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# Is Web3 Better Than Web2 for Investors? Evidence from Domain Name Auctions

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# Is Web3 Better Than Web2 for Investors? Evidence from Domain Name Auctions

*Short Paper*

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## Abstract

*Blockchain-based assets are commonly believed to attract new investors. To investigate this claim, we compared investor preferences for Web2 and Web3 domain name auctions by analyzing daily auction patterns in Namecheap and OpenSea. Our results indicate that Web3 platforms may attract extreme investors with low or high values as a niche market. We found a significantly higher number of bids per auction, higher average bid prices, and greater price spreads on OpenSea, but a significantly lower number of unique bidders per auction. Our findings highlight the importance of considering the auction platform's characteristics and asset context when evaluating bid patterns and predicting bid prices. This study serves as a starting point for future research in this emerging market and offers directions for further investigation.*

**Keywords:** Web3, domain name, auction, platform, investor preference

## Introduction

The growing dependence on the Internet has increased demand for domain names by both individuals and organizations. An effective, customized domain name enhances branding and provides a competitive edge, making it easier for customers to find and access to e-businesses. As a result, organizations seek catchy, memorable names that stand out from competitors (Lindenthal, 2014). However, securing a domain name that matches the company's name can be difficult and costly due to scarcity. For example, generic top-level domains like .com, .net, or .org are valued at a higher price as they reflect how established the organization is (Salvador & Nogueira, 2011). Therefore, large organizations are willing to pay high prices for matching domain names (Tang et al., 2014), leading to the popularity of domain name marketplaces.

The domain name market has evolved from traditional Web2 technology to decentralized Web3 technology. Initially, domain name marketplaces were centralized, and transactions were done using fiat currencies. However, with the rise of Web3 applications, decentralized marketplaces with transactions completed via cryptocurrencies are now available. The traditional domain name marketplaces are lucrative, with secondary markets valuing dot-com domains at 150-200 times higher than primary markets (Palma et al., 2021). For instance, in 2019, Voice.com was traded for $30 million. In contrast, Ethereum Name Services (ENS) is the leading decentralized domain name registry, and its domain names are traded as Non-Fungible Tokens (NFTs) on secondary markets such as OpenSea. For example, in 2021, Paradigm.eth was sold for 420 ETH, which is about $1.49 million (KIllick, 2022). Hence, investors seek to secure strategic and highly

sought-after domain names and sell them in marketplaces for exorbitant prices. Typically, an auction-based secondary marketplace with a growing community is preferred for potentially higher returns. Coupled with transactions being completed with cryptocurrencies which are volatile in nature, these investors of Web3 domain will potentially have a larger risk appetite.

To understand how investor behavior differs in Web2 and Web3 domain name marketplaces, we analyzed the daily domain name auction records of Namecheap and OpenSea from December 1st, 2022 to January 31st, 2023. Our research provides initial evidence on how the shift from Web2 to Web3, known as "cryptoization," may impact user preferences and behavior, which allows platform owners and investors to adjust their strategies accordingly. For example, some Web2 marketplaces are currently expanding their product scope to include Web3 domain names such as the Handshake Protocol (HNS).

# Background

In this study, we assess two domain name marketplaces: Namecheap and Opensea. Namecheap is an established online marketplace for Domain Name Services that has a large customer base built over many years. OpenSea is a Web3 marketplace for ENS that operates on the Ethereum blockchain network. While there are other platforms in the marketplace, we have chosen Namecheap and OpenSea as a starting point to identify key differences between a Web2 and Web3 domain name marketplace.

