00:16
Hello and welcome to another BFRR episode, our Bitcoin Fiat and Rock'n'Roll podcast that explores the intersection of crypto, blockchain, DeFi and traditional finance. And exactly that mix is going to be at the center today also in today's episode with Fabian Schär. So welcome Fabian. Hi Manuel. Thank you very much for the invitation. It's great to be back. Exactly. You have been in the podcast, I think twice minimum talking about different

00:46
Let's come back maybe also to you in a minute on the introduction on what you focus on, but you look a lot into Bitcoin, but now also on stablecoins. And that is the central topic of today's episode. You wrote a very interesting paper with a few core authors that was ultimately published by the BIS, the Bank for International Settlements, as a working paper, where you look into how stablecoin transactions actually

01:13
take place and what they are likely used for and actually also distinguish between transfers and transactions. We're going to come back to what that is. It's a fascinating topic and I'm very, very happy to have you here. And why do I believe it is timely that we speak and also why I'm so happy is because obviously stablecoin adoption is accelerating in the industry, right? Everyone is talking about stablecoins and there's a growing evidence also of real payment usage.

01:42
by business and financial institutions, but there are very different ways to look at this evidence, right? And maybe the evidence isn't actually that strong as many would see and would hope. That is exactly what you focused on in the paper, right? Because these headline transaction volumes don't necessarily tell us how much real economic activity is taking place and understanding what those stablecoins are actually being used for.

02:07
Yeah, you ultimately looked inside blockchain transactions, distinguishing payments from other financial operations and especially distinguishing between transfers and transactions. And you also looked at different blockchains on which, no, actually only on Ethereum, but at least on different stable coins that were used on Ethereum for the different use cases. So I'm very happy that we talk about it. Welcome again. But maybe you also spend a few minutes to give our dear listeners.

02:36
a bit of an overview of what you do and how it came about that you wrote this paper. Yeah, sure. Again, thank you very much for the invitation. I'm Fabian Schär. I'm a professor at the University of Basel in economics and finance with a research focus on public permissionless blockchains. So in the past, I have been a guest in this podcast for the DeFi papers. And I think once we also talked about privacy research.

03:02
This time, of course, we talk about stable coins, which are also very important topic on public permissionless blockchains. I'm also a visiting scholar at the International Monetary Fund and technical advisor for the Bank for International Settlements Committee on Payments and Market Infrastructures. And this is also with whom I have co-offered this paper. So this is with colleagues from the BIS. And in particular, the CPMI then. from... Exactly. Yes.

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

03:32
And it's timely because also the BIS, think, I would bravely say, woken up over the last months and maybe one or two years to the growing importance of stablecoins and has actually released a few very interesting papers actually over the last weeks as well following your paper, which I read with very high interest. We're going to link them maybe also here in the show notes that all focus on stablecoins in payments.

04:00
And this is actually also how I want to start the episode and discuss a bit with you where you believe we stand with regards to payment adoption and what you saw then later on in the episode in your assessment that is depicted in the paper and explained in the paper. But yeah, there's, I mean, very interesting statistics in the market around stablecoin usage and stablecoin payments. So we see obviously a big market size, actually at

04:29
remained rather flat throughout 2026. But before 2026, there was a tremendous growth in the market capitalization of stablecoins, roughly 300 billion across different blockchains and across different stablecoins. Of course, Tether and Circle being the biggest ones still, USDT and USDC. And there are a few providers that also try to estimate the real adoption in the case of real payments adoption of stablecoins.

04:57
What is often cited and often looked at is the Visa on-chain analytics website, where they report more than 51 trillion of overall stablecoin transaction volume over the preceding 12 months. So massive figure. What they do is they adjust them, right? And so their methodology already tries to adjust the overall 51 trillion volume, which ultimately ends then to

05:26
or ends up in 10 trillion remaining after adjusting for high frequency trading bots, internal exchange, treasury movements, bridge routing and repeated transactions and other artificially inflated or inorganic activity. And what does that mean from 51 trillion massive number down to 10 trillion roughly adjusted volume, but this is still significant apparently, right? So Visa has 14 trillion annual

05:55
payment volume in 2025. So not yet the same volume of Visa, but quite close actually. And when you look at the gross volume, and this is what you often read also in not well researched news articles or on LinkedIn feeds, you could argue 3.6x the multiplier over Visa volume, right? There's also other reports, Allium reports, 400 billion of stablecoin payment volume.

06:21
roughly 50 % increase year over year. Visa also says business transactions increased, stablecoin linked card programs increased. Cross border usage is also estimated to grow significantly or have grown significantly over the last months in 2025. For example, there's figures between 50 and 60%. So what I'm saying is there's lots of writing and also lots of analysis that all point towards a strong growth in adoption.

