UNIVERSITY of NICOSIA

Week 2, Session 4

Launching a Token: Part 1

BLOC 528: Token Economics

Background of Terms on Valuation

Before we delve into the valuation and launch of a coin, let's review some basic terms in valuation.

A bond is a financial instrument that pays a periodic coupon, and at maturity repays the principal.

Shares are used to characterize a company's equity. They typically come with voting rights and Dividend rights. They however not necessarily allow their holders to determine the company actions. (These are comparable to governance tokens in the DLT space.)

A zero coupon

bond is a bond that does not pay a coupon and the interest accrues instead.

The valuation of bonds is done via discounting the respective cash flows (coupon and principal) back to today and adding them up.

The enterprise value of a company is the aggregate value of its equity and its financial debt. Debt interest, as opposed to equity dividends, is tax deductible, giving rise to the [Debt] Tax Shield. This tax shield accrues to the equity valuation, and is an important reason why the enterprise value changes with leverage of the company, ie when a company takes on more debt.

The earnings multiple calculation determines the "fair" share price as EPS * PE where EPS are the Earnings per Share and PE is a Price/Earnings ratio, typically obtained by comparable companies. PE ratios however do not work for loss-making companies such as startups, in which case Revenue Multiples can be used.

General Strategy for Launching a Token

1. Identify a pain point and how you are going to solve for it
2. Clearly articulate why a token is especially integral for your solution
3. Cultivate a community of people around that pain point, and understand the incentives they face and what rewards are likely to be more motivating for them (e.g., create user stories)
4. Create those incentives and embed them into the ecosystem design
5. Enumerate the broader supply/demand factors that influence your token
6. Establish the distribution of tokens and the treasury supply of it, and explain it in a whitepaper

Common Mistakes With Tokens (1/2)

- Unclear token utility – Recognizing that the benefits conferred by a token play a major role in influencing its price, if the utility is not clearly articulated, then it can cause ambiguity and confusion among users, resulting in price volatility.
- Low initial supply – Although the “fear of missing out” (FOMO) can generate an initial increase in the price of a token, a high emissions-to-initial-supply ratio will result in more than 100% annual inflation. Artificially low supply and aggressive emissions tends to generate big declines in prices.
- Unlimited supply – By a similar “token,” some projects have created an unlimited supply of tokens, which effectively eliminates scarcity and confuses holders.
- Unfair distribution – Although the specifics vary across project types and sectors, giving, for example, a substantially large portion of tokens to the core team (or a few whale investors) would alienate other holders and generate a red flag to the community.

Common Mistakes With Tokens (2/2)

- Unfair emissions schedules – Overly aggressive or relaxed vesting schedules could generate large swings in prices due to sell pressure shocks or perceptions of scarcity, which could deter users from holding due to volatility.
- Liquidity mining – Although protocols that distribute governance tokens as rewards to incentivize participants to supply tokens into a liquidity pool have often fared well, the downside that must be mitigated is the attraction of yield-farmers who are not loyal to the community and may suddenly leave when there is a better offer, which would threaten the price of the token and add additional volatility.
- Inflation – Tokens with a net increase in circulation and no burning mechanisms can generate too much inflation, incurring the same criticism that traditional fiat currencies incur from the crypto community, thereby alienating holders and impacting its price.
- Centralization – Since most token holders prefer decentralization, overly centralized decision-making runs the risk of alienating holders. As my research has pointed out, airdrops were only linked with increases in market capitalization and volume growth for decentralized exchanges – not centralized ones.

Vesting Schedules

- Linear vesting schedule – The vested tokens are distributed proportionally during the vesting period, meaning that a certain number of tokens are distributed to the vested parties at a fixed interval during the vesting period. If 10% of the tokens are locked every 3 months with a total vesting period of 9 months, the vested party will receive the tokens in equal ratios. Hence, this vesting schedule is known as a “linear” method.
- Graded vesting schedule – Each period has a different token release ratio, allowing each project to customize according to their needs. For example, 25% could be released in the first 6 months, 10% in the next 3 months, and 25% in the following 4 months.
- Cliff vesting schedule – The cliff method is a period where no tokens are released at all. As such, it holds the token till the time cliff period ends. In order to better understand, let’s suppose the cliff period is for 3 months. Thereby, no tokens are to be released during the cliff period. After this period, the vested party will receive the tokens either in a linear or graded method, depending on the needs of the parties involved.

Types of Tokens / Coins

Creating a token is much easier than a coin – typically coins are thought of as running on its own blockchain network, which demands a unique set of programming skills corresponding to the blockchain that it's being built on. A token is generally built on an existing blockchain using open source tools.