## *Domain Name Service on Namecheap*

Namecheap is the world's second-largest domain registrar and has been offering an online auction platform since 2021. Users can buy and sell domain names on this fee-based, closed platform by registering for an account and subscribing to Namecheap's services for a non-refundable fee of $5 per year. To bid on a domain name, buyers must offer an amount higher than the current highest bid, and the bids will be visible to the public. The highest bidder will receive an email requesting payment within 24 hours. If the bidder fails to make the payment within 48 hours, the domain will be offered to the next highest bidder. If no successful payments are made, the domain name will be put back up for auction. The new owner is responsible for renewing the domain before it expires, and there is a transfer fee of $0.18 charged by ICANN. Sellers can set a starting price for their domain names at $5, but domains that will expire in less than seven days cannot be listed. Namecheap charges a 10% commission fee for each transaction, and the seller receives the full sales amount. Once the sale is approved, Namecheap will assign the domain to the new owner.

## *Ethereum Name Service on OpenSea*

In 2017, Ethereum Name Services launched its domain name service, which is now tradable as an NFT on various platforms, including OpenSea. On OpenSea, sellers have the option to list their ENS for sale at a fixed price or through timed auctions. Potential buyers can bid on the listed item with any price that they desire, and the bids are publicly visible. However, unlike traditional auctions where only the highest bidder wins, sellers have the flexibility to accept a specific bid if they choose to. Once an agreement is reached, the transaction is processed on the blockchain. The seller pays the gas fee if they accept the bid from the buyer, while the buyer pays the gas fee for fixed-price sales. OpenSea will cover the gas fees for timed auctions with a reserve price of at least 1 ETH. Additionally, OpenSea usually charges a 2.5% fee on all secondary sales.

# Literature Review

## *Web2 vs. Web3 Domain Names*

Domain names are a set of characters used to identify individuals or organizations on the Internet. In Web2, these names are linked to Internet Protocol (IP) addresses of Internet services like websites or email services. Web2 domain names can be obtained by registering a domain name retailer accredited by ICANN for a period of 1 to 10 years, with costs varying based on the different factors, such as the name's popularity, the markup and the value-added services provided by the retailer, and the type of top-level domain (TLD).

Web3 domain names, on the other hand, are created for blockchain platforms that utilize smart contracts and cryptocurrencies. Each user or smart contract has a unique account address that is typically a long,

difficult-to-remember number. For example, the account address in Ethereum is a 160-bit integer represented by a 40-character hex string. To provide a more user-friendly option, Web3 domain name registries such as ENS and Unstoppable Domains offer a human-readable format for these addresses.

Unlike Web2 domain names that are maintained by ICANN-accredited registries, Web3 domain names are tracked through smart contracts and traded as NFTs on platforms like OpenSea. The cost of an ENS domain name is mainly determined by its character count, with shorter names costing more. For instance, a three-character domain name on ENS can cost approximately $640 annually, while names with five or more characters cost only $5. In addition, the buyer needs to pay an additional gas fee during the registration process as the domain name record will be written to the blockchain.

Prior studies have examined some of the characteristics of domain name sales. For example, the preference of a domain name by a potential buyer could be influenced by the availability of alternatives with the same keyword but a different TLD (Farahmand, 2017). In the Web2 domain name market, almost half of the new registrations with a recently created TLD are for speculative purposes without actual use (Halvorson et al., 2015). We expect Web3 domain name market to be more speculative in nature as it could be treated as a domain name market with a newly created TLD, or an NFT market with price bubble (Wang et al., 2022).

To prevent a domain name from expiring, it must be periodically renewed for a fee. However, some owners may choose to renew their domain name even if they no longer need it and then sell it on the secondary market for a higher price. Studies have found that around 20% of expired .com domains are re-registered within 300 days, but competition for a domain name is often highest at its earliest availability (Lauinger et al., 2016). This has led to an active secondary market for domain names that attracts investors. Other studies have found factors that affect the price of domain names in the secondary market, such as length, character composition, and TLD scarcity (Lindenthal, 2014; Sun, 2022). Our study focuses on how the characteristics of the domain name secondary market may influence the value of a domain name.

