Citi Digital Dispatch Episode 9

00:03 Ryan Rugg

Welcome to Citi's Digital Asset podcast series, a show about all things digital asset from the team here at Citi. I am your host, Ryan Rugg, Head of Digital Assets for Treasury and Trade Solutions at Citi. This podcast is for everyone: entrepreneurs, corporate treasurers, strategists and policy makers. We explore digital assets in the financial sector from tokenization, digital money, evolving regulatory market, insights from experts, and much, much more.

Until now, payment networks have been siloed without the right interoperability. We believe the future networks will be multi-asset, multi jurisdiction and we are inviting a handful of industry experts to talk about their predictions for what this future will look like and how they think we're going to get there. The future of treasury requires an interconnected global system of networks. And industry coordination is critical. Our new mini-series, The Future of Borderless Networks, features industry experts who are at the forefront, driving innovative real-time solutions into national and cross-border payment systems.

Welcome to the Future of Borderless Networks for Digital Dispatch. Today we are here with Rhomaios Ram, founder of Fnality, to discuss the future of borderless networks. We believe the future of networks will be multi-asset, multi-jurisdiction and always-on and we are inviting a handful of industry experts to talk about their predictions for what this future will look like and how they think we are going to get there. We're honored to have you. Thank you for joining.

01:35 Rhomaios Ram

No problem. Thank you very much, Ryan. And by the way, just call me Rhom.

01:38 Ryan Rugg

Thanks, Rhom. I appreciate it. Can you give us a little background on Fnality, how it started, the vision and kind of where you are today?

01:46 Rhomaios Ram

Well, that's, I don't think I'm going to do that in 5 minutes but let me let me have a little crack at that. So, Fnality was basically born out of a small handful of banks, basically, that were looking, and this is going back to 2016 now, that were looking at blockchain and all the potential of it and thinking there's, there's enormous potential for us to, you know, ease our operational burden, et cetera, et cetera. If we can just get everything into blockchain, it will be easily reconcilable. But actually, if we have to still make the payments on the traditional, in the traditional way through traditional RTGS or other existing payment systems, we're not going to get as much operational save as we thought we could. So how do we get payments on chain but in a way that banks can use it? And Fnality was born to basically answer the question of, well, what do you need for banks to make payments between each other? And then also, is it even possible to do that? So, you've got to remember, I said 2016, 2017. This is the time before stablecoins and the time before Central Bank Digital Currency and all, all of all of those types of things. The fundamental answer to that question was basically you need to have three things. Two of them are kind of necessary and one is philosophical. So, the first necessary thing is for banks to pay each other they need to have risk free payment asset or settlement asset. And so, it needs to be basically something with the credit quality of central bank money. The second thing was you need to have something called central settlement finality, hence the name of the company and what that's all about is essentially ensuring once you've made the payment, the person you've paid can't come back to you and say I don't want the payment and, you know, I don't want the payment anymore, give me back my goods. So, you know, when you go and buy something at the store today, you can exchange it in 30 days. You can't have that in financial markets, because otherwise you could imagine if somebody unravels a transaction late in the day, it would have a knock-on impact all the way through the entire financial market.

And the third thing, which is more the philosophical one, was at that time it wasn't clear if there was going to be a single blockchain or multiple blockchains, but we had the view that in all likelihood there were going to be multiple blockchains for different use cases, et cetera or different situations.

And so, whatever we built needed to be interoperable with all of those different blockchains so that people could basically have what I call a single pool of liquidity where they could have all of their money in one place, but then use it all the different venues they needed to use it without splitting the liquidity amongst those different venues.

04:16 Ryan Rugg

That's really interesting. Yeah. I started my journey in 2016 as well and, I'm sure. Did you start on public chains originally when you think about like blockchains overall? Because when I was at R3, we started on public chains and realizing from scalability, privacy, for largely highly regulated institutions like banks, it just wasn't possible.

