



Eduard Bomhoff &lt;eduard.bomhoff@monash.edu&gt;

---

## The Grumpy Economist

1 message

---

**The Grumpy Economist** <noreply+feedproxy@google.com>  
Reply-To: The Grumpy Economist <noreply@blogger.com>  
To: eduard.bomhoff@monash.edu

23 April 2018 at 23:27

---

## The Grumpy Economist

### Basecoin

Posted: 22 Apr 2018 05:11 PM PDT

Cryptocurrencies like bitcoin have to solve two and a half important problems if they are to become currencies: 1) Unstable values 2) High transactions costs 2.5) Anonymity.

I recently ran across Basis and its [Basecoin](#), an interesting initiative to avoid unstable values. ([White paper](#) here.)

Basecoin's idea is to expand and contract the supply so as to maintain a stable value. If the value of the basecoin starts to rise, more will be issued. If it falls, the number will be reduced.

So far so good. But who gets the seignorage when basecoins are increased? And just what do you get for your basecoins if the algorithm is reducing the numbers? From the white paper:

If Basis is trading for more than \$1, the blockchain creates and distributes new Basis. These Basis are given by protocol-determined priority to holders of bond tokens and Base Shares, two separate classes of tokens that we'll detail later.

If Basis is trading for less than \$1, the blockchain creates and sells bond tokens in an open auction to take coins out of circulation. Bond tokens cost less than 1 Basis, and they have the potential to be redeemed for exactly 1 Basis when Basis is created to expand supply.

Aha, basecoins get traded for ... claims to future basecoins?

You should be able to see instantly how this will unwind. Suppose the algorithm wants to reduce basecoins. It then trades basecoins for "basecoin bonds" which are first-inline promises to receive future basecoin expansions. But those bonds will only have value during temporary drops of demand. If there is a permanent drop in demand, the bonds will never be redeemed and have no value. They are at best claims to future seignorage. Any peg collapses in a run, and the run threshold is mighty close here.

But it gets worse.

Just how are the bonds different from the basecoin itself? I presume you can trade the bonds too, so they are just as liquid as the actual basecoins. Or, in milliseconds, you could trade a basecoin bond for a basecoin and then the receiver back again. So, since they now pay interest, they are better in every way as an asset to hold. In monetary theory "bonds" are crucially less liquid than "money" allowing bonds to pay a higher interest.

The whole *point* of cryptocurrency is to make everything liquid. There can only be lasting seignorage, a "money" that pays less interest than "bonds," if the money is in restricted supply. The fact of cryptocurrency is, even if you limit the supply of your currency, a competitor can come along and supply a different currency.

What would be a better way?

*In a liquid market with competitive currency supply, only backed money can have lasting value.*

It's time to face this hard truth.

Suppose that when you trade a dollar for a JohnCoin, that dollar is invested in Treasury bills, or best of all interest-paying reserves at the Fed or overnight treasury debt. Then when on net people want less JohnCoins, the sponsoring entity can always deliver dollars.

I have just reinvented the Federal money-market fund. Let it be reinvented! Money market funds are not great at low-cost transactions. Marrying low-cost transactions to a money market fund would be great.

The money could also be invested, together with a substantial equity tranche, in a combination of a pool of mortgage backed securities and reverse repos at the Fed. This isn't completely run proof, but would offer greater interest. I have just reinvented the Bank. But with low-cost electronic transactions.