## *Online Auction*

Online auctions are designed to sell goods or services to the highest bidder in an efficient manner, with the benefit of automation compared to the traditional auctions. There are four common types of auctions: English, Dutch, first-price sealed-bid, and Vickrey auctions. In an English auction, the seller accepts higher bids for the item until no more bids are made, while in a Dutch auction, the seller gradually lowers the price until a buyer accepts it. Although both auction types reveal bid prices from other bidders, the real-time price clock in Dutch auctions may influence human behavior (Adam et al., 2017) and give an advantage to bots.

The first-price sealed-bid and Vickrey auctions differ from English and Dutch auctions in that bidders submit their bids confidentially, and the auctioneer or platform determines the winner after the bidding period has ended. However, open-bid auctions like the English auction are more common in online settings, possibly because they are believed to reduce cheating in the auction (Jenamani et al., 2007).

Online auction platforms, such as eBay, have achieved tremendous success by processing millions of transactions worldwide every day. Due to the network effect, users tend to remain loyal to a single platform. Therefore, retaining users is essential for online auction platforms, and they should consider factors such as trust, security, privacy, efficiency and convenience (McLaughlin et al., 2017; Trevathan et al., 2005). Platform design and mechanisms like digital certificates can contribute to establishing trust (Ba et al., 2003). Addressing the concerns of both buyers and sellers is crucial to earning their loyalty to a particular platform, thereby gaining a competitive advantage in the marketplace. Our study aims to explore how Web3 platforms can strengthen or weaken these desirable factors for online auctions.

## *Non-Fungible Token and Cryptocurrencies*

Non-fungible tokens (NFTs) are unique digital assets that have gained significant popularity since early 2021. NFTs rely on blockchain technology and can only be traded within the same ecosystem (Ante, 2022). The speculative nature of NFTs causes some items to have inflated prices. It has been found that these assets can also provide high returns in the long term, up to six times the initial investment cost (Mazur, 2021).

The literature presents inconsistent findings on the relationship between NFTs and cryptocurrency prices. Although Dowling (2022) suggests a weak correlation between NFTs and cryptocurrencies based on spillover index, Ante (2022) found evidence that the value of Bitcoin and Ethereum can affect NFT prices,

but not the other way around. Moreover, the research by Apostu et al. (2022) indicates that NFT prices do influence Ethereum prices, but only when the NFT market is substantial enough. Overall, the literature suggests that the relationship between NFTs and cryptocurrency prices is complex and varies depending on factors like market size. Our study also examines how market factors may affect domain name auctions.

## Research Model

Our research aims to determine whether Web3 domain name marketplaces are more attractive to investors than Web2 ones by using the following hypotheses as a basis of comparison between the two marketplaces. We argue that Web3 marketplaces are more favorable for several reasons. First, as more people use decentralized applications and cryptocurrencies, businesses will want Web3 domain names, creating an opportunity for investors to buy popular names early and sell them later. The new marketplace could lead to more bidders and bidding activities. Second, Web3 marketplaces use cryptocurrencies like Ethereum, which can rise in value, giving investors more profits. This value appreciation also influences investors' willingness to pay, resulting in higher bid prices. Third, the speculative nature of NFTs can drive up ENS prices, leading to higher returns for investors. This speculative nature can also contribute to a wider spread of bid prices. In a marketplace where all investors are conservative, it is likely that there is a smaller difference between the highest and the lowest bid, limiting the potential for appreciation. Hence, we expect more activities with different types of investors in OpenSea, and propose the following hypotheses:

H1: OpenSea has a higher number of bids per auction than Namecheap.

H2: OpenSea has a higher number of unique bidders per auction than Namecheap.

H3: OpenSea has a higher average bid price than Namecheap.

H4: OpenSea has a higher spread of bid price than Namecheap.

H5: OpenSea has a higher rate of investors who bid on at least two different domain names than Namecheap.

