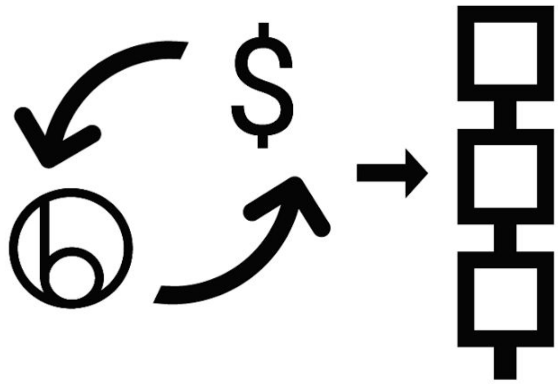
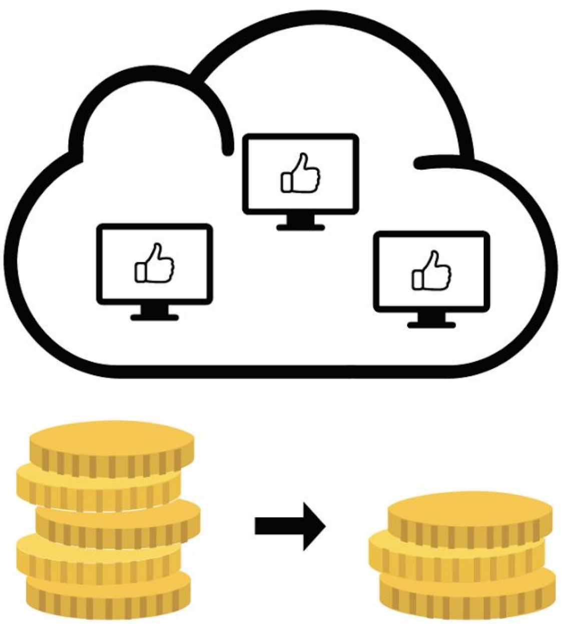
How it works
(simplification)

Upload an exchange rate to the blockchain using a decentralized oracle. E.g. Basecoin <-> USD.

