POD OF JAKE
#176 - JEREMY ALLAIRE
AI-GENERATED TRANSCRIPT

Jake 00:16
Thank you, Jeremy, for coming to join me on the podcast today you are the co founder and CEO of circle, the financial technology company behind USDC, one of the two most prominent stable coins in the world, and you've been in the space for over a decade now circle is really one of the oldest companies in crypto. And a lot of people who have gotten involved more recently, might not sort of know that. So looking forward to diving into all of this, but before we get too deep into circle, or USDC, or anything, I think it'd be great to hear your origin story. For those who don't know, you, just the earliest, you're willing to start to where you are today and talk about some of the decisions you made along the way.

Jeremy Allaire 00:52
Yeah, sure. I mean, I'm, I'm happy to, to start relatively early. I think, you know, maybe the key is sort of just generally kind of how I got into, got exposed into sort of technology and entrepreneurship a little bit. And then kind of the path that led me on. So I was, you know, I think, very lucky, in that I was sort of born into what I call the apple two generation. So when personal computers were, were just coming out, you know, the Apple two is like a pretty cool computer, and my, my father got one. And so I had an opportunity from a very young age to just, like, learn about the kind of empowerment that came from, you know, from, from personal computing. And, and from, you know, very early on, I was also interested in, like, how to connect that to the broader world. And so, you know, got involved in pre internet, online communities, and, you know, all kinds of fun stuff. And I think also was inspired by, you know, really the, the the kind of heroes of the personal computer revolution, who had kind of talked about the fundamental empowerment that came from putting this kind of tool in, in everyone's hands and what that could do to society. And so, I was sort of followed Steve Jobs and Mitch Kapoor who invented you know, Lotus 123. And obviously, you know, Bill Gates and Microsoft story and others, so kind of had that as a backdrop and was sort of self taught technically. And then was very, really lucky in, in college, that I actually got access to a high speed internet connection into my dorm room. And this is in like, 1989 1990, right in 1990. And back then, the Internet didn't really exist. And as we think of it at all, today, it was a sort of research and education network

that was connected to military networks. But there was sort of this crossover of scientists and researchers that were connecting their networks around the world, to this through TCP IP, the open protocols. And so I became enamored, I was studying political science, economics and philosophy. And I was studying kind of the collapse of the Soviet Union. And that kind of emergence of the kind of competitive forces of different economic systems and political systems. And I happened to be quite interested in what was happening at the kind of end of the Soviet era. And what was really powerful in 1990, this is just as revolutions are really sort of starting to happen in significant ways. But I, I was able to connect with people who were who were in the Soviet Union, I was able to connect with people who are in kind of conflict zones in other places, and the protocols that were available to do that were like, you know, the Usenet news Protocol, or, you know, email, or what are called listservs. And like these sort of communications tools, through these open networks, but I was just completely blown away by the possibility of an open network that was built on open protocols where you could all you could just read the specs of these protocols. And there were like libraries and software that anyone could implement. And you could just, if you had a computer, I was just a guy with a computer in a dorm room, I could connect to all these and then all of a sudden, there's this whole world. And so that was like a revolutionary experience for me. And I just found myself, you know, becoming really obsessed with open computer networks and all the kind of protocols and the possibilities of disintermediation, and decentralization of information and communications and things like that. So that that was sort of the backdrop and then you know, I got in I got involved in entrepreneurship also very early, like right out of college. And partly I attribute that to my own. My dad, actually who had you tried a lot of different things. And he had started his own software thing. And he just took risks with his career. And I saw like, oh, you could like try anything, it didn't really matter. You didn't have to, like have a career for one thing for your whole life. And I also had a Montessori education, which I think contributed to a little bit of my mindset, when it comes to exploring things and taking risks and stuff. But anyway, I think I, I found like, when, when I graduated college in 1993, like the, the, what spoke to me was the open Internet. And I was like, I'm gonna commit my life to working with this, there was no web

that didn't exist, although there were early web browsers, like the CERN web browser was the first graphical browser on a Mac, it was it was really limited. That was the one that Tim Berners Lee had created. And then mosaic came out. And it was one of these moments where, you know, I literally the the weekend became available to us on a Windows computer, I had it. And again, one of these like, Aha moments were like, okay, like all these ideas that I had about how how the Internet could be an open network, and you could basically build software applications that connected it, that that became really clear to me. And I then pursued the idea of essentially the web as an app platform that the web would become like an operating system that you'd actually be able to write code that was running on servers that then like could distribute software out to any end computer anywhere in the world. And people can interact with it, people can then communicate through those apps. So got very excited about that. And in, in 1994, and that led to the first company that I helped to co found a layer Corp, which we built called Fusion, which was the first commercial web application server, so like an app server, which is sort of how you take code and run it on a server and connect it to databases and run transactions and render dynamic web pages. So it was like a very revolutionary product. And then we built out like a, you know, some of the most popular tools for building the web, basically building websites, apps, infrastructure, content delivery systems, and grew that took that company public, in and and then eventually merged it into Macromedia, which many people know from like, tools like Dreamweaver, or flashplayer, or other things that then went on to be part of Adobe, but I was a CTO there. And I think similarly, there was sort of another like, I kind of think of that web one data epic, as sort of the birth of protocols like HTTP and HTML and the web and what that allowed and a lot of entrepreneurship came from that and I was sort of a, you know, a tools and infrastructure provider to everyone who was coming up with ideas and web one Dotto and we had millions of customers around the world that use our software. And then in in, like 2002, I was as CTO of Macromedia, I was part of kind of launching a new platform for how you could do essentially, like really rich immersive media and communications applications and video applications and other things that only became possible in the context of sort of web two Dotto, so the idea was to a information exchange and publishing two way communications, not a one way kind of read only,

