

# A Guide to Fundamental Analysis in Crypto

February 2023



JieXuan Chua, CFA

# Table of Contents

<b>Key Takeaways</b>	<b>3</b>
<b>Introduction</b>	<b>4</b>
<b>Why do Fundamentals Matter?</b>	<b>5</b>
<b>What to Look Out for?</b>	<b>7</b>
Demand and Supply	7
Financial Performance	8
Valuation	9
Tokenomics	10
Stakeholder Engagement	11
<b>Fundamental Analysis in Action</b>	<b>12</b>
Ecosystem Overview - Top dApps	13
By Fees	13
By Revenue	13
By Earnings	14
By Daily Active Users	15
By Developers	16
Case Studies: Understanding Business Models	17
NFT Marketplace - OpenSea	17
Decentralized Exchange - Uniswap	18
Liquid Staking - Lido	20
Valuation	22
<b>Closing Thoughts</b>	<b>23</b>
<b>References</b>	<b>24</b>

## Key Takeaways

- ❖ Fundamental analysis refers to the method of assessing the intrinsic value of projects and tokens by analyzing various economic, financial, qualitative, and quantitative factors.
- ❖ A non-exhaustive list of factors such as the demand and supply dynamics, financial performance, valuation, tokenomics, and stakeholder engagement form the basis of fundamental analysis.
- ❖ In general, the more demand for a protocol's service, the more valuable its tokens are, assuming all else is equal. Token holders are compensated by the value accrual of their tokens, which appreciate in value as more fees are paid by users of the protocol.
- ❖ For a project to be truly self-sustaining, it needs to achieve profitability and generate real cash flow. This is where understanding a project's financial performance comes into play.
- ❖ Valuation helps investors get a sense of the intrinsic value of a project's native token. This is important in ensuring that one does not overpay for a token.
- ❖ Tokenomics refers to the study of the economic characteristics of a cryptographic token. The goal is to understand how various incentives affect the supply and demand of a token and, ultimately, its price.
- ❖ We are of the view that stakeholder engagement is worth monitoring to understand the underlying demand and development of projects given that people are at the heart of successful projects.
- ❖ To put theory into practice, we have analyzed some of the top dApps based on several metrics, and shared examples of how the business models of different projects work.

# Introduction

A comprehensive analysis of traditional web2 companies usually involves considering both qualitative and quantitative aspects of the business. Besides a qualitative evaluation of industry-wide and company-specific factors (e.g. industry trends, competitive moats, and management decisions), investors tend to also look at financial statements (i.e. balance sheet, income statement, and cash flow statement) and analyze relevant financial metrics. The goal is to understand the fundamentals of a business and to make an informed assessment of the intrinsic value of the business.

**We believe analyzing crypto projects should be no different - fundamentals matter.** In fact, as the crypto market continues to grow, as more projects go live on mainnet, and as investors become more sophisticated, fundamentals are likely to increase in importance. A focus on fundamental analysis will be pivotal in assessing quality projects, and driving prospective returns.

*“Fundamental analysis refers to the method of assessing the intrinsic value of projects and tokens by analyzing various economic, financial, qualitative, and quantitative factors.”*

That said, intrinsic differences between crypto and traditional markets require us to adapt and look at things from a slightly different perspective. Financial metrics still matter but line items on crypto’s “income statement” read differently - we look at metrics such as protocol fees, protocol revenue, token incentives, and earnings. Additionally, qualitative evaluation of crypto projects includes analyzing data related to active users, developer activity, competitive landscape, and token utility, among others.

At risk of oversimplification, a non-exhaustive list of factors such as the demand and supply dynamics, financial performance, valuation, tokenomics, and stakeholder engagement form the basis of fundamental analysis and are key in making an informed decision in crypto.

## Why do Fundamentals Matter?

Booms and busts are part and parcel of market cycles. While the phenomenal returns during bull markets can be enthralling, the significant drawdowns suffered during bear markets often goes unannounced. With that in mind, we argue that **while narratives contribute to higher token prices when animal spirits are high, strong fundamentals help cushion the blow of market volatility during the crypto winter.** In times of market corrections, it becomes more noticeable that not all projects are built the same.

*“Only when the tide goes out do you discover who's been swimming naked.”*

*- Warren Buffett*

We touch on a few reasons why fundamentals matter in this section.

### ❖ **Projects with strong fundamentals are more self-sustaining**

Projects that have the ability to generate profits and real cash flow are self-sustaining and are less reliant on external sources of funding to keep the lights on. This is especially key during crypto winters when deal flows slow and transaction activities are muted.

On the other hand, projects that run on an operating loss with no viable turnaround plan may be susceptible to failure if the treasury runs out of assets to keep operations running. Today, it is not uncommon to see projects bootstrap growth through the emissions of native tokens to attract users. The consequence is that they are often unprofitable and need to rely on other sources of funding. Understandably, this is not too different from the typical playbook employed by many early-stage startups which operate at a loss and prioritize growth in the short-term. While short-term unprofitability is not an immediate red flag, prolonged cash burn can be concerning. Projects need a concrete business plan to achieve operating profit and business sustainability.

### ❖ **Understanding a token's valuation prevents overpaying**

Valuation is an aspect of fundamental analysis and refers to the process of estimating the fair value of projects and their respective tokens. A token priced at a tenth of a cent does not necessarily mean it is cheap. The converse holds true - a token priced at hundreds of dollars does not necessarily mean it is expensive. Essentially:

*Price ≠ Value*

Valuation provides a framework for investors to understand how much they are paying for a token. **The aim is to give investors a sense of whether a token is overpriced or undervalued.** Having a good sense of a company's fundamentals (e.g. revenue, profitability, growth etc.) allows one to provide the necessary inputs to valuation frameworks, thereby deriving fair value estimates for tokens. A caveat is that valuation tends to be subjective and different investors may derive different fair value estimates.

❖ **Constant outperformance requires work - investors are increasingly sophisticated and discerning.**

Success stories of crypto millionaires who made their riches by “ape-ing” into moonshot projects are not unheard of. However, the risk-return profile of such bets can be skewed. Investing in tokens based on the grapevine without a deep understanding of what one is investing in, can be likened to buying a lottery ticket - it all boils down to luck.

As the crypto industry matures, investors are getting more sophisticated and more institutional investors have also entered the market. While pockets of speculative opportunities may still exist, steady and constant outperformance likely requires work. In this regard, doing your own due diligence on projects to understand fundamentals is key. Additionally, doing your own research and ensuring you are aware of what you are investing in mitigates the risk of investing in low quality projects / rug pulls.

❖ **Bear markets bring the importance of fundamentals to the forefront**

While fundamentals matter in all parts of the market cycle (bull or bear), bear markets shine a spotlight on its importance given that the probability of project failures increases significantly during bear markets. **These periods usually coincide with lower user activity, lower transaction volumes, lower revenue, and lower deal flows.** In light of this, being discerning is key to avoiding the pitfalls of investing in weaker projects.

