Jonathan Wu, Crypto Analyst: What Makes a Stablecoin Stable?

Eric: [00:00:00] So this is Eric has with the encrypted economy and today really excited to have Jonathan Wu, uh, on the show. He's going to be talking about, uh, stable coins and algorithmic stable coins. And, uh, Jonathan has been doing a lot of posting, um, with regards to the operation of algorithmic stable coins. He's got a mass quite the following, and he's provided some very insightful content.

So John, welcome to the shelf. Excellent. So, um, you know, like any other show, the, the origin story, uh how'd you get involved in crypto. And what was your background

before?

Jon: [00:00:38] Oh boy, let's see. I was a traffic guy before, um, as the crypto folks like to call finance 1.0, yep. So did a whole career in consulting, private equity, uh, went to business school.

And then after that, uh, started my own startup, shut it down in February and had a couple friends in crypto and they said, you really gotta pay [00:01:00] attention to this. And as soon as I started diving into defy, decentralized finance, I became instantly addicted. And you know, I've been in free fall down the rabbit hole.

Like, like, like many of us. Um, and so was there like a S like, and you can make this a crypto response or you can make it really any response. So really just a chance for the audience to get to know you better, um, personal event that shaped your values, your goals, just really anything that you think is, is maybe a little more insightful as to what makes you.

Uh, yeah, so, I mean, definitely for crypto, I think it was, uh, a rejection of permission structures that I've been in, you know, my entire life. So I haven't, I've described myself as a retired stamp collector, you know, I was all about the status and the esteem and, you know, the, the, uh, you know, halls of power.

Um, and I think crypto is this beautiful thing where you see protocols like unit swap, where it's a single person. [00:02:00] Hayden just sitting down and saying, Hey, I think there's a better way to build a market. And in a totally permissionless manner writes a couple of lines of code and now Unisoft does billions of dollars of volume.

So, um, I thought that was really appealing to me coming from, uh, a potentially corrupt and inefficient world, uh, of which I was a beneficiary. Um, so just that notion was incredibly powerful.

Eric: [00:02:25] Excellent. So, so, um, you know, the, the podcasts, we typically start off at a high level. I call it the horizontal layer before we go a little more vertical.

Um, so we're talking today about stable coins. Let's just take a step back and let's go through what is a stable coin.

Jon: [00:02:42] Yeah. So I mean, a stable coin is just any crypto asset that is pegged or otherwise. Uh, non-volatile. And so the, the notion is to find a decentralized currency, a mode of exchange that roughly tracks [00:03:00] purchasing power.

And so a bad currency would be something that, um, either inflates or deflates rapidly. Um, and it's very hard for you to buy a basket of goods. Over time with that, a relatively stable amount of that currency. And so a stable coin is just, uh, a way to create a currency that roughly allows you to transact in a predictable manner.

Eric: [00:03:25] Right. And let's compare and contrast that with stores of value and why stores of value from a monetary perspective, don't have the same characteristics.

Jon: [00:03:36] Yeah, store value is oftentimes a lot less liquid. And so, you know, classic store value and, um, uh, a couple stores of value in the normal world, uh, equities, gold real estate.

Um, they're not very liquid, um, and not only that, but they're highly volatile. Um, and so what you want to be able to do is, uh, take, uh, a currency [00:04:00] and be able to. You know, purchase a relatively stable basket of goods with it, and it's hard to do so with highly liquid assets. I'm also a landlord, um, came from the real estate world at some point in my meandering career as well.

And I can tell you it's in, when you really need it. It's hard to liquidate or extract value from.

Eric: [00:04:19] Right. Right. And, and this concept of liquidity is going to wind its way through our podcast. So I'm taking the time to sort of lay the foundational elements now, um, maybe I'll get some haters out there for this, but I think.

Um, you know, at least for the moment, Bitcoin has sort of lost the argument as being potentially that, that, that stable currency. Um, because you know, when you go from like 65,000 to below 30, within a relatively short period of time, How do you transact for that in a real world? So I think a lot of the discussion, and it has certainly put even more spotlight on stable coins and what they do has [00:05:00] shifted to stable coins, because those would be a more to your point liquid, but not only liquid, but reliable liquid, um, form of currency.

Jon: [00:05:10] Yeah, exactly.

Eric: [00:05:12] And so how does inflation factor into the whole stable coin?