but it was sort of read write and, and I actually, in those days knew people like Chris diction, and, you know, the founders of Twitter and others, who were, who were involved in kind of the first apps that kind of took those ideas forward. And I focused on the, like the media side of it, but there was, again, web to that it was a convergence of things, it was broadband, it was Wi Fi, it was, you know, improvements in software, technology that could deliver like a higher fidelity user experience. So that led me into kind of wanting to kind of transform how video and Television Distribution happened by moving that to the internet. So the first was sort of how do you move content? And how do you move software delivered to the internet? And then the sort of next was how do you move actual, like really rich forms of communications to the internet, again, on this idea that open networks with open protocols that are decentralized, that anyone can plug into any device that can speak that software protocols can plug into could transform an industry? And, you know, what I worked on also, you know, kind of became a widely used piece of software and services and went public, as took that company public as well. But it's part of a broader set of things that we're going on around that that new set of possibilities that that happened on the internet. So that's sort of like the overall origin of kind of my entrepreneurship and early technical beginnings and And, and things like that. But that that all kind of predates predates circle as well.

Jake 10:06
Right? Well, well, first of all, I appreciate the story. And it's a great one and unique, I would say, maybe not like completely unique, but very different from the vast majority of stories, origin stories I get for people on the podcast just in that you've sort of experienced the generation of technology, when it comes to the internet that a lot of my guests, you know, have it. You know, you talked about accessing the internet in your dorm room in the early 90s. This was like you said, you know, pre browser, pre, pretty much everything that people associate the internet with today. I not only did you witness that, and observed that, but you were a central and integral part of that, and building these tools, like you said, for, you know, all the way back in web one. First question, you know, I've got a bunch just coming from the story alone, and might have to scrap the game plan that I had coming in. But when you rewind back to, you know, those

years, like, whether it's in college, or soon after graduation, working on your first company, I imagine, you know, here's this new thing, that you're obsessed with the internet, and you really believe in it very strongly. But it hasn't, like, you know, taking over the world yet, by any means. And so you have some sense of faith that the genuine innovation here is going to be it's sort of inevitable that it's going to grow. And presumably that translates to your sort of perspective on crypto dating back, you know, again, a decade from from today, when when Bitcoin first came out, I knew, you know, you went and founded circle. But inevitably, in those first 10 years, there's, you know, some level of volatility, maybe a little bit less so with internet, because there wasn't sort of like prices associated with everything like there is in crypto, but even still, there's regulatory uncertainty, things are kind of slower than you might expect them to be in a lot of ways. So would you say that now, you know, having weathered these first 10 years and more than weathered but thrived in in these first 10 years of crypto and and building something within it? Is it a similar feeling of sort of faith? You know, with moments of doubt throughout that, that were someone who didn't live through that might not have as much confidence when they have those doubts that you know, crypto is for real? And it's coming in? It's sort of inevitable? Do you think that that's similar to what it was like with the Internet? And you actually saw it come to fruition? Or was there? Are there elements between the two that are kind of different? Maybe from like, a regulatory perspective, you're a little more wary that we might get this incorrect? from, like, a US perspective, whereas we got the internet? Mostly correct.

Jeremy Allaire 12:35
It's a great question. And, and I think, my experience, it's interesting, because obviously, like, as a whatever, I was, like a 23 year old, you know, getting started in technology, entrepreneurship, and the early internet, etc. Like, I didn't know much of anything, you know, but I had really high conviction about, like, how the web open how the open internet, open protocols and open software and, you know, the web itself, like how that would become like, this application platform, and what that would do and all the opportunities that would come from that extremely high conviction. And if you ask anyone who worked with me, then or knows me from then, you know, I was super

