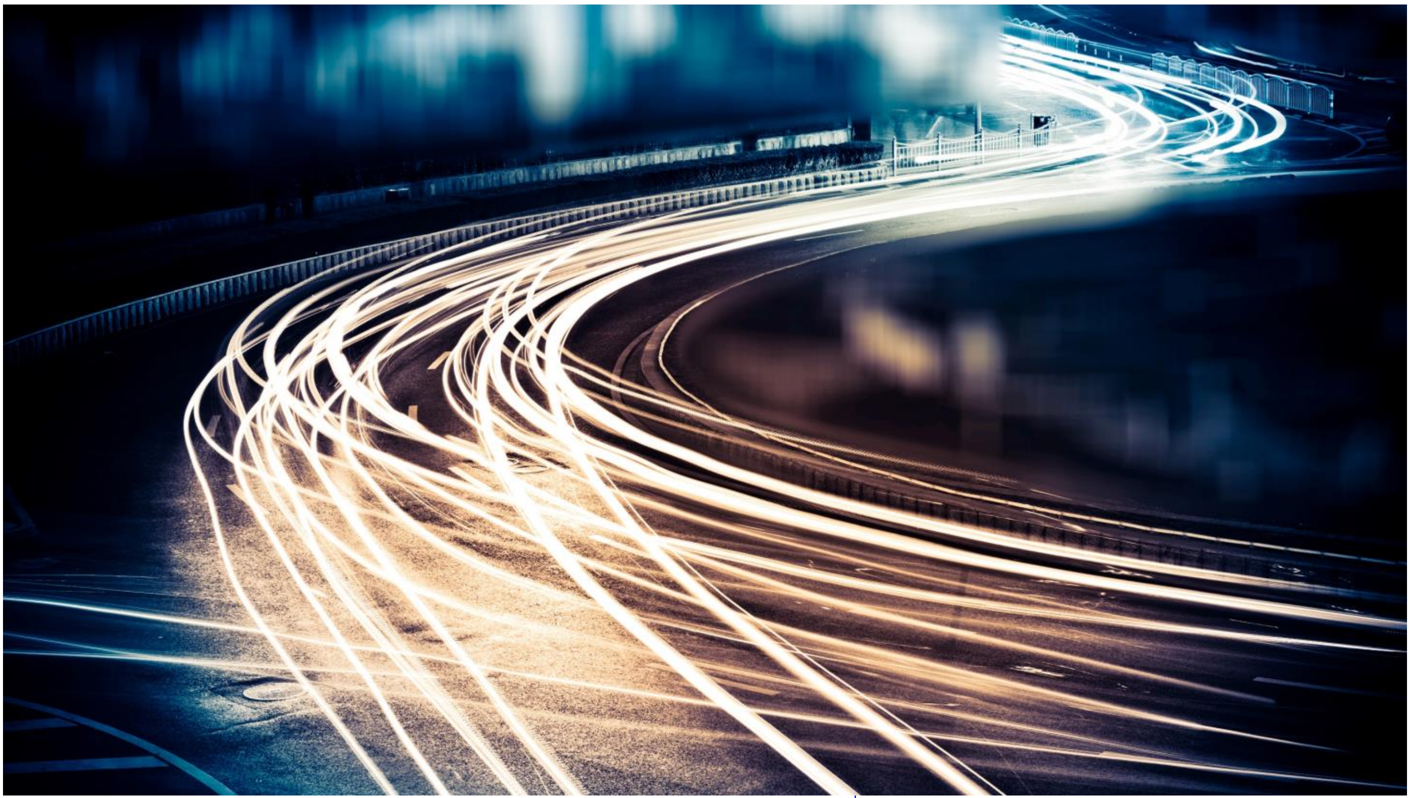

Education | Digital Assets

Digital asset staking through the lens of traditional yield-bearing instruments

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Overview

Anyone seeking knowledge about a new investment vehicle generally starts by making a comparison to better-known asset classes. Many, for instance, look for similarities between gold and bitcoin to explain the value of that cryptocurrency. This analogy helps us over some conceptual hurdles and serves as a foundational pillar to further understanding.

But what about yield in the context of digital assets? Owners of “proof of stake” cryptocurrencies can earn extra income on their token holdings (proof of stake is a blockchain consensus mechanism that relies on owners to “stake” their crypto holdings in exchange for the opportunity to validate transactions, advancing the network, and receiving rewards in return).

In this paper, we compare and contrast digital assets with other yield-producing asset classes (fixed income, equities and real estate investment trusts, or “REITs”).

Highlighting the similarities and differences between these asset classes helps us establish what digital asset staking rewards are (and what they are not).

Digital assets, equities and stock dividends

When comparing digital asset staking rewards to equities, the most striking similarity is in how distributions are made to asset holders. Staking rewards appear similar to dividends paid in parent company stock.* Staking rewards are paid in tokens, based on the number of digital assets staked, which is somewhat analogous to a stock dividend where the dividend is awarded as of additional shares, calculated as a percentage of the number of shares held. As is the case with equities, this could have a dilutive effect on token holders, as well as creating longer-term tax liabilities versus those created by an immediate cash distribution.

* Proof of stake rewards, while usually distributed as tokens of the native blockchain, but can also be programmed to deliver a different token.

Digital assets, fixed income and asset structure

When comparing the source of yield in fixed income and digital assets, it is at the structural level where the greatest similarities can be seen. In the fixed income markets, the trust deed, paying agency agreement and deed of covenant set out the terms according to which income is paid. The rules around coupon payments are set out up front, when the bond is issued. For a digital asset, the terms of its structure are written into its code. While not quite as immutable as a bond covenant, which remains in place for the life of a bond or until recall, digital asset tokens are programmed with staking rewards written into its code, and as such, will function as written. As alluded however, changes to a protocols programming can be made over time, and staking methodologies can be changed. Beyond the connection to the predetermination of yield, the similarity between these asset classes diverge, as staking yields are based on multiple factors and are highly variable versus bond coupons.