04:35 Rhomaios Ram

Yeah. So, we also. So, we also thought that there was going to be or possibly public blockchains, but a few conversations with the regulators kind of shifted that, that notion. Essentially what we realized is no matter how safe you think the public blockchain is, and, you know, there's good, good reason to say that, you know, the public blockchains have never had fails and all the rest of it. You could never guarantee with absolute certainty that everything's going to be all right. Therefore, you need to have a chain that can be closely monitored and somebody's got to be in charge of it. And then secondarily, in, in financial markets, at least in wholesale financial markets, it's important to know who the participants are because you need to know, you know, basically the identity is closely tied to who, the ownership of the different financial products and so on. So, you needed to have a permission because you need to know who actually owns the particular asset or money that you were shifting around.

05:32 Ryan Rugg

That was the same for me. KYC, AML, sanctions, all that, you know, we just could not get, you know, large institutions comfortable with public chains and, you know, at the time we had developed our, you know, kind of our own protocol because of that. So, when we think of like large enterprises like what are some of the friction points that you're solving for kind of in the network?

05:52 Rhomaios Ram

Yeah. So, like I said, when we first started this off, we were thinking it's purely operational. So, you know, banks have like many people in operations and they're doing all of these reconciliations. You know, you can imagine the trade process. So, you agree the price on the transaction, then it goes to your middle office and they check the details against what the trader said, then they call up their counterparty at the other bank. Is this a transaction you are actually doing? Yes. No. Then it gets fed into kind of the engine room. And you know, the transaction gets split into like amongst 45 different systems, you know, some go to risk, some go to finance, you know, others go to the payment systems, et cetera. And then when it comes time to actually settle the operations folks have to refine the people they actually transacted with, and make sure that everything reconciles against very expensive process, quite time consuming. Not to mention you've got to move liquidity around, et cetera, et cetera. So that was the original idea was can you make that much more simple because you have only one record of what the transaction is and everyone agrees with kind of a golden source type idea.

As we got into the Fnality thing and the whole idea of a digital, you know, on chain cash that has central bank like properties, we began to realize actually this had the potential to massively save banks costs in terms of liquidity. So you wouldn't have to spit your liquidity amongst multiple different correspondents and venues, and so on, and also provide balance sheet savings because you wouldn't have to keep the money, you know, somewhere else for extended periods of time, so T+2, T+1, et cetera, et cetera actually has a financial cost that nobody's benefiting from. It's just a loss overall for the system.

07:31 Ryan Rugg

It's really interesting and I also think I find it fascinating, the work that Fnality has been able to accomplish with regulators, especially the ECB. It's really unique, put you in a very unique position compared to most, you know, the regulators, I would say globally have had various approaches to different kind of entities, you know startups, large enterprises. Can you share a little bit about your journey and how you got them comfortable with Fnality to actually, you know, kind of approve you?

07:59 Rhomaios Ram

Yeah. So, so, like I said, it's been a very long journey. So, we started talking to multiple regulators actually back in 2017, so ECB was definitely one, but we were also, we're located in the UK, so we're talking to the Bank of England and also the Federal Reserve. There was a few others, actually. We chose our central banks and, you know, sort of the participants based on where we thought the central banks were the most advanced in terms of blockchain development. And they had sort of reasonable flows in traditional markets. So, it was a three that I said plus Canada and Japan.

At the time, there were two big participants that were Swiss banks and, you know, Switzerland was obviously included in it. Now we're down to one, so it's slightly, slightly different situation and it's been a process of sort of discussion and both sides learning about how the other works in this context to figure out a place where we could get comfortable that we were doing the right thing. I think the biggest thing that we did that enabled us to get where we need to get to has been to try and fit everything into existing regulation rather than trying to get the law changed or, you know, find some other path through it all. So, once we realized that we could be regulated as a regular payment system, so we're regulated under something called the PFMI, the Principles for Financial Market Infrastructure, which is like a global sort of standards, it became pretty easy then for the regulators to put us in a box and they have a set of policies around that and assess us on the basis of that. Of course, there's still some novel aspects to what we're doing. You know, the whole DLT thing, et cetera. The fact that they're all going to be linked up across the globe and so on, you know, and all of that's taken time and indeed still part of the conversation, but for the most part, the regulators are reasonably familiar with what we're doing, and so far haven't said no.