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

06:51
in the payments use case of stablecoins. And I think you also in the paper had that idea, right? The overarching idea, what is actually happening with regards to stablecoins, not necessarily with a focus on real economic payments, but rather distinguishing between peer-to-peer payments versus more complex transactions. But before we dive deeper into your article already in your paper, so what do these numbers tell you or how do you look at these numbers and how do you look

07:21
also through your research lens, obviously, at the adoption of stablecoins in general as a payment instrument. There's certainly something going on, mean, the numbers, even though they are completely different, depending on what source you're looking at. And of course, I'm always a little skeptic and ask for what are the assumptions, what are the exact sources and so on. But I think what all of these studies had in common is that they show a tremendous growth as you have said. And I think part of that is, of course, that there has been a lot of

07:51
tailwind from the US with the current US administration, which on the one hand was pretty supportive with blockchain in general, but on the other hand, and I think this was even more important for stablecoins, was pretty skeptical towards CBDC. And as a term that could not even mention anymore, so people started talking about tokenized reserves. And I think the combination of these two things really led to this increase.

08:19
And this is something I think we will get into later on. We should not overestimate what is actually going on. And it really depends on what exactly one is measuring. And there might also be an incentive for at least for some of these reports to make the sector look bigger than it actually is. And the idea of course of our research as it will go into later on is to bring a more research lens and potentially a more objective lens and see what is actually going on. And that is also

08:48
As we said, the core of the paper, but also you used a very different methodology. What I know when you go through the reports and also when you look into Visa data, example, often it is based on self-reported data from, for example, payment or stablecoin payment service providers that obviously, as you say, have an interest in maybe inflating the numbers. You read, as you also said, very different numbers, also the big

09:15
consulting firms have produced quite interesting reports, which also deflated the overall volume quite significantly, but then still there was quite a significant number coming out. You chose a very different methodology as well for the measurement ultimately of stablecoin transactions. So when people talk about those stablecoin transaction volumes, are they actually measuring payments? That's the key question. Maybe you can guide us through your view.

09:44
your research, what's the difference ultimately between a blockchain transaction, a token transfer and an economic payment and what might happen under the hood when you see a

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

transaction on the blockchain? So basically the goals we had for the paper was number one, we didn't want to rely on any large scale assumptions, right? And not on proprietary vendor data. That was one thing. And the other thing is, as you mentioned, before you can analyze stablecoin transactions or stablecoin transfers.

10:14
you need to understand the difference and whatever they actually are. And I think something that is a little confusing to economists with a more traditional background and do not necessarily look into blockchain data every day is that transaction has a completely different meaning on the blockchain than it does in a traditional sense. But in a traditional sense, we say a transaction, what we have in mind, it's one person, let's call her Alice, sending some asset to another person, let's call him Bob.

10:43
And in a blockchain world, a transaction is actually just the instruction for an initial step. So for example, when you talk to a smart contract, and then the way to think about this is that the smart contract then can really start a cascade sequence of different sub-transactions, like internal calls that emit events. Events is a term we will come back to. So the arm in some cases, as you will see later on,

11:10
thousands of sub steps that are all triggered by an initial transaction. And the huge risk, and this is where it inflates the numbers, is when somebody either just looks at the transaction, they may be missing, first of all, the context, but also some of the sub steps. But also when they look at the transfers, which are a consequence of these transactions, then they might count individual accounting steps that have no economic meaning whatsoever, and treat them as individual parts.

11:40
So what we did is we combined these two and we tried to get a more complete picture of what is actually going on. And by going really on the data in the blockchain, I think you also then went into a very precise analysis of how many events and how many transactions are actually part of the transactions that you see in the blockchain, which ultimately belong to each other.

12:08
which should not be counted as individual transfers or individual events. And therefore really looking at the on-chain data, how does it work maybe from a technical perspective, if I may ask to read those events? Is that something that is complex or is that something that everyone can do and then basically replicate your assessment?

12:31
The idea is exactly that everyone can replicate it, right? And ideally people are running their own nodes. In that case, they don't have to trust any third party provider, but there are also options where you can have just like an API access, it's called RPC providers. And then you can talk to their blockchain node and get the same data. So there are lots of different ways in which you can do it. But the important part to understand is the data we are using.

12:58

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

is directly from the blockchain and in our case from an archive node that we're operating ourselves. If you're interested in the more technical details, we're running Erigon and then we can get all of the data from there basically. you start out with the stablecoin transfer events. So we decided early on that we want to look into USDT, USDC and the PayPal stablecoin, PYUSD. We got the transfer events from those stablecoins. And once you have these events,

13:28
you can get the broader transaction context. So from the initial events for the stablecoins, we knew which are all of the transactions from 2025 that involved at least one stablecoin transfer. And when you have this encapsulating transaction, then from the transaction, you can get the more generalized events. So for example, you can ask questions like what other tokens, what other assets

13:53
have been transferred as part of the same transaction. What other interactions did you have with other smart contracts? And then combining all of this information, including fees, for example, including block information, it's like a puzzle where you get more more information just from the blockchain directly. And lots of information, right? We're going to come back to the specs of the stats. It's quite impressive. But maybe before going even a bit deeper into the paper of itself.