evangelist, right? Like I was, I believe, strongly and I tried to translate that conviction into like, Okay, how do we like, how do we move this, like forward to then like, the next step to like, fulfill that vision, knowing that, like, there were so many things that weren't possible at the time, right? Dial up, internet was awful, right? You could, you could barely squeeze anything through that little thin pipe. And there were no mobile devices, there weren't there were so many things that were that were really hard. There was no wireless, there was nothing. So there was simultaneously like, you know, even delivering what you could even within the constraints, the literal physical constraints, the capital constraints, other things was enough to kind of fuel you to kind of keep keep pushing and going on. And I think, you know, even though there weren't like, you know, asset prices, there were stocks, right, people were buying stocks, and there was a speculative gold rush. And there were, you know, people with a PowerPoint, as they'd say, rather than a white paper, but people with the PowerPoint could like IPO and like you had a speculative boom and bust. And you had a huge run up in in expectations, all the transformative things that could happen. And then when, you know, a combination of macroeconomic conditions change, like the interest rate environment and the macroeconomic environment changed, and people realized, like, all the big ideas that people were putting out there that were people were putting huge amounts of capital behind. They were just going to take a lot Longer than people thought or people just lost faith entirely. Right? So you had a huge crash 99 You know, 95% value destruction in most companies, not just scores and scores of companies just out of business and so on. And actually venture capital just stopped wanting to invest in the internet, right 911 happened, it was all then became about enterprise security, like, it was like this whole different thing. And ecommerce was kind of declared like, basically, a niche, a lot of the ideas are on digital media are considered totally pie in the sky. You know, it was it was really written off and the risk takers, ie the theoretical risk takers, which the real risk takers, the entrepreneurs, but the VCs, you know, sort of stepped away, right? Almost entirely. Now, I had like higher conviction than ever in like 2002 2003, that, like, wow, the conditions are really emerging for this next generation of this, that's really going to fulfill a lot of the ideas about how you can actually deliver like high fidelity communications, media

software, all this stuff, and just kept pushing, pushing, pushing. And so kind of tying it to crypto, like, what was interesting for me, when a lot of the ideas crystallized around circle, in in early 2013. Was, I saw it very similarly to where we were when like, the first when mosaic first became available, right? Which was to say, like, the technology is really raw. And like that, it's there's so much, there's so many ideas on what can be built. And if you really like listened closely, and you listen to the technical communities that were early in crypto in 2013, some of the ideas are now like flourishing, right? smart contracts, extensibility, extensible blockchains, like more scalable, you know, even things like zero knowledge, technology, like all these things were talked about, but but we're kind of, not there. But as a technologist, I could look at it and say, Okay, I can see all that all those things are gonna happen. And I'm patient. And now that I'm a little bit more mature, and I have more experience, I'm patient, to sort of see this take longer. And, and, you know, one of the things that was compelling to me about founding circle was, it was going to take a long time, because it was, it was such a big change that was going to take place. And it was complicated and hard and involve changing laws. And I figured, wow, that's going to be really hard, changing laws all around the world to accommodate this new internet financial system. And what could come from it. Like that was actually compelling to me, as a founder at that stage, having taken two companies public was compelling to me that, wow, this could be even more impactful than the web, right? And I told everyone who I founded the company with, and all the early employees, like this is going to take 10 to 20 years. Like don't don't join this thinking like this is just going to be this this, like overnight success, it's going to take 10 or 20 years, you know, I hope that we can have really great products that are along the way that move us towards the vision. But like it's going to, it's going to be hard it's going to take it's gonna take a while like the technology that we wanted to have in place to launch what was now USDC. Like that didn't exist when we started, we thought it would take three, four or five years. And it did it took like five years before the technology of blockchains even got to the place where we can even execute the first core idea that we had, basically.

Jake 18:37

Yeah, it's really interesting. And I'm curious the difference between you talk about like with crypto, a lot of the early people in crypto, just Bitcoin at the time, pretty much we're talking about some of these ideas that are now you know, 10 years later, 15 years later, finally coming to fruition. So there's some, you know, group of sort of future applications or technologies that are somewhat foreseeable, if not immediately possible. But then there's a whole set of other applications, technologies, whatever you have, whatever you will, that that is sort of unpredictable by nature, because they come from these technologies, that maybe these predictable technologies sort of lead to these unpredictable technologies. And, and crypto, I think, like a good example of this is like, you know, NF T's sort of blindsided a good number of people, at least in their, in their scope. And there were, you know, early experiments long before like the 2020 2021, hype cycle around NFT use Kitties and things like that, but I don't think people saw that as being like, the Trojan horse that would bring crypto into a lot of the mainstream or something like that. And presumably, there's other you know, things to come for sure. So I'm curious, how do you, you know, with the internet, for example, like, what were some of those foreseeable things versus the unforeseeable things and how do you think about that in terms of crypto today?

Jeremy Allaire 20:01
Yeah, I mean, like, I think I mean, it's interesting, right? Because sometimes, like, there were a lot of ideas in the early internet about, for example, like how you could do like, you know, voice over IP, for example, like, it seemed obvious Oh, yeah, you're gonna be able to do voice over IP. And there were, there was just tons of companies that tried to do this and tried to do all these things, et cetera. And, like, the tech wasn't quite ready, right, the the software availability wasn't quite ready, they were just like, a lot of little missing pieces. And then it's sort of like a timing thing. When enough certain things come together, and then someone executes the right user experience, Skype was the product, obviously, that that really did that, that like really takes off, it's really easy for someone back in, say, 1996 1997, to say, everyone's gonna be able to have like software, they can communicate over the internet, and like, and you can even have really, really smart computer scientists like hammering away on that problem. But like, it's just, there's just a