Additionally, the number of quality projects trading at more reasonable valuations also increases amidst a broad market sell-off. As such, investors can afford to be more selective and invest in quality projects rather than in unproven or speculative opportunities. The consequence is that quality projects may find it relatively less challenging to raise funds whereas second-rate projects may find it harder to thrive during the bear markets.

## What to Look Out for?

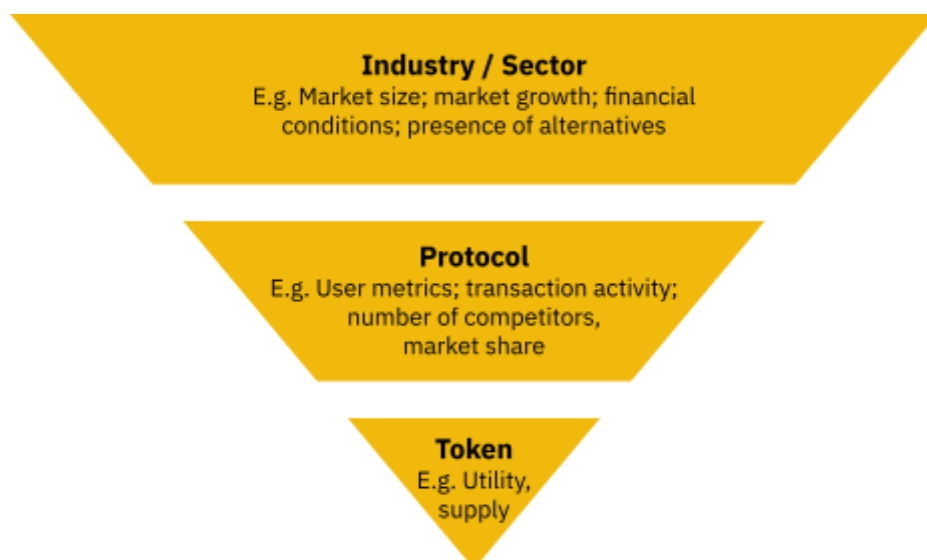
There is more than one way to skin a cat and it would be impossible to cover all the different ways to analyze a protocol. With the understanding that this is not an exhaustive nor prescriptive list, we attempt to summarize a few key areas to look at in this section. For those who are more data-driven, or those who would like to see fundamental analysis applied to specific projects, these will be covered in the next section.

### Demand and Supply

One of the key aspects of fundamental analysis in crypto relates to demand and supply dynamics. In general, the more demand for a protocol's service, the more valuable its tokens are, assuming all else is equal. **Token holders are compensated by the value accrual of their tokens, which appreciate in value as more fees are paid by users of the protocol.**

Nonetheless, it is key to note that demand and supply dynamics are prevalent across different levels in the ecosystem and not just on the protocol level. One way of looking at this would be to take a top-down approach, starting with understanding the industry landscape, before diving into protocol metrics, and finally, analyzing tokenomics (more on this later). The diagram below includes some examples of potential factors to look at in each level of analysis.

**Figure 1: Demand and supply dynamics are prevalent across the ecosystem**



Source: Binance Research

Given the diversity of the crypto ecosystem, different sets of metrics need to be applied to different kinds of projects or sectors. For example, in proof-of-work ("PoW") systems, the

number of miners would be an important supply-side metric. In proof-of-stake (“PoS”) systems, that could refer to stakers/validators instead.

In an ideal scenario, a quality project would strike a perfect balance between demand and supply across all levels. However, the reality is that this is generally unattainable given the vast number of factors at play, some of which are not within the control of project teams (e.g. market forces). Investors need to take a view and determine the types of compromises they are willing to make.

## Financial Performance

Projects require cash to pay for operating expenses such as developers’ salaries, server costs, and in some cases, office rental expenses. Initial stages of the project lifecycle would generally see such costs being covered by external funding. However, **for a project to be truly self-sustaining, it needs to achieve profitability and generate real cash flow.** This is where understanding a project’s financial performance comes into play.

Financial metrics include line items similar to those seen in a traditional company’s financial statements. To name a few - revenue, expense, profit, and treasury size etc. For comparison across protocols, profitability ratios such as net income margin and growth metrics such as revenue growth rate may be helpful as common benchmarks. Ceteris paribus, one would generally prefer a project that is able to grow revenue year-on-year while keeping expenses in check.

*Figure 2: Sample of financial metrics*

Metrics	Formula
Fees Growth (%)	$(\text{Current Year Fees} / \text{Prior Year Fees}) - 1$
Revenue Growth (%)	$(\text{Current Year Revenue} / \text{Prior Year Revenue}) - 1$
Protocol Margin (%)	$\text{Protocol Revenue} / \text{Total Fees}$
Net Income Margin (%)	$\text{Net Income} / \text{Total Fees}$
Treasury Growth (%)	$(\text{Current Year Treasury Size} / \text{Prior Year Treasury Size}) - 1$

*Source: Binance Research*

Note that it is not uncommon to see loss-making projects considering the nascency of the industry and given that most projects are barely a couple of months/years old. Instead of writing off all unprofitable projects, it is key for investors to evaluate the estimated timeline and viability of projects to achieve operating profit and decide if the opportunity makes sense.



## Valuation

Valuation helps investors get a sense of the intrinsic value of a project's native token. This is important in ensuring that one does not overpay for a token. Even if a project ends up ticking all the boxes of what makes a quality project, it may still not make financial sense to invest in the token if it is incorrectly priced.

*"It's not what you buy, it's what you pay.... The failure to distinguish between good assets and good buys, gets most investors into trouble."*  
- Howard Marks

Specifically, one way to get a sense of whether a token is overpriced or undervalued is through relative valuation. This refers to the method of comparing the value of a project's tokens to that of competitors. In other words, an asset is valued based upon how similar assets are priced in the market<sup>(1)</sup>. Intuitively, one would prefer a token that is priced reasonably compared to peers. What is considered "reasonable" is subjective but generally can come in the form of either a price discount to average, or if a token is trading at a premium, has stronger fundamentals than peers to justify the premium.

Metrics commonly used for relative valuation are similar to that used to evaluate traditional companies such as price-to-sales and price-to-earnings multiples.

**Figure 3: Sample of relative valuation metrics**

Metrics	Formula
Price-to-Sales (by total revenue)	Fully Diluted Valuation / Annualized Total Revenue
Price-to-Sales (by protocol revenue)	Fully Diluted Valuation / Annualized Protocol Revenue
Price-to-Earnings	Fully Diluted Valuation / Annualized Net Income
Market Cap / TVL	Circulating Market Cap / Total Value Locked
FDV / TVL	Fully Diluted Valuation / Total Value Locked

Source: Binance Research

Just like how something that is cheaper is not necessarily better, a token trading at a discount to peers does not necessarily make it a good buy. **Valuation multiples need to be evaluated in conjunction with other aspects of fundamental analysis.**

For more details and to see how we applied principles of relative valuation, refer to our prior report on "[Uncovering DeFi Fundamentals: Decentralized Exchanges](#)".