14:21
What I think is also often not yet, especially also in like TradFi players that have not been very active in the blockchain development and also in building solutions with blockchains, right? What is not yet fully understood or might not be fully understood is this idea of composability and atomicity, right? Before going deeper, I would also want to highlight that. Maybe can you explain how...

14:47
A simple peer-to-peer stablecoin transfer differs from a complex composable atomic blockchain transaction. And why does this distinction especially matter for understanding also your paper and stablecoin usage in general? Yeah, absolutely. I mean, it goes back to what we discussed earlier with these sub steps. The idea and what actually makes blockchain special in addition to potential governance benefits that you get.

15:14
is this idea that a transaction can trigger multiple steps. When we talk about composability, what it actually means is you can think about the individual smart contracts. Tokens also count as smart contracts. You can think of them as individual Lego pieces. And then as part of your transaction, you can incorporate all of these different Lego pieces. And this can be something as simple as just calling the token smart contract and saying,

15:44
Hey token smart contract, I would like to transfer 10 stable coins to Carl. And then when the transaction gets executed, then the token smart contract will show these balances, checks if you had a sufficient balance deducted from your balance and adds it to Carl's balance. But it can also be something more sophisticated where you initially speak to an orchestrating smart contract, which then for example orchestrates a swap between multiple tokens.

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

16:13
So your initial transaction goes to a decentralized exchange, a decentralized exchange, then swaps token A against token B, thereby speaking to multiple smart contracts. And that's called composability. And what makes it so special and so interesting also from a financial, from a traditional financial market perspective is another technical term called atomicity. And atomicity basically means that all of these steps, the individual individual legs are either

16:43
executed jointly so that all of them are settled or nothing at all. So you know if one of the individual steps fails, then the entire transaction will fail and you will not see any state changes. And that's quite interesting. It's also the new thing and the reason why I think one of the conclusions from the paper, as you will see later on, is that many of the transactions are in fact much more complex than you would expect. And we're going to come back to the stats, but one step that I found super

17:13
impressive is also that apparently in your data set, there was one outlier, which created more than 2000 event logs, right? Where one single transaction led to 2000 event logs. So 2000 different steps sounds like an enormously complex transaction that ultimately includes several smart contracts, lots of different steps likely, right? I don't know whether it was a DeFi protocol or maybe a combination of DeFi protocol and lending and

17:42
whatnot. don't know whether you have more info on what that transaction actually was. Yeah, I these super complex transactions with thousands of events, are typically arbitrage related. Many cases also flash loans. So that somebody at the very beginning of the transaction borrows funds, then uses various different decentralized exchanges to swap.

18:11
a large number of different assets against each other in multiple steps. In some cases, it even has liquidation steps from lending protocols in there when they're trying to liquidate somebody. And then of course, this being a flash loan, which means you can borrow any arbitrary amount at the beginning of the transaction, as long as you're paying it back at the very end of the transaction, there's also this step at the end. And this is something, you say it's an outlier and you're right, it is an outlier of 2000.

18:39
but transactions with event counts in the hundreds and even above 1000, it's actually something that's quite common. And it's fascinating to think about it, what that actually means to have all those transactions which are composable, first of all, where different smart contracts can talk to each other, but then also atomic, as you said, which means, this is now my technical understanding, I hope this is correct, right? All transactions or all events would sit basically in the same...

19:07
mempool waiting for confirmation and then they all, they are all confirmed in one go and all written in like this one single transaction in the block. And therefore there is no different steps in different blocks or in different events or transactions in the different blocks, which can also lead to counterparty risk or any other processing risk, processing step risks that need to be mitigated or need to be managed because everything just happened.

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

19:38
in one single confirmation across various different small computer programs which these smart contracts ultimately represent. Yeah, exactly. I think the easiest way to think about this is think of a transaction as an instruction. So basically what you see in the mempools or what is waiting for inclusion in the blockchain before execution is the initial instruction to trigger something.

20:02
And then the events or logs is a result of the transaction being executed. So it's literally like a log that says, okay, as part of this transaction, token A has been swapped and token B has been transferred and so on. So it's all of these different things. And this is also why it's important to have both perspectives, right? Because the transaction itself doesn't tell you too much. The transaction itself basically just tells you the initial smart contract that had been called. And then in order to make sense of the transaction, you also need the events.

20:30
And in some cases, we even need call traces, which I we don't have to tackle that. It's another perspective that you can also look into. And I think another perspective is also the gas that needs to be paid, right? Maybe you can also explain a bit how that can be retrieved from the data. But one step that I also found interesting, so for example, this particular transaction that you found as an outlier in the dataset was obviously much more expensive to process.

21:00
What is the expensive? What do we talk about? So regular peer-to-peer transaction consume like 37,000 gas. Complex transactions can sometimes cost 1 million gas, right? So quite significantly more already, 37,000 to 1 million. But that particular transaction cost 58 million gas. now gas is measured in gwei and that has a certain ETH price, right?

