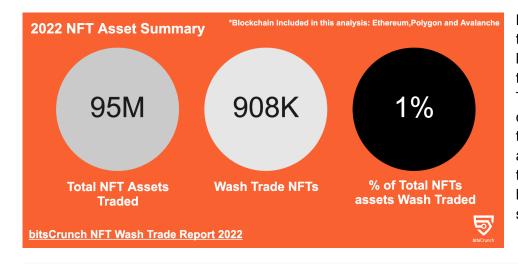
More Wash Trade sale transactions have taken place in Polygon, Cheaper gas fees could be one of the reasons. Still, by volume, Ethereum accounted for nearly 160x more.

| blockchain ≑ | collection ≑               | Total Wash Trade sales ≑ |
|--------------|----------------------------|--------------------------|
| polygon      | OpenSea Collections        | 1.67M                    |
| polygon      | Aavegotchi                 | 118k                     |
| polygon      | Bored Apes Exploded        | 85.1k                    |
| polygon      | Pegaxy Pega                | 65.3k                    |
| polygon      | ZED Horse                  | 51.1k                    |
| polygon      | Bored Comic Ape            | 47.2k                    |
| polygon      | Dao Vinci                  | 40.5k                    |
| ethereum     | OpenSea Shared Storefront  | 37.6k                    |
| ethereum     | ENS: Ethereum Name Service | 32.6k                    |
| polygon      | Bored Stoned Apes Club.    | 30.1k                    |
| Totals       |                            | 3.01M                    |



Overall NFT wash trade sale transactions are less in number but they are of high value transactions thus make us so much of the volume.

#### Wash Traded NFT's



Number of NFTs wash traded are also significantly lower to the proportion of the wash traded volume. These NFTs will still have challenges when the user tries to make a genuine sale as the transaction history is tainted by wash trading. It is best for traders to avoid such tainted NFTs.

| Top 10 collections of 2022 b | y wash traded NFTs | bitsCrunch               |
|------------------------------|--------------------|--------------------------|
| collection ≑                 | blockchain ≑       | Total Wash Traded NFTs ≑ |
| OpenSea Collections          | polygon            | 103k                     |
| Pegaxy Pega                  | polygon            | 47.2k                    |
| OpenSea Shared Storefront    | ethereum           | 32.1k                    |
| ZED Horse                    | polygon            | 12.9k                    |
| Aavegotchi                   | polygon            | 11.7k                    |
| Metroverse City Block        | ethereum           | 5.34k                    |
| League of Kingdoms ITEM      | polygon            | 4.07k                    |
| KnownOriginDigitalAsset      | ethereum           | 3.97k                    |
| Otherdeed                    | ethereum           | 3.76k                    |
| Flower Fam                   | ethereum           | 3.63k                    |
| Totals                       |                    | 772k                     |

OpenSea store front collection contract from both Ethereum and Polygon is taking two of the top 3 spots on the above list. These contracts are public mint contracts and allow any user to mint a media item to an NFT.

| Distribution of was | h trade NFTs by blockchain | bitsCruech        |
|---------------------|----------------------------|-------------------|
| blockchain ≑        | Total Wash Trade Sales ≑   | Total NFTs Sold ≑ |
| ethereum            | 644k                       | 41.5M             |
| polygon             | 256k                       | 52.2M             |
| avalanche           | 4.25k                      | 1.39M             |