To test our hypothesis, we collected active auction data from Namecheap and OpenSea from December 1st, 2022 to January 31st, 2023, and compiled the statistics on a daily basis. We identified active auctions for Namecheap by finding completed listings with at least one bid[1]. For OpenSea, we utilized the ENS Sales Bot on Twitter[2], which captures sales or registrations with a minimum of 0.5 ETH and bids with at least 20 ETH. The ENS Sales Bot is a reputable source of sampling data since it is widely used by ENS investors.

| Variable | Mean | Std. Dev. | Minimum | Maximum |
|---|---|---|---|---|
| 1. Number of active auctions | 516.3571 | 350.0566 | 113 | 962 |
| 2. Number of bids | 17164.2460 | 17082.0495 | 308 | 50140 |
| 3. Number of unique bidders | 80.9048 | 16.3254 | 50 | 134 |
| 4. Number of investors | 71.0476 | 11.8077 | 47 | 102 |
| 5. Average bid price | 839.0936 | 738.1425 | 36.5805 | 1763.1974 |
| 6. Median bid price | 762.2010 | 736.0461 | 15.5 | 1723.1666 |
| 7. Minimum bid price | 7.8182 | 3.9597 | 3.9697 | 15.3873 |
| 8. Maximum bid price | 27604.6854 | 34392.8829 | 215 | 151141.04 |
| 9. Standard deviation of bid price | 731.7558 | 626.4356 | 43.6842 | 2653.0419 |
| 10. Ethereum price | 1350.4800 | 160.6304 | 1167.68 | 1659.02 |
| 11. Nasdaq composite index | 10928.6214 | 395.2762 | 10213.29 | 11621.71 |

**Table 1. Summary Statistics** (N=126.)

[1] https://www.namecheap.com/market/recent/

[2] https://twitter.com/EnsSalesBot

Table 1 shows the summary statistics of our dataset. Table 2 shows the correlation matrix across the variables from Table 1. The econometric model used for hypothesis testing is specified as $\ln y_{i,t} = \alpha \ln y_{i,t-1} + \mu_i + \tau_t + \epsilon_{it}$, where $\ln y_{i,t}$ is the log-transformation of the variable of interest, $\ln y_{i,t-1}$ is the lagged dependent variable to control for the effect of auto-correlation[3], $\mu_i$ is the platform fixed effect, $\tau_t$ is the day fixed effect, and $\epsilon_{it}$ denotes idiosyncratic errors. The platform fixed effect allows us to identify the difference between Namecheap and OpenSea in terms of the variable of interest. We normalize Namecheap's platform fixed effect $\mu_0$ to zero for easier comparison.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **(1)** | 1 | | | | | | | | | | |
| **(2)** | 0.964 | 1 | | | | | | | | | |
| **(3)** | -0.732 | -0.722 | 1 | | | | | | | | |
| **(4)** | -0.626 | -0.615 | 0.961 | 1 | | | | | | | |
| **(5)** | 0.987 | 0.965 | -0.752 | -0.65 | 1 | | | | | | |
| **(6)** | 0.990 | 0.968 | -0.769 | -0.665 | 0.997 | 1 | | | | | |
| **(7)** | 0.704 | 0.650 | -0.597 | -0.514 | 0.712 | 0.717 | 1 | | | | |
| **(8)** | 0.767 | 0.706 | -0.565 | -0.482 | 0.766 | 0.761 | 0.673 | 1 | | | |
| **(9)** | 0.840 | 0.784 | -0.549 | -0.454 | 0.874 | 0.842 | 0.628 | 0.791 | 1 | | |
| **(10)** | 0.017 | -0.007 | -0.030 | -0.050 | 0.000 | 0.000 | 0.019 | 0.073 | 0.049 | 1 | |
| **(11)** | 0.027 | 0.076 | 0.159 | 0.122 | 0.009 | -0.006 | -0.132 | 0.019 | 0.085 | 0.662 | 1 |

**Table 2. Correlation Matrix**

## Results

We first used an econometric model to estimate the platform effect on the number of bids per auction. Our findings, as shown in the first column of Table 3, indicate a positive and significant effect for OpenSea, supporting H1. On average, the Web3 platform increases the number of bids per auction by 437%, likely due to the auction mechanism used in OpenSea[4]. Investors may bid with a price lower than the highest bid in hopes that the seller will mistakenly accept their bid. This is a possible function in OpenSea where investors would always be looking out for the chance to have a bigger return. Additionally, the owner of the ENS may also place bids with other accounts to increase the activities of the auction (Harrison, 2022).