21:26
So you can then also do the math back then, how much that was in euros or US dollars, but I suppose also in euros and US dollars, quite a significant cost to process that transaction, right? Yeah. So there are transactions. I don't remember the exact number by heart, but there are transactions in the data set that costs several thousand US dollars just in transaction fees. And of course, on any Ethereum virtual machine blockchain,

21:55
which is of course including Ethereum, but there also many other blockchains that use the same virtual machine to process transactions. You have this concept of gas that is being used, which you can think of as individual computational steps. And then the price you're paying for the computational step. And when there is an auction for the inclusion, it's always about the price that you're paying for the individual step and of course the complexity of the smart contract.

22:24
So in other words, how much computational resources it needs to get executed is in the gas units itself. So the more complex the smart contract, the more gas units you use. Yeah. So let's maybe after this prelude, which was already super interesting, dive a bit deeper into the paper. So how did you approach the research and how do you distinguish a simple transfer

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

from a complex financial transaction using blockchain data? mean, we've talked a lot already about it, but maybe a few more stats that

22:53
the listeners also understand what you actually did and how big that dataset actually was. So yeah, before we get started with that, I want to be very clear. It's not the idea of the paper that we say any of the other measurements are obsolete. And it's certainly not the idea that we say this is the ultimate way to measure any blockchain activity. As I said earlier, the idea is that we have something, some new perspectives that allow us to

23:17
investigate stablecoin activity without the need for proprietary data and something that can be easily replicated. And for that we use different perspectives. I already talked about the event logs. was approximately 600 million of them, 141 million Ethereum transactions. And this covers all of the transactions that involved at least one transfer and three stablecoins that I've mentioned.

23:47
on Ethereum mainnet in 2025. So it's an entire year worth of data. And as I said, we started with the transfer events from there. We got the transactions from there. We got the generalized events. We got the receipts, which allowed us to look into the gas related transaction fee related questions. And then we basically analyzed various different things. So one is the question of co-usage.

24:16
what other tokens have been used in the context of these stablecoin transactions. We also looked into more generalized co-usage. So the question is like what decentralized exchanges, what lending protocols, what bridges have been used as part of the stablecoin transactions. We looked into the complexity questions. So in terms of gas usage and event counts, and then also timing related patterns.

24:45
Again, I want to stress that fact. It's not the claim that any of these perspectives singled out are perfect by any means. All of them have drawbacks. But the idea is that when you analyze stablecoin activity from various perspectives and you it in a way where it's replicable, that this might be a valuable instrument for the analysis of stablecoin activity. Especially also, I suppose that you can use the same methodology also on other blockchains, at least those that function similarly to Ethereum mainnet.

25:14
layer 2s, any EVM compatible blockchain, where you could ultimately use the same mechanism. is exactly right. mean, you can use it on any blockchain that uses the EVM. You could also extend it to other tokens, of course. And even for virtual machines that are close to the EVM or EVM compatible, many of the metrics that we are proposing still work. So quite significant again to repeat, USDT, Tether, USDC, and PYUSD is from PayPal.

25:43
the three by far dominant, most dominant stablecoins, centralized stablecoins on Ethereum mainnet, full calendar year of 2025. So quite recent data. I would of course be interested in a yearly assessment of most recent data as well in 2026, because obviously I think 2026

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

was also an interesting year of further adoption. But maybe now let's jump to your findings. And I think there's very interesting findings.

26:11
What were the most surprising findings for you or maybe they were not as surprising as one thinks, but at least those that stuck out, right? And how does transaction complexity ultimately also change your understanding of the stablecoin adoption? So there are lots of different findings. But personally, I'm a little less interested in the differences between the various stablecoins. I think it's still something we can talk about and that is still valuable, but it's just like a snapshot.

26:40
right? And it can change and also arguably might depend on the exact setting. I think the most striking result is that there might potentially be a huge measurement bias. And that also some of the existing research and literature may not be controlling for this adequately, right? That it's really important to know exactly what one is measuring. Again, what I'm talking about is the differentiation between transactions and transfers. When we talk about transactions,

27:09
And then it's 31.6 % of all of these stablecoin related transactions that involve additional contract interactions and are part of the more complex group of interactions. So where you can clearly rule out that it's just like a simple payment from A to B, right? Where clearly something else is going on. And this doesn't sound like a lot, right? When you say 31%, you could argue, okay, but this means almost 70 % then falls in the other category.

27:37
But what is important to understand when you change the perspective and when you start with a more natural starting point, which is the transfer events. And this is what most research papers and most data sources do. Then it's actually all the way around. then you have, and you will see that approximately 60 % of all stablecoin transfers belong to a transaction context that is more complex.

28:03
And this makes a lot of sense, Because by definition, when you have a simple payment, then in this transaction, there is only one transfer. But of course, when it is a more complex transaction, then again, by definition, you will have multiple transfers in there. So it really depends on your starting point. And to me, this is important just to show this and to understand that when one starts with transfer events, for example, and creates all of these transfers as individual payments and is not aware of the transaction context, that this might be highly problematic.