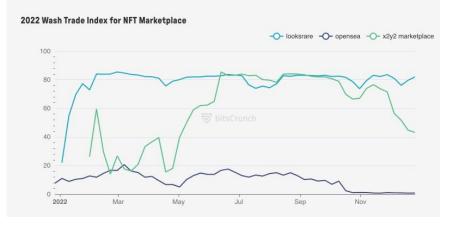




#### Distribution of wash trade NFTs by marketplace

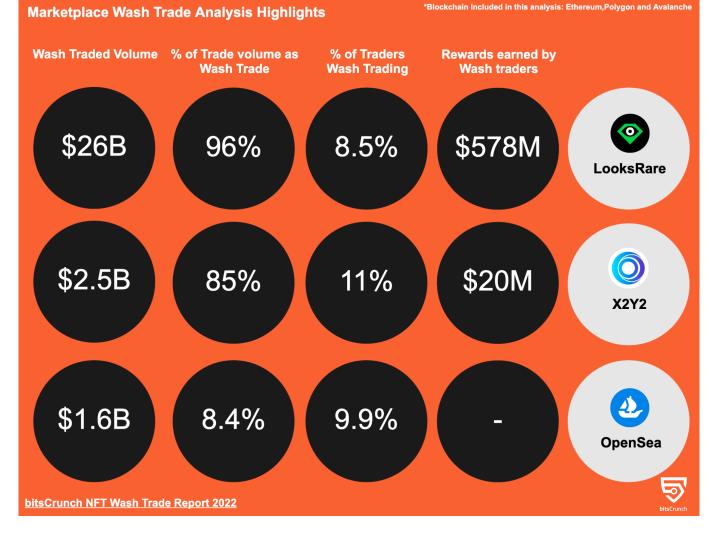


#### Wash Trading in Marketplaces



bitsCrunch's wash trade index represents the level of wash trading prevalent in a selected blockchain, marketplace, or collection.

This index is calculated by determining the percentage of wash-traded volume over the non-wash-traded volume.



| Rewards claimed b | by wash traders in 2022 | bitsErunch    |
|-------------------|-------------------------|---------------|
| reward 🗘          |                         | Total in \$ ≑ |
| looks             |                         | 578M          |
| x2y2              | <b> す</b> bitsCrunch    | 20M           |

The results of our analysis have revealed that rewards play a significant role in the occurrence of wash trading in the NFT market. Among the top two reward tokens in 2022, the 'looks' token was found to be the most influential reward in the wallets of wash trading participants. These findings indicate that reward incentives can be a

driving factor behind wash trading activities, and it's crucial to consider the impact of such rewards on the integrity and sustainability of the NFT market.

#### Wash Trading by Collection



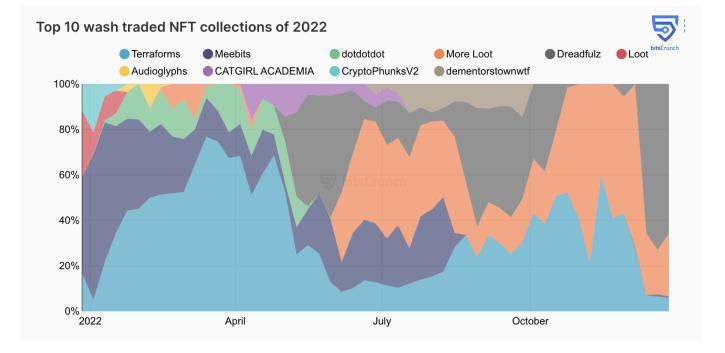
In total 613K NFT collection contracts were deployed in 2022, this is an increase of 863% compared to 2021. This shows the tremendous growth and attention received by the NFT market. This also resulted in a lot of scammers and wash traders. In total close to 2% of the collections had wash traded NFTs.