Jon: [00:05:17] Yeah. So, I mean, inflation is just a loss of purchasing power. Um, and so it just so happens that our central banking entity believes that a small moderate amount of inflation is necessary for overall system stability. Um, it's not clear how the crypto universe is going to consider inflation.

Right now. We actually still outsource the notion of stability to the U S. And so most stable currencies in crypto are pegged to the U S dollar. And so you can have monetary policy within crypto that maintains price stability to the U S dollar, but ultimately the U S we're trusting that the United States has the best monetary policy when it comes to [00:06:00] purchasing power.

Um, and so I would say that that is an unsolved question. There are certainly crypto native, uh, non pegged stables, like . Um, but they are in their nascency and certainly far less popular than us dollar and Fiat peg currencies.

Eric: [00:06:18] Right. And you can certainly make an argument to that, that there was a market for stable coins, even before stable coins.

I mean, you look at Euro dollars, you know, that you're a dollar, whereas created because of the insatiable demand for us dollars. So you created a us dollars that are up. Which aren't even regulated much like stable coins, although, you know, a lot more regulatory attention is now being turned Tuesday.

Jon: [00:06:43] Exactly and like it, or hate it. You know, most of them, our spending is still Fiat denominated. We still live most of our lives in the real world. And so until the point that our spending shifts to the metaverse, um, we're still going to prize, you know, the basket of goods we actually [00:07:00] consume. And that's why CPI is still relevant because we still drink milk and eat eggs and fill up our cars with it.

Eric: [00:07:07] That's right. And we want that stable currency to know that we can buy it. Right. So let's start to break down stable coins a little bit because now we sort of covered it generically, but like many things, it's not that simple. Right. So there's, there's pegging, there's collateralization. I'm gonna turn it back to you to kind of help, you know, let's, let's walk through that a little bit.

Jon: [00:07:29] Yeah. I mean the simplest form of a crypto stable coin is just a Fiat backed, fully reserved current. Um, and so the classic examples of that are USD T tether, um, and USB-C, and the notion is very simple. Uh, I have a dollar in a vault somewhere and some central trusted entity tells me that there truly is a dollar in that vault and against that dollar, I issue a digital representation.

Which is the, uh, crypto [00:08:00] asset version of the currency. And so one USD T is one us dollar because it's always backed one-to-one um, theoretically, and I won't address the tether FID. I'm not an expert on it, but, um, uh, happy to, happy to talk through that.

Eric: [00:08:18] There's probably some argument and, and we'll, we'll, we'll, we'll get into it a little bit.

When we talk about partially collateralized, right? Because if the notion of fully collateralized is one-to-one us dollar tether, of course, in their white paper stated they were one-to-one one USD T equals one us dollar, anybody who's been following crypto, even Maialino. That that is not the case. Um, a few months ago in conjunction with a settlement with the us, uh, attorney general in the district of New York, uh, they basically disclosed as part of the settlement.

They agreed to be a little more transparent about their formerly non-transparent, uh, [00:09:00] proof of reserves and shocking. They disclosed that they were 76 backed, uh, or reserved with unrated commercial paper. Now they didn't use the word unrated, but hell if

you were like an A-plus or AAA or AA, or what have you, you would certainly state the ranking of that paper, but they just simply said.

76% commercial paper, which raises a lot of question as to what kind of commercial papers, since many in the community don't even know how they been acquiring it in the quantities to support like a $60 billion float. Um, most people don't even know that they've been players in the market. So then people say, oh, intermediaries, but you know, one of the challenges with tether is, um, The argument keeps getting worse and worse.

Every time they sort of abused the trust. And I'm just going to throw one other zinger before we move on. Cause I'm not trying to, I'm not trying to go down the rabbit hole of just tether, but, um, even their bank, which holds all their reserves Deltek went [00:10:00] on the Laura shin unconfirmed podcast. Uh, back in February when this, uh, crypto anonymous, uh, went on, on, uh, on Twitter.

Well, actually I guess, elsewhere as well. And started breaking down all the issues with, with, uh, tether. And one of them was that they looked at the reserves for Deltek and didn't think things matched up. Their CEO went on confirmed and stated that the he had, or Deltek had confirmed and they used the word trust and verify.

Um, that they had enough cash and cash equivalents after they conducted an audit and he clarified what cash equivalents meant T-bills and time deposits. Well, unless things dramatically changed between February the end of February and the disclosure of the reserves. Um, apparently that audit couldn't have been very solid.

