



Houlihan Lokey

DIGITAL ASSETS: HOW CAN VALUATION DIFFER FROM TRADITIONAL ASSETS?



INTRODUCTION

Alternative asset managers are increasingly investing in digital assets, often in forms other than cryptocurrencies. However, many managers have delayed investing in digital assets or establishing dedicated digital asset funds due to headwinds, including the 2022 crypto crash, exchange bankruptcies, and fraud. Some potential investors have lost interest in this asset class due to the lack of regulatory clarity and increasing returns on cash with the rise in short-term rates. Yet, tailwinds appeared in 2023 driven by a traditional banking crisis, favorable court rulings such as the Ripple decision, the approval of a true Bitcoin ETF, and the Q4 crypto price recovery. These opposing forces have resulted in substantial price volatility. The overall token market had annual changes of +15%, -15%, and +90% in the past three, two, and one years, respectively (Coindesk CMI⁽¹⁾).

Managers are developing investment theses for digital asset class investments to identify the opportunity for outsized returns and prepare for the operational requirements of owning tokens. This is because, in successful outcomes, our clients' investments often lead to the ownership of fungible tokens rather than equity. Many native digital enterprise capital structures separate the roles of equity ownership, control, and economic benefit into distinct pieces. All the capital structures include a token that often contains most or all of the eventual value in the investment but may not enjoy control rights or other typical equity features. In short, managers are not simply trading cryptocurrencies; they are investing in companies but expecting to be rewarded through the token warrant attached to the equity investment. In contrast to traditional equity warrants, which deliver equity upon exercise, the token warrant delivers a very different instrument, which has embedded in it most of the value of the digital enterprise.

To illustrate this type of capital structure and explore some of the issues associated with valuation, we will examine Ripple, a private company that has developed a blockchain-based payment system and has also been the subject of a years-long lawsuit by the SEC. The lawsuit is partially under appeal, and the financial information of the private company has not been publicly distributed, so our illustration has been sourced from public discussion forums, news reports, and broker representations.⁽²⁾ As such, it is not purported to be accurate, only sufficiently representative to illustrate three significant observations:

1. The value of a blockchain project is very often entirely in the token and not the company equity.
2. The equity does not always control either the intellectual property of the project or the distribution of the tokens that eventually result.
3. In the case where the company also owns the resulting tokens, the equity can have a very wide valuation range, potentially wider than a similar technology company in a nondigital form—partially driven by valuation guidance.

INVESTMENT THESIS

Fundamentally, investors in these structures believe that a disruptive new technology (blockchain) will create a broad wealth transfer from traditional companies, whose returns accrue to equity holders, to native digital companies, whose returns accrue to token holders. Part of the reason for this belief in the digital disruptors is that they could operate much more efficiently (lower cost, more throughput, scalable) as a native digital company. Such a disruptor company would be based on blockchain technology, where its entire ecosystem is defined in the code and represented in the token. As a result, investors are highly focused on the token as the primary unit of value.

Among the reasons for this belief in native digital companies as disruptors is that they do not require a central authority, regulator, or interaction with traditional institutions to be viable and useful to real-world participants. Traditional companies are often based on older (and likely centralized) technology, which often involves more than one distinct entity to accomplish the same result. Examples of traditional companies include payment systems such as ACH or the credit platform Visa. These companies are owned or controlled by the beneficiaries of their service yet operate as distinct companies with their own walls and overhead. In contrast, Ripple is a payment system based entirely on a blockchain where fees accrue to holders of the XRP token, not Ripple equity, and it does not require traditional payment rails, regulatory oversight, or even banks to operate. We compare Ripple to ACH and Visa as an example of the investment thesis that legacy companies providing services at risk of blockchain-driven disruption will not be capable of transforming into native digital providers of such services. Success in this strategy also means that a manager must be prepared to own a position in a native digital token.

Houlihan Lokey is valuing digital assets or their precursor agreements for alternative asset managers. Consistent with the increase in the number of digital assets in our clients' portfolios, we have been challenged to reconcile both the unique aspects of these investments and the appropriate valuation methodologies. This paper will focus on the most common structure that we see in these portfolios—the token warrant—and some issues around valuation.

CLASSIFICATION

According to Coindesk's Digital Asset Classification Standard,⁽³⁾ almost 67% of digital assets by market value are currencies or stablecoins. These are primarily payment systems like BTC, XRP, or USDC, and the tokens are not typically valued by third-party agents. Most of the remaining 33% (29%) are classified as smart contract platforms, and the final 4% are DeFi, computing, and entertainment tokens, all of which are the types of projects that we typically see as valuation agents. While several of the large smart contract platforms like ETH, BNB, and SOL are mature projects with observable token prices, many of the smaller projects such as APT, UNI, or FIL are still developing their technology and ecosystems. Smaller yet are projects that are in development and have not launched their mainnet and issued a token.