| | (1)<br>Number of bids per auction | (2)<br>Number of unique bidders per auction | (3)<br>Average bid price | (4)<br>Standard deviation of bid price |
|---|---|---|---|---|
| Lagged dependent variable | 0.2787** | 0.2651* | -0.1493 | 0.1750 |
| | (0.1142) | (0.1474) | (0.1212) | (0.1629) |
| OpenSea fixed effects | 1.6810*** | -1.4396*** | 3.2459*** | 1.6323*** |
| | (0.2710) | (0.2891) | (0.3470) | (0.3639) |
| Day fixed effects | Yes | Yes | Yes | Yes |
| Observations | 124 | 124 | 124 | 124 |
| R-squared | 0.9901 | 0.9857 | 0.9674 | 0.8584 |
| Adjusted R-squared | 0.9797 | 0.9706 | 0.9331 | 0.7098 |

Robust standard errors clustered at the day level are in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

**Table 3. Main Model**

[3] The variable of interest exhibits AR(1) pattern based on the sample autocorrelation function plot.

[4] The effect size is calculated by $(e^{\mu_1} - 1) \cdot 100\%$.

The second column of Table 3 reports the result regarding the number of unique bidders per auction. Surprisingly, the result suggests a negative and significant effect for OpenSea, which contradicts H2. The subscription fee requirement in Namecheap marketplace does not discourage bidders from joining. Buyers seeking web2 domain names are willing to pay the fee to participate in the marketplace. In contrast, OpenSea has fewer investors, but a higher number of bids per auction. This may be due to the platform's relative lack of establishment, which can affect desirable platform characteristics like trust, security, efficiency, and privacy (Ba et al., 2003; McLaughlin et al., 2017; Trevathan et al., 2005). However, this could also create a niche market. Investors may be looking to acquire digital assets like unique and short domain names on ENS early on, before others can get them, to maximize their profits.

The third column of Table 3 shows the result regarding the average bid price, which confirms H3. OpenSea has a positive and significant effect, with the bid price of ENS being 2468% higher than the bid price of Web2 domain names on average. We also estimated the model using median bid price instead of average bid price to address the issue of outliers, and the result is qualitatively similar ($\mu_1 = 4.3428, p < 0.01$). The uncertainty and fluctuations in the value of cryptocurrencies drive bidders to place higher bids to increase their chances of securing the domain and subsequently selling it. Investors may still make a profit even if they sell the domain at a lower price by taking advantage of the volatility of cryptocurrencies. Another possibility is that an investor may have acquired cryptocurrencies at one of its lowest values, so they do not mind placing a higher bid as the difference in the spread is sufficient to make a profit.

The fourth column of Table 3 displays the result regarding the spread of bid price, measured by standard deviation, and confirms H4. The positive and significant effect of OpenSea on bid price standard deviation suggests that, on average, the Web3 platform increases it by 412%. To further support this finding, we also estimated the platform effect on the bid price range, defined as the maximum bid price minus the minimum bid price, which yielded similar results ($\mu_1 = 3.5197, p < 0.01$). Interestingly, the effect of OpenSea on both maximum and minimum bid prices was higher on average when estimated separately ($\mu_1^{max} = 3.5121, p < 0.01; \mu_1^{min} = 0.6340, p < 0.01$). Overall, the result suggests that the value distribution of investors in Web3 platforms covers both very low and very high values, which may also indicate a niche market.

