Matthew: **00:00:00** I just hope my daughters don't come in and say hello.

Richard: **00:00:04** It could be fun.

Mike: **00:00:06** It's okay if they do. It doesn't usually happen in happy hour, but this is something that could happen.

Richard: **00:00:13** That's right. And we're live. So, Mike, why don't you maybe take us away with the disclaimers before we get going into serious business or semi-serious business?

Mike: **00:00:25** Yeah, of course. Well, yeah, we've got a couple of great guests. We've got Matthew Edwards and Rob Furse here. And I'm think I'm going to let them introduce themselves a little bit as we get on. But as usual, we're going to have a wide- ranging conversation. Today's topic is The Evolving Landscape of Cryptocurrencies, Bitcoin and whatnot. I think almost a whole world of change has happened in only three or four months since we last had a couple of gentlemen on to talk more about this. And I think these guys offer some pretty interesting and novel points of view. So as these novel points of views are shared, please go and get advice from a real financial professional, not like any of the people on this particular call today.

(Background Chuckles).

Mike: **00:01:10** Make sure if you're doing anything in these crazy markets, that you that you consult a real professional. Today, we're going to have a conversation about many things. And some of them will be potentially at the cutting edge of current beliefs, current status quos and whatnot. So we'd like to have wide ranging conversations to have the freedom to do so. So make sure you get professional advice if you're going to act on anything.

Richard: **00:01:33** Well said.

Mike: **00:01:33** And then lastly, my drink today. Yeah. My drink today is a nice, I'm having a nice cognac, keeping my aikido in place and, and cheers gentlemen, and thank you for taking the time to join us.

Richard: **00:01:47** Cheers. It's a hot, an unusually hot day here in Toronto. So I'm going for a nice cold beer as is Rob I believe.

Rob: **00:01:54** Yeah absolutely, a cold beer.

Mike: **00:01:59** What are you having Matt?

Matthew: **00:02:00** Yeah, I was going to say it's a cold day down here in Southlake, Texas. But I don't know if you guys are IPA guys, but this Sculpin IPA is my favorite., a nice little San Diego brewery.

Rob: **00:02:12** It looks very nice.

Mike: **00:02:14** I like that. I like that. So why don't we kick it off with a little bit about each of yourselves, just to give some scope as to what your financial history is like. Because you both have a pretty interesting financial sort of career history, how you came to know a little bit about this field. I think you both come at this from very unique but very insightful positions as this sort of frontier asset class is developing. And so maybe, Matt, we can start with you. And you can just give us your sort of journey, if you will.

Backgrounder

Matthew: **00:02:53** Yeah, sure. So, thanks. Thanks for that. Thanks for having me. Nice to meet you guys. So I grew up in the traditional hedge fund world. I spent the formative part of my career at a firm called Grosvenor Capital Management, which I suspect most people in the space have heard of, it's one of the oldest fund of funds in the world. In fact, I think it might be the second oldest, the oldest US based fund of funds, started in 1971. So I joined the firm back in 2001 and spent about 13 or 14 years or so at the firm, vast majority of my time spent there was on the manager due diligence side of the equation. So over the course of my, in my tenure at the firm, I helped lead due diligence on, you know, several dozen hedge funds across the globe, deployed several billion dollars on the back of that. I also helped manage a number of multi manager multi strategy portfolios at the firm. I got to witness quite a bit of growth in the traditional hedge fund space, you know, Grosvenor was really kind of at the tip of the spear as it relates to the institutionalization of hedge fund investments. I joined the firm again back in 2001. We were about two and a half billion in AUM. And when I left in 2014 where we were about 50 billion. So it was quite the ride. The cool thing was, you know, I am here in Southlake, Texas. I grew up in Garland, Texas which is relatively nearby. But I was fortunate to be given responsibility for Asia at the firm. So I ended up becoming our Asia Strategy Head and got to move to Tokyo back in 2006. And then I opened the Hong Kong office for the firm back in January 2013. So that was a wonderful kind of training ground to learn about alternative investing, particularly within markets security space. I got to meet some phenomenally talented investors all over the world. I got to work with some great people at Grosvenor and it was a wonderful training ground for me. And then I helped start a hedge fund in Hong Kong. You know, having been on the other side of the table I was, of course developed a natural curiosity about that side of the table. And so ended up helping to launch a global macro fund in Hong Kong, started by the former Co-head of Asia Macro Training at Goldman Sachs, which was a really fun ride. And I got to work with some, again, some wonderful people. I got to see how the sausage was made, so to speak. And got to sit on that other side of the table and interact with allocators globally. So, you know, over the course of the better part of 17, 18 years in traditional hedge funds, I really got to see all sorts of different types of businesses and strategies, and just meet some wonderful people. I left hedge funds, you know, having, which we'll probably talk about a little bit later on in the discussion having grown a little bit disenchanted with the notion of sustainable alpha in traditional liquid capital markets, and tried my hand at some consulting type work around leadership advisory in talent assessment, which was a curiosity of mine. And somewhere along the way, I ended up going down the crypto rabbit hole, at the behest of some friends of mine that are quite active in that space. I'm not a technologist by any stretch of the imagination. But the one thing that appealed to me pretty immediately was, you know, it sort of served as the antithesis of my old world in that it was the definition of inefficient. And so that really scratched the curiosity of mine. I immediately became interested in this space. I started learning quite a bit more about it, ended up briefly hooking up with a group in Hong Kong that actually just listed on NASDAQ via SPAC, it is SPAC season after all, a group called Diginex, which is, you know, they're doing a number of different things, really trying to build sort of the infrastructure to facilitate the institutionalization of this asset class. I was initially helping them out with a number of different things at the top layer level. And then, you know, saw that they were trying to build an asset management piece of the business at the center of which was the fund of funds. Obviously that was right up my alley, I started to kind of build that out for them. But then just got to the point where I thought to myself, “Why am I building a start up within the start up when I can go build that start up on my own?” So here we are today. We are in the process of launching Dalpha Capital Management, which is a, will be a fund of funds focused purely on digital asset trading strategies. We have a team of five people. We are really trying to do kind of similar to what Grosvenor did back in the mid 90s, which was provide that institutional on-ramp, into a space that is a little bit scary for most, it can be opaque, there is a lot of cowboy behavior, risk management is an afterthought, operational deficiencies are bound, but offers some pretty compelling risk return profiles. And so that's the same thing that we want to do with Dalpha. And we're pretty excited at the prospect. We see history rhyming quite a bit in terms of where we are in the maturation of the asset class and the practitioners looking to capitalize upon it, and where we were back in the early days of traditional hedge funds. So that's us in a nutshell.