## Tokenomics

Tokenomics refers to the study of the economic characteristics of a cryptographic token. The goal is to understand how various incentives affect the supply and demand of a token and, ultimately, its price.

Key factors that affect supply include:

- ❖ **Token Allocation:** Token allocation refers to how tokens are distributed to different parties. While there is not a “one-size-fits-all” model, investors should get a sense of centralization risks (e.g. outsized allocation to founders/private investors), and whether they believe the allocation is fair.
- ❖ **Vesting Period:** The vesting/lock-up period refers to the time period when the sale of a token is restricted after initial distribution. Token lock-up periods are important incentivization tools to ensure that the motivations of developers and insiders are aligned with those of token holders. They are also helpful in mitigating potential price fluctuations that could come from early investors taking profit during the early stages of a project.
- ❖ **Emission Schedule:** Emissions refer to the rate at which tokens are released. Guiding questions include - Will circulation increase significantly in a short time period? How much dilution is expected and how quickly?

Key factors that affect demand include:

- ❖ **Governance Rights:** Tokens with governance rights allow token holders to vote and influence decisions related to the protocol. Projects may set different rules on how governance tokens are distributed and the governance rights of these tokens. Given the ability to potentially sway major decisions of the protocol, some may see value in accumulating these tokens in scale.
- ❖ **Value Accrual:** Token holders may benefit from mechanisms that result in value accrual for the token. For example, in a buy-and-burn mechanism, projects may use fees generated by the protocol to remove tokens from the circulating supply, thus increasing the value of outstanding tokens.
- ❖ **Other Utility:** Demand may also stem from other use cases of tokens. Utility includes but is not limited to boosted rewards for token holders, tokens as a medium of exchange, or tokens as a requirement for participation in the protocol.

A good token supply design is important to create an environment in which allocation and emission are managed in a sustainable way that fosters long-term growth rather than short-term gains. That said, demand and supply go hand in hand - without token demand, supply itself would be of no value. In this aspect, token utility and its value accrual mechanism are worth examining to determine if there is intrinsic demand for the token.

There are many layers to tokenomics and this short write-up provides only the most basic introduction to the subject. For more details, be sure to check out our report “[Tokenomics Deep Dive](#)”.

## Stakeholder Engagement

Behind every successful project is a team of hardworking developers who build new features and maintain the project, a group of active users who interact with the platform, and a passionate community that supports the project. In other words, **people are at the heart of successful projects.**

As such, we are of the view that stakeholder engagement is worth monitoring to understand the underlying demand and development of projects.

- ❖ **Users:** This refers to the number of users actively interacting with the protocol over a specific time frame. Users are the primary driving force behind the demand-side of a project. Without users, there would be no activity on the platform and a project would generate zero revenue. The number of active users (e.g. monthly active users) is a useful metric to track.
- ❖ **Developers:** This refers to the number of developers that are actively building on a specific chain/project. Given the rapid pace at which crypto moves, projects need to continuously attract new developers and retain existing talents to build and improve the project in order to continue attracting more users. Monitoring developer activity is a great way to determine the long term potential behind a crypto project due to the importance of developer engagement in creating value for an ecosystem.
- ❖ **Community:** This is less quantifiable and is a catch-all term that includes anyone associated with the protocol such as investors, token holders, traders, validators, etc. The community is crucial for the development, adoption, and overall success of a crypto ecosystem by providing support, feedback, and resources. In a traditional sense, managing a community is almost like investor relations at a large company.

## Fundamental Analysis in Action

Before we dive into on-chain data and actual case studies, let's spend a minute to understand some of the commonly used terms when examining crypto projects.

Analyzing a project's financial performance is similar to evaluating traditional companies. One way to analyze financial performance would be to get an understanding of a project's revenue, cost, and profitability.

Specifically, revenue and earnings of a protocol can be derived by the following:

$$\text{Protocol Revenue} = \text{Total Fees} - \text{Supply-Side Fees}$$

$$\text{Earnings} = \text{Protocol Revenue} - \text{Token Incentives}$$

Another way to visualize this is in the form of an income statement.

Income Statement	
Total Fees [A]	[A]
Less: Supply-Side Fees [B]	[B]
<b>Protocol Revenue [C]</b>	<b>[A] - [B]</b>
Less: Token Incentives [D]	[D]
<b>Earnings [E]</b>	<b>[C] - [D]</b>

- ❖ **Total fees:** This measures the amount of economic value received by the protocol (e.g. trading fees, commissions etc.)
- ❖ **Supply-side Fees:** This refers to the fees paid to supply-side participants (e.g. liquidity providers, stakers etc.).
- ❖ **Protocol revenue:** This refers to the revenue captured by the protocol and is derived by subtracting supply-side revenue from total fees.
- ❖ **Token incentives:** This represents the cost to token holders as a result of token emissions to incentivize usage of the protocol.
- ❖ **Earnings:** This is the bottom-line and measures the profitability of the protocol after subtracting token incentives from the protocol revenue.

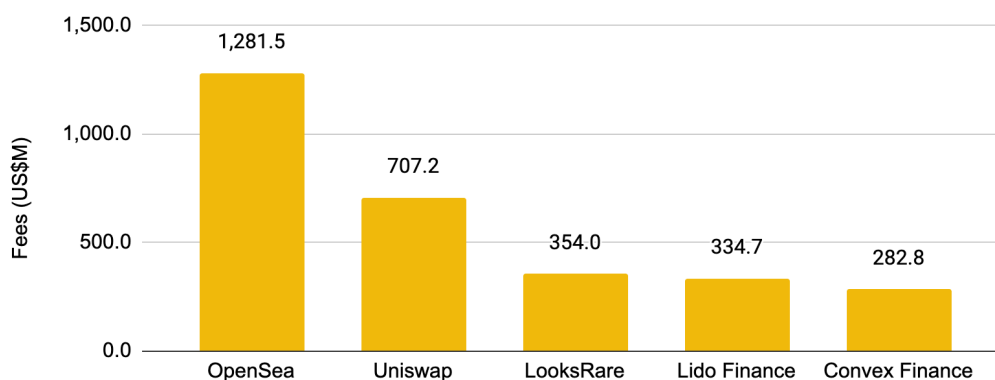
Having understood each of these terms, let's dive into the crypto ecosystem to look at some of the top decentralized applications ("dApps"), using data from [Token Terminal](#).

## Ecosystem Overview - Top dApps

### By Fees

Based on data from Token Terminal, the top 5 dApps in terms of fees over the past 365 days are OpenSea, Uniswap, LooksRare, Lido Finance, and Convex Finance. Notably, fees collected by OpenSea is nearly double that of the next leading dApp. This is contributed by its market leading position in the NFT ecosystem. (Spoiler alert: OpenSea is also the top dApp in terms of revenue, and earnings).

