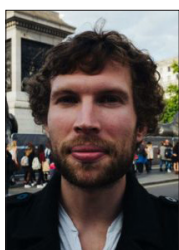


In this issue:

- Why bitcoin (and most other cryptos) don't work as currencies
- How to manipulate cryptocurrency prices
- What are stablecoins and why are they so important for crypto?

Laying the foundations of financial revolution

Harry Hamburg, Editor



What is the biggest problem with cryptocurrency?

The fact it doesn't actually work as

a currency.

Bitcoin was created to be an alternative world currency. A peer-to-peer payment system no central authority could control, manipulate or shut down.

A true currency of the people, by the people and for the people, which shall not perish from the earth (to borrow some of Abraham Lincoln's lines).

And, perhaps most importantly, a

currency that couldn't be "printed out of thin air".

There will only ever be 21 million bitcoin created. No one can ever create more than that and dilute the supply.

Remember, bitcoin was created in 2009, in the wake of the 2008 financial crisis, just as the UK and US began their quantitative easing, or "money printing", campaigns.

Bitcoin's genesis block famously has the following text encoded into it:

*The Times 03/Jan/2009
Chancellor on brink of second
bailout for banks*

This could simply have been included to prove the date. But much more likely it was a statement by Satoshi Nakamoto on the state of the financial system.

Most people believe Nakamoto made bitcoin, with its very strict supply rules enshrined in computer code, to create a better system than the one which led to the 2008 crisis.

A new, stable currency, which could form the bedrock of a fairer financial system.

Only, that's not the way it has turned out.



Why bitcoin (and most other cryptos) don't work as currencies

The main problem with trying to use cryptocurrencies as currencies is they are extremely volatile and extremely open to price manipulation.

The only way you can really use them to pay for things now is if you agree on a set price at the time of the transaction.

For a smaller item, this could be the price when you send the payment. For a bigger item, such as a car or a house, you can agree to peg the price to a certain day at a certain time.

This is far from ideal. If you are intending to use a crypto as a real currency, you can't have its price wildly fluctuating every day.

Sure, this price movement can be great for investors and traders, but it makes most current cryptos, even the big ones like bitcoin, essentially useless as currencies. And arguably useless as stores of value.

Remember, cryptocurrency was created to solve the problems of price manipulation. But, as it turns out, it's incredibly easy to manipulate the price of most cryptocurrencies.

How to manipulate cryptocurrency prices

If you have enough money on hand, you can manipulate the price of a small cryptocurrency very easily. You simply buy up a big percentage of the supply.

Then you can manipulate it to your heart's content.

This is very common in crypto circles. Some big investors "whales" club together and buy a large proportion of a new crypto when it is only around on smaller exchanges.

Then when it hits bigger exchanges, they start manipulating the price.

They can sell a massive amount of it very cheaply and tank the price. Or they can restrict the supply so that anyone who wants some has to pay more.

Usually, they will do a combination of the two. They will push up the price, then tank it, then buy more up on the cheap and then repeat.

Of course, this isn't the only reason crypto prices move about, but it is a pretty big part of it. This is how the "pump and dump" groups work.

Most of the time, the insiders already have a big amount of the chosen pump crypto. They then arrange for many people to buy it at the same time and then sell it at the same time.

The price shoots up. The insiders cash out before they give the command for the others in the group to sell and they make a massive amount of money.

Some people in the pump and dump group will make money as well, but many more will lose money. Usually a substantial amount.

But what about bitcoin, isn't that too big to manipulate?

Unfortunately, not really.

To move the price a significant amount, you don't need to buy up billions of dollars' worth of bitcoin. You can spend a lot less and still move the market.

All you have to do is "eat" through a few buy or sell walls on a major exchange. When these walls get eaten, prices can move massively.

This is because the market cap of bitcoin (or any stock, for that matter) doesn't really represent how much money is in it.

The market cap is calculated by taking the circulating supply of bitcoin and then multiplying that by the cost of one unit.

If you eat through a buy or sell wall, it may only move the price a fairly small amount to start, but this creates a snowball effect.

As I've shown in previous issues, there really isn't as much money in the crypto market as the market caps would lead you to think.

[Going off JP Morgan's research](#), we can see that in bitcoin the ratio of cash inflow to market cap is about 50:1.

As I write this the total market cap of bitcoin is \$109 billion. But the actual amount of money in it is probably only around \$2.1 billion.

Which means you could massively manipulate the market if you had a few million to play with – as



many early investors do.

You can massively manipulate the bitcoin price without spending anything at all

Because crypto trading is basically controlled by bots, you can manipulate the market even more easily.

In fact, you may not even have to spend anything. You just need a fairly big bankroll in reserve. But you never need to actually touch this money. You just need it to set up a fake trade.

All you do is get your bot to make a buy above, or a sell below, current prices and then withdraw it before anyone can trade on it.

These new prices set off other bots to either reduce or raise their prices and then you can buy or sell for more or less than the real market price.

This is called spoofing. Crypto markets are rife with it.

But even the world's major financial markets are not immune to the practice of spoofing.

Case in point: spoofing by Navinder Singh Sarao is what's said to have caused the 2010 trillion-dollar flash crash across the S&P 500, Dow Jones and Nasdaq.

It is, of course, illegal in regulated markets. But crypto markets are fair game.

The most famous case of spoofing in crypto is the aptly named

"Spoofy".

Spoofy was outed by an article on Hacker Noon back in August 2017. The headline of the article read: Meet "Spoofy". How a Single entity dominates the price of Bitcoin.

And the author went on to show exactly how Spoofy was controlling pretty much the entire market of Bitcoin.

If you want to know more about it you can read the original article [here](#).

So, to sum up: manipulating bitcoin's price is easy if you have the cash and the know-how.

So, does that mean the cryptocurrency dream is dead in the water?

Well no, thanks to a development known as stablecoins.

What are stablecoins and why are they so important for crypto?

A stablecoin is a cryptocurrency that remains price stable.

For example:

Let's say today stablecoin x is priced at \$1 per coin.

You buy 10,000 stablecoin x for a total of \$10,000 and keep it for five years.

When you come to sell your 10,000 stablecoin x, after those five years, your 10,000 stablecoin x are still worth \$10,000.

I guess that begs the question, why would you ever want to invest in a stablecoin if you're never going to make a profit when you sell?

You wouldn't, you'd never use it as an investment. But you would use it as a currency, or as a store of value. The exact thing that bitcoin was invented for in the first place.

Which then leads us on to the next question. If you're an investor, why should you care about stablecoins?

Because of what stablecoins enable.

Stablecoins provide the foundations for the new crypto economy to be built on.

Let's take a look at some of their main uses

1. A liquidity tool for exchanges

Crypto enables people to trade in and out of other crypto assets extremely quickly and extremely easily.

But it takes a lot longer to trade between crypto and fiat. And worse still, many banks are blocking trades to crypto exchanges altogether.

Stablecoins mean you don't have to trade back into fiat to take a profit or to cut a loss.

You can simply trade into a stablecoin, instantly and at virtually zero cost.

You can even deposit your money on to an exchange and change it directly into a stablecoin so you're



ready to execute a trade whenever you feel like it.

This is much easier and safer than keeping your trading money in your bank in fiat.

What if a few days before you want to make a trade your bank decides it doesn't want you moving your money to crypto exchanges? You're stuck.

Having your money in a stablecoin is like having it in a bank. Except you're completely in control of it. When a bank has your money, you never really own it.

Remember the capital controls Greece imposed during its crisis?

Remember the run on Northern Rock and the bank bailouts that followed in the UK?

Remember that Times headline written into the bitcoin genesis block?

Put your money in a stablecoin and no one can take it from you without the threat of force.

2. An actual currency

As I said in the opening of this issue:

Bitcoin was created to be an alternative world currency. A peer-to-peer currency that no central authority could control, manipulate or shut down.

However, its massive price swings mean it is useless as an actual currency, for all the reasons I have already covered.

We all remember the cautionary tale of "bitcoin pizza guy" who was foolish enough to actually use bitcoin to buy something. The two pizzas he bought ended up costing him tens of millions of dollars.

No one wants to end up like bitcoin pizza guy and so no one is really using bitcoin in the way it was intended to be used – as an actual currency.

With a stablecoin, there is no chance you'll fall to the same fate as bitcoin pizza guy.

If you buy two pizzas for £16 with a stablecoin today, in five years that same amount of stablecoin will still only buy you two pizzas. (Or slightly less if you want to be pedantic and take inflation into account.)

Stablecoins allow you to keep your money in crypto. They mean that you never need to go back to fiat if you don't want to. Just take a second to think about how big that is.

3. A lifeline during hyperinflation and access to money for the unbanked

This third one is probably not something you'll need yourself. But for many people around the world it is the single most important use.

Let's say you live in Venezuela, with its predicted 1,000,000% inflation rate this year.

Imagine if instead of keeping your money in bolivars, you could put it in a stablecoin and completely avoid the horrors of living

through hyperinflation.

Put enough money for six months' food into a stablecoin and you can use that money to eat for the next six months. Keep that money in bolivars and you can only eat for a few days.

And let's not forget about all those "unbanked". These are people who, for whatever reason, can't get a bank account. In the US alone there are 10 million unbanked households.

Around the world, there are a staggering two billion unbanked people.

Stablecoins are a global currency that anyone can access, without restrictions and without prejudice.

4. As the basis for other financial crypto products – loans, insurance, etc

This is a big one.

Because stablecoins maintain a stable price it means you can build other financial instruments on top of them.

Think smart bonds, smart loans, smart insurance.

I've written before about how smart bonds work. (If you missed it, you can read it [here](#).)

Smart loans can be set up easily and allow people to effectively lend to themselves – at very low interest rates... 0.5% a year. Seriously.

They work in a similar – although less evil – way to how a



pawnbroker does.

- You put up collateral in the form of Ether.
- You then get stablecoins in the amount your collateral was worth at that time.
- When you pay back the loan, you get your collateral back.

In practice it's a little more complicated than that – you can only load out up to a certain percentage of your collateral. But that's essentially how it works.

And that's just the tip of the iceberg. As MakerDAO says on its [blog](#):

Decentralized cross-border lending can occur through the introduction of a stable cryptocurrency. This removes the problems seen with popular high volatility cryptocurrencies which creates an uncertain lending environment as borrowers and lenders cannot comfortably plan for the future.

This has the potential to transform many industries including supply chain, exchanges, shipping and more. Another example is financing and financial planning. Ethereum and the crypto-ecosystem, at large, proved the large scale potential for global crowdfunding campaigns. However, many projects face uncertain accounting procedures as they struggle to manage a predictable financial plan due to volatility of their assets.

Ultimately, decentralized currencies pave the way for a

modern financial revolution that will remove inefficiencies, reduce risk stemming from centralized parties and change the way we transact.

To sum up, stablecoins allow for Satoshi Nakamoto's vision to be realised. They enable an alternative financial system.

But wait, what is a stablecoin's price pegged to?

A stablecoin can be pegged to any asset you want... the gold price, the dollar, the pound, the euro, the silver price, a Big Mac... anything.

Most stablecoins, though, are either pegged to the gold price, the dollar or another major currency.

They can either be fully backed by that asset or they can be built around smart contracts.

Asset-backed stablecoins are much easier to get your head around. Smart contract-based ones are a little more complicated, but have much more potential.

First let's take a look at a few asset-backed stablecoins, then we'll move on to a smart contract-based one.

How asset-backed stablecoins work

Tether is the most well-known stablecoin – and the most controversial.

One Tether (USDT) represents \$1 held by Tether Limited.

There are currently 2.7 billion

USDT in existence, so in theory Tether Limited holds \$2.7 billion in a vault somewhere.

Whether Tether actually does or not is very much up for debate. There is no way of verifying it.

In fact, Tether is potentially *the* biggest threat to crypto's future. If Tether turns out to be a scam, it's going to take the whole market down with it.

However, due to Tether's lack of transparency and credibility, other more reputable stablecoins were formed.

For example, TrustToken saw the shambles that Tether was and decided to create TrueUSD.

Here's how it describes TrueUSD:

TrueUSD is a USD-backed ERC20 stablecoin that is fully collateralized, legally protected, and transparently verified by third-party attestations. TrueUSD uses multiple escrow accounts to reduce counterparty risk, and to provide token-holders with legal protections against misappropriation. TrueUSD is the first asset token built on the TrustToken platform.

And there are a number of other, reputable and accountable companies making stablecoins like this now.

On 10 September, the Winklevoss brothers announced they are launching a stablecoin for their Gemini exchange, which has the full backing of the New York Department of Financial Services.



And on 26 September, Circle announced its own stablecoin, USD Coin. In launching it, Circle's CEO, Jeremy Allaire, even referred to how little trust there is in Tether:

Market infrastructure like stablecoins will become the base layer that supports every financial application. It has to be legitimate, trustworthy, built on open standards. We are solving a lot of these fundamental problems that exist. That's a huge difference from something like Tether, and we think the market will very quickly gravitate to that.

You'll probably notice that both these cryptos are pegged to the US dollar. So there is definitely a large amount of irony here.

Cryptocurrency was created to get away from the current financial system, yet these stablecoins are pegging their prices to it.

However, that's not true of all stablecoins.

Digix Gold Token (DGX) for example is backed by gold and pegged to the gold price.

1 DGX represents 1 gram of gold, audited, logged and stored in a Singapore vault.

You can actually buy DGX tokens and exchange them for that gold if you want.

So, although most stablecoins are pegged to the dollar, they don't have to be. The US dollar is simply a very well established and stable asset right now.

It is the price that all other prices are measured against. So it makes sense that's what most stablecoins are pegged to.

Should that change, people could easily exchange their dollar-pegged stablecoins for ones pegged to a different asset.

And unlike with traditional currency, they could do this in seconds, with a couple of clicks of the mouse and at virtually zero cost.

How smart contract stablecoins work

The best example of a smart contract stable coin, and the most exciting stablecoin out there right now, is DAI.

Basically, DAI is a decentralised stablecoin. You'll notice that in all the above examples, a team is needed to look after the assets backing the stablecoin. Not so with DAI. It can work in a completely decentralised way.

This means it is much more in line with the original bitcoin vision. It doesn't require any central parties to work.

How it actually works is rather complicated.

Basically, whenever its price falls under \$1 there is incentive for people to buy it so they can sell it for \$1 and profit.

And whenever it goes over \$1 there is incentive for people who bought it for \$1 or less to sell it and profit.

It is backed by assets that people have put into it – I based the loan scenario earlier on how DAI works.

If you want to really understand how it works, I recommend this article: [Maker for Dummies: A Plain English Explanation of the Dai Stablecoin](#).

As for whether DAI's smart contract based system works... well, it launched on 27 December 2017, right before the most volatile period in crypto's history.

It's had a real trial by fire and come out with flying colours.

Although stablecoins might not seem exciting at first, when you really think about them you soon realise they are possibly the biggest development in cryptocurrency since bitcoin.

Stablecoins are laying the foundation for a real financial revolution.

Until next time,

Harry Hamburg
Editor, *Crypto Wire*

PS If you've ever wondered how many Ethereum its creator Vitalik Buterin holds, the answer is 365,000, which is currently worth \$71.6 million. He also has 32,000 OMG tokens, worth around \$96,000.

You can have a look for yourself [here](#). He revealed it [on Twitter](#) last week, although I'm pretty sure he's posted about it before. I thought it was a fun bit of information to know.