convergence of things that have to happen to make it ready for that, kind of like that, that take off. And I think like, things that that occurred, you know, later, like, there were so many different takes on communities, and sharing information and communities that happened online Yahoo groups, you know, it was like a huge thing, and geo cities and these first generation internet kind of online communities and then MySpace, and, you know, but cracking the code on like, how to make, you know, your trusted group of friends share photos together, like that was the thing that that really kind of caught fire. And that was hard to predict. But it was all in a space where like, everyone seemed to like know, oh, this idea exists, we're gonna be able to do this, right? I think similarly, like, there was sort of blogging, right, everyone thought, oh, blogging is this, this, and I was very, I was very active in the birth of like blogging standards and blogging software. And was doing video blogging, from like, back in 2000, to 2003. But the kind of concept of micro blogging came along, and that was like what Twitter was, and so there's like, oh, there's this thing micro blogging, and it was like, Is that really what people want to do is like these, like 140 characters, like an SMS thing that you're doing? And like, the clearly, like, it was like a form factor that like worked. And it exploded, right. So that was hard to predict. But like, again, like there were a set of conditions that really kind of came together. And then mobile devices sort of came online at a time where like, SMS and that form of messaging, and can the user behavior could all kind of tie together and make that work? And obviously, other examples would be, and I use this one a lot, because I talk in ties into your question, I talk a lot about how, you know, once you have, you know, these public chains, and you have programmable money like USDC, and you have smart contracts, it's like, wow, what an incredible creative surface. Entrepreneurs and technologists and developers are going to invent so many new uses of money that we've just never thought of, right? We don't even know what they are yet. And that's exciting. Like, because people asked like, what's going to be the killer app of stable coins? Or what what does it mean that you can have programmable money? Like what are you gonna be able to do? And I? My answer is, it's sort of like asking someone like, in 2007, like in the iPhones coming out, or 2008, when the iPhone is coming out, like what are you gonna be able to do with like, like, the ability to put a piece of software on on an iPhone, right, there was

not even an app store yet when the iPhone first came out. And then when the apstra came out, that was right, in the generation of iPhones, where you had 3g, so you increase the bandwidth a little bit, and you had a GPS they put in it and, you know, people are like, Oh, you're gonna be able to replace your Garmin GPS in your car and have like, turn by turn directions from your phone. Wow, that's really that'd be great. But actually, no, it was, you know, Travis, who invented Uber and like, revolutionize the transportation and logistics and delivery and like, the huge changes in society, but no one no one can quite see it. No one can quite see it because the pieces weren't all there to put together and that's what I where I think we are today with the crypto economy. And where we are today with programmable money is the pieces are now coming together like good UX, scalable blockchains like you know, kind of like these new legal forms of digital money in the form of stable coins and, and, and developers are just now starting to get unleashed on it. And so like, I actually see like this kind of exponential curve over the coming years that's going to be like from all this invention that's going to happen with new utility for money that we just haven't seen before. We haven't we haven't seen solved but like that's the creativity that's available to the world today. And anyways, sort of tracing back through a little bit of these different epics of the internet and what's expected. What's unexpected, the obvious ideas, like it's very easy for everyone to say, you know, like cross border payments are going to be instant and frictionless and free. And like, that's just going to work. Like, it's obvious that's going to happen, like, and it is actually happening. But like, which apps which utilities, which protocols? How's that, like, what's going to bring that to life, like WhatsApp brought to life, you know, billions of people with free communications, like so, there's these moments of kind of how the software comes together, which will will will have the kind of these dramatic scale experiences as well. Yeah,

Jake 25:44
it's interesting, you know, you take the Uber example. And to your point, like people could maybe more easily predict like, okay, you'll be able to have like your picture your Garmin with your phone, your directions to anywhere on your phone, and not ended up happening, you know, like Google Maps, or Apple Maps or whatever. But then beyond

that, was sort of less predictable on it. Yes. Like a great entrepreneur sort of pieced out together with the UX at the right time, everything like that. And I think, to your point, right now, it's foreseeable. A lot of the parallels to what we have in the financial world today, yes, you know, coming on chain, and sort of, you know, the web three version of all these things with defy and everything like that. But then it's the level and that probably will happen. Like it seems somewhat inevitable that that will happen. Just like you had Apple Maps, and just like you had Google Maps, but then the question is, what's the Uber? Yeah, the interesting thing is, like, you know, the Internet was mostly dealing, like in terms of information, and now we're dealing with crypto more so in terms of value, yeah, and this is like, just as the at the end for what information could sort of do was difficult to foresee, because it was just genuinely unprecedented. It's similar with value now. And like, we have this assumption of like, okay, we've historically, we have been able to, like, buy and sell things, and we use money for that. And, you know, the, you know, we have various financial tools. But how does that like that could fundamentally change in a way? That's, like, very difficult to foresee? Right?