28:33
Yeah, so roughly one third of all transactions go in the camp of more complex transactions. then 60 % of all the activity that ultimately emit events fall into this bucket, which means 70 % of all stablecoin transactions are peer-to-peer, which could, for example, also classify as a payment transfer where simply between two wallets, money is being moved. We're going to come back to that, whether that can be interpreted in that.

29:03

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

But more interesting. Interesting addition, if I may. Because that's not part of the paper that we have published. But of course you always keep working on the papers after you have published an initial working paper. And one thing we did is we further explored these simple transfers. So what are they actually? And the substantial part of it, so approximately 30%, is either going to or coming from centralized exchanges.

29:29
So even in that category that might potentially be payments, there's substantial evidence that it's mostly just transfers to these more centralized cost custodians. Yeah, I think this is what you sometimes also see in studies. think the BCG has also released a paper on that where they also see a huge block in transfers to centralized exchange or between centralized exchanges that ultimately indicate towards market making, right? Where you then want to

29:59
rebalance your positions across the different marketplaces and not necessarily real economic payments. yeah, maybe you also said it already, your paper also finds that Tether circles, so USDT and USDC have a very different behavior than PayPal's stablecoin, PYUSD, right? What does this tell us about the economic functions of stablecoins and why is that eventually also important for

30:26
regulation eventually of the stablecoin, right? Because they might be used for very different use cases. One might be maybe even a retail use case, maybe also even on different blockchains, right? The other one might be more wholesale capital markets settlement where you might also need to regulate the stablecoin transfers very differently. So I think people by now are well aware that there are different categories of stablecoins, right? so for example, there are on-chain collateralized stablecoins.

30:56
Then we had huge scandals with unbacked purely algorithmic stablecoins. And then of course the category we talk about here are off-chain collateralized stablecoins. the idea that they hopefully have the sufficient collateral and sufficient in size, but also in liquidity to back the promise. That's the basic idea. Luckily we all have regulation for them as well. exactly.

31:23
But I think even in that category, can be substantial differences. And this is one result also from the study that of course, depending on how integrated, for example, the stablecoin is with DeFi protocols, whether it is being used as collateral, whether it is like a major asset that is being used on decentralized exchanges and also supports many of the hops between other assets.

31:49
So the integration in DeFi changes, of course, how the stablecoin is used and how it interacts with the entire ecosystem. And this is something that we saw that, for example, USDC is heavily integrated in the Ethereum ecosystem. And one thing that I didn't expect, I mean, the integration per se is not very surprising, but one stat that I did not expect is that over 19 %

32:15

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

So almost 20 % of all of the USDC transaction also involve wrapped ETH. this is every fifth transaction basically is doing something with ETH as well. And the two stable coins between each other, so Tether and the USDC, when you look from the perspective of USDC, then it's 11 % of all of the transactions that move USDC also move Tether.

32:42
There is a substantial integration. can see the same with contracts, right? You can also look into, for example, various decentralized exchanges, or then again, wrapped ETH, which is the ERC-20 variant of Native ETH, and the contract with wrapping and unwrapping steps. And basically what you see there is that for USDC, and to some extent also for USDT, you see a lot of integration. For the PayPal stablecoin, not so much, which is not too surprising, but still it's important to show

33:12
that there are huge differences in the way these stablecoins are being used. you could argue of the 60 % of the stablecoin transactions, if they were equally weighted in a volume, then we would expect more PayPal USD usage in traditional peer-to-peer transfers, more simple transfers. But USDT and USDC would rather fall into the more complex transaction.

33:40
type in the 30 % or roughly one third percent. I mean, of course they are not equally distributed in the volume, right? But I think that is a very interesting tendency to see PayPal USD rather in the peer-to-peer world. And eventually, how is it integrated? I also think about the channel, PayPal USD is also integrated in the traditional PayPal app in many countries. And eventually this is already an indication that retail users might actually use it, right? Whereas

34:10
If you go for more sophisticated usage, you might use a MetaMask. This is already a wallet and an interface and a channel that might not be for everyone, right? Yeah, absolutely. I think it's important that we are very careful with the interpretation because it's limited to Ethereum mainnet. That's one thing. Something that we did on purpose because we wanted to make sure that the heterogeneity between these stablecoins is not driven.

34:40
by differences in the blockchain. If you would, for example, compel USDT on Tron versus USDC on Ethereum mainnet, then you couldn't be sure if the differences are stemming from the blockchain variation or from the stablecoin variation. This is one thing. then, of course, this perspective does not necessarily say anything about the use case in the sense of whether the payment was peer-to-peer or what exactly they did with it.

35:07
All we're saying with the co-usage is that you see that with USDC, there is a lot more contract interaction. It's more frequently used jointly with other assets. So the integration, especially in the DeFi space, is much more pronounced than, for example, with PYUSD, which might also be a timing issue to be fair, right? Because of course, USDC has been around for much longer. But you mentioned a very important point, and let me also give my view and...