#### NFT collections count for 2022

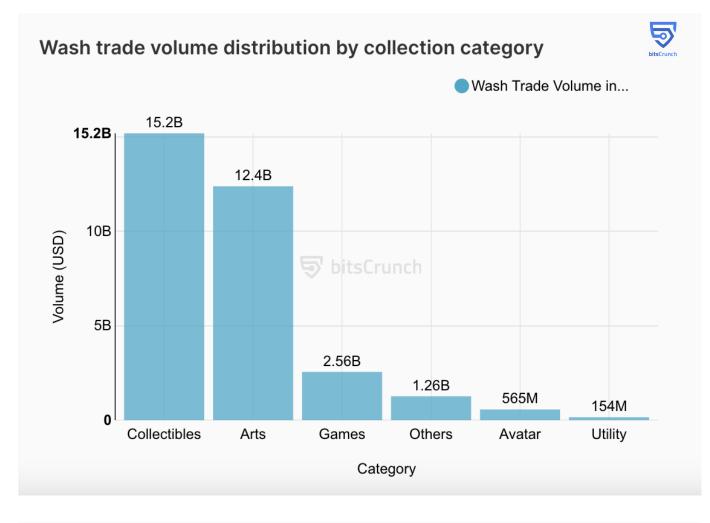
bitsCrunch

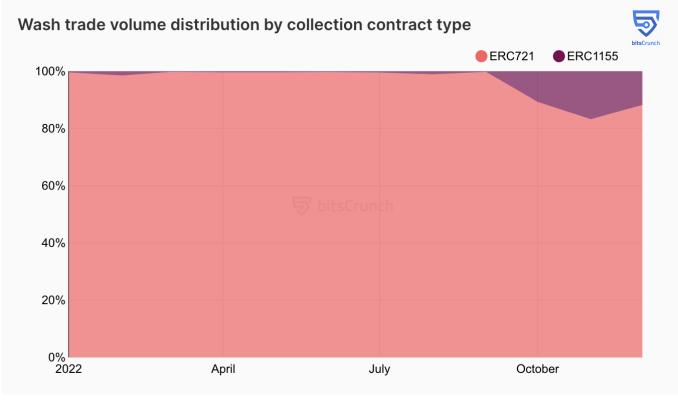
This list only includes collections with a total lifetime sale volume of more than \$10K

| blockchain 🗘 | All Collections 🖨 | Wash Traded Collections 🖨 | Mint and Sale Volume in \$ 🖨 |
|--------------|-------------------|---------------------------|------------------------------|
| ethereum     | 20k               | 9.68k                     | 57.1B                        |
| polygon      | 2.11k             | S bitsCrunch 972          | 1.35B                        |
| avalanche    | 284               | 151                       | 319M                         |









#### Wash Traders

| Clustering of Wallets | bitsCrunci            |
|-----------------------|-----------------------|
| wallet_range ≑        | # of Wallets <b>^</b> |
| > 500 M USD           | 16                    |
| > 1 B USD             | 17                    |
| > 10 M USD            | 297                   |
| > 1 M USD             | 754                   |
| 500-1k USD            | 23.5k                 |
| >10k USD              | 45.3k                 |
| 100-500 USD           | 57.4k                 |
| <100 USD              | 58.3k                 |
| <10 USD               | 58.3k                 |
| >1k USD               | 112k                  |

In 2022 a total of 355K wallets engaged in wash trading across Ethereum, Polygon and Avalanche. About 168K new wallets started engaging in wash trading activities during the same period. This is a 61.5% increase from the previous years. The chart shows that a handful of wallets contribute to a significant portion of the wash trading.

About 1K+ wallets have done wash trading of \$1M or more. As mentioned in the earlier sections, these wallets are the sharks of the NFT market. Together, they contributed more than \$28 billion worth of wash trading.

| Top 15 sharks in wash trade volume and     | icwards carri                      | cu                         |                               | bitsCrun                     |
|--|------------------------------------|----------------------------|-------------------------------|------------------------------|
| wallet ≑                                   | Total<br>Volume in \$ <sup>‡</sup> | Wash Trade<br>Volume in \$ | LOOKS Rewards<br>Earned in \$ | X2Y2 Rewards<br>Earned in \$ |
| 0xa53496b67eec749ac41b4666d63228a0fb0409cf | 2.42B                              | 2.42B                      | 50.3M                         | 35.4k                        |
| 0xd73e0def01246b650d8a367a4b209be59c8be8ab | 2.42B                              | 2.42B                      | 50.3M                         | 35.1k                        |
| 0×718a085f6d45a955395881bceff30ec97ffb1013 | 1B                                 | 1B                         | 21.2M                         | 3.15k                        |
| 0xf6764f702650eb66b2bd7368e2fef7133a8f4f80 | 963M                               | 963M                       | 20.6M                         | 2.11k                        |
| 0×32b8bfad45b330b81899df23ff6aac609781ce56 | 775M                               | 775M                       | 16.7M                         | 0                            |
| 0xa99a76dddbb9678bc33f39919bc76d279c680c89 | 769M                               | 769M                       | 17.3M                         | 0                            |
| 0×1ae35fce5942bcecca5f47d9d34d267658d6ac17 | 763M                               | 763M                       | 16.7M                         | 0                            |
| 0×35d0ca92152d1fea18240d6c67c2adfe0cca287c | 742M                               | 742M                       | 15.9M                         | 0                            |
| 0×18a4489a739ac9835da14e006b35d65040e53a4a | 695M                               | 695M                       | 15M                           | 0                            |
| 0xf1ddb5dacc5a916842aae0a6fbe59c36f97bd940 | 666M                               | 666M                       | 14.3M                         | 0                            |
| 0×48ad09ed9a4d3d9b76959f4d53ba0bc138fce336 | 590M                               | 590M                       | 11.9M                         | 0                            |
| 0xc803698a4be31f0b9035b6eba17623698f3e2f82 | 562M                               | 562M                       | 11.7M                         | 0                            |
| 0×7cdbc750bdc92fb92e1b94090289cc6db19e30c2 | 556M                               | 556M                       | 12.1M                         | 0                            |
| 0×7272b039aadebbc309a11bc8ee7e8363df33fabf | 551M                               | 551M                       | 12.1M                         | 0                            |
| 0xc935aaa23734fce35843829d2a39c3920172a0d6 | 544M                               | 544M                       | 785k                          | 2.48M                        |
| Totals                                     | 14B                                | 14B                        | 287M                          | 2.55M                        |