So the cha the challenge with tether is that they have, unfortunately, a history of sort of abusing the trusts that the market has put into it. And. The regulators [00:11:00] are increasingly concerned that this thing is a lot less stable than all with desire. So, you know, I think the market is ultimately going to have to do a reset to a lesser dependency on tether, or they're going to have to agree to some sort of a settlement where they regain that trust maybe through a more stricter audit regime, because obviously.

The current scenario really can't, uh, continue. So, so that's my little mini tether podcasts within the larger podcast. So we're shifting back to the me Bikash but I have a lot of views on tether. I've been, uh, I, I I've commented publicly on social media and otherwise on it. So, uh, you know, I, I don't think we can really have a, uh, uh, episode on stable coins without talking about the tether elephant in the room.

You know, and just to sort of reset for the listeners, this podcast, isn't about a stability issue that exists within tether. It's about understanding the [00:12:00] structure of stable currency within a digital stable currency and the deal. Uh, mechanisms that we use to set it and is really almost like a chance for the listeners to understand the frameworks that, you know, whatever happens with tether, what even happens to the crypto market.

Short-term. Stable coins are clearly here to stay because to do anything in the digital ecosystem, you need a stable currency. So John, with that complete, not complete tangent, but with that little option, we're going to go back on the, on the highway here and keep

walking through the description of, you know, fully collateralized, partially collateralized and non collateralized.

Jon: [00:12:45] Yeah. And actually the tether case is, uh, informative.

Because why are we uncomfortable that some of the values held in commercial paper? The face value they're telling us is a dollar. So why are we uncomfortable? Because there is some underlying implied [00:13:00] volatility to holding commercial paper versus us dollars.

So that becomes really important when we talk about our next type of stable coin crypto asset collateralized, because we can't collateral. Stable coins one-to-one with crypto assets. And why? Because crypto assets have extremely high implied volatility. And so you see certain protocols like maker Dao, um, offering a minimum collateral ratio of 150.

And so you need to commit a buck, 50 of volatile assets to generate a dollar of Sable assets. And that makes perfect sense because the volatile assets go up and down. And so you never want to be caught in a situation where there's less than a dollar of backing for every dollar of currency issued. And that's the tether problem, right?

If you're at a dollar of face value collateral against a dollar of issued currency, well, you would hope that the dollar collateral has absolutely zero volatility. Ideally, it would be cash or cash [00:14:00] equivalents like treasuries that's as zero risk set as exists in the world today. Um, but if it's commercial paper, that means that actually there's a chance that in a tail risk event, like the failure of the underlying corporations, um, against whom the, the debt is issued, that you might become under collateralized.

And then that becomes a problem because now your dollar is backed by 90 cents or 80 cents or something. And so, uh, the solution in the crypto vers, uh, that maker and others have committed to is just taking more collateral. So that there's a little bit of a buffer between the dollar of issued stable and the actual underlying value of the collateral.

And more importantly, if the collateral value ever races below the minimum required collateralization ratio in maker's case, third parties go and liquidate the collateral. And ensure that the protocol is stable and there's always more than a dollar [00:15:00] of face value assets for every dollar that's.

Eric: [00:15:03] Right. As opposed with tether, if, if, if it starts to go below, there is no automated, uh, you know, it's not algorithmic and maker.

I believe it's, it's, you know, there's a whole incentive model. That's also algorithmically determined. Right. But in the case of. I mean, I'm sure, you know, there's date. They use some things on the back end to try to liquidate, but the question is, is in the case of the bank run, you know, how would they create enough dollars to satisfy the obligations?

Jon: [00:15:31] Correct. And it's important to note also that it's almost impossible to have, uh, a decentralized, uh, fully Fiat bank. Stable currency. And so if you think about USD T and USCC, we're really trusting central organizations and, um, really giving them our faith that when they say there's a dollar in the bald, there actually is a dollar.

The nice thing about [00:16:00] maker and other decentralized stable protocols is we can kind of always see on chain how much collateral is outstanding. And not only that, but third parties can step in and in situations where the maker protocol or other protocols like it, like liquidy get into trouble where the collateral starts to dip below the minimum collateralization ratio and their liquidation mechanism.

That we can all kind of see transparently. And so that's kind of the goal of crypto, right. Is to move away from having to trust a third party that could be corrupt, could obfuscate, you know, the actual source of collateral, um, that ultimately has to be, um, given the faith to audit and observe and custody.