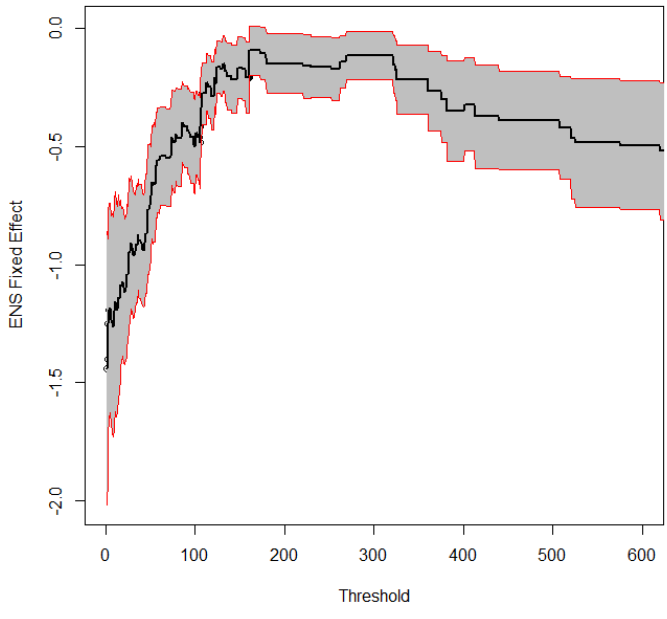


**Figure 1. Confidence Band of Effect on Rate of Investors**

To test H5, we applied our econometric model using the variable of interest as the number of investors who have bid on at least two different domain names, divided by the number of active auctions. The results suggest that OpenSea has a positive and significant effect on the number of investors per auction ($\mu_1 =$

$-1.3993, p < 0.01$). We also re-estimated the model using a different definition of an investor, who has bid on at least T different domain names during the sample period. By changing the threshold value T, we obtained a confidence band of the OpenSea effect on the rate of investors at a 95% confidence level, which is shown in Figure 1. Similar to the result in H2, the figure demonstrates that OpenSea has a lower rate of investors regardless of the threshold value, thereby rejecting H5. Once again, the reason why OpenSea has fewer professional investors who bid on more than one different domain name could be due to the platform's relative lack of establishment.

For a robustness test, we re-estimated the model using data from auctions with more than one bidder, and the results are qualitatively similar. Additionally, we conducted an econometric analysis using market indicators as control variables instead of fixed effects for each day, and the results are presented in Table 4.

| | (1)<br>Number of bids per auction | (2)<br>Number of bidders per auction | (3)<br>Average bid price | (4)<br>Standard deviation of bid price |
|---|---|---|---|---|
| Lagged dependent variable | 0.2083** | 0.1684 | -0.1964 | 0.0598 |
| | (0.0803) | (0.1180) | (0.1213) | (0.1121) |
| OpenSea fixed effects | 1.8458*** | -1.6280*** | 3.3785*** | 1.8563*** |
| | (0.1879) | (0.2310) | (0.3458) | (0.2657) |
| log(Ethereum price) | -0.5139** | -0.0949 | -0.4243 | -0.6336 |
| | (0.2054) | (0.1282) | (0.3705) | (0.5428) |
| log(Nasdaq composite index) | 1.8945*** | 0.4940 | 2.1090 | 3.7247* |
| | (0.6493) | (0.4999) | (1.3276) | (2.1770) |
| Day fixed effects | No | No | No | No |
| Observations | 124 | 124 | 124 | 124 |
| R-squared | 0.9759 | 0.9758 | 0.9378 | 0.7592 |
| Adjusted R-squared | 0.9751 | 0.9750 | 0.9357 | 0.7511 |

Robust standard errors clustered at the day level are in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

**Table 4. Market Indicators Model**

Our analysis suggests that while Ethereum prices and Nasdaq composite have little impact on auction patterns, they can affect the number of bids per auction. Specifically, a higher Ethereum price discourages investors from placing bids on OpenSea, possibly because they prefer to trade in cryptocurrency directly for higher profits. Our finding partially supports the findings by Apostu et al. (2022), where the relationship between Ethereum prices and the prices of a particular group of NFTs is insignificant when the market size of that group of NFTs is small. In our study of ENS NFTs on OpenSea, we find that they are not influenced by the prices of Ethereum, which may be more likely to be the case in smaller NFT markets. Another possible explanation for this is that ENS NFTs may be viewed as independent assets that organizations need, similar to a registration license needed to operate a physical business, but in this case, it is a virtual asset.

