Understanding DeFi valuations

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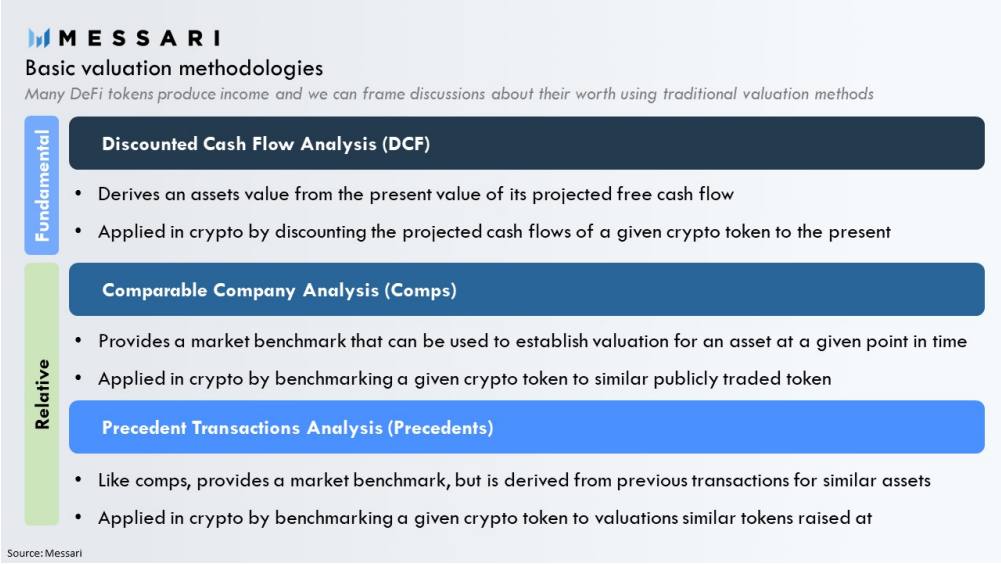
Many DeFi tokens produce income through some value extraction mechanism at the protocol level. In this regard they can be characterized as capital assets, and as capital assets, we can frame discussions about these assets' worth using traditional valuation methods. The three most common methods used to frame discussions about these cryptoassets' value are Discounted Cash Flow (DCF), Comparable Company Analysis (Comps), and Comparable Transactions (Precedents).



The conceptualization of DeFi tokens as capital assets is well understood among most investors in the space, and there are now public resources dedicated to evaluating these assets as such. What's less widely discussed, is how much insight applying many of these methods actually provides. Using traditional valuation methodologies is great for modeling out how these assets may potentially accrue value; however, any use of these methodologies beyond such simple value accrual illustrations can quickly become absurd. There are other ways to frame these tokens' value.