Richard: **00:08:00** Yeah, that's a very interesting place for us to pull on to, I think a little bit later on. How about you, Rob?

Rob: **00:08:07** Sure. Yeah, and thanks for having me. It's great to be here. As Mike knows, I'm the co founder of a Canadian brokerage called Echelon Wealth Partners. We're about 70 advisors managing around 6 billion in client assets. And we have a kind of mid-tier capital markets group of about 50 professionals. So that as I said, that started 10 years ago, it actually started out as something called Euro Pac Canada, which was an offshoot with Peter Schiff of all people, and those who know crypto know that Peter is, you know, very vocal against Bitcoin, which is kind of ironic, because, you know, that partnership started as a really kind of a play on hard assets. You know, Peter, at that time was, he called the housing crisis, and of course, he was and still is a big advocate for hard assets, gold being the leading asset. And that made a lot of sense for us as Canadians, you know, we love hard assets. And we thought that that kind of association would do well to, you know, to have on our side as we were sort of two guys in a dream starting a brokerage here in Canada. So, that's sort of the background of Echelon. How I got into the securities business is a little bit circuitous itself. I took an English degree, which is not the natural progression into finance. And decided I didn't want to go the lawyer teacher route, so actually ended up becoming kind of a computer tech project manager in the late 90s, early 2000s. Traded like a maniac through the dotcom boom, as it were, even though in Canada, it was only about a six month kind of mayflower or mayfly kind of season, but that really kind of was the jet fuel to trying to understand markets and what actually just happened here on the back of that, which led to an investigation on money, and which led to gold, which led to starting to become an investor and I guess a speculator of sorts in junior gold companies. And me, along with some of my friends who are, you know, kind of all part of this together, became, I guess kind of pulled into the capital market side, a friend who got hired into a hedge fund right out of his basement. And it was that time in the cycle in the early 2000s, where it was just coming back into favor kind of the gold theme, the hard assets theme. And so what we were doing kind of digging around for those, you know, those early stage companies was actually kind of a rare skill, believe it or not. And so started doing basically non brokered private placements kind of just early stage financings, got pulled into what we call an exempt market dealer here in Canada now, so sort of for accredited investors and doing deals for accredited investors and institutions. And rode that wave right into ’07, ‘08 until everything went kaboom as we know. And then that was the impetus for reforming and we circled right back to the cold call to Peter Schiff and the start of Echelon. So that's sort of the roundabout cycle that's brought me here today. I guess I'll mention the Bitcoin angle as well, which for me started in late 2016. And I actually, like, I think a lot of people, I feel like I was super late, given that I had the perfect sort of training for understanding and be open to Bitcoin, having kind of the computer background, understanding the