

Defining the Tokenization Crossover Point

Tokenization is incorrectly being used as a blanket term to represent two different infrastructure plays. As a baseline, an asset is *natively* tokenized if its single source of truth exists on a blockchain. Else, it is a digital representation of a financial asset that is verified and exists on a traditional financial ledger - and the degree to which the representation is 1-to-1 varies.

Native tokenization boils down to an infrastructure upgrade, where we are tasked with proving that issuing financial assets on a shared, decentralized, and programmable ledger is more capable than legacy financial systems. The quality of being more capable stems from the argument that blockchain-based financial infrastructure has **implicit and explicit economic benefits that outweigh its implicit and explicit economic costs.**

Surprisingly, I haven't found extensive literature documenting the explicit costs vs. benefits of tokenization. It would be an interesting exercise to compare the issuance, management, and trading lifecycle for an asset issued on traditional rails vs. onchain rails, and compare side-by-side the total value lost vs. efficiencies gained (if any) to/by rent-seeking middlemen. This is akin to the elementary concept of the *mechanical efficiency* of any machine; a simple ratio of the input vs. the output.

Output Work/Energy
(Work / Energy generated by the system)

$$Efficiency = \frac{W_{out}}{W_{in}}$$

Input Work/Energy
(Work / Energy supplied to the system)

The diagram shows the formula for efficiency. An orange arrow points from the text 'Output Work/Energy (Work / Energy generated by the system)' to the W_{out} variable in the numerator. Another orange arrow points from the text 'Input Work/Energy (Work / Energy supplied to the system)' to the W_{in} variable in the denominator.

It may be more difficult to quantify the implicit costs and benefits of tokenization. In the frame of *native* tokenization, I am not sure what implicit economic costs would look like outside of the opportunity cost + coordination of making these infrastructure upgrades. However, I remain very excited about the implicit benefits. The theoretical limits of financial engineering open up when an asset is represented natively onchain and is guaranteed under the same price discovery, liquidation, and redemption laws dictated in the U.S. Securities Law. Some examples, for the sake of argument, include but are not limited to: advanced vault mechanisms which enable close to infinite lending-and-borrowing combinations, creative looping strategies to enhance risk/return profiles, composability of one base asset with others for on-demand unique portfolio construction, (responsibly) managed tranche construction within a single asset or between thematic assets, and the discovery of new financial primitives + derivatives.

If we treat tokenization as a system that supposedly upgrades the issuance, management, and trading of a financial asset, **then the efficiency of representing said asset onchain should be higher than that of representing it offchain.** Quantifying this for different types of asset

classes, especially bifurcated between assets that already have a central issuing and management party (DTC/Cede & Co. for equities, etc.) vs. those that don't (broker/dealers for alternative assets) would be interesting. A framework for this is the ***Tokenization Crossover Point***, a point at which the aggregate economic and functional benefits of representing an asset onchain exceed the explicit and implicit costs introduced by tokenization.

Incentives begin to misalign when we conflate the SPV-model of tokenization as the endgame for this technology. ***Native tokenization derives its benefits from explicit and implicit efficiencies, but SPV-esque tokenization is about increased financial accessibility and leverage.*** While I remain a cautious fan of the work Robinhood and other consumer-facing tokenization platforms are doing, it is a mere step in the right direction, but not the end state of what tokenization can unlock for financial asset infrastructure.

These misaligned incentives are best showcased with the case study of [tokenized AMC stock on the Robinhood platform](#). It's similar to a *Hold-Up Problem*, where each party wants to achieve the same end goal (selling AMC stock), but they have opposing incentives. Each party fears that cooperating gives the other side power to extract future rents, so they prefer to retain control rather than risking dependency.

AMC would prefer to prevent this SPV-style of tokenization since Robinhood may become a *de facto* custodian, thereby controlling rails, liquidity, and trading rules. It also leads to fragmented liquidity in the underlying asset, attributing to theoretically increased price volatility across both trading venues.

Robinhood would prefer the opposite, for obvious reasons.

Tokenization works across a spectrum with different goals. It's vital to not conflate SPV-esque tokenization with the theoretical efficiency of a completely onchain financial infrastructure. It's all about increasing accessibility to new markets (Robinhood and "tokenized" stocks) and expressing leverage in creative ways (Hyperliquid and perpetual futures, Kalshi/Polymarket and prediction markets).

It's been an interesting phase for tokenization and worth seeing how both forms codevelop.