**Figure 4: Top 5 dApps by fees in the past 365 days**



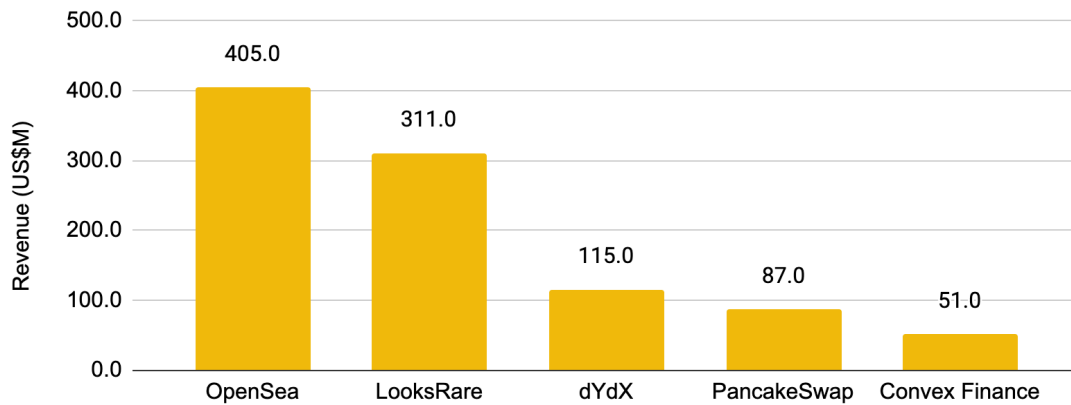
Source: Token Terminal, Binance Research

Data as of 2 Feb 2023

### By Revenue

Fees collected is just one part of the equation. In reality, **most protocols only accrue a portion of fees as revenue after netting off payments to supply-side actors.** For example, fees collected by NFT platforms account for both marketplace fees as well as creator royalties. The latter is first collected on behalf of creators (supply-side actors) when the transaction is made, but is subsequently passed on from the marketplace to them.

The top 5 dApps by protocol revenue in the past 365 days are OpenSea, LooksRare, dYdX, PancakeSwap and Convex Finance. NFT platforms (OpenSea, LooksRare) benefited from high NFT sales in the first half of 2022, and their relatively decent take rates/trading fees contributed to strong revenue for the year.

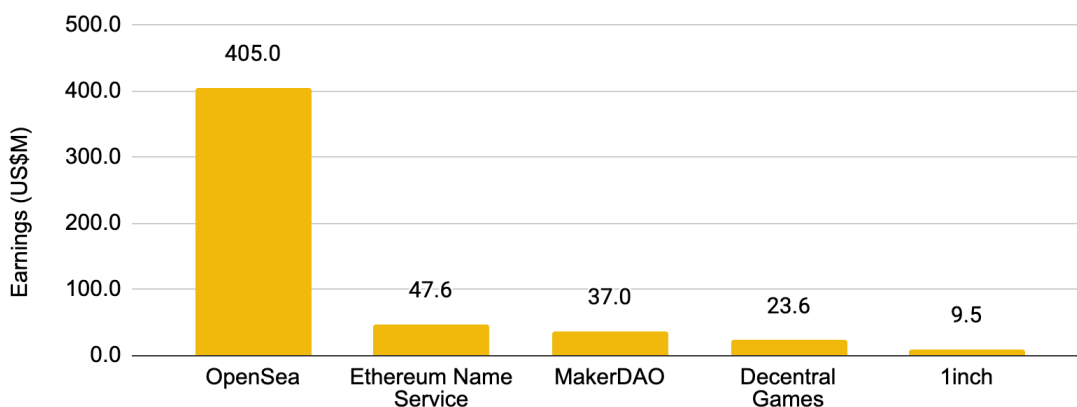
**Figure 5: Top 5 dApps by revenue in the past 365 days**

Source: Token Terminal, Binance Research  
Data as of 2 Feb 2023

## By Earnings

It is not uncommon for protocols to incentivize growth and adoption of the platform via emission of native tokens. Take the example of decentralized exchanges (“DEXes”) - native DEX tokens are pivotal in incentivizing liquidity provision on the platform by providing additional returns to liquidity providers who park their assets with the respective DEXes. Such token incentives dilute the value of holdings of existing token holders, and can be seen as a cost to the protocol. **The earnings of a protocol can be calculated by netting off token incentives from the protocol revenue.**

The top 5 dApps by earnings in the past 365 days are OpenSea, Ethereum Name Service, MakerDAO, Decentral Games and 1inch.

**Figure 6: Top 5 dApps by earnings in the past 365 days**

Source: Token Terminal, Binance Research  
Data as of 2 Feb 2023

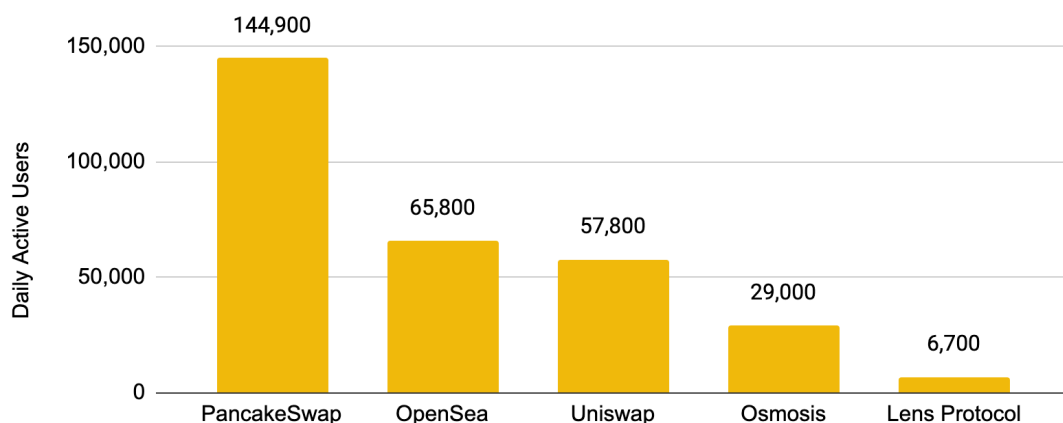
Notice the significant differences in rankings of top dApps by earnings, compared to rankings by revenue and fees. This is contributed by differences in token incentives strategies and token emission schedules. dApps that have dropped off from the earnings leadership board have high token incentives, resulting in lower net earnings (or even loss). However, being loss-making in itself does not mean much and is similar to the playbook of early-stage startups that operate at a loss to bootstrap growth. More analysis needs to be done to understand the protocol's growth strategy and token emission plan. Additionally, note that off-chain operational expenses are opaque by nature and true profitability is likely to differ when that is considered.