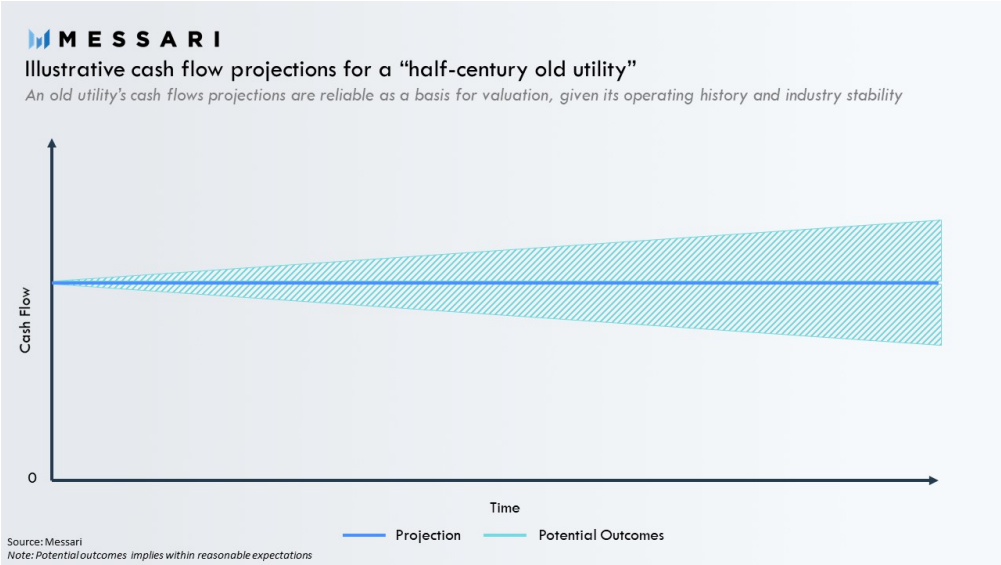
Valuation 101

Valuation is both an art and a science. Every asset can be valued using a combination of scientific and artistic elements. This combination of art and science exists on a spectrum, and valuation for a given asset may sit anywhere on this spectrum.

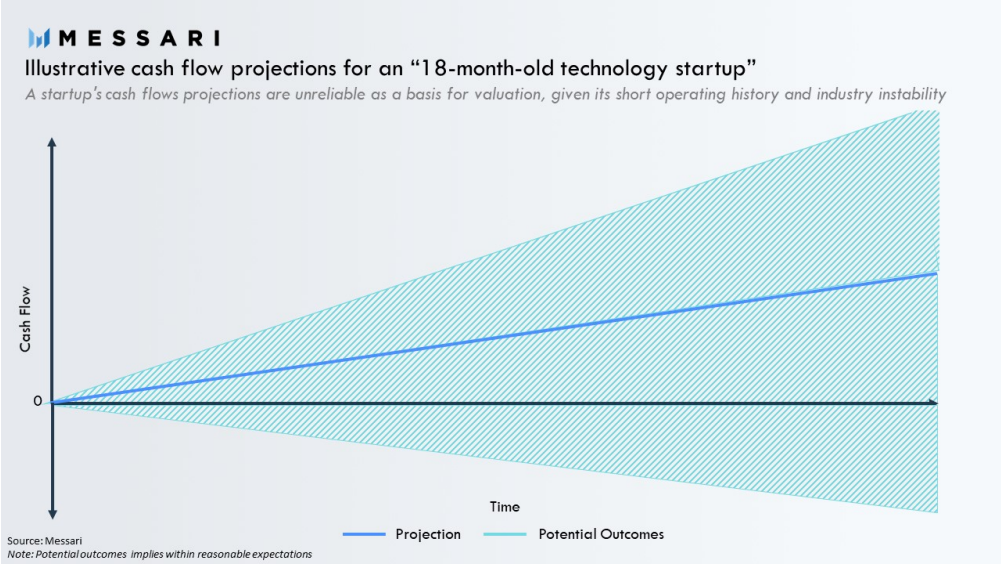
To illustrate this point, let's just think in terms of companies.

When a company operates predictably and in a stable environment, valuation can be more scientific. A half-century old utility that's generated $1 billion in cash flow every year for the

past decade serves as a prime example of this. Given the company's long operating history and industry stability, such a utility could be reasonably expected to produce more of the same for the foreseeable future. This makes a model relying on accurate projections of the utility's future cash flows much more reliable, given that those cash flows are rooted in sound assumptions about the future. The certainty makes valuation for these assets much more precise, and thus scientific.



In contrast, when a company operates unpredictably and in an unstable environment, valuation can be more artistic. An 18-month-old technology startup that made $100,000 last year in a fast changing industry is a great example of this. Given the company's short operating history and industry instability, such a startup could not reasonably be expected to produce more of the same for the foreseeable future. In contrast to the previously mentioned utility, the technology startup faces too much uncertainty over future revenue and profitability for anyone to make accurate assumptions about its future. This makes a model relying on projections of the startup's future cash flows much less reliable. Uncertainty is the enemy of scientific valuation, and why early stage startup valuation is much more art than science.