Jeremy Allaire 27:16
Yeah. I mean, I completely agree. I mean, I think we take a few things as as sort of assumptions, right? So one assumption that we have is that the advent of stable coin networks, stable coin protocols, and this new form of fully reserved money, you know, that that effectively, like the blockchain networks, that that kind of those, those new protocols and assets can kind of perform on will, will drive the marginal cost of storing moving value to zero. And that will create an environment where you can very dramatically increase the velocity of money. And if you've sort of studied economics, or monetary theory, or you look at how central banks think about economic activity, this sort of money velocity is this really powerful thing. And I think by analogy, when you think about the internet, when once you got the marginal cost of like sending an email to zero, or the marginal cost of, of publishing a piece of content down to effectively zero, or the marginal cost of having a peer to peer voice, or video cost, effectively approaching zero, right, then like the net world output of those things, just like went exponential, right? When the

marginal costs of delivering a piece of software to a browser was effectively zero, right, then you could have software that could be consumed through browsers by billions of people. And so when you when you have that happen with with with value exchange, when you have that happen with the mechanisms of value exchange, it's pretty profound, right? Because this this radically higher money velocity, it's, it should lead to this, you know, the net world output of say, transactions that happen financial transactions that can happen should be multiple orders of magnitude larger than it is today. And that's, and then that creates all kinds of other like challenges, right? Because when money moves, there's risk. Okay, well, what there's, there's, you know, there's there's kind of kind of risk of people like you giving people money as a loan, and then them not paying it back. Right. There's risk in terms of like, people stealing the money, and there's risks of people doing illegal things with the money and there's certainly a whole bunch of risks. And so how do you deal with like this hypervisor, high velocity, globally integrated, globally interoperable kind of monetary model and deal with those risks? That's where I think some of this stuff coming back to one of your earlier questions is harder, right? Because Because you start you start intersecting with things like, you know, national sovereign until you start intersecting with geopolitics, you start intersecting with kind of fiscal and monetary policies that exist around the world. And those have been, those are built up into very deep, deep institutional infrastructures that are at the core of the nation state system. So it's not, it's not as straightforward as Hey, everyone just got Skype. And now we're all just having voice calls, right? So two people in crypto, I think, in some ways, it feels that way. Right? Once you're like, oh, I have a wallet, and I have USDC, or I have, you know, whatever, you know, digital token, and I, and I'm just like, interacting in the same way I do with other forms of software on the internet, it feels inevitable because it is inevitable. But there's, there's other challenges that that come within it, but I think so anyway, we take for granted this kind of this kind of this layer of infrastructure, and what that will mean. And we hope to be an important part of that infrastructure. I think one of the things that I think is really interesting is, you know, just like the internet, because everyone was connected, and you could exchange information. And eventually, you had some forms of of ways to like transact, like

credit card collection or, or things like that, you could really, you know, you can reinvent different using market place models, you can really reinvent a lot of different forms of industry, right, you can reinvent the ad industry, and how attention was packaged sold, you can reinvent, you know, obviously other content industries, but you know, even Alibaba and Amazon sort of this concept of like, deep, deep, deep longtail markets, where I might invent something, and I'm in one part of the world, and now it's available to everyone in the world, and like, and that's a really powerful thing. And I think that it's likely that how we think about markets for capital today are gonna look radically different in 10 years, that, like we have, we have notions of markets for capital. And some of those are, the markets for capital are kind of, you know, markets that are established and, you know, through very clearly defined products that are packaged and sold through banks, some of those are through different types of investment funds. And then, and then the actual capital markets, like debt, capital, markets, equity, capital markets, foreign currency, capital markets, right, these markets, but I think the building blocks that we have now, through on chain money on chain governance, you know, through programmability, through high velocity, money, through all these things, I think that really creates some very exciting opportunities to reinvent the way capital works more broadly. And I've used this metaphor in the past, but my own view is that, like the building blocks that we have with Blockchain networks and stable coins and, and digital commodity money, as well, are kind of like the the kind of technologies that we're at the birth of modern capital markets, and banking, the joint stock corporation, certain forms of kind of common corporate law, and then, you know, kind of terms of, of how, you know, banks and exchanges and other things could work. And they go further back in history, but like the the kind of explosive growth that happened with those, and it feels like we're we're really coming into an age of an internet financial system that looks more like the internet communication systems and software systems and information systems, but its financial system, and what the impact will will be on how kind of social political and economic organisms function.