## By Daily Active Users

As discussed in the prior section, users are the primary driving force behind the demand-side of a project. Users drive transaction activity, which in turn translates into fees generated by the project.

The top 5 dApps by daily active users as of 2 February 2023 are PancakeSwap, OpenSea, Uniswap, Osmosis, and Lens Protocol.

**Figure 7: Top 5 dApps by daily active users (latest)**



Source: Token Terminal, Binance Research  
Data as of 2 Feb 2023

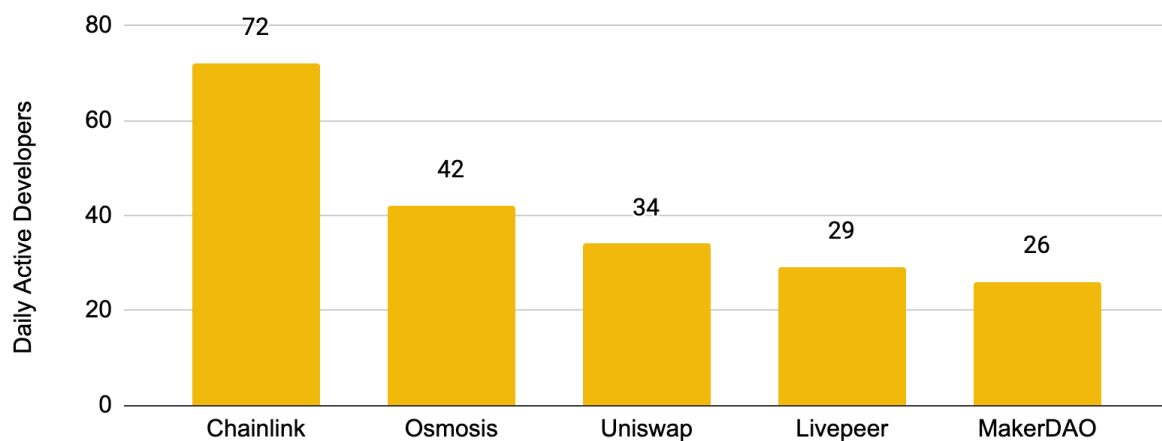
Note that **given differences in market size, user behavior, as well as nuances across sectors, daily active users may vary depending on the sector a project is in.** For example, when comparing a DeFi project to a SocialFi project, one needs to be aware of the differences in sector market size. Additionally, users of certain projects (e.g. metaverse, or gaming projects) need not always interact with smart contracts when they use the platform, and thus, on-chain user metrics may understate true user activity.

## By Developers

Developer engagement is an indicator of value creation. Developers build dApps that increase use cases and attract more users. The result is more funding into the ecosystem to attract even more developers.

The top 5 dApps by daily active developers as of 2 February 2023 are Chainlink, Osmosis, Uniswap, Livepeer, and MakerDAO.

**Figure 8: Top 5 dApps by daily active developers (latest)**



Source: Token Terminal, Binance Research  
Data as of 2 Feb 2023



## Case Studies: Understanding Business Models

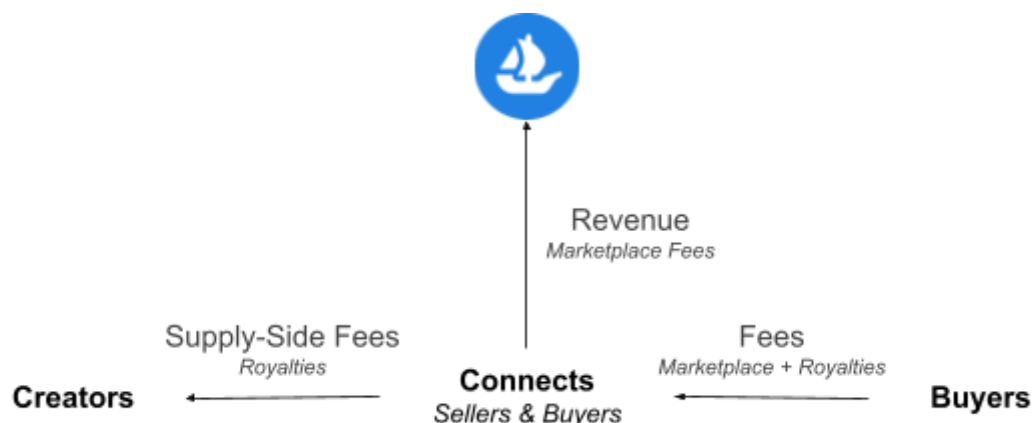
While quantitative metrics (such as those shown previously) serve as helpful benchmarks for comparison and rankings, differences in operating models make apples to apples comparison difficult. Additionally, it may be hard to visualize how a project accrues value without a good grasp of business models.

In this section, we take a look at a few projects across sectors to understand how different business models work. Hopefully, this helps in providing better context and understanding how web3 projects accrue revenue.

### NFT Marketplace - OpenSea

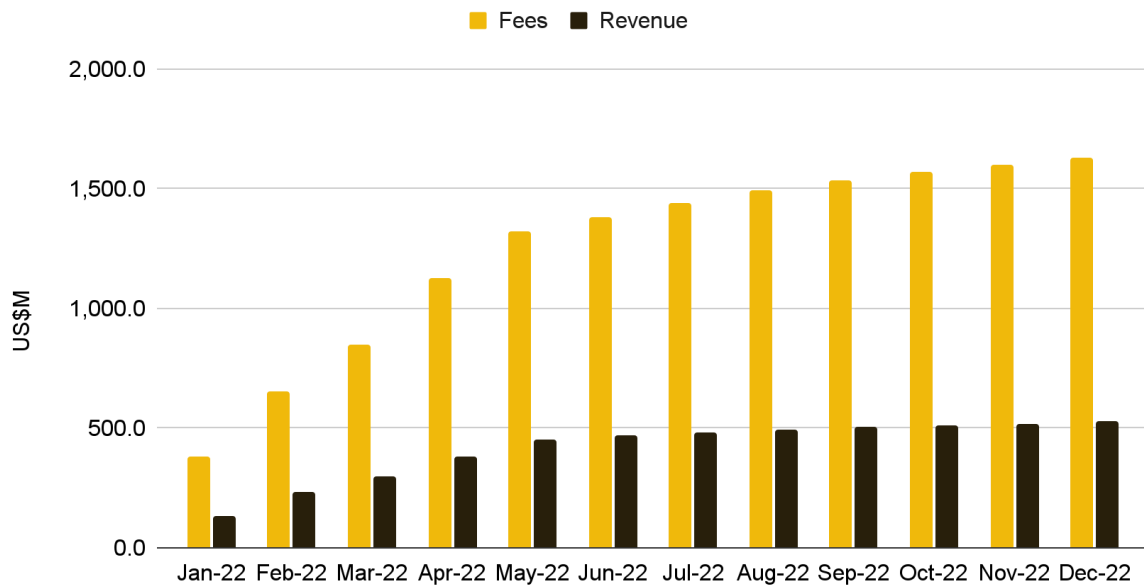
OpenSea is one of the leading NFT marketplaces and is the top dApp by fees, revenue, and earnings in the past 365 days based on data from Token Terminal. The platform allows collectors and creators to buy, sell, and create NFTs. OpenSea has nearly 2.6M cumulative users<sup>(2)</sup> and approximately 40-60K daily active users over the past year<sup>(3)</sup>.