Many of these less-mature projects are developed like a traditional technology project but are structured such that the returns flow to holders of a token rather than holders of equity in a company. While in many cases the ultimate value of the token will be driven by fees paid for the use of the computing platform (rather than earnings from a company), the creation and development of the computing platform and the ecosystem needed for commercial success is the project. Native digital computing platforms like Ethereum (ETH) separate elements such as intellectual property or incentivization of participants in the ecosystem from the economic rewards that remain a function of token ownership. Ethereum Labs is reported to own more than 300,000 ETH tokens, but there is no Ethereum company, only a network of validators, developers, and others united in a community (Ethereum.org). Another example of a highly successful token with no company ownership is Bitcoin (BTC), as it has no external controlling entity and its rewards accrue to the operators of its network (miners). However, if Bitcoin was a traditional technology company, it would be the eighth largest public company by market capitalization.

For the purposes of this paper, tokenomics are the characteristics, rights, and attributes of the token, which are usually described in a white paper used to generate enthusiasm for the project. It will include the plan of allocating the tokens when issued, such as through token warrants, grants, or other means.

The highly simplified model on the next page illustrates that the result is ownership of tokens rather than a traditional equity in a technology company.

SIMPLIFIED TOKEN PROJECT CYCLE



Laboratory conceives of a blockchain idea and determines tokenomics of the project.

It forms and sells equity in a company to develop the idea. That equity owner also buys warrants for the anticipated token according to the tokenomics plan. Cash is raised for the Project only, not Lab.

Company spends all the cash for tech, marketing, and partners; gets an operating ecosystem. Tokens are awarded according to tokenomics plan.

Ecosystem partners other than equity can also be incentivized with token awards.

Token has been issued, and likely little to no cash remains.

Ecosystem is entirely represented in the token and allocated via tokenomics to warrant holders, including a large portion allocated to the lab but not necessarily to the company.

Token has been distributed to the ecosystem.

Company has no assets but is an operating entity that could start cycle over with new project.

This simplified model has four components: the “lab” that owns the intellectual property (IP), the initial equity investment in the company, the technology and ecosystem (the “project”), and the resulting economic value (the “token”). The initial capital of the company is spent to develop the technology and marketing, and to do all the things needed to achieve the project specifications, launch the mainnet, and issue the token. The cash burn rates are observable to investors with information rights while the value of the partially created technology and ecosystem are less observable and the value of the resulting token is unobservable until it is bought and sold. The lab is independent from the company, the project, and the token, but it can influence or control outcomes by traditional means such as board seats and equity voting rights if the lab is an investor. The lab will typically retain a large portion of the token allocations and can assign those to incentivize behavior across the ecosystem.

The distinction here is that this structure separates the things that are usually combined in a traditional technology company—the IP, control, and economics.

The value of the company can be thought of as the sum of the components owned by the company (cash, the project, and a portion of the tokens), but the critical difference from a traditional operating company valuation is that the expected future cash flows from the operation of the platform represented by the token accrue to the token, not the equity. Given this, the equity investors also purchase token warrants for a nominal price at the same time as their initial investment. While the overall project is governed by multiple constituents, including the lab and company, the resulting distribution of the token is determined in advance by the lab in a concept known as “tokenomics.” In the diagram above, the original company is ultimately left with no tokens, technology, or assets and has little value other than its potential to execute another project.

One valuation approach for an investor who owns both the equity and the token warrant is to sum the value of the components (cash, project, and tokens or warrant). Valuation approaches could include the following:

1. Project could be valued as “amount spent” or “cost to recreate”—the value of the technology and the ecosystem partner agreements.
2. Tokens where only limited amounts are available to buy and sell; adjust the initial consensus price (or award price) by the price movement of a set of similar tokens (an index approach). There may be discounts to apply to restricted tokens or anything that creates a difference between tokens not free to trade and the observable token.
3. Tokens or warrants could be valued in several approaches, which would vary based on the maturity of the project. On day one, the token has relatively little value, but closer to issuance, the token can be valued in the same way as any other technology startup. The CFA Institute suggests two methods: using a measurement of network usage or expected acceptance by potential users evidenced by pilots or proof-of-concept releases, and creating a DCF model based on the fee structure of the token and expected usage amounts.