09:55 Ryan Rugg

Which is great. So, it sounds like a lot of education in the early stages, right? Explaining what you are doing and also, you know, comparing and contrasting it to almost TradFi as we call it, right, to things they understand from a more traditional basis to like showing that, you know, blockchain is the way that it's moving is not recreating the wheel per se, right? Just making things more efficient, more transparency, faster, always-on infrastructure to kind of match that, you know, speed of digital commerce. So, we have a lot of people on Digital Dispatch talking about different networks. How do you think of Fnality compared to the Regulated Liability Network, compared to Agora? Like all these different initiatives? And I know you and I talked kind of a little bit before about this where they're solving different kind of pain points within the industry. So, like how do you think about it?

10:44 Rhomaios Ram

Yeah, I mean, but both Agora and the Regulated Liabilities Network, a very big picture of visions of how the whole thing could be in the future. And actually, I think most people involved in digital assets can kind of agree that in the long run that's probably where we're going to end up. I think Agora goes slightly further than the Regulated Liabilities in the sense that it considers, you know, retail payments and all of it, yeah, all of that market, et cetera. I think Regulated Liabilities probably stopped short of retail, but definitely goes to all, you know, sort of, you know, regular companies and so on. Where we fit in, we believe is, so there's many, there's many components to all of those things if you're going to make those visions possible and the different end users have different needs. You know, at different aspects of it. What we're doing is the piece that allows, I guess it's kind of the foundational piece for all of it. At the end of the day, if you're making payments between clients that have different financial institutions, different banks basically, those banks are going to need to settle their liabilities on something. So, in the traditional world they settle it on the RTGS. So, in the US they settle on Fedwire. In the new world, they're going to have to settle on, or they don't have to, but you would, you would lose a lot of the benefits unless you settled on something digital. And so, we're providing what's effectively a private sector answer to wholesale digital currency.

12:08 Ryan Rugg

See, because if you think about it like in country liquidity efficiency, settlement is pretty efficient like Fedwire and other, you know, utilities. But when you start going cross-border and getting multi-banks, that's where you start to get the friction, right, from bank holidays to weekends to time change. So how do you connect kind of like all them on one to kind of add that efficiency, I think is really where, you know, the future is. So, when you think of, you know, traditional financial institutions compared to smaller, I would say more agile, how do you think about when it comes to disruption and innovation in this space? Do you see a difference kind of between the two?

12:48 Rhomaios Ram

So, I mean, good, good question. I mean, so I can't see a world where or I find it very difficult to see a world where some plucky start up is going to kind of dominate, you know, kind of what traditional banking has done for you know you know for centuries in some cases. So, it's hard to see that a bunch of fintechs are going to kind of take over the world. It's also hard to see that banks as they are today and other large financial institutions can innovate in a way that's really in touch with what their clients' needs are and can innovate fast enough to find the right way to satisfy their clients' needs as their clients' needs a kind of constantly changing. So unfortunately, my answer is it's going to need a bit of both and actually, you know, we, my company is basically come from a, you know, a consortium of banks that basically come together to make this whole thing happen. But even us on our own, it's not enough. There's a whole ecosystem kind of out there and it needs all the different players to all sort of move (...), you know, not necessarily in lockstep, because we're never going to be able to organize that, but they all need to move at the same pace to shift the whole market towards digital in the way that you know some of the, what do you call it, the entities that you talked about earlier have envisioned it so.