35:36

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

did a bit of research also on other volume on other blockchains, right? So you have only focused on public Ethereum mainnet, not on Tron, not on Solana, not on BNB from Binance, the smart chain, for example, where also obviously significant stablecoin volume take place, right? And there was an interesting report in general, I must say this report from Allium I found quite interesting. Obviously you can, or I have to go into.

36:03
The details how they come up with the figures, at least they show very interesting statistics. BCG and Allium together have looked also into or tried to estimate real economic stablecoin payment adoption. And they see Tron as by far the leading blockchain with regards to real economic stablecoin adoption. 230 to 370 billion volume on Tron in 2025 alone.

36:31
35 to 50 billion on BNB Smart Chain or Binance chain and then Ethereum with 20 to 35 billion. So maybe only a 10th, right? So they estimate at least that on Tron there's much more real life adoption, which then eventually also hints us towards not complex transactions, right? But more peer to peer transactions where you would rather think about buying a ticket or

36:59
maybe across border payments for B2B where lots of focus is at the moment on, right? So you only focus on Ethereum, right? But there's lots of volume on other chains. How representative do you think your findings would be for the overall stablecoin ecosystem, especially now with this gigantic figure that is estimated to have real world economics on Tron? That's a very good point. I think our paper is more about the framework and the methodology and showing what one can do, which is with blockchain data.

37:29
And by no means do you want to claim that this is like the ultimate truth, that is completely one-to-one applicable to all kinds of different settings. As I mentioned, the reason why we used Ethereum Mainnet is that there are multiple reasons, but one of them is that the stablecoins we were interested in, they are all present on Ethereum Mainnet, which already rules out many of the other chains. Like if you have a chain where that doesn't have the activity.

37:57
one of these stable coins, then things get little more difficult. Also, I want to stress the fact that yes, there are all these estimates and depending on the source, but the stable coin activity and especially the market cap on Ethereum mainnet is still significant. And you look for example, in DefiLlama, which is one of the statistics providers and then the blockchain space. And I think Ethereum is still number one in stable coin market cap. And it's certainly a huge

38:26
player. But in the end, as I said, it's about the framework. It's about the idea that you have something that can be replicated. in fact, for many of these blockchains that they have stated in beginning, if they're using the Ethereum virtual machine, then you can just take our methodology and basically do the same study there. Now it is some work, right? I mean, this is also one of the reasons and also for the volume or the sheer volume of the data and for the analysis and to run some of the regression models that we did.

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

38:56
It's not exactly straightforward to do it with all the chains, but just from a framework perspective and from the methodology, one could do that. And of course it would be super interesting to do it. then as you've mentioned also to include a 2026 data once we close up the year. Yeah. Maybe there's also some other researchers that now have a precedent with this paper and also apply that methodology. For example, on Tron.

39:24
and then lay a bit deeper what actually happens on Tron because I think at least to me, this is also still a bit of a mystery or is a bit of a black box. What is actually happening on Tron? I don't know of any person that uses Tron. Maybe it's really a real world US dollar adoption in countries that certainly suffer from inflationary currencies. I don't know, right? Or whether it's anything else, but that would certainly be interesting to understand.

39:50
Now Fabian, for the remaining minutes in this podcast episode, I would also like to come back maybe to the interpretation. What does this all mean now? And especially for institutional finance and payments and banking ultimately. So there's lots of focus on real life payments use case, but payments as we now also heard from you is at least on the Ethereum blockchain might not actually be the main use case of stable coins, right? But rather,

40:20
much more complex, ultimately wholesale capital markets use cases, right? Where you have maybe other tokens that could in the future then also become, you know, securities represented in a tokenized form, right? At the moment, I think in DeFi, this is not necessarily always the case. mean, the RWA space, the real world assets space is there and it is also growing, but it's not yet massive, right? So you also mentioned, for example, wrapped ETH.

40:49
as the main counterpart in trading pairs on DeFi. So it's more still, I would say crypto that is traded or the crypto assets that are traded. But nevertheless, the idea is more capital market settlement, complex transactions instead of payments, right? So looking at your research, where do you see the most compelling applications of stablecoins and programmable money in general for traditional financial institutions after having now understood what actually happens on Ethereum with stablecoins?

41:18
I mean, this is also, think we can step away from the data, right? Because the data only tells us like the snapshot and gives us one perspective. But more generally, I have to say, I'm even more skeptical that we need get stable coins. To be quite honest, we have payments. I think they're functioning quite well. And we have to understand that all of the free stable coins we're talking about, they are heavily centralized.