## Discussion and Conclusion

In this study, we analyzed daily auction patterns in Namecheap and OpenSea to compare investor preferences for Web2 and Web3 domain name auctions. Our findings showed that OpenSea had a significantly higher number of bids per auction, higher average bid prices, and greater price spreads. However, it also had a significantly lower number of unique bidders per auction, indicating that Web3 platforms may attract extreme investors with low or high values as a niche market. The high number of bids will also indicate that the investors are competitive to hit the right prices. There may be other factors influencing these results which we will examine in greater detail in future studies.

Contrary to popular belief, our study did not find evidence to support the claim that the value of cryptocurrencies affects asset values on Web3 platforms. Bidders in the ENS market have limited data to rely on when determining bid prices, so they are motivated by the potential for profit. In OpenSea, there is

a high level of activity, and bidders may outbid one another, driving prices up. On the other hand, Namecheap is a well-established platform with a large number of registered users. Transactions are made with USD, a stable fiat currency with little question about its liquidity or value. The value of the domain name purchased at the bid price is not contested, and investors can determine its value at the start. As USD has little fluctuation in value, investors who secure a bid must take a calculated risk approach to determine its worth.

This study has some limitations, as it only covered two platforms (Namecheap and OpenSea) and a period of two months. To verify the generalizability of our hypotheses, a more comprehensive study with different auction marketplaces and a longer sample period should be carried out, which could also control the potential seasonal patterns in investment decisions. It would also be interesting to evaluate such data in relation to economic situations such as the decline of cryptocurrency, economic downturns, and certain external factors such as new competitors entering the marketplace. In the case of an economic downturn, the demand for a domain name may increase with the increased need for individuals to have their own websites for profiling or running their own home businesses. The number of bidders may increase, but probably with smaller spreads in the bid prices. Future studies can also go deeper into the analysis of the criteria and characteristics of investors which lead to their bidding behaviors which may be influenced by situational circumstances as well. Some of these factors like sentiment of the certain domain name keywords may be reflected in social media or search interest, which could be used for empirical analysis.

As Web3 takes off in the next few years, higher demand for ENS may present a different scenario than what we see today. A study can be conducted to look at possible factors that can influence bid prices and identify the behavior of serious buyers versus investors in such a marketplace. Future studies can also examine the motivational factors of investors across Web2 and Web3 platforms. For instance, investigating the underlying mechanisms behind the Web3 effect, such as currency risk, value, or the novelty of the market and technology, could provide valuable insights. These aspects were not extensively explored in the current study. Understanding these mechanisms will be insightful to organizations who are amid deciding their choice of a Web2 or Web3 domains. The growing marketplace will also allow us to study the characteristics and comparison of platforms in greater detail.

## References

Adam, M. T. P., Eidels, A., Lux, E., & Teubner, T. (2017). Bidding Behavior in Dutch Auctions: Insights from a Structured Literature Review. *International Journal of Electronic Commerce*, *21*(3), 363–397. https://doi.org/10.1080/10864415.2016.1319222

Ante, L. (2022). The Non-Fungible Token (NFT) Market and Its Relationship with Bitcoin and Ethereum. *FinTech*, *1*(3), 216–224. https://doi.org/10.3390/fintech1030017

Apostu, S. A., Panait, M., Vasa, L., Mihaescu, C., & Dobrowolski, Z. (2022). NFTs and Cryptocurrencies—The Metamorphosis of the Economy under the Sign of Blockchain: A Time Series Approach. *Mathematics*, *10*(17), 3218. https://doi.org/10.3390/math10173218

Ba, S., Whinston, A. B., & Zhang, H. (2003). Building trust in online auction markets through an economic incentive mechanism. *Decision Support Systems*, *35*(3), 273–286. https://doi.org/10.1016/S0167-9236(02)00074-X