- Security tokens – providing a more efficient way to trade securities if there are smart contracts undergirding the actual assets. Then, compliance turns into an art of simply specifying the conditions under which a trade takes place and ensuring verification. The smart contract replaces what has traditionally been a large body of intermediaries that execute a contract and broker the process between buyers and sellers.
- Tokenizing physical assets (e.g., real estate, minerals) – there are several benefits: a) fractionalization of the asset so lower income borrowers can participate; b) efficient giving of rights to ownership and/or use, c) cleaner records that live on the blockchain. There are nonetheless important risks to manage: for example, there are still regulations to manage and liabilities about the underlying borrowers (e.g., of real estate) and whether they can afford. The tokenization does not short circuit the existence of rules.
- Utility tokens / NFTs – in addition to the points about, there is also the value of rights management and resolving ownership issues. Today, record labels and big institutions get entire rights to artists' content. NFTs would empower the artists by giving them control over their data (created content) and deciding on what terms and how much to lend it out.

Rationales for Using Tokens v. Alternatives

- First, having a token that is native to a blockchain provides a common system of account that reduces the probability that assets and liabilities will be mismatched in different units of account. And since native tokens can be linked directly to the history of activity on a blockchain, they provide a trustless mechanism for facilitating exchange that is insulated from the fluctuations in other asset prices in the economy.
- Second, tokens can help secure credible commitment on both sides of a trade. Although the use cases of smart contracts are still limited, and complex rules and contingencies have yet to be fully implemented, they reduce the risk of either side reneging, according to Cong, Li, and Wang. Consider an entrepreneur who distributes tokens to investors. Insofar as the founder(s) succeed, there is much less chance to cheat or mislead the investors since the tokens are fundamentally tied with the intellectual property and technology stack of the blockchain.
- Third, tokens reduce transaction costs on a platform and make it easier for a network to form because they enable exchange around a common pain point, according to additional research by Cong, Li, and Wang. Taking Filecoin as an example, users can buy and sell spare computation power using the native token, so the value of the token is only as large as the demand associated with that service on the platform. In this sense, tokens can also help facilitate coordination among stakeholders in the presence of network effects, thereby making them a useful tool for raising capital.

Fundraising with Tokens

- Initial token offerings (ITOs) began as a way of soliciting funds from communities at scale without having to go through the regulated process of IPOs. However, as they began promising returns to buyers of the tokens, it began looking more like securities.
- Moreover, many tokens launched that overpromised and simply created a lot of hype so that the insiders would be able to cash out on a bidding up of the price that was only temporary without plans to deliver.
- Nonetheless, token sales remain a popular way of raising funds – the standards for them are higher.
- “ICO proponents argue that blockchains with native tokens permit disintermediation of Internet marketplaces with centralized control, such as Amazon or Facebook. In these firms with traditional equity-debt capital structures, the managers’ control over the platform enables them to extract a large share of its economic surplus on behalf of the equity holders, who are often also the managers.”
- “In the blockchain utility token model, platform management is decentralized, and value accrues to the token holders, who may include the platform developers but are mostly its customers, workers and other contributors. The token’s value is often expected to increase with the value of the decentralized network. This correspondence enables three features, though not every ICO makes use of all three. First, the token can reward the network creators without giving them operational control after the network has launched. Second, token buyers who may be prospective customers can fund the platform’s development, speculating on the future value of the service it will provide. Third, like concert tickets, food stamps, or stock certificates, the token’s value arises by providing access to a future good or service, creating customer commitment.” (Howell et al., 2019)

Fundraising with Tokens

Initial Coin Offerings: Financing Growth with Cryptocurrency Token Sales FREE

Sabrina T Howell ✉, Marina Niessner, David Yermack

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Abstract

Initial coin offerings (ICOs) have emerged as a new mechanism for entrepreneurial finance, with parallels to initial public offerings, venture capital, and presale crowdfunding. In a sample of more than 1,500 ICOs that collectively raise $12.9 billion, we examine which issuer and ICO characteristics predict successful real outcomes (increasing issuer employment and avoiding enterprise failure). Success is associated with disclosure, credible commitment to the project, and quality signals. An instrumental variables analysis finds that ICO token exchange listing causes higher future employment, indicating that access to token liquidity has important real consequences for the enterprise.

Tokens Help Solve Conflict of Interest Problems

- Entrepreneurs and users of the startup's platform often face a tension – when tokens are issued to finance investment, token supply increases, but the investment might not pan out.
- If productivity goes up, everyone benefits, but if it does not, the users may reduce token holdings or even abandon them entirely.
- If so, the entrepreneur then must raise external funding. That dampens the entrepreneur's incentive to invest.
- Smart contract fueled tokens solve that commitment problem.