Uh, the actual collateral value that's sitting behind the current.

Eric: [00:16:49] Right. And, and to be fair, even the us dollar itself, I mean, it's not fully collateralized, it's backed by the full faith and credit, but the more you issue it's really dependent [00:17:00] upon others valuing that asset. And if they stopped valuing that asset, then interest rates have to go up in order to get them to value that asset.

I said again, so, um, yeah, so it, it, it's also important when you get into the staple point discussion. There's a bigger hole too, which is, you know, USD T is often the stable coin, but USD, I mean, us USD T USD, uh, is, is, is more stable. But, uh, you know, these particularly when they're pegged, one-to-one, they're sole dependency on the underlying us dollar as well.

Jon: [00:17:34] Absolutely. So then I think it's worth moving on to under collateralized stable coins. And so we talked about. Over collateralized stable coins that are backed by volatile assets. And we had talked about how it makes sense that you would need 150% plus of face value. In synthetics case, I believe the number is 500%.

It's like significantly over collateralized and that's as a safety mechanism. Right. But it goes, it [00:18:00] kind of begs the question. W if you're 500% over collateralized, why not be 10,000 times over collateralized? Why not have a million dollars? Of collateral for every dollar of currency. And I think when you take it to that extreme, it becomes very obvious that you'd have to suck up a huge amount of the world's capital just to create the currency.

And so the holy grail is kind of to have all the de-centralization of a volatile crypto backed, um, stable coin, but also at the same time, be capital efficient and this term gets thrown around a lot. And all that means is to just have less than a dollar of collateral. Behind every dollar of currency that's issued.

And so there have been a lot of theoretically brilliant, but practically, uh, to date unstable, we'll attempt at creating what's called an algorithmic stable coin. And when an algorithmic stable coin is, is fundamentally something that's under collateralized. And so it has fewer than less than one, $1 of collateral for every currency, [00:19:00] that dollar of currency that's.

Um, and retains it's pegged to the U S dollar via a clever stability mechanism and a bunch of these stability mechanisms have been devised. Um, one is the seigniorage shares model

where when the currency is over a dollar, uh, essentially what happens is you can, um, sell the dollar when there's more than a.

Sorry, one has stable currency is worth more than a dollar. Um, what you want is to, uh, create more volume of that stable currency. You want to increase the supply. And so increasing the supply means the central bank entity needs the mint, more of the stable coin. And in order to mint the stable coin, you commit, um, a mix of collateral and then this central entity increases the supply.

Um, the increase in supply should [00:20:00] bring the price of that stable point back down to a dollar. And so that's the kind of pegging mechanism. And so through controlling supply and demand like a central bank, does these algorithmic stable coin protocols kind of maintain their peg one-to-one to the U S.

Right. And

Eric: [00:20:15] when in the Senor and shares, when it drops below a dollar they'll often issue, like I think basis we'll issue a basis as bonds. So when those bonds get priority, if, and when it goes back above a dollar, so it's sort of like, Know, in many ways it's, it's designed to resemble what the federal reserve might do.

Uh, you know, in, in, in trying to create, um, trying to maintain the value of the currency. But this is, that is that basically the mechanism for the seniority shares is

Jon: [00:20:49] yeah, there's a dual token model where there's the actual stable coin and then there's an equity shares component. And the idea is anytime the [00:21:00] stable coin is above a dollar.

Anytime a new stable coin is minted. The profit goes to the equity holders. And so that gives equity holders a reason to hold the shares because if the stability is above a dollar, the sh shares accrue value. And then when the stable coin is below a dollar, um, in basis, this case you can issue bonds. Uh, again, The shares in order to buy the equity at a discount.

And so ultimately the whole mechanism is premised on the notion that the stable coin will continue to be used. It will continue to be distributed. It will continue to fluctuate above and below the peg and profit will accrue to equity holders. And so the difference between the, uh, actual. Circulating quantity of stable coins and the value of the collateral is the value of the equity.

So the equity kind of stands in as [00:22:00] collateral and you're kind of bootstrapping value out of thin air because it's all premised on the faith that the equity in the actual organization has.

Eric: [00:22:11] So with algorithmic stable coins, um, how do you algorithmic stable coins? I mean, I guess we'll talk about what they actually are and how their mechanism for achieving that stability differs from what are considered not algorithmic stable coins or you're fully collateralized or, or what have you.