Jake 33:59

Yeah, it's, I feel like you're sort of thesis around all of this is, it seems to align with a thought that I've had that I could not support with, like, in the technical way that sort of you have with like, you know, all the all the financial lingo and everything like that, but this concept of like, you know, you talked about marginal cost, you talked about these, these risks. And again, I'm like, if I'm thinking with like, the information to value analogy, you know, there are certainly risks. It wasn't all great that you know, information became zero marginal cost, it's on the net, you know, I'm pro technology I think, on the net, it's it's great that we have people are able to like freely share technology, share information and everything like this, but you know, on the on the transfer during like the migration from one year to the next, you have these power structures being disrupted, and with information who is more like, you know, the people who control the information and when you convert that over or to money or find it financial systems or value. It's the people who control the money. And the implications of that are sort of, like difficult to foresee in some ways. But you know, we're sort of, in the midst of maybe that now we're like, with information. It's not like the US government was controlling information. I mean, to some extent, maybe they were, but there's like a few networks. And you know, you turn on your TV, you have like a few channels and, and that's sort of like where you're getting your information. And now you go on Twitter and everything you see on these legacy channels, you can now double and triple check on Twitter, and whatever. And it's not, you know, it's a world of lower trust that sort of comes out of that, because this thing that you previously didn't really have the resources to question you do. And so that, like, there's pros and cons, you get, maybe better, more accurate information, but you have a lot less trust, there's no like single party that you can like turn to and just believe sort of, for better or worse. And if you apply that to money, it's like, well, what happens when you decentralized control over money. And given that that's like a major lever for governments. And so I guess, you know, there's a bunch of things that come out of that. But one thing is like, what the proper, you know, if you're like a big media company, at the start of the internet, you kind of want to go like all in on the internet, you know, it's going to be disruptive. But you'd rather sort of disrupt yourself and then just get disrupted. Like, ideally, if you could have built Twitter, as you know, CNN or

whatever, you would have liked to have done that. But it's not as clear to me like what the US should do, but like the, you know, the world reserve currency, you see something like Bitcoin come about, what do you do about that? You know, like, I know, there's, you know, as a, as a CEO of a big crypto company, you have certain, you know, preferences for what you would like to see, I'm sure, but from like, a US perspective, how do you even treat this new thing that's, you know, a threat, but also possibly a boon to your, you know, country? Yeah.

Jeremy Allaire 36:54
I mean, I, you know, there's a lot of different ways to look at it, if you look at it strictly through the lens of sort of the the United States as the sort of, with the dollar as a reserve currency, and, you know, kind of, you know, the United States ability to continue to kind of finance its debt and the kind of geopolitical consequences of, of dollar hegemony, hegemony or or dollar weaponization. And like, if I'm thinking about it at a national security level, or at a at a global, macro, political and economic level, right, I'm thinking about one set of major issues. But what I do know is right, I do need the dollar to remain highly, highly competitive. And there are more rising, there's more rising competition. And so the competition, right, there's, there's two to two ways. The dollar asset itself is effectively the it because it's Fiat, it's full faith and credit, right. So Full Faith and Credit is effectively like, Can does the rest of the world continue to believe in the credibility of the United States government's ability to repay its debts? Or what that really is, is? Does it believe that the United States economy will continue to be a thriving, innovating productive economy, such that the economic output and the ability to effectively generate taxes and repay debts? Is there Right? That's, that's sort of like you're taking a position on that or not. And so that has to do with like, the Do you believe in in the country's ability to support, you know, breakthrough innovation and economic productivity? And interestingly, I mean, the breakthroughs in AI the breakthroughs in synthetic biology, actually a lot of breakthroughs in crypto, a lot of breakthroughs in quantum the United States is playing a huge role, Evie, other things, China as well, but the United States playing a huge role. So right now, sort of, it seems like the dollar that that credibility piece is still there. And, you know, I was just at an event this earlier this week,

where, you know, the strength of the US economy is actually remarkable compared to so many other parts of the world right now. The flip side, though, is it's sort of a, it's a technological competition, right, which is the form factor of the dollar and what it means what does it mean to have $1, or a digital dollar, and this sort of internet technology competition that exists? And again, like, that's an opportunity set for the United States. And that's where I think, you know, having you know, US Federal stable coin laws is really powerful and important because it creates a framework for private sector innovation with good supervision and regulation and creating this new form of money, this digital cash equivalent money on the internet, that is dollar based and dollar back. So that's something that that can be looked at there. But, but I think more broadly, stepping away from the dollar issues for a moment, and just thinking about the bigger arena Yeah, I have like crypto and the technology of crypto and blockchain infrastructure and others. You know, I look at that more like, generalized infrastructure for the internet. And, you know, my view is that US policymakers, every, every government in the world, I don't, you know, I'm, I'm interested in sort of how this impacts the whole world, not just the US, I happen to live in the United States, but the government should be looking at that as Wow, there's like this breakthrough new infrastructure on the internet that allows for, you know, incontrovertible data and, you know, direct transactions on that data between people without an intermediary and, and Trustworthy Computing, and the sort of resilience from cryptography and information and, and, and the ability to prove things and attest to things. And the impact of that on so many different industries is really profound, like, let that grow, right. And even things like digital tokens as mechanisms of incentive design, and the ability to manifest organizational forms that are entirely mediated by software on chain and have governance mechanisms. And the like, this is really powerful, new material. And it's an it's like, it's like new material, where just like, you know, becoming a web company, or an online company, right, is like, building an on chain company is, is really what that might look like. And so I think it's that whole arena, when you step back, and you think about, like, what governments ought to be doing is encouraging the development of these new institutional forms, encouraging the development of these new systems of economic coordination, encouraging that, yes, like dealing with things like