**Figure 9: OpenSea's Business Model**



Source: Token Terminal, Binance Research

For every transaction on OpenSea, buyers pay a 2.5% marketplace fee and royalties (if applicable), on top of the price of the NFT. Both marketplace fees and royalties are collectively termed as “fees” collected by the platform. **The marketplace fees go direct to OpenSea as revenue, whereas creators receive the royalties paid.** In total, OpenSea collected over US\$1.6B in fees in 2022.

**Figure 10: OpenSea Cumulative Fees and Revenue in 2022**

Source: Token Terminal, Binance Research

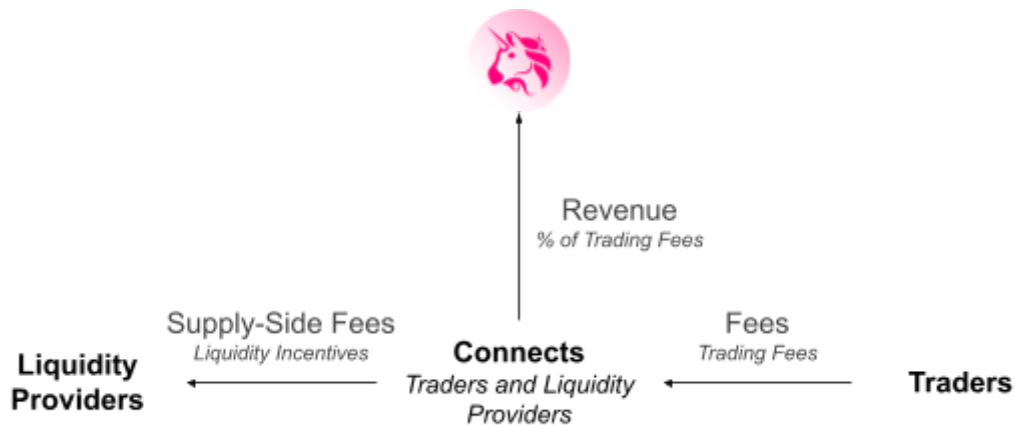
Data as of 2 Feb 2023

Netting off creator fees from total fees collected, the 2.5% of marketplace fees accrues directly to OpenSea. This translates to a considerable US\$528M in annual protocol revenue last year. While NFT trading volume has tapered off alongside muted market activity, monthly revenue for OpenSea has stabilized at around US\$7-14M since the second half of 2022.

Given that OpenSea does not have a native token, the on-chain profitability metric reflects 100% of protocol revenue since there are no token incentives. However, in reality, operational costs (e.g. salary, IT expenses etc.) need to be factored in to determine true profitability of the protocol.

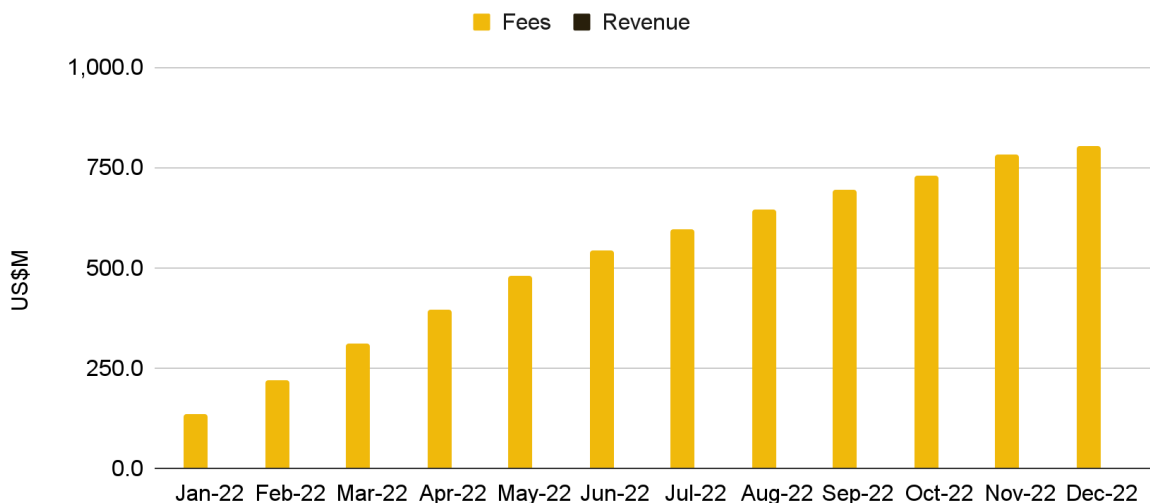
## Decentralized Exchange - Uniswap

Uniswap is a decentralized exchange that should be no stranger to most DeFi users. The protocol facilitates trading of crypto assets without the need for an intermediary by employing smart contracts to settle transactions. The launch of Uniswap V3 previously ushered in novel features such as concentrated liquidity and flexible fee structures.

**Figure 11: Uniswap's Business Model**

Source: Token Terminal, Binance Research

Traders pay between 0.01% to 1% in fees for every transaction on the platform. Considering that Uniswap recorded a behemoth US\$573B in trading volume last year, it raked in an impressive US\$803M of fees in the same period. That makes Uniswap the second largest fee generating protocol in 2022 based on dApps analyzed by Token Terminal.

**Figure 12: Uniswap Cumulative Fees and Revenue in 2022**

Source: Token Terminal, Binance Research

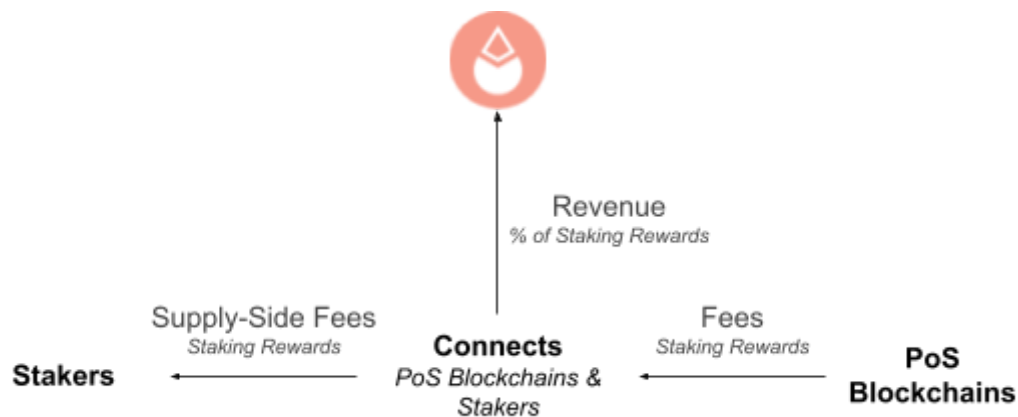
Data as of 2 Feb 2023

Eagle-eyed readers will notice that despite the large amount of fees collected, protocol revenue for Uniswap is zero. This is not an error. **Currently, fees collected are fully paid out to liquidity providers and Uniswap does not take a cut.** That said, Uniswap V2 and V3 has a “fee switch” mechanism that can be turned on which would allow a portion of fees to be channeled to the protocol.