41:44
I mean, the issue is for all VFT stablecoins, can blacklist individual addresses, they have pause functions in there, they can upgrade the smart contracts completely, change the code, the logic, everything. It functions a little different, the upgradability, depending on what stablecoin we're talking about. So for Tether, it's not quite the same, but effectively they still

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

have the capabilities to change the logic of the contract and to do whatever they want. And then once you realize that it's effectively completely centralized and there's very little to do,

42:13
on the contract level, certainly also on the collateral level, because you have to trust that they have sufficient collateral, then it really becomes the question. what's the big deal? What are we doing here? And what's so different to other payment systems? And I think the answer there really, as you have also already teased, is again, composability and atomicity. If you have these assets on the blockchain,

42:39
then you have the potential to go into much more complex transactions and therefore it's not surprising that this is exactly the finding that we see in this paper. If you just want to do a payment from A to B, you don't necessarily need a blockchain for that and you don't necessarily need a stablecoin for that. There are other ways in which you can do it. But if you have a very complex structure of transaction with multiple sub-steps, where you want to make sure that all of these different transfers and all kinds of assets are executed either

43:09
as a unit, all of them with all legs or nothing at all, then blockchain becomes much more interesting. And this of course also relates to a different problem, Once we talk about wholesale and settlement in complex transactions, we have to realize that stablecoins still have a counterparty risk. And it's not like a perfect settlement instrument. So my personal preference, if it goes more in that direction, would be a wholesale CBDC.

43:37
very clear, not retail, not like something that necessarily competes with other existing retail payment forms, but for institutions and to settle large scale payments between those institutions, between institutions that already have access to central bank reserves. I think this could be very interesting. But I don't buy this story. I don't believe in a stablecoin use case where you do grocery shopping.

44:05
or where you buy a train ticket with your stablecoins. I see very little evidence of that and I'm skeptical that this will happen in your future. I mean, those are also that you mentioned rather retail use cases, Where ultimately, especially in Europe, I think the competition is enormous with instant payments being there. can reach every account within the SLA is 10 seconds, but usually it takes less than three seconds, right?

44:35
every account and we don't have an unbanked population in Europe, not necessarily. So you can actually reach every European citizens now with schemes also on top of instant payments like Wero or AP. Now the digital euro comes as well, which is a retail center, which has nothing to do with blockchain. But nevertheless, it'll continue to compete also with the existing schemes, which are cards, domestic.

45:01
then we have credit card schemes, debit card schemes. So there's a plethora of solutions. So I'm fully with you. What is often rather focused on, at least also in banking, actually for both stablecoins and tokenized deposits, which are more applying the infrastructure for more

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

complex transactions across multiple banks where correspondent banking is involved, which is in cross border.

45:29
So not necessarily domestic transfers, but rather cross borders. We know the G20 goals of reducing the time, the processing time, but also the fees. And I think this is where at least most banks look into stablecoin adoption, then also tokenized deposit adoption. We don't have to go too much into detail on tokenized deposits, but stablecoins obviously as well. But then I would also say it's still open for discussion whether all corporates, if you now think about corporate cash management, corporate payments, will hold

45:58
wallets, right? Or whether the stablecoin sandwich is then more realistic, but then you really have to have very deep liquidity pools and on and off ramping before that can actually fly, right? So I don't know whether you also have a perspective on those use cases. Yeah, I think we should actually go with the tokenized deposits now that you've mentioned it. And I'm even more skeptical there. I can already see all of the incoming emails in the next few weeks because of my statements, because this might be highly controversial.

46:27
But I I talked to so many proponents of tokenized deposits in the past few years. And so far, I'm sorry to say, but nobody really could explain to me what exactly the purpose of a tokenized deposit is. It's actually, quite trivial, right? A token is something that's supposed to be transferable by definition. Like a bearer instrument. Yeah. But the deposit is something that is like a contractual relationship between one customer and one bank.

46:57
And as soon as you want to transfer it out for reasons like the deposit insurance, and also because the other person might not have a contractual relationship with your bank, you need another instrument anyways. So the only thing you do is you're issuing the tokenized deposit, you can hold it in place. And then when you transfer it, you burn it again. And at that point, it really, to me is not a token. It's a glorified accounting instrument. And it's highly questionable to me whether the internal deposit accounting of a commercial bank.

47:27
needs to be out in the open on a blockchain or if it's not sufficient if it's on their core banking system. But that the actual transfer that settles any of these transactions between bank A and bank B would never be in a tokenized deposit. It requires something else and then it's really the question. So what is the benefit and what is the big boss about these tokenized deposits? I still do not understand it. So far, nobody could explain it to me. So let's see.

47:56
I mean, one argument I think you can have is, and you mentioned it already, as the settlement asset becoming a wholesale central bank digital currency, right? And if those financial instruments or tokenized deposit being represented as a token smart contract of bank A and then bank B, the recipient bank also has a token smart contract, and those can be directly in this composable fashion and an atomic transaction be linked.

48:24

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

For example, with another smart contract, is the wholesale CBDC smart contract, right? And therefore you could argue maybe there's an added value in this composable transaction across multiple totals. ask you something? Let's say you're bank A and I'm bank B. Why do you care about the deposits on my side? This is completely irrelevant to you. Whether or not I still have an obligation to someone else is not something that's relevant for our transaction. What you care is...