data security, privacy, fraud, there's like real things to address with it. I'm not saying it's just like, everything should just be run wild. But I do think that there needs there needs to be a shift towards saying, Wow, this is a critical infrastructure layer, that for the next generation, the internet that is going to change our society and the economy, and even organizations as a whole work and how productivity happens in the real economy. That should be the view that that governments are taking. And right now, it's mostly just kind of reacting to the speculative pieces, or reacting to the fact that there are all these unregulated vehicles and venues that are being abused by criminals and fraudsters. And so there's real stuff that they need to react to. So I think that that's also important, you know, to address those, those kinds of things. But I think, you know, zooming out and seeing the bigger picture of, of what this what this kind of change represents is also important and taking more of a laissez faire approach, in some ways, like, was done with the internet in 1996. And the late 90s, by saying, We don't know exactly what's going to happen here. We know, we don't want certain, you know, we're going to have rules around criminal conduct or rules around, you know, certain types of of activity, but we're going to kind of really see what people can invent. And I think that, you know, for crypto more broadly, I think that's probably the right posture.

Jake 43:19
Yeah, there's a couple of a couple of directions. I want to go with that. I guess first, first and foremost, you you mentioned earlier, you know, the velocity of money, how USDC or, you know, crypto more broadly can can change that by, you know, not just like percentages, but orders of magnitude. And, you know, currently, like we you know, we have the fed the Fed will like you know, change interest rates to sort of manipulate that velocity of money in a way that they try to, you know, keep all of these measures in place where we'd like them to be inflation being sort of top of mind for a lot of people. In a in a world where that velocity of money changes, for reasons that are sort of outside of government control, or interest rates, you know, bank's ability to manipulate or anything like that, is there concern of like, sort of runaway inflation or something like this, that might not be in this, you know, in the span of like a year, but over the span of a decade or two, where the, you know, it turns out that these

potentially these, you know, internet native currencies, such as like Bitcoin, are or something else potentially are just better suited to, you know, sort of survive and thrive in a world that is, you know, internet based money and internet based transacting internet based and everything basically.

Jeremy Allaire 44:45
Well, what one can so I believe in digital commodity money, meaning, I believe in the long term future potential and the current potential of digital commodity money Non sovereign digital commodity money in Bitcoin is sort of the best known of that ilk. And, and I believe in digital commodities more generally meaning a digital token that is a commodity asset that has utility as a commodity, that that also is something that is, you know, economically exchangeable. So I believe that's significant, they'll be more and more digital commodities. But I also think that for coordinating economic activity on an everyday basis between people and households and firms, you know, everywhere, right? Price stability is really, really critical. And, you know, you need to be able to know, like, when I ordered that, that part that I got it at a at a value, and it's going to be delivered at that value, and the price stability is really critical. And that that doesn't change. And so, I think, sort of stable coins attempt to do that. And they're, they're bound by how price stable the fiat currency is that they're, they're backed by. And so, I do, I do think there's an unknown high velocity stable coin money that is fully reserved by US government obligation money behind it, I do believe that the interest rate transmission mechanism will continue to exist. So it does not interfere with the interest rate Transmission Mechanism per se. But I believe that the credit intermediation layer, which today is is a is a leveraged model, principally a leveraged model, although becoming less so, as non bank, private credit firms take on more and more of the credit delivery in at least in the US financial system. So you have the kind of levered forms of bank lending and you have non levered, generally non levered forms of private credit, like credit intermediation could be improved substantially, by moving to an on chain financial system, an on chain treasury, management and smart contract intermediation for economic contracts. If you can do those things, you actually could have a dramatically more effective system of credit intermediation, and then you combine that with kind of the

fundamental interest rate mechanism that exists like you actually, I believe it's possible to kind of maintain price stability, get the benefits of this higher velocity of money, and actually have that higher velocity of money be based on a full reserve banking model, as opposed to a fractional reserve banking model and actually have an underlying economic, monetary and economic system that is safer than the historical banking and financial system and sort of less prone to some of the risks that drive historical booms and busts. So I think there's a lot to chew on there for central banks. As this kind of technology grows,

Jake 48:07
I definitely, you know, I don't envy that job of like the, you know, palette, the Fed, or whoever it might be, it's obviously that, you know, there's a lot of critique that goes around and, you know, some of it may be fair, other others might not, but the difficult position to be in. And same with, I think, you know, a lot of like us legislators, where, you know, some people may have, you know, bad intentions, I generally like to kind of give benefit of the doubt that people are at least trying to do what they think is right, and they might have different priorities or whatever different things that they care about. But it's a difficult problem and extremely fast moving time. And I guess the hope is that the US and to your point, other countries can get this right. And if there's any sort of over indexing that I do, in terms of like, the US regulation, and all of that, I think it's primarily due, I mean, first of all, you know, like you I live in America, but a lot of people just kind of copy paste us regulations in a way, or at least do something that's not going to be, you know, too many standard deviations away from us regulatory policies. So, I know we're coming up on time, but obviously, we're, you know, we're in an election year, there seems to be a good amount on the line. You know, with all of this regulatory uncertainty people, you know, it's always difficult to predict, with crypto, like, you know, these price cycles and things like that, but there's a general kind of assumption based on history, you know, not necessarily repeating itself, but rhyming that, you know, in the next year or two, there's going to be another sort of, like, upswing of the hype cycle. All of this is sort of like coming together. I guess, you know, presumably, you you do a lot of, you're going to probably one of the

best people in the world to talk about sort of like the state of affairs with in terms of how the US government and other governments, to your point are thinking about this. How are you feeling about that? Overall, are you hopeful and optimist Stick? Are there concerns that we actually could like devastatingly get this wrong in some way? What's like your current temperature on all of that?