#### Top 15 sharks in wash trade volume and rewards earned

| Wash traders by marketplace |                     |  |
|-----------------------------|---------------------|--|
| marketplace_name ≑          | # of Wash Traders ≑ |  |
| opensea                     | 253k                |  |
| gem                         | 17.9k               |  |
| редаху                      | 15.9k               |  |
| x2y2 marketplace            | 15.5k               |  |
| aavegotchi S bitsCru        | 13.5k               |  |
| looksrare                   | 10.7k               |  |
| element                     | 8.15k               |  |
| genie                       | 7.99k               |  |
| blur                        | 5.64k               |  |
| knownorigin                 | 1.28k               |  |
| Totals                      | 305k                |  |

| Wash traders by collection |                     |  |  |
|----------------------------|---------------------|--|--|
| collection 🗘               | # of Wash Traders 🗢 |  |  |
| OpenSea Collections        | 39.1k               |  |  |
| OpenSea Shared Storefront  | 19.8k               |  |  |
| ENS: Ethereum Name Service | 16.8k               |  |  |
| Pegaxy Pega                | 15.9k               |  |  |
| Aavegotchi Scrunch         | 13.5k               |  |  |
| ZED Horse                  | 11.7k               |  |  |
| Metroverse City Block      | 8.63k               |  |  |
| Cold Blooded Creepz        | 5.07k               |  |  |
| Fighter                    | 3.1k                |  |  |
| Reptile Armoury            | 2.89k               |  |  |
| Totals                     | 305k                |  |  |



The above chart provides a visual representation of the weekly NFT traders and the wash traders in the NFT market. While the percentage of wash traders may seem small in comparison to the overall number of traders, they have significantly impacted the NFT trading volume in 2022 by contributing to about 57% of it. This chart highlights a concerning issue that just a few rogue traders can have a significant impact on the overall market.

This also highlights the impact that even a limited number of problematic traders can have on the credibility of the NFT market. The presence of wash trading in the market can tarnish its reputation, potentially hindering its growth and adoption of the underlying technology and its intended use.

## **S**

### Conclusion

The NFT market experienced highs and lows in 2022, with 613K collections contracts deployed on Ethereum, Polygon, and Avalanche. However, only 1.6% of these collections generated \$10K or more in sales volume on the secondary market. Wash trading was a major issue, with 59% of the total volume being wash traded. The first two quarters accounted for 89% of all trading volume and 90% of all wash trading volume for the year.

NFT marketplaces that offer reward tokens are primarily responsible for wash trading. Despite being aware of the manipulations, these marketplaces have failed to take action and have instead rewarded wash traders with close to \$600 million worth of reward tokens. This indicates a lack of ethics and regulation in the marketplace, which needs urgent attention.

The prevalence of wash trading highlights the need for regulation in the NFT market. Without self-regulation, regulators may step in with stricter regulations that could impede the market's growth and development. Participants must be aware of the risks associated with wash trading and remain vigilant. NFT marketplaces must work towards curbing this practice and developing better surveillance tools to detect and prevent wash trades beforehand.

To address the growing problem of wash trading in the NFT market, bitsCrunch has taken several steps to protect the ecosystem and its users. The company has increased efforts to identify and expose fraudulent activities like wash trading. It is also developing compliance tools that will help honest NFT marketplaces detect wash traders and prevent them from gaining access.

To promote a safe and secure marketplace, bitsCrunch is developing surveillance tools to detect and prevent wash trades. These tools will help identify unusual trading patterns and activity and flag potential cases of wash trading. NFT marketplaces can then take action against wash traders and prevent them from manipulating the market and undermining the ecosystem's integrity.

bitsCrunch is committed to maintaining a fair and transparent market for NFTs and working with industry stakeholders to address this problem. By proactively identifying and preventing wash trading, the company hopes to restore trust in the NFT market and promote a healthy and sustainable ecosystem for all users.



# Thank You

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