Digital assets, REITs and asset challenges

On their face, REITs more closely resemble equity in their cash dividends, but also have some unique relationships that are interesting to note. First, digital asset staking requires that staked assets be locked up, freezing the ability to redeem assets until the staking period is over. In a similar vein, REITs also impose lock up periods in an effort to reduce redemption risk. Second, REITs are managed portfolios, the success of which are, to a greater or lesser extent, investment manager dependent. On this last point, a comparison can be drawn from quality of management to the quality of (digital asset) programming and the ongoing developer activity as keys to the health of the asset.

Table 1: Yield fundamentals: A comparison across asset classes

Digital assets and traditional yield bearing assets share in a very basic principle: that the yield mechanism – whatever that is – is designed as an incentive. In the table below we show a side-by-side comparison of key features of yield across asset classes.

	Digital Assets	Equities	Fixed Income	REITs
1. Asset structure	Digital tokens governed by protocol programming and may be purchased directly or through digital wallet structures.	Company share ownership (certificate) offered to the general public through financed offering and traded on stock exchanges.	Bond covenant conferring the promise of future payment. A debt instrument.	Securitized investment fund basket. A rights-based asset. REITs have a 90% payout requirement to meet investment type criteria.
2. Yield source	Payment for contributing to proof of stake blockchain validation and contributing liquidity.	Dividend yield and share buybacks. Determined by company board.	Defined by bond schedule with finite maturity date.	Rental income and capital gains distribution.
3. Yield determination	Variable. Staking is not an automatic yield feature. Determined by protocol. May change over time. Can be impacted by transaction fees and participation levels.	Variable. Available as a way to distribute company profits and will often depend on revenue sources. Cash rich, subscription-based/utility and infrastructure companies can potentially offer growing or higher average yields.	Normally fixed coupon but can be floating. Yield will vary, based on the quality/risk of underlying instrument, with riskier (e.g. high yield) bonds generally offering higher yields. Senior bonds pay coupons before other assets, but junior, subordinated bonds can have coupons switched off, or even convert to equity.	Variable. Distribution of holding rental income according to payout requirements.
4. Yield calculation	Block rewards/Total network amount staked. The source of block rewards is a multi-variable calculation.	Annual dividend/Current share price	Annual interest/face value	Annual dividend/Current share price
5. Yield distribution	Distributed to protocol stakers. Proportional to locked up (staked) value.	Distributed equally among shareholders.	Distributed regularly to bond holders.	Distributed equally among shareholders.
6. Yield recipient	Token distribution to stakers. Can be the staked token, or another token asset.	Cash distribution to stock owners. Companies can also distribute stock dividends. Or distributed to fund shareholders.	Cash distribution to bond holder. Or distributed to fund shareholders.	Cash distribution to REIT owners. Or distributed to fund shareholders.
7. Yield benefit	Investment incentive, supporting network security and decentralization (liquidity).	Investment incentive supporting share price stability and liquidity.	Investment incentive, usually funding large infrastructure projects, municipal projects and general corporate finance.	Investment incentive, supporting real estate projects and portfolios.

8. Terminology / Metrics	Yield farming Reward rate Staking ratio New supply Slashing	Dividend Yield Cash dividend – Companies give profits directly, leading to a drop in share price that matches the dividend. Stock dividend – Companies give more shares instead of cash, which doesn't change the company's overall value.	Yield to maturity Current yield Yield to call	Dividend Yield
9. Asset challenges	Minimum staking amounts require the consolidation of assets for the purpose of staking. Staking yields can be difficult to predict due to factor variability. In addition, staking rewards can change over time.	Dividends not guaranteed and can be lowered. This risk is usually greater for smaller companies but can impact even the largest companies in times of market distress. Dividend stability/growth is often considered a corporate gold standard.	While yield and value at maturity are constant, interest rates significantly impact price. This does not impact basic yield, but significantly impacts the upside of bond investing. Bond upside limited by redemption value of 100.	REITs are managed by investment teams, and reliant on management quality. Investment can have lock ups for private REITs.
10. Asset risks	Lock up illiquidity, technical, smart contract risks, dilution of value, improper validation penalties.	Volatility, company credit/balance sheet risk, systemic market risk. Dilution through increased issuance. (See Cash dividend vs. Stock dividend terms above).	Credit, liquidity, duration.	Lock up illiquidity, tax implications, duration, cash flow and corporate credit risk.

Digital assets are unlike traditional asset classes

There are a good number of similarities between digital assets staking rewards and traditional asset classes. The exercise of comparison is an accessible framework for comparing these instruments, however there are key differences to highlight:

- Yield from the traditional assets discussed here are automatic features of ownership. Token holders make an active decision to stake tokens, and staking participation has more complexity than is revealed in this analysis.
- Digital assets are not limited to paying users in their own tokens and can develop protocols that pay rewards in other assets entirely.

These analogies have been created to simplify and educate. Digital assets are by their nature, very different. It is precisely these differences that make it such an exciting place to watch as we see old concepts reworked into new possibilities.

Future staking topics
Digital asset staking, as other digital asset topics have a good deal of market and technical complexity. Looking at digital asset staking next to traditional asset classes is a great way to begin to think about staking as a yield feature, but leaves the door open to many more ideas and deeper conversations about the specifics. Who stakes and how? How do staking protocols change over time? What about Liquid Staking? As the digital assets space matures we are sure to see continued innovation in this space and look forward to talking to the index and investing community about these topics.

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