DeFi Tokens

The most common method for framing DeFi tokens' value is comps analysis, a relative valuation method that when applied to crypto aims to determine value by benchmarking a given crypto token to a similar publicly traded token. The way this is done is by dividing a token's market capitalization by its earnings to arrive at an earnings multiple. Comparing these earnings multiples across projects is meant to be a way of measuring value.

Relative valuation is the primary method for framing DeFi tokens' values because of the issues previously highlighted by the example of the technology startup. Fundamental valuation is very unreliable for early stage startups due to the uncertainty over their future cash flows. Because DeFi projects are like early stage startups (think Seed or Series A), searching for product-market fit and producing little if any cash flow, many have looked to relative valuation to gauge the value of DeFi tokens.

That we can use relative valuation at this stage is uniquely possible in DeFi given that tokens begin trading publicly virtually from inception. The legacy finance parallel would be like if Facebook shares had begun trading publicly in 2004, the year Facebook was founded, rather than 2012, when it IPO'ed and was significantly more mature. However, this unique opportunity to attempt valuing DeFi tokens at this stage poses challenges.

	Circulating cap	Annualised Earnings	P/E Ratio	Total cap[!]	P/E total cap
Binance	$2,500M	$210M	**11.9x**	$2,900M	13.81x
Bitfinex	$1,150M	$6M	189x	$1,150M	189x
Compound	$876M	$4.4M[!!]	200x	$3,360M	**760x**
Maker*	$524M	$0.12M	**4360x**	$524M	4360x
Synthetix*	$264M	$0.93M	281.5x	$266M	283x
Kyber*	$225M	$2.6M	85.9x	$260M	99.3x
AAVE*	$184M	$0.35M	547.7x	$184M	547.72x
Curve	*$100 - 400M?*	*$2M[**] @ 0.01%*	50-200x		
Uniswap	*$100 - 400M?*	*$2M[$] @0.05%*	50-200x		

[!]With good incentive design, token reserve generates value for network
[!!]Annualised earnings from today
**Earnings taken from Tokenterminal.xyz*
***CRV token planned but unclear mechanics*
[$]Uniswap could add 0.05% fee and a token

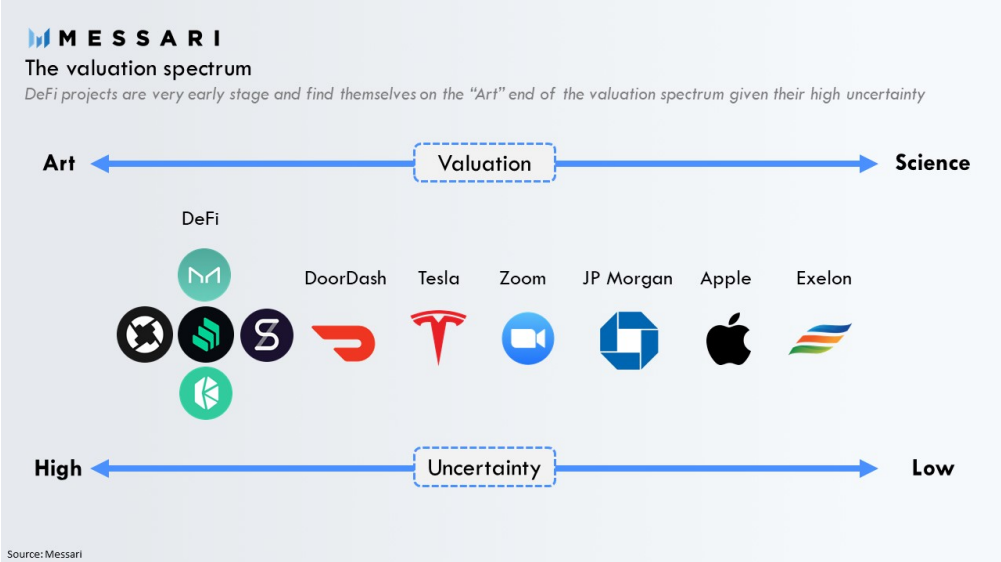
Source: Julien Thevenard

The above table provides an excellent overview of earnings across various tokens, that we can use to highlight issues comparing earnings multiples. Some issues include:

- Earnings multiples are backwards looking, or extrapolations of the present at best, yet the uncertain future is all that matters for value
- Evolving token economics can dramatically change earnings potential, which makes both the past and present irrelevant in determining value
- Different value accrual mechanisms, make the denominator of token earnings multiples less comparable to the point of near meaninglessness
- Different target markets imply different prospects and earnings potential, thus reducing comparability across tokens

To make the above more issues concrete, many of the projects in the above table altered their token economics over the past year, many of the projects occupy different target markets (centralized and decentralized exchanges, lending, and synthetic asset issuance), many have different value accrual mechanisms (discretionary burns, programmatic burns, and fees), and lastly, because so many of these projects (outside the centralized exchange space), generate such little earnings, the multiples are truly absurd. This makes it hard to draw any takeaways from any of the multiples other than that all these projects are extremely overvalued relative to their current earnings.

This shouldn't be shocking and should be expected for projects as early as DeFi projects are. The overwhelming majority of the value these projects will create is far into the future, which is inherently very uncertain. But it goes to show how useless relative valuations may be at this stage.



Art, not science

Valuing DeFi tokens is an art that depends on one's subjective assessment of the future value of a token discounted to the present. To help determine that potential future value one can look to a combination of qualitative and quantitative measures. Some examples on the qualitative side include product-market fit, team, community, and token economics. While some examples on the quantitative side including earnings, volumes, users, and various use case specific KPIs.

Looking at Compound provides a great example.

What's not important is that Compound currently takes a small cut of the protocol's net interest margin to put towards an insurance fund, good for a couple million dollars annualized, and indicative of COMP's earnings potential. Or that those earnings would value COMP at 810x times earnings. Rather on the qualitative front it's that it has solid product-market fit, a talented team building the protocol, a passionate community taking control of the project's future, and a path to value capture. On the quantitative front it's that it is growing loan originations, bootstrapping liquidity, and acquiring users rapidly. In fact, in the last 12 months, Compound has originated $1.75 billion in loans, which is nearly equivalent to the amount that LendingClub did in 2013, more than six years after it launched. LendingClub was valued at $1.55 billion at the time. Compound is currently valued at $972 million.

($ in millions) Illustrative fees to justify valuation

Lender	Age (Years)	LTM Originations	LTM Transaction Fees	Transaction Fees (%)	Valuation	EV / LTM Originations
Compound	1.7	$1,758	*$54*	*3.1%*	$972	0.6x
LendingClub	6.4	$2,064	$86	4.2%	$1,550	0.8x

Lending Club as of Dec. 31, 2013
Compound as of Jun. 26, 2020
Note: COMP does not currently have economics

There are plenty of ways you can dice up the comparison and plenty of different economic models COMP could implement beyond transaction fees for matching lenders and borrowers. Furthermore, one could also consider that transaction revenue for COMP holders would be pure profit because there's no associated operating expenses COMP holders pay. All expenses are outsourced to users of the COMP protocol who pay the Ethereum blockchain transaction fees, Ethereum infrastructure operators that run the Ethereum clients, and ETH

holders that pay miners for securing the Ethereum blockchain.

The above analysis is illustrative of just one way an analyst could think about Compound's value in the absence of traditional valuation methods. Given the above considerations, it becomes up to one's subjective assessment of the future value of Compound discounted to the present, whether Compound is worth the investment or not.

This same exercise can be run for other tokens across DeFi.

Practice Artistry

Valuation is important, and traditional valuation methodologies can help investors think about how value may potentially accrue to these assets. But fundamental valuation at this stage is unreliable, and relative valuation analysis across DeFi tokens is simply not that insightful. We can worry about these methods once these tokens grow up a bit.

For now we're artists.