14:08 Ryan Rugg

Yeah. You know, I think about, you know, kind of like the evolution like within, like, even like my role within, you know, R3, to your point like a consortium of banks, you know. Then going to a large global system integrator like IBM, where they actually implement and scale technology across the board to like being in house. And I think it's extremely, you know, positive that you're seeing a lot of these large enterprises across the board like you know, I know you come from the TradFi world also. Move into the startup, move into the fintech, but also bring people in house, right, to understand the technology, understand how to build it, and stand up because it is going to be a partnership, right? Like how do you bring best practices from kind of the startup world, tech world into large banks to modernize? But in a safe and sound way, and I think that is going to be a key differentiator as we all kind of move forward together.

14:54 Rhomaios Ram

Yeah, completely, I completely agree because the model that we're talking about is a very different model. It's very hard to imagine it when you're sitting inside doing the things the way that you've kind of done them. You have to have some outside perspective. So, I kind of agree. I guess your assertion is that it needs to take some different types of people, different ways of thinking because of their, you know, their previous experience, et cetera. I completely agree with that. It's very hard. It's obviously not beyond people to do it, but it's very hard to really change the mindset of what you're doing in the context that you're already in.

15:26 Ryan Rugg

But it's also another flip side been extremely beneficial for me to be within a bank coming from a tech world to understand how these systems work, to understand where potentially, you know, innovation could stimulate, you know, thinking about, you know we talked about Investor Day recently like, you know, our crown jewel is our network. So how do we envision that borderless network, what is the next evolution of it? And you know one of my favorite lines from like Steve Jobs is, you know, you can't connect the dots looking forward, only backward. So, like how do we get to that end point? You know, you and I were joking. We know what the end point is. It's like where you have this multi-asset network, instantaneous settlement, completely frictionless, always-on. But how do you get there, right? Like how do you take these iterative steps throughout this journey to kind of get there?

So, you know, we talked about like when you started the journey, there was no such thing as like stablecoins or what's now CBDC, Central Bank Digital Currency. Do you envision a world where you have all these different types of digital assets, if it's crypto, if it's, you know, stablecoin, CBDC, tokenized deposits, all on one network, or do you envision multiple networks out there?

16:35 Rhomaios Ram

Yeah, I mean, I guess it comes down to how do you define the network. So, I do see them all able to interoperate with each other in some way. So, all the things that you just said, seamlessly, et cetera, et cetera. So, I think kind of most people that I know in the digital asset space kind of have a view that's very similar to that. There's some difference about is it all on a single protocol? Or is it on multiple protocols that are able to interact? My personal view is it's hard to see that it will be on the, it's a little bit like the Internet, right? So, the Internet sounds like it's the same thing for any user, the Internet is the same thing, but the Internet in China is not the same as the Internet in India, which is not the same as the Internet in, you know, kind of in the West. So, in that way I can see them being sort of slightly different, and you know, almost by definition different jurisdictions will want to control the environment in the you know in the way that they see fit for their, you know their particular, you know, the way that their people want to live and so on.

17:36 Ryan Rugg

Yeah, I definitely agree. I think there will be multiple networks. That interoperability piece is like key and it keeps coming up as a thread in all these conversation on how these multiple networks come together and the ease of adoption too. You know you, we think about, you know, the way that we've set up Citi Token Services, we've completely obfuscated all the complexity of a blockchain away from a client. They use API's or via CitiDirect, and that was by design 'cause we think like phase one, you know, or phase zero, however you want to consider it, like clients, you know to host nodes or have wallets, you know that adds additional operation, open additional accounts like, clients already manage massive amounts of accounts across multiple banks, multiple jurisdictions, especially, you know, our large multinationals. So how do we kind of like streamline that process? So where do you think we are in our journey? Like this is one of my favorite questions. Like you know, you think about like, you know, the Gartner hype cycle and like, you know, where are we on that point of like that? Are we on that tipping point like leading towards like mass adoption? Are we at the beginning of it? Like, where do you think we are from your perspective?

