# Explicitly Decoupling Network Value and Token Value in Cryptonetworks

In current value frameworks, network value and token value are either conflated or their distinction is merely implied. In order to better understand cryptonetwork value drivers, particularly as it pertains to cryptocommodities (or utility tokens), we must expand the existing paradigm by explicitly decoupling network value generated and network value captured (or token value). Doing so sheds light on interesting questions about token model priorities. Much of today's design discussion is centered around maximizing token value, potentially at the cost of the network's long term viability and usage. WIth traditional equities, management unequivocally aims to maximize shareholder value by maximizing profit and margins. Should this same approach apply to cryptonetworks?

More generally, given the nature of cryptonetworks, determining value should depend on whether we are discussing the value of the network generated or the value captured by the native asset of the network. If a cryptonetwork is to act as an decentralized trust network intended to democratize information and open access to restricted pockets of freedom, what should design priorities around 'value' be? Should network designs prioritize maximizing value retention or value generation? Naturally, the ideal design is one that maximizes both. But, is there a tradeoff between the two?

### Network Value Defined

Cryptonetworks are considered economies. As such, the network value they generate is often referred to as **"GDP"** and is a strong indicator of **usage** and **network health**. Given the public nature of blockchains, on-chain metrics are used to determine this value exchange, most commonly through the **on-chain transactional volume** of the network (although there are several limitations to this metric).

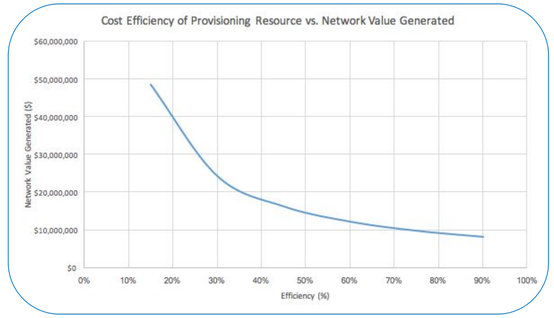
Literature around correlating a utility network's "worth" to the value it generates or exchanges (instead of the value it captures) is sparse. Naturally, this makes sense, given that much of **today's utility token usage is driven by investors, traders, and speculators.** The effect is that a cryptonetwork's "worth" is defined as its market cap (token supply * token price), which is (mis)defined as its network value. Further conflation occurs as network value generated and token value have identical unit of account denomination. In order to effectively ingrain the importance of decoupling the two, we believe **market cap should be more carefully labeled as *network value captured*** and that network value generated should be an increasingly discussed indicator of assessing the "worth" of utility networks specifically, as intended usage increases.

### Network Value Determinants

Network value is commonly forecasted through **market sizing.** Most assumptions in determining TAM center around the specific resource being provisioned. As token models become increasingly understood and tested, we may perhaps realize **correlations between network usage/accessibility and token model mechanics,** independent of the actual resource being provisioned. Similar to how a token model design might capture network value more effectively, so too might be the case for generation. Consideration of this possibility is important when determining and forecasting the potential network value of a cryptonetwork.

### Misconstrued Way of Assessing the Value of a Network?

If network value is calculated as the product of the price and quantity of the resource provisioned, then an efficiency in provisioning that resource will yield a lower network value. Unlike in traditional equities, **cost efficiencies in cryptonetworks do not accrue to the asset or exchanged value.** Should efficiencies in cryptonetworks rightfully be reflected by lower network values? Intuitively, a more efficient network should deem it more valuable. Perhaps this opens the conversation for **finding ways to assess cryptonetwork value in which efficiencies are positively reflected.** Or, perhaps conversation around the need for adjusting network value, similar to inflation adjustments in a country's GDP, should be considered.




Network value numbers were taken from Chris Burniske's INET Model

The cryptoasset is a **new asset class** and has a different basis of value from other asset classes

The cryptoasset is a **superclass with subclasses**. These subclasses also have unique bases of values amongst themselves.

**Cryptoasset subclasses**

- Cryptocurrency
- Cryptotoken
- Cryptocommodity

*Within* subclasses, *cryptonetworks* powered by a native asset **provision different services/resources.** Depending on a network's 'token model', these *assets* **serve different mechanical purposes.**

Thus, at the **network level**, the nature of the value generated is unique

**The ramification?** A natural distinction and decoupling of network value generated and network value captured

Thus, at the **token level**, the degree of and mechanism for capturing value is unique.

***Network Value Generated***

***VS.***

***Network Value Captured (Token Value)***

***Valuation Frameworks***

**The two drivers of a cryptoasset's basis of value.**

**Utility Value**

Refers to what the underlying blockchain is used for and therefore drives demand for the asset if it is needed to access the resource.

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**Speculative Value**

driven by people trying to predict future network usage that may translate to cryptoasset demand **(future utility value)**

The value of cryptoassets can be derived by dividing the forecasted demand for the underlying resource by the "monetary base available for its fulfilment to obtain per unit utility value."

**M * V = P * Q**

- **Size of the asset base**
- **Asset Velocity**
- **Price of the digital resource being provisioned**
- **Quantity of the digital resource being provisioned**

The **equation of exchange model** continues to be the most commonly used valuation methodology, with increasingly more sophisticated extensions (including consideration of optimal holding times, system idleness, and treasury management). Other explored cryptoasset bases of value include the external cost to produce the asset and the total cost of computing resources required to maintain the asset's blockchain (with limitations to both). It must be noted that **a token model may change the way a utility value is calculated.** In the "Work Model", for example, the terminal value of a utility token might be calculated as cash flow / discount rate. Given the nascency of these frameworks, it has been generally accepted that **models lack the complexity to determine price targets** but are instead useful in understanding the underlying value drivers of a cryptoasset. Through continued iteration, our understanding of these levers will only strengthen.

How do we model how cryptoassets capture value?

As stated, the 'token model' determines the utilization and purpose of a cryptonetwork's native asset. Depending on the network's design, the asset's value-capture mechanism and value derivation differs.

The cryptocommodity** subclass, for example, contains several token model designs. Below are a few:

**Model-Dependent Token Value Accretion in Cryptocommodities****

- **Proprietary Payment Model** driven by demand as a store of value
- **Work Model** driven by demand amongst contributors/providers.
- **Burn & Mint Model** driven by rates of supply burn and supply issuance

The most traditional utility token model is the proprietary payment model, in which the token acts as a means of exchange for the service/resource provisioned. For cryptocommodities, many posit that this model poorly captures value at the token level (due to velocity dynamics) and **discussion has emerged on how to design token models that better capture value.** However, making an explicit distinction between network value generated and network value captured sheds light on whether this is necessarily the right approach (specifically when the asset is not intended to be a store of value). ***Could deliberate mechanisms for maximizing token value (velocity suppression, modified token model design, etc.) affect usage and usability of the network? Do token models have second order effects on network value generation that we have yet to discover? How might we determine this?***

*cryptoasset and token are used interchangeably. **cryptocommodities and utility tokens are used interchangeably