## Liquid Staking - Lido

Lido is a liquid staking provider for Ethereum and other proof of stake (“PoS”) chains. Users of Lido receive a staked token in exchange for staking their native PoS tokens on Lido. Stakers can then use the staked token to earn additional yield from other DeFi protocols while still receiving staking rewards. In effect, Lido offers users the ability to retain liquidity while generating yield on their staked assets.

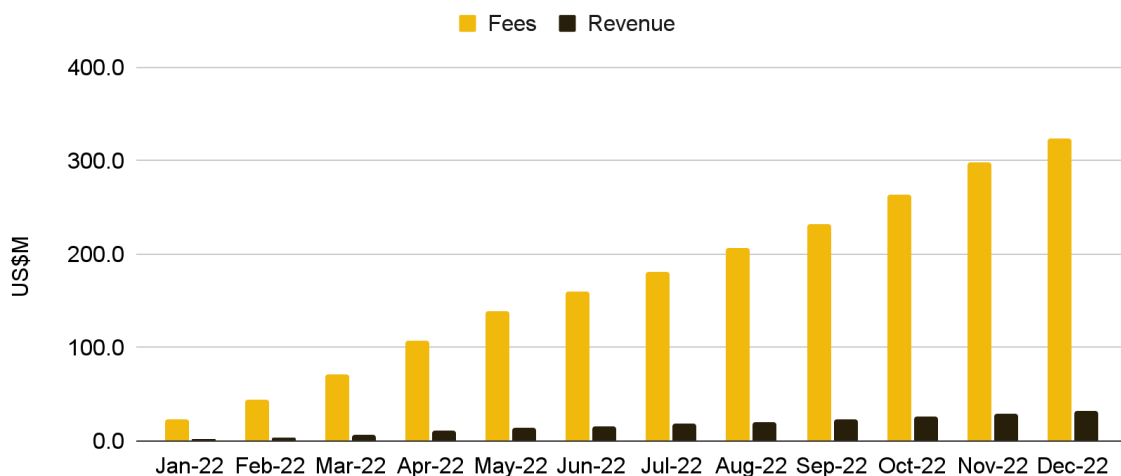
**Figure 13: Lido’s Business Model**



Source: Token Terminal, Binance Research

By pooling PoS deposits and staking them through a set of node operators, Lido receives staking rewards which are then distributed to stakers after charging a 10% fee. The 10% fee accrues as protocol revenue and is split between the node operators and the Lido DAO's treasury. Over the course of 2022, Lido received US\$32M in protocol revenue.

**Figure 14: Lido Cumulative Fees and Revenue in 2022**

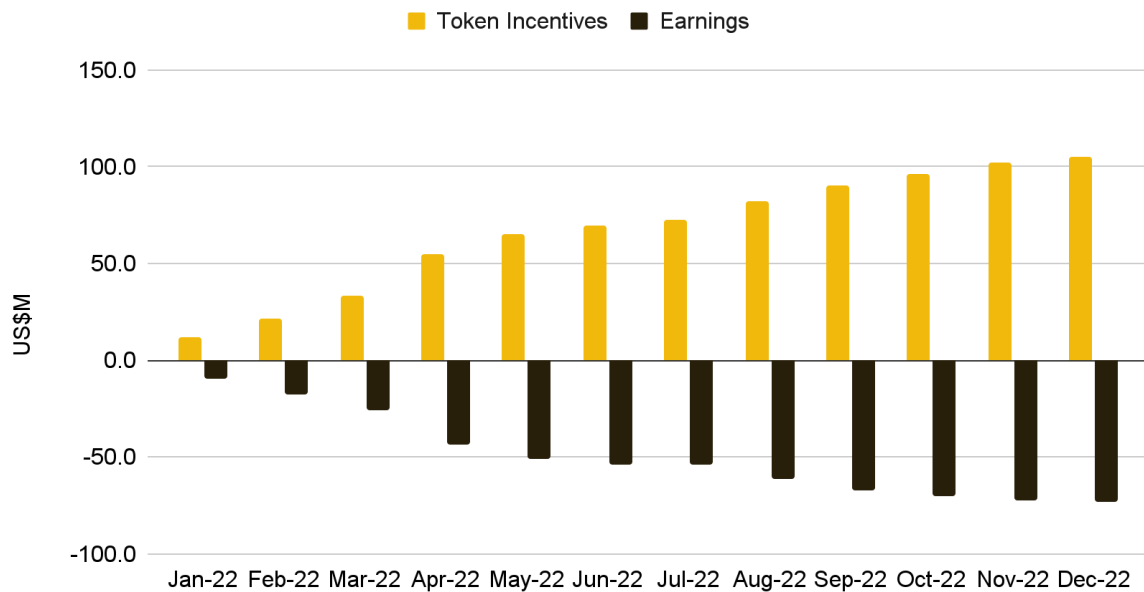


Source: Token Terminal, Binance Research

Data as of 2 Feb 2023

LDO is the native token of the Lido DAO which grants governance rights relating to the protocol such as setting fees and assigning node operators. 1 billion LDO tokens were minted at launch, of which these were allocated to the DAO treasury, investors, developers, employees and others. The Lido DAO treasury intends to distribute its supply of LDO for development purposes and appears as token incentives on Token Terminal. Netting off token incentives from protocol earnings, Lido had a net loss of US\$73M in 2022.