Method No. 3 above is not without basis because, from the perspective of valuation, mature projects such as ETH can be valued via a discounted cash flow (DCF) method based on projected revenues from the protocol. It was recently reported that ETH had earned in aggregate \$10 billion of revenue in 7.5 years, faster than Microsoft and Adobe had earned a similar amount of revenue earlier in their histories at about 20 years each.⁽⁴⁾ The market cap of ETH is approximately \$200 billion, and the \$2.6 billion in annual revenues implies a revenue multiple of 77x, not inconsistent with the valuation of some unicorns and other transformative assets. This shows that the valuation through the lifecycle of a token project can move from the simplified model to a more traditional model as the project matures and its ecosystem becomes more stable.

EXAMPLE OF VALUATION ISSUES—RIPPLE AND XRP

Ripple is very similar to the simplified token project above as a company that has spent most of its cash in developing a successful project, except that Ripple has been awarded tokens. The tokens (XRP) are its largest asset, although the company's token holdings are less than half of the total tokens to be issued.

For discussion, Ripple appears to have no liabilities and two assets: cash or securities for \$1 billion, and 46 million XRP tokens. It has sold equity, some of which is available in secondary private markets such as Linqto or EquityZen, and the tender offer has been reported by Reuters.⁽⁵⁾

Using these assets and prices from public sources, we calculate a company value below. In the first column, we use a known equity price and imply the price of XRP. In the second, we use the announced tender offer price and imply the token price. In the third, we use the traded token price.

	Secondary Market	Tender Offer	Theoretical Full
Implied company value represented by secondary market, reporting, or implied by token price.	\$4.5 Billion	\$11.3 Billion	\$28.6 Billion
Less value of cash and securities.	\$1.0 Billion	\$1.0 Billion	\$1.0 Billion
Implied value/price of XRP (46 billion units). Actual market price is \$0.60 per token.	\$3.5 Billion or \$0.076 per Token	\$10.3 Billion or \$0.224 per Token	
Actual value/price of XRP (46 billion units). Actual market price is \$0.60 per token.			\$27.6 Billion or \$0.60 per Token
Equity discount from theoretical full.	84%	60%	

While there is significant public discussion around Ripple, XRP, the SEC suit, and many other aspects of the project, the difference in valuation indications highlights the opportunities that some investors perceive. Assuming the Ripple equity holders are the eventual beneficiaries of the 46 billion tokens, relevant valuation questions and investor opportunities include the following:

- Which price of equity is correct, and how does a valuation agent support its conclusion in the face of a potential 84% discount? The valuation agent will likely utilize the market price of Ripple equity only for fair value reporting purposes if the transaction prices are representative of fair value.
- While the tender offer is a bona fide executable transaction for some holders, the percentage of any single holder's total and the overall amount of the tender is limited. How should this affect valuation? It should be noted that alternative forms of liquidity, with conditions, are offered and may affect the determination of a range of values.

NEW FASB GUIDANCE COULD SIGNIFICANTLY INCREASE REPORTED VALUE

In December 2023, the FASB released ASU 2023-8 (Intangibles—Goodwill and Other—Crypto Assets),⁽⁶⁾ which contains several relevant sections pertaining to digital assets. The headline has been that companies who hold cryptocurrencies will report them at fair value. In the body of the statement, the FASB indicated that there would be no exclusion from fair value reporting for crypto assets that lack an active market (paragraph BC25), and Topic 820 provides guidance on various factors that would impact the fair value of crypto assets (BC31). The FASB also explained its decision not to offer any measurement alternatives for crypto assets without a quoted price in an active market (BC40).

The result of this guidance in our Ripple example could be to cause the financial statements for a potential IPO of Ripple to reflect the market price of the XRP token and result in a market estimate of value much closer to the theoretical full price of \$28.6 billion.

CONCLUSION

While the valuation of digital asset projects in a theoretical aggregate is not dissimilar to any technology startup or unicorn, the separation of the token (via its tokenomics) from the equity can cause significant differences from expectations for an investor in traditional equity. There are also significant potential differences between fair value and the investors' assessments of the value opportunity, as we see in the Ripple example. Projects in native digital form separate the funding of the project from the beneficial cash flows, adding an additional layer of analysis. To paraphrase the CFA Institute, "The valuation issue is still a debated topic among industry stakeholders...current models and approaches carry a number of limitations...they offer insights into the functionality and mechanics." They are optimistic that with time and constructive disagreement, industry understanding and capabilities will improve.

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CONTRIBUTORS



David Wagner
Senior Advisor
+1 212.497.7984
DWagner@HL.com



Andrew MacNamara
Managing Director
+1 212.497.4286
AMacNamara@HL.com

HLI

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