Jon: [00:22:33] Um, yeah, it's an Al the algorithmic portion of it is just a way to return the peg back to one stable coin equals one us dollar. And so there are a variety of mechanisms, um, this in your shares model being, uh, dominant right now. Um, and that was adopted by FRAX and basis. And, uh, recently with iron Titan, which saw a significant failure.

[00:23:00] And the senior chairs again are just a mechanism to, um, plug the gap between actual, underlying collateral and the value of the currency.

Eric: [00:23:16] Yeah, I mean, would you say I've heard it described that it's more akin to like more active market-making, uh, with regards to algorithm, make stable coins, as opposed to, um, necessarily, um, mint and Bern, you know, which you might do in another model, the algorithmic stable points, it's more of an active market making, going out and buying or selling to, to moderate

Jon: [00:23:39] accordingly.

Yeah. There are multiple models, but yeah. If you think about the monetary policy as similar to the Fed's open market operations, when there's too much of the stable coin, AKA the stable coin is below peg. Um, you want to destroy it. You want to incentivize destruction of supply. And when there's [00:24:00] too few AK, the stable coin is above the peg.

You want to incentivize the printing of more. And so if there's a central entity that can go out and purchase. Stable coins and destroy them. Um, when it's below the peg and issue more when it's above the peg, uh, that's kind of what the protocol is. Amy. Right.

Eric: [00:24:21] So like with the basis bonds, for example, basis, bonds are, I guess, swapped out for the basis, a token, right?

The stable coin. And then those coins, when they come back in there, they're burned to destroy them. And that's, that's the relation of the bonds to the coins. They're basically issuing bonds to burn

Jon: [00:24:42] coins. Correct. And the commitment to the bond holders is they'll be the first to get paid. The peg ever goes above a dollar.

If the peg ever goes above a dollar, the protocol will create more supply. And the profit of creating that supply will go [00:25:00] first to bond holders and then to, you know, basis shareholders.

Eric: [00:25:04] Great. Great. So, so there've been, you know, so algorithmic, stable coins, um, um, I guess other than just the seniority, I mean, I understand even the seniority model has had its challenges.

Well, maybe we can talk through some of the challenges and, and I think, uh, you're, you're certainly an expert with some of the ones that have been, uh, most in the news lately in the algorithmic front, primarily, um, Titan. Um, but there's also been a stay and frack. So maybe you can pick whichever one you want to talk about first or just weave them all together.

Jon: [00:25:35] Yeah, we can talk about Fe phase, actually, not as soon yours model, um, seniority, meaning just the difference between what it costs. A currency and what the actual face value is. Um, the way that Fay attempts to maintain peg is essentially twofold. One when the stable coin is above the dollar [00:26:00] peg, they rely on arbitragers to arbitrage the.

Stable coin back to a dollar, essentially by selling the stable coin for a dollar of reserves. Um, on the other side of things, the way they try to maintain the peg is by panelizing the selling of the stable coin when it's below the dollar peg. So let's say the stable coin is 97 cents on the dollar. Um, what fade does is makes it very hard for you to sell without a deep penalty and the penalty.

You know, Jim has a geometric relationship with the distance from the dollar peg. And so at 97 cents, I believe the penalty is 9 cents. So the dollar minus the 97, which is 3 cents squared, um, and the deeper it goes away from the peg, the higher the penalty is. And what that means is basically it reduces the amount of cell pressure on the stable coin.

In order to incentivize more buying. And so they're trying to disrupt the [00:27:00] supply demand dynamic to get more people to buy the stable coin, restrict selling, and that should push it back toward the peg. Now, the problem with that is if there are just a bunch of sellers who want to sell, and now they're handcuffed to the desk and they're not allowed to sell, it's not as if the selling demand goes away, they still want to dump the stable coin.

They just can't really do it right now because they. Take on a really huge penalty to get rid of it. And so th th the problem arises when you have a significant sell by, um, demand difference. And, uh, the stable coin just cannot get back to peg naturally. And so Fay has like an emergency mechanism to basically force the stable coin back to the peg called a reward.

And the reweight essentially is just pulling all the liquidity from their trading market, which they control, um, rebalancing the supply. And then re-injecting the liquidity and that [00:28:00] forces the, the peg price back to a dollar. Unfortunately, what happens is all of the sell demand that was kind of had their hands chained to the desk and couldn't sell immediately want to sell.