48:53
if you receive the CBDC. So I don't see why it needs to be part of that atomic settlement. And to me, since it's not transferable anyways, it's just a glorified accounting instrument that you're creating it and later on burning it. I think a lot of it has to do with the fact that many commercial banks feel, I mean, they read the same statistics that you've also mentioned in the beginning. They see that there is something going on with stable coins.

49:20
They would like to also be active in that sector themselves because they might be a little bit concerned that they are losing payments, that they are losing one angle which connects them to their customers potentially at some point. But then they realized that stable coins themselves might not be the most interesting thing for a bank because it completely undermines banking as a business, right? It's not a deposit.

49:43
something where you hold the collateral. And then of course, the idea of creating something that could potentially fulfill the role of a stablecoin, but acts more like a deposit is within immediate reach. But again, it's not the same thing because it's not fully transferable. No, and on that front, I fully agree, right? It's a very different thing. And I think this is also what is still misinterpreted or not enough discussed within the industry and also in media.

50:10
Very quickly, you always read, all right, yeah, for a bank, makes more sense to do a tokenized deposits than a stablecoin. Yeah, but as you say, they're completely different animals, One is a bearer instrument, one is not. To the defendant, I would say, to those banks that also look into it and also why, for example, financial institutions on the central bank side or the BIS is looking into. The issue with correspondent banking transfer seems to be looking at SWIFT data.

50:40
that the settlement is actually quite fast already today. So depending on the papers that you look at from Swift, 90 % of all transactions are settled within one hour. 75 % are actually settled within 10 minutes. So really fast, but the ultimate credit doesn't happen, right? And there are numerous reasons and complex reasons ultimately also why the credit on the ultimate beneficiary account doesn't happen. And I think this is...

51:10
One of the hopes that, for example, by having a atomic and composable transaction into the beneficiary bank's smart contract, you can expedite and speed up the credit process. think you can do it in different ways. know what's interesting? I mean, I think you're right. I still don't think that tokenized deposits would deliver on that promise. I mean, it's even a little more funny than how we discussed it so far, because in many of the projects that you're mentioning,

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

51:39
the wholesale CBDC and the tokenized deposits are not even on the same chain. And then of course you don't have atomicity. That's true. Yeah. Good discussion. And maybe looking at the time where we're coming to a close Fabian as a closing question, mean, maybe now coming back also again to stable coins and to your paper from having looked at the data, right. And the evolution of stable coin usage, what would be one thing you think banks regulators

52:08
financial institutions in general fundamentally misunderstand about stablecoins today and what should they change in their views about stablecoins? I think for all of them it's a good strategy to look into the data, right, and to collect data and to really try to understand what is actually going on. Not so much rely on vendor data on like third parties that are trying to sell you already the conclusions, but maybe for a commercial bank to get some

52:36
in-house knowledge on how can you retrieve data directly from the blockchain? What does it actually mean? How can you work with it? And then I don't necessarily see the urgency right now to become super active themselves. It's good to observe. It's good to learn. It's good to study the developments. But I mean, I might be completely wrong about this. Nobody knows, right? But I know looking at the data,

53:02
There is very little evidence that says that a commercial bank has to immediately act and do something. That's very interesting. when you talk to consultancy firms, obviously they would never say that, maybe even after having read your paper. But yeah, I mean, I think it's always valuable to look into data and to look into also the assessment of data. And therefore I think this paper is such an important contribution to

53:32
really understanding what is happening within stablecoins. And I can only encourage everyone working in the field to having a closer look and to understanding the data. then also in fearing one owns interpretation and also reason to become active or non-active. What I find quite interesting when thinking about what to do or what not to do is also the question of issuing a stablecoin, right? It really has to change when it comes to adoption, I would say.

54:01
the what we currently see in the market. It could also be that this what we currently see on Ethereum mainnet is still a legacy usage of stablecoins. And then in 2026 or 2027 data, it already looks very, very differently because the usage has just changed, right? And maybe also institutional adoption has come up and then stablecoins transform more from a instrument where smart contracts talk to each other, do composable, more complex transactions, more into

54:30
very basic, easy peer-to-peer transfers. Maybe that happens, right? But at least at the moment on Ethereum mainnet, to be important to distinguish, right? We cannot see a big trend towards that. Exactly. So Fabian, thanks a lot. This was a very interesting ride through

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info

your paper and through general, the stablecoin adoption. Thanks for joining and dear listeners, if you found that interesting, obviously always please share the episode with your colleagues, with your friends.

55:00
It's important for us to continue to spread the word about the podcast and about our distinguished guests and their important contributions. So that was another episode of Bitcoin Fiat and Rock and Roll, bringing Europe's perspective on crypto adoption and blockchain adoption and TradFi and the general economy to the world. Thanks a lot for joining in and tuning in and thanks Fabian for joining. Thank you, Manuel. Cheers.

All rights reserved © Bitcoin, Fiat & Rock´n`Roll - bfrr.info