**Figure 15: Lido Cumulative Token Incentives and Earnings in 2022**



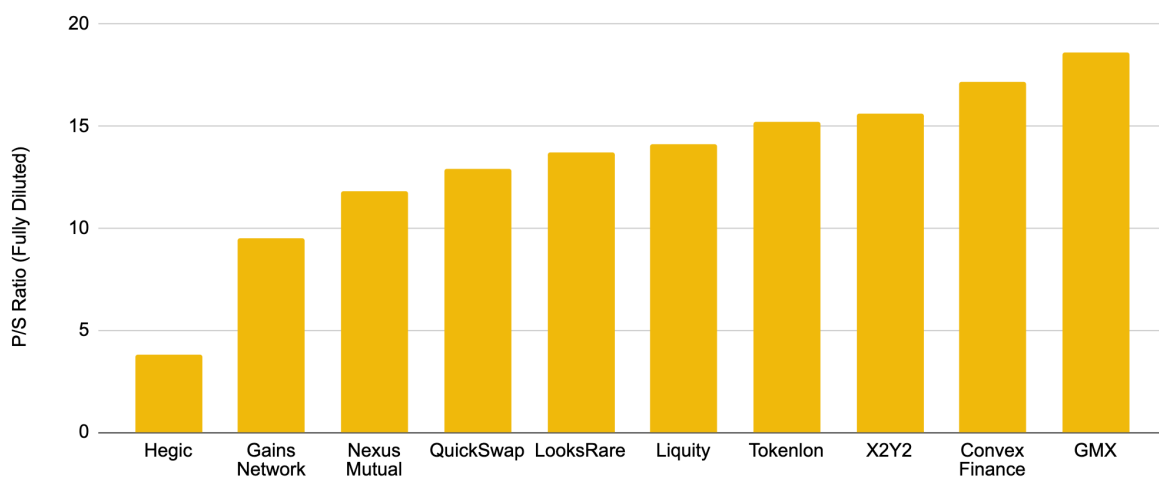
Source: Token Terminal, Binance Research  
Data as of 2 Feb 2023

## Valuation

Finally, relative valuation can be a helpful framework for investors to compare a project's valuation to get a sense of whether the token is overpriced or undervalued.

Given that a token may seem expensive or cheap for a variety of reasons, investors should take note to evaluate valuation in conjunction with other aspects of fundamental analysis. Additionally, depending on factors such as the metric used or the time frame of analysis, results may vary. Investors should exercise discretion and not take things at face value.

**Figure 16: Example of P/S Ratio (Fully Diluted)**



*Source: Token Terminal, Binance Research  
Data as of 6 Feb 2023*

The figure above is directly retrieved from Token Terminal and the dApps shown have been sorted by their price-to-sales ratio. Specifically, this is calculated by dividing the fully diluted market capitalization with the annualized revenue and shows how a project is valued in relation to its revenue. **On the surface, the lower the ratio, the “cheaper” a token is (since you are paying less for each dollar of revenue generated).** However, more analysis needs to be done given that price does not equate value and numerous factors affect a token's valuation.

As highlighted in the section “[What to Look Out for](#)”, there are numerous valuation metrics. Investors can calculate these manually, or by supplementing their analysis based on data from platforms such as Token Terminal.

## Closing Thoughts

The distributed and public nature of blockchain technology presents investors with unparalleled access to data in a transparent and efficient manner. It also levels the playing field between institutional and retail users. Since transactions on a blockchain are recorded every couple of seconds, financial performance can be analyzed in real-time with minimal delay and without expensive tools such as a Bloomberg Terminal. As compared to traditional listed companies which typically report their financials through quarterly reports, real-time data availability represents a massive improvement to the status quo in terms of the quality of investor disclosures.

Moreover, expansive data availability and the existence of alternative data sets on-chain allow investors to derive extensive insights about how a project's fundamentals will play out in the long run. While more can be done to improve the user experience for less technical users, it is undeniable that the underlying infrastructure presents a huge potential for the application of fundamental analysis to evaluate cryptocurrencies.

As the crypto ecosystem continues to mature, fundamental analysis will likely grow in terms of understanding and application by market participants. By providing investors with a framework to evaluate cryptocurrencies, fundamental analysis enables investors to make informed investment decisions and gain valuable insights to projects. Additionally, a deep and thorough understanding of projects from both a qualitative and quantitative perspective helps investors better appreciate the diversity of the crypto ecosystem and to be more discerning in their analysis.

Looking ahead, the advancement of on-chain analytics and user experiences, as well as the increase in sophistication of market participants will make fundamental analysis increasingly valuable in assessing quality projects and driving prospective returns.

## References

- 1) <https://pages.stern.nyu.edu/~adamodar/pdfiles/valn2ed/ch17.pdf>
- 2) <https://dune.com/rchen8/opensea>
- 3) <https://tokenterminal.com/terminal/projects/opensea>



## About Token Terminal

Token Terminal is a platform that aggregates financial data on blockchains and decentralized applications that run on blockchains.

We believe that both blockchains and dapps are conceptually similar to traditional marketplace companies. They are internet-native businesses whose services generate fees that are split between the projects' supply-side participants and owners. These businesses are owned and operated by their tokenholders, similar to how companies are owned and operated by their shareholders.

This is why we want to measure and evaluate the performance of blockchains and dapps using financial key performance indicators and correct the misunderstanding—where applicable—of crypto being all about currencies. An increasing amount of blockchains and dapps can be valued by measuring their usage and cash flows.



## About Binance Research

Binance Research is the research arm of Binance, the world's leading cryptocurrency exchange. The team is committed to delivering objective, independent, and comprehensive analysis and aims to be the thought leader in the crypto space. Our analysts publish insightful thought pieces regularly on topics related but not limited to, the crypto ecosystem, blockchain technologies, and the latest market themes.



### Jie Xuan Chua, Macro Researcher

Jie Xuan ("JX") is currently working for Binance as Macro Researcher. Prior to joining Binance, he worked as a Global Investment Specialist with J.P. Morgan and had prior Equity Research experiences at various fund houses. JX is a CFA charterholder. He has been involved in the cryptocurrency space since 2017.

**Read more**<https://research.binance.com/en/analysis>**Share your feedback**<https://tinyurl.com/bnresearchfeedback>

*This report was published in collaboration with Token Terminal. All content was produced independently by the author(s) and does not necessarily reflect the opinions of Binance.*

**General Disclosure:** *This material is prepared by Binance Research and is not intended to be relied upon as a forecast or investment advice, and is not a recommendation, offer or solicitation to buy or sell any securities, cryptocurrencies or to adopt any investment strategy. The use of terminology and the views expressed are intended to promote understanding and the responsible development of the sector and should not be interpreted as definitive legal views or those of Binance. The opinions expressed are as of the date shown above and are the opinions of the writer, they may change as subsequent conditions vary. The information and opinions contained in this material are derived from proprietary and non-proprietary sources deemed by Binance Research to be reliable, are not necessarily all-inclusive and are not guaranteed as to accuracy. As such, no warranty of accuracy or reliability is given and no responsibility arising in any other way for errors and omissions (including responsibility to any person by reason of negligence) is accepted by Binance. This material may contain 'forward looking' information that is not purely historical in nature. Such information may include, among other things, projections and forecasts. There is no guarantee that any forecasts made will come to pass. Reliance upon information in this material is at the sole discretion of the reader. This material is intended for information purposes only and does not constitute investment advice or an offer or solicitation to purchase or sell in any securities, cryptocurrencies or any investment strategy nor shall any securities or cryptocurrency be offered or sold to any person in any jurisdiction in which an offer, solicitation, purchase or sale would be unlawful under the laws of such jurisdiction. Investment involves risks.*