As soon as the peg goes to a dollar, they want to redeem the, uh, the, the stable coin forward. And when that happens, the peg then drifts back below a dollar again, and you kind of restart the cycle. And so the fundamental problem with stable coins in general is there needs to be a balanced amount of supply and demand.

There needs to be sufficient use case for the stable coin for people not to want to be net sellers and. Having integrations with other protocols. Um, that means having an internal use case within the protocol itself, that means being able to buy something, right, being able to buy something with a fake dollar, being able to buy something with FRAX being able to buy something with di and that's something that I think di has done a really good job of is dyes actually usable.

You can [00:29:00] actually take it around the crypto ecosystem and you can use it and spend it. And yeah.

Eric: [00:29:05] Right. And so I guess as maybe there's a, um, maybe, uh, suppressed demand for buying, um, crypto assets, like we're currently in some people, some people might call it a mid-cycle correction. Some people might call it a bear.

Um, but in those, in that environment, generally it dissipate, there's less liquidity unless it's an active bear market down. Um, and. You know, there's less demand for the stable coin. So what happens to these issuers during that time? Does it put a lot of pressure on those that, you know, other than protocols like maker or USB-C where they've already got a significant market share so they can weather the storm.

What does it do to ones that are more nascent developing? Maybe don't have the same market share.

Jon: [00:29:52]

As long as the change in demand and supply is incremental. These stability mechanisms have a way of returning the price of the peg. I [00:30:00] think what happens, um, the, the troubling case is the edge case where there's like a sudden spike in cell demand where everyone really, really wants to get rid of the stable coin.

And so iron tightened, might've been a good example of that, where, uh, there was a period. The equity holders decided that the equity just wasn't worth very much and same with the holders of the stable coin. And they sold both concurrently now due to their stable mechanism, which, um, every time the stable coin is under a dollar, you can redeem it for a mix of collateral and equity.

And so the protocol essentially issues, equity against redemptions. The problem with issuing equity. The more redemptions. There are the more equity you have to issue. And the more equity you issue, the less the equity is worth. So you can see where this is going, where as I issued more and more equity to satisfy redemptions, the value of my equity falls and the more equity I have to issue.

And so the supply of equity [00:31:00] tokens that I have to issue essentially goes parabolic. Um, and what you saw happen with iron Titan was it was trading at a value of $60 on the day. It failed. Um, and by the end of the day, it was trading at billions of a dollar, like 15 billions of a dollar. And that's due to this very reflexive nature of their stability mechanism.

And that was an incredibly sudden move. So a lot of these stable coin protocols are prepared for incremental shifts in demand, but they're not prepared for sudden. You know, mass Exodus from.

Eric: [00:31:41] Right. So like, in, in the case of a Fe, you'd have to have an office, a lot of conviction that the market was going to start selling down hard, to be willing to take sort of a 9 cent, um, penalty, uh, for selling at 97 cents.

And th you know, that's probably one leap that a [00:32:00] lot of traders wouldn't be so inclined to make, but I. Sounds like they didn't have that same mechanism. They didn't have the same mechanism to sort of moderate or disincentivize the fall.

Jon: [00:32:12] Yes, exactly. And ultimately, if you think about what a non-bank currency is like the U S dollar or algorithmic stables, it's really based on faith.

Right. Um, and as with the us government, you know, it's backed by the full faith and credit of the United States. Um, We all as Americans decided to lose faith in the U S dollar and all 340 million of us decided to switch to the Euro or switch to the yen. The U S dollar would also fail. Um, We just don't think that's going to happen.

And we look at each other and we say, you're not you, you believe in this. Right. Okay, great. I'll I believe in it, if you believe in it. Um, and that's why the U S dollar continues to have value the same way. Bitcoin continues to have value, um, algorithmic [00:33:00] stables have to bootstrap themselves to that point where people can look at each other and say, you have faith.

This will remain a dollar, right? Oh yeah. I have faith in that. And if we all collectively have faith in both the value of the underlying currency and in the seniority case, in the seniority, then it will stay near the Peck because of it below. Um, I'm incentivized to believe that it'll go return to a dollar.

And so I will demand more of it. Um, knowing that it'll go back to a dollar. I know we all don't have faith, then it fails. And so I think this is the trouble with algorithmic stables. You have to get to a point. Mutual faith among the entire community before you can truly say you have price stability. Um, and that means being adopted, having use cases, um, being a mode of exchange

Eric: [00:33:52] and, and what is frack?