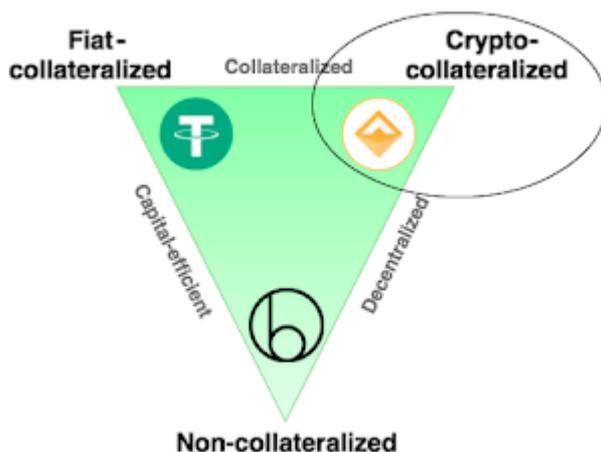
Put another way, just what happened to the dollars that got turned in to basecoin when the coins were created? Why are they not still there to back basecoin retrenchment? Answer: "Base shares." They have gone into investors pockets! And quickly out to real dollars where frustrated later basecoin investors can't get them. Yes indeed, the seignorage from printing a new money can be an attractive investment.

It is interesting to me how the cryptocurrency community seems to be painfully re-learning centuries-old lessons in monetary economics.

Bitcoin was modeled after gold. There is a finite supply, so a transactions demand can lead to an intrinsically worthless token having value. Alas bitcoin forgot the lesson of gold that money demand can move around a lot, so the value can be very unstable over time. And unlike gold, there is nothing stopping infinite supply expansion of cryptocurrency substitutes. That's not subtle. Those faults are immediately obvious when anyone with a smattering of economics looks at the design. (Fans of "network" and "first mover externalities" should remember just how well their AOL shares are doing. Anyway the plethora of new issues disproves the claim.)

The Fed was founded in 1907 in part to provide an "elastic currency," exactly the lesson missing from bitcoin and at the center of basecoin. Alas, the Fed trades money for *treasury* bonds, backed by taxes, not for *Fed* bonds backed by future seignorage. And laws against using foreign currency or issuing private currency help a lot.

Basecoin buyers will soon learn the lesson that bonds cannot pay more interest than money in a liquid market, and that claims to future seignorage cannot back money in the face of competitive currencies.



Source: Hasseb Quershi

that though, the post is excellent.

I found a [very nice primer](#) on stable value cryptocurrency, by Hasseb Quershi, one of the few posts in this subject that makes sense to me. He divides the source of value of cryptocurrencies into "fiat collateralized," i.e. backed by government debt, "crypto collateralized," like basecoin collateralized by first rights to future seignorage, and "non collateralized," like bitcoin trying to have value only by their own scarcity.

I object a bit to "fiat collateralized." Our government debt, and the money that it promises, is collateralized by our government's promise to tax its citizens to repay the debt. Pure fiat money is not collateralized at all. Other than

Quershi complains that backed currencies need accounting and legal oversight to make sure that the backing really is there. Yes. This seems like less of a problem to me than it does to him. Federal money market funds are not hotbeds of Ponzi schemes.

The second problem is transactions costs. Blockchain is designed to work when you don't trust a central intermediary. But it is not a good design for low transactions costs. A cryptocurrency carries within it the entire history of where it has been to certify its validity, and I gather bitcoin is now up to 7 seconds of computation to clear. Central ledgers don't have to carry around any of that information. Their validity is certified by their existence on one computer, say the Fed's. That may have security and anonymity issues, but it is much faster computationally. And we'll see how long the US government lets us have anonymity. (Anonymity is half an advantage and half a problem.)

As I was finishing up this post, I learned that [Basis just raised](#) \$133 million from investors. Rumbblings around "the" valley where I live are that blockchain is The Hot Thing, and that investors are mad to throw money at any vaguely plausible associated idea. And a few that are not.

I can see why investors would want to be Basis stockholders, and receive seignorage, and I can see why there is a headlong rush to issue new cryptocurrencies. The rush to buy the currencies, other than to get money out of China and Russia, does not seem that sensible, especially given that so many have such clearly hazy promises of long-run value. (The white paper is interesting but this is worth \$113 million? I'm in the wrong business!)

---

You are subscribed to email updates from [The Grumpy Economist](#).

Email delivery powered by Google

To stop receiving these emails, you may [unsubscribe now](#).

Google, [1600 Amphitheatre Parkway, Mountain View, CA 94043, United States](#)