Jeremy Allaire 50:08
Yeah, so I guess I look at it from a few different angles. I think, you know, one is just generally all around the world, regulators and policymakers are just getting smarter, smarter about all of this, right? There's just more time that goes by, and there's more practitioners, and there's more technology, and there's more, you know, there's good actors, there's bad actors, they're better able to differentiate and understand what seems like the real risk issues are and kind of how to address some of those. And, and, you know, in a lot of places around the world, governments are really leaning in on web three, as a concept, meaning like, Hey, this is this new technology generation, and it's creating a lot of opportunity. And I see that from, you know, Japan to, you know, to Singapore to even, you know, the EU, or they have this comprehensive regulation, but the fact that they have comprehensive regulation is sort of like a green light to like, go and do stuff. Right. So with Mica. So, I think, and you're seeing, you're seeing a lot more understanding. And, and, and I think that's really good, like, like, compared to 10 years ago, it's obviously very different. Compared to two years ago, it's different, you know, it really it continues to evolve. And at the end of the day, right, people are intelligent, generally. And they want to, they want to see good social, economic, technological progress, like, like, broadly, we're not in a world where people want to like, put that all back. And so you're gonna have different reactions under different political systems, the kind of the kind of blockchain infrastructure that China's is getting behind and they're doing a lot with Blockchain is, there's a huge amount of state intervention in that right, I think, the kind of blockchain innovation that maybe we'd like to see, you know, in what we call the West, right is, is maybe more more open, and more like the open Internet. And so I think, again, there's like really good progress that's there. And I don't like I myself, don't ascribe too much to, you know, Republicans are for and Democrats are

against, and you see a lot of that on crypto Twitter, and you do see political statements from different wings of parties and other stuff. But like, I look at, like, the work that's happening around stable coin, as an example, and, you know, you've got, you've got Republicans and Democrats, you've got, you know, national security Hawks. And, you know, progressives, you've got, you know, the, the, the agencies and the White House, you have all these sort of stakeholders, and they're really trying to get to the bottom of it and say, like, how do we how do we put something together that that really works, and it's, that's good, and it's suggest that there's not a for or against, in that kind of world. And I think that's ultimately going to be the case with digital tokens and markets, regulation, as well as, like, the innovations here, and there are some differences for how this works compared to past, you know, things and so that's the job of lawmakers is to kind of differentiate that and, and, and so I, I believe that that will happen, and that is happening around the world. So yes, there are ways that things could maybe, quote unquote, go wrong, or go, you know, not have not not move in the way that you'd want them to move. But I'm, I'm also, I believe, very much that kind of the technology utility, and the kind of path of open source creativity and open Internet software innovation, right? That just happens and just like keeps being birthed, it just keeps happening. And society which I include individuals and firms and and you know, all that kind of actual society, right gravitates to utilities that improve what they can do in the world, and improve their economic condition or their outcomes. And I think that this technology is going to continue to prove that it can do that. And at that point, it doesn't matter what political party you are right then it's sort of the will of the people which is to say like, you know, that the incremental progress in terms of this technology and utility is ultimately what will get reflected in law. And like law reacts to the things that that drive forward in the in the entrepreneurial and technical and innovative space, it may come in fits and starts and may come in other ways. I was listening to a book earlier today which was making reference to the the invention of the of the kind of the loom and you know, the ability to use a loom to birth the Industrial Revolution and the Loom was actually invented by a Frenchman and the French government was so threatened by it, and what it might do to kind of the, the kind of peasantry and others that they destroyed it and said, Don't do it. Whereas, in England, they

created a patent system, and they like supported this, the tinkerers and the inventors. And it's sort of there's a broader discussion about the birth of the Industrial Revolution. But I think, yeah, you can have societies react differently, and it can, it can lead to very different economic outcomes. But I genuinely believe in the age of the internet and the age of open software, that that that progress, kind of kind of overcomes and ultimately, laws and regulations kind of reflect what society holds holds dearly.

Jake 55:45
Yep. Well, I definitely share that view. And I'm optimistic on what's to come. So appreciate you taking the time today. I know we're up on time, but fascinating conversation and excited about everything that you've been doing over the last decade. And that's finally, you know, over the last few years with us, DC or last several years, I guess, to us, DC and now, you know, it feels like we're on the verge of sort of a big, a big time and inflection point basically with crypto and very excited to see sort of what comes out of that. So appreciate the time and yeah, looking forward to sharing with us with that people.

Jeremy Allaire 56:19
Thanks, Jake. My pleasure.