18:41 Rhomaios Ram

I don't know that we're at the tipping point of mass adoption, I think, but we're definitely, well, so people often ask me what, you know, what do I think about the crypto space and how they're going to converge and all the rest of it? So, I'm definitely a believer that ultimately there will be some sort of convergence and interoperability between these ecosystems. It's very hard to imagine that, you know, things that people like BlackRock or WisdomTree, or all these other guys are doing won't somehow be connected to what happens in wholesale finance et cetera, et cetera. I guess what I'd say is though, there's quite a bit of the journey to go. How long that, you know, the $60 million question or probably more than that, it's like, you know, you know, how long is that journey? I don't, I don't know. The analogy I kind of always use is I always imagine the crypto space, DeFi space, crypto space is like a bullet train and the traditional finance space is like a traditional steam locomotive. So, the bullet train took out off at the station. It's going a hundred 300 miles an hour. It took a corner too fast and kind of came off the rails. Then all of the helicopters and the searchlights came out and picked up the bodies and all the rest of it. That's back on the track and it's picking up speed again, so it's going, but it's a long way out of the station. The traditional finance thing, it's just moving and it's out of the station. But it's an enormously massive, you know, locomotive and what that means, if you remember your physics, is it's got an enormous amount of momentum. So, it's actually quite hard, even though it's going slowly, it's quite hard to stop it. So, for me there is, you know, it's, you know, slowly getting sort of to the right place. It'll be sometime maybe before we catch, you know, the traditional space catches up to the crypto space, but it will kind of eventually happen. And really where we are in the hype cycle is kind of where do those points converge.

20:28 Ryan Rugg

I agree, and I'm definitely extremely optimistic with what's going on this year. You know, to your point, BlackRock, WisdomTree, you're seeing large enterprises kind of enter the space, not just retail DeFi. You're seeing the (...) ETF. So, you're seeing more and more of these large enterprises who are, you know, Citi's clients enter this space which gives me, you know, makes me much more optimistic than I think about, you know, we've been in this space together as long, like the peaks and troughs that we've seen, crypto winter where, you know, also, when I was at R3, you know if we didn't close the deal, we were closing the doors. So, it was like, you know definitely I'd say it's much more positive momentum. So, one of our favorite questions to ask all our guests is what is your boldest prediction for the future of digital assets? It can be outlandish as you want, or it can be, you know, kind of within your swim lane perse. Whatever you, whatever. I, we've, we've had, we've had the whole gamut.

21:21 Rhomaios Ram

Yeah. Yeah. Yeah, I'm. I'm sort of. Yeah, I'm going to come out as Mr. Boring now because I'm sort of in the, I don't know whether it's necessarily in the swim lane, but I really believe that, well, I do believe that the whole of the financial markets is going to shift. I think it's necessary for a whole bunch of reasons. You need to build more resilience into finance, et cetera. You're going to get that out of distributed systems. Part of it is out of other business models for all of the participants in financial markets still working, question mark, you know, so they, you know they need to find a way to continue going. And ultimately it's really going to come from the thing that you were talking about the clients, right, like the clients just don't really care about, you know, the problems of the different institutions, what they care about is, can I do the thing that I want to do at the time that I want to do it in the way, way that's most convenient to me. And it's going to be very hard to continue that kind of delivery of excellent service on, you know, traditional models, especially when it's contrasted with what's happening in, you know, with new technologies. So, for me it's, I'm not really explaining any kind of new vision, but I believe that this is, yeah.

22:31 Ryan Rugg

But what I'm hearing is like we're at an Inflexion point with technology. You know, if it's blockchain, if it's AI, if it's quantum like the way that financial systems run, the way that financial models are done, it's going to change, right? To your point, it's all based on client needs, what our clients want, how we're going to do it. So, greatly appreciate the time, Rhom. Thank you for joining. I hope everyone enjoyed this episode with Fnality. We really appreciate you for tuning in. Thank you.

22:55 Rhomaios Ram

Thank you.