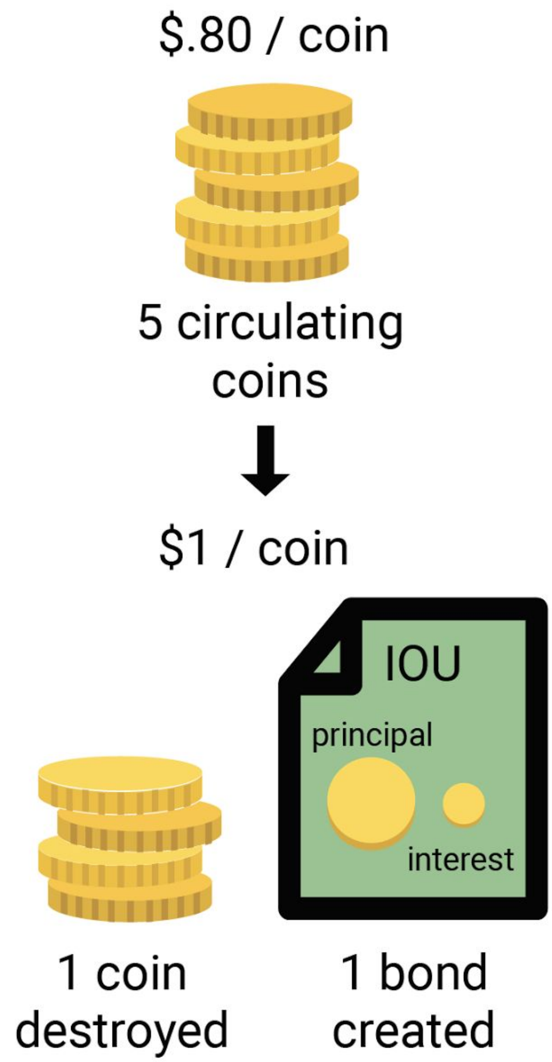


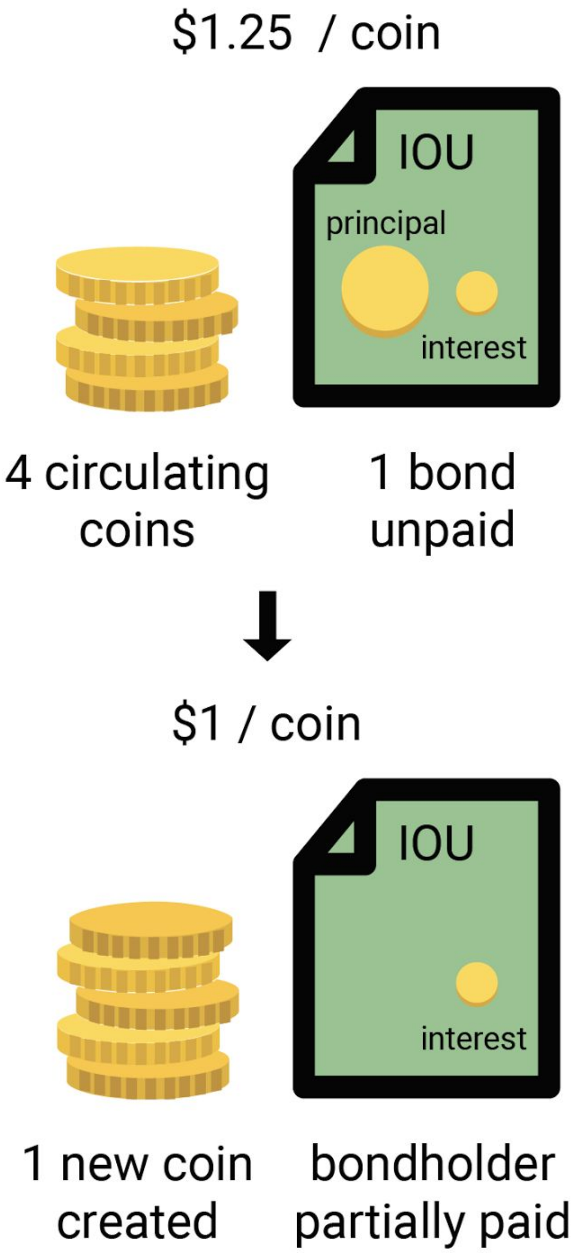


Fixed consensus rules automatically expand and contract coin supply in response to the exchange rate to peg coin price to $1. Using an elastic money supply to stabilize prices is at the core of nearly all central bank policy today.

When coins are trading for less than $1, supply is contracted algorithmically, and coins are deflated, until coin price appreciates back up to $1. This is called a "contraction."

To contract coin supply, the blockchain offers coin-holders a chance to buy bonds, which pay principal plus interest in the future. Coins used to buy bonds are destroyed until the bond is paid. Coin supply decreases, price increases.

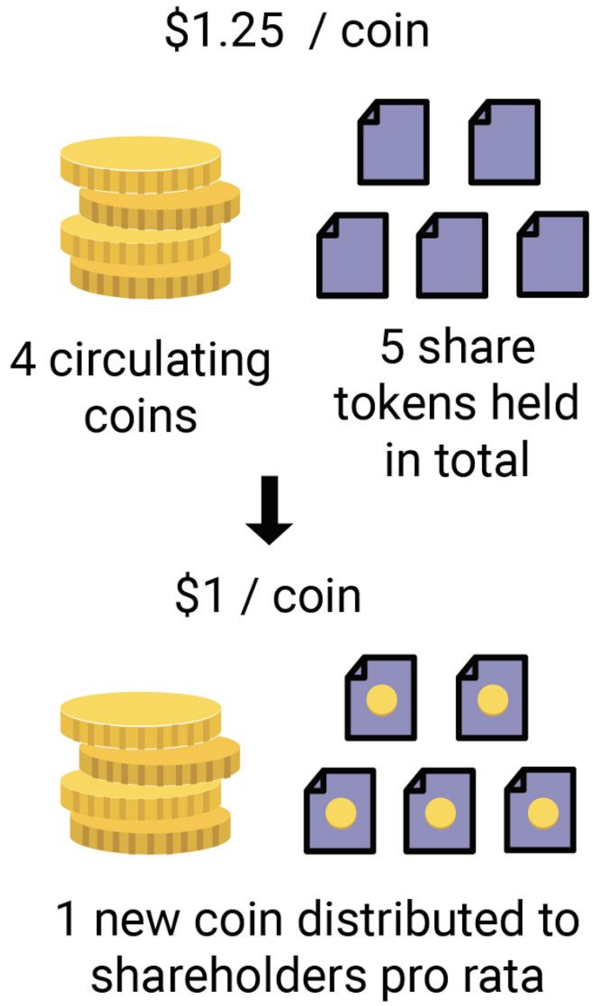


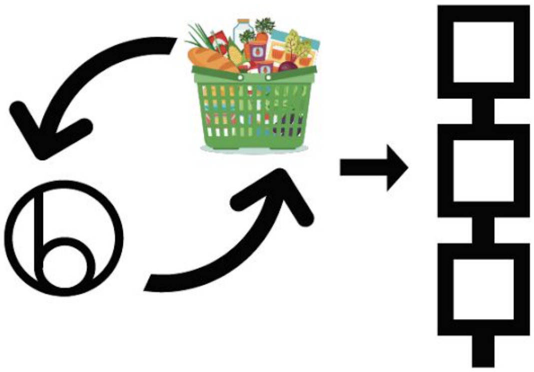


When coins are trading for more than $1, supply is expanded algorithmically, and coins are inflated, until coin price goes back down to $1 per coin. This is called an “expansion.”

To increase coin supply, new coins are issued and paid to bond-holders.

If we need to expand the supply, but all existing bond-holders have been paid, new coins are issued to holders of “shares,” which are just tokens that collect new coins in lieu of bond-holders. In that sense, shareholders are “junior” to bondholders.

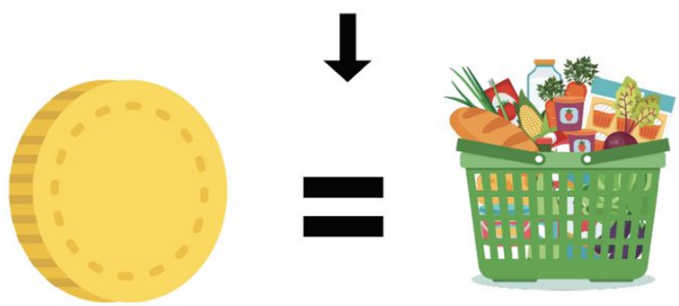




In the long run, when people use coins to purchase goods and services, the system can peg to a consumer price index (CPI) by uploading the price of a basket of goods instead of the coin <-> USD exchange rate to the blockchain.

Thus, we peg to USD only in the short run as a bootstrapping mechanism. In the long run, we shift the peg to a CPI, eliminating dependence on fiat while maintaining decentralization, automation, and price stability.

In the short run, coins are pegged to fiat.



In the long run, coins are pegged to a basket of goods directly, eliminating dependence on fiat.