Dowling, M. (2022). Is non-fungible token pricing driven by cryptocurrencies? *Finance Research Letters*, *44*, 102097. https://doi.org/10.1016/j.frl.2021.102097

Farahmand, F. (2017). The Importance of Human Information Processing: A Behavioral Economics Model for Predicting Domain Name Choice. *Computer*, *50*(9), 67–74. https://doi.org/10.1109/MC.2017.3571044

Halvorson, T., Der, M. F., Foster, I., Savage, S., Saul, L. K., & Voelker, G. M. (2015). From.academy to.zone: An analysis of the new TLD land rush. *Proceedings of the ACM SIGCOMM Internet Measurement Conference, IMC*, 381–394. https://doi.org/10.1145/2815675.2815696

Harrison, M. (2022). *NFT Guy Accidentally Spends $150K on Stupid Joke He Tried to Make*. The Byte. https://futurism.com/the-byte/nft-guy-accidentally-joke

Jenamani, M., Zhong, Y., & Bhargava, B. (2007). Cheating in online auction - Towards explaining the popularity of English auction. *Electronic Commerce Research and Applications*, *6*(1), 53–62. https://doi.org/10.1016/j.elerap.2005.12.002

KIllick, J. (2022). *The Top 10 Most Expensive ENS Domains Ever Sold*. Start with NFT's. https://www.startwithnfts.com/posts/the-top-10-most-expensive-ens-domains-ever-sold/

Lauinger, T., Onarlioglu, K., Chaabane, A., Robertson, W., & Kirda, E. (2016). WHOIS lost in translation: (Mis)Understanding domain name expiration and re-registration. *Proceedings of the ACM SIGCOMM Internet Measurement Conference, IMC*, *14-16-Nove*, 247–253. https://doi.org/10.1145/2987443.2987463

Lindenthal, T. (2014). Valuable words: The price dynamics of internet domain names. *Journal of the Association for Information Science and Technology*, *65*(5), 869–881. https://doi.org/10.1002/asi.23012

Mazur, M. (2021). Non-Fungible Tokens (NFT). The Analysis of Risk and Return. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3953535

McLaughlin, C., Bradley, L., Prentice, G., Verner, E.-J., & Loane, S. (2017). Consumer to Consumer (C2C) Online Auction Transaction Intentions: an Application of the Theory of Planned Behaviour. *DBS Business Review*, *1*, 5–25. https://doi.org/10.22375/dbsbr.v1.4

Palma, R., Varadarajan, R., Justin, J., & Robnett, S. (2021). *What's in a (Domain) Name? The $2 Billion Secondary Market for Dot-Com Domains*. BCG. https://www.bcg.com/publications/2021/domain-name-secondary-market-insights

Salvador, P., & Nogueira, A. (2011). Analysis of the internet domain names re-registration market. *Procedia Computer Science*, *3*, 325–335. https://doi.org/10.1016/j.procs.2010.12.056

Sun, K. (2022). Digital Asset Valuation: A Study on Domain Names, Email Addresses, and NFTs. In *arXiv*. https://arxiv.org/abs/2210.10637

Tang, J. H., Hsu, M. C., Hu, T. Y., & Huang, H. H. (2014). A general domain name appraisal model. *Journal of Internet Technology*, *15*(3), 427–431. https://doi.org/10.6138/JIT.2014.15.3.11

Trevathan, J., Read, W., Ghodosi, H., & Ghodosi, H. (2005). Design issues for electronic auctions. *Proceedings of the Second International Conference on E-Business and Telecommunication Networks*, 340–347. https://www.researchgate.net/publication/220917837

Wang, Y., Horky, F., Baals, L. J., Lucey, B. M., & Vigne, S. A. (2022). Bubbles all the way down? Detecting and date-stamping bubble behaviours in NFT and DeFi markets. *Journal of Chinese Economic and Business Studies*, *20*(4), 415–436. https://doi.org/10.1080/14765284.2022.2138161