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Token-based platform finance☆

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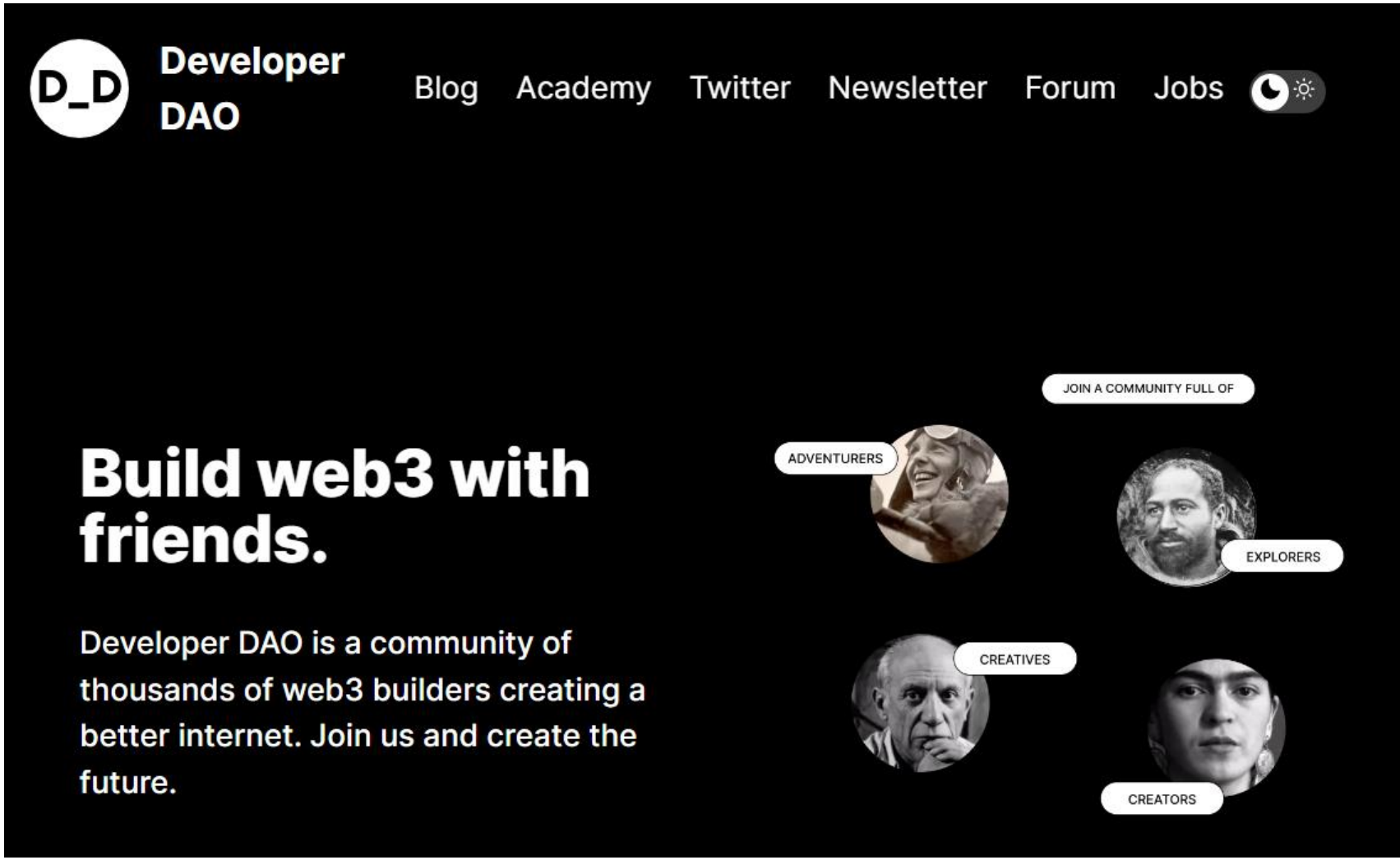
ABSTRACT

We develop a dynamic model of a platform economy where tokens serve as a means of payment among platform users and are issued to finance investment in platform productivity. Tokens are optimally rewarded to platform owners when token supply (normalized by productivity) is low and burnt to boost franchise value when the normalized supply is high. Although token price is determined in a liquid market, the platform's financial constraint generates an endogenous token issuance cost that causes underinvestment through the conflict of interest between insiders (owners) and outsiders (users). Blockchain technology mitigates underinvestment by addressing the owners' time inconsistency problem.

Tokens Can Also Gate Access

- Obtaining a token can grant you access to a community and give you points that allows you to redeem other community benefits.
- Tokens can become a badge of honor and, in some cases, allow for interoperability with the rest of the world if it is also linked with a listed token with a public price.
- But in those cases, you have to be careful about regulatory considerations since it takes you outside the plain vanilla utility NFT.



Guest Lecture – Jacob Robinson, Law of Code Podcast

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Questions?

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