Jon: [00:33:56] So FRAX was one of the first. Um, Senor [00:34:00] shares, algorithmic stable coins. And the idea with FRAX was to be very, very incremental about letting the market decide how much collateral they needed behind every dollar of stables that was issued. And so the protocol actually began fully collateralized one-to-one and what the, the way that, uh, Sam cause Damien, the founder designer.

The model was that every time the peg was above a dollar for collateral, the collateralization ratio would actually fall by 25 basis points. So 0.2, 5%. And in this way, you know, he thought the market could determine how much appetite for collateral. They really had. If there was continuous demand. For the stable coin, the collateralization ratio would fall consistently today.

It's about 70% collateralized, which means the market roughly said, you know, we have appetite for it to be 70% collateralized and the rest of it [00:35:00] will be collateralized by the equity in the protocol itself. This in your shirt. Or a frack shares. Um, anytime the peg is below a dollar, the collateralization ratio improves by 0.25%.

So it goes up. And so in that way, kind of, if no one really wants to use this, or there's not a lot of demand for the stable currency, well, let's make sure there's more collateral behind it to improve faith in the system. If there is a lot of demand for it, then we can reduce the amount of collateral that's bad.

And then, so that was kind of the FRAX idea. And it's been relatively stable, although, um, total circulation is around $150 million, I believe, as of this recording. Um, so it's not nearly as universal as some of the really big players like USD T, which has tens of billions of dollars in circulation.

Eric: [00:35:46] And does frack had the ability to continue to increase collateralization as the price goes down?

Jon: [00:35:52] So fracks. Yes. So the way the mechanism works is it increases the collateralization ratio by [00:36:00] 25 basis points for every hour that it's below the peg. And so if it is a remaining below the peg, the collateralization ratio kind of creeps up over time. And the problem with iron Titan was iron tightened was actually a FRAX fork.

And so they took a lot of the underlying mechanisms of fracks. And again, the problem with iron Titan was because there was such a sudden failure. Moving the collateralization ratio by 25 basis points an hour. Doesn't help very much. If there's a six hour bank run, where every single person who's an iron Titan holder, you know, decides to sell their holdings of both the stable coin and the shares back.

Eric: [00:36:38] Right. Right. And so coming out of the, uh, I guess the F the Titan issue, and I think even say had some of his challenges, although they seem to admire it, what do you think the, the lessons are for algorithmic stable coins going forward? Cause there's been a lot of models. Um, I've, I've certainly read a num a number [00:37:00] of papers and B the refrain is sort of universal, which is.

Make sure you understand how this thing is actually operating before you invest in it, because you know, you could get a surprise and iron Titan is an example of that. So when you know, where is the market for algebra, the mix stable coins? Are we getting closer to do you know, I guess first, what do you think the lessons are from some of the, from iron Titan and others?

Jon: [00:37:24] I think one of the lessons for both FEI and iron Titan, um, they both issued a bunch of incentives to get people to purchase the stable coin, which makes sense. You need to bootstrap adoption. Somehow the problem is issuing one time incentives is like giving someone a gift, like free money, right. A free prize or something.

Um, it only lasts for as long as they value that free prize. It's not really an ongoing committee. And so I think the first trap that algorithmic stables run into is focusing too much on, on incentives and rewards to drive adoption. Um, the type [00:38:00] of person who will be drawn to incentives and rewards, isn't really planning on necessarily using the stable for anything.

They're just there to collect their free gift. And then as soon as they can, they'll dump the free gift on the market and walk away. And so lesson number one, you know, bootstrapping adoption using rewards is a dangerous game. You'll certainly get adoption, but. Quickly get to a point where everyone wants to dump the currency as well.

I think the second lesson is you just need a forgive, the pun stable recurring use cases for the actual currency itself. If I told you I was starting a new currency, you would say, great, what can I use it for? What can I buy with it? If there's nothing you can buy with fracks or Fay or. Then there's not really a strong reason for you to hold it in the first place.

Um, it's not a store value because it is stable. It doesn't really actually, it, it doesn't, uh, there's no value of cruel to the actual stable currency itself. [00:39:00] So you need a place to transact. And so it's. Even more so than the trap of, you know, issuing too many rewards, you know, algo stables really need to focus on where can I use it integrating with protocols where I can actually spend the stable to buy something.

Eric: [00:39:17] Right. And it would seem, uh, you know, again, we're probably a number of years away from it really taking root, but where you have like these Metta versus, you know, it would seem that if you can plug into that early on to a successful model, You know, you've just locked the market versus maybe trying to get it now and, and compete with not so much USD T cause there may be actually an opportunity there, but in USB-C, uh, maker, Dao or di um, and some of these other stable points of interests.

Um, and so what do you think, I mean, do you have any views on the potential regulation of stable, close, stable clients going forward?

Jon: [00:39:58] Um, I actually don't have [00:40:00] specifically strong views on stable coins. I know mark Cuban had called for regulation after the iron tightened fiasco, but I can only imagine that's because yeah, he, uh, he had a personal stake in its success.

Um, I don't actually think that it requires, um, a more complicated regulatory regime than, um, uh, than, than the rest of crypto assets. I think in general, we should. Consider stable currencies to be assets. And so they probably should not be taxed every time they're transacted. Um, now the nice thing about stables is they roughly are the same value or should be the, roughly the same value in USD over time.

And so the tax impact should be relatively little for, you know, using them to buy and sell, but they do have. Volatility, you know, they do kind of vary around their peg. The reason why these stability mechanisms exist is because the peg can drift. And so I can't really think of like [00:41:00] the taxation nightmare.

Imagine if you were taxed every single time you spend a S. Every time you transacted in the real economy, uh, just wouldn't be very stable.

Eric: [00:41:10] Right? Right. It would be definitely suppressing the ability to transfer the, the currency. I mean, uh, the turnover on, on USD T is like, like 60 times in a year or something.

Like, I don't know. I mean, I heard the statistic, but I couldn't tell you the timeframe, but it's a lot compared to your normal crypto acid, because it's a, it's a currency. Um, interesting. So, um, before we, um, you know, before we break anything else that maybe I should have asked, I didn't ask, or you thought I'd ask on the podcast?

Jon: [00:41:41] Yeah. Yeah. I, I think, um, it's, it's, uh, I think it's worth digging into, uh, terrorist stable. Um, UST. So Tara's focus is really on improving use cases and bridging UST to [00:42:00] the real world, uh, via FinTech apps. And, you know, they are also an algorithmic stable. Um, but I think the Tara ecosystem is really, really focused on integrations with real world applications.

And so being able to spend UST. You know, at a grocery store at a retail location and have a reason to hold it. Uh, I think it's like valuable to see companies not only prizing, you know, the mathematics and behavioral economics behind maintaining peg stability, but also shoring up demand and making sure that there's a place to take the currency.

Um, I think that's a super admirable goal. It remains to be seen whether UST will gain really wide adoption either in the real world or. Uh, you know, in the crypto verse, but I think it's a very strong first step to think about demand and integrations. Before you consider the mathematical superiority of any pigment mechanism.

[00:43:00] I think the kind of like hidden secret here is as long as people want the thing and want to hold the thing and use the thing, um, it almost, it matters less what the stability mechanism is because if we all have faith that the us dollar is going to retain value. We're going to keep using it. There's going to continue to be demand for the U S.

Eric: [00:43:21] Right. Well, today, USDA has proven that because despite the fact that they've, you know, after their disclosure, this will maintain the peg, uh, you know, remains to be seen. What else is involved in that, but they've certainly maintained it for now. Despite what you think would be a real confidence hit, maybe that, I don't think that story is fully played out though, obviously.

Yeah. Um, back to Tara, um, what is their mission? For maintaining the pig.

Jon: [00:43:47] Um, so UST is, uh, similar algorithmic stable that, um, issues Luna against, um, against the stable coin. And so Luna is the [00:44:00] equity share of, uh, the terror ecosystem. Um, and so when the price is below a dollar, uh, it's redeemed for a mix of collateral and Luna.

Um, and so Luna really. The, the equity is kind of used to buy and sell UST to maintain around the peg.

Eric: [00:44:22] Great. Well, glad you brought that out because it actually came up in my research, but I never got to it. So, thanks. Um, so if people want to find out more about you read your stuff, where can they

Jon: [00:44:33] find you?

Uh, Twitter is great. Uh, I'm at J O N w U underscore.

Eric: [00:44:38] Excellent. Well, John, thanks so much for coming on the

Jon: [00:44:40] podcast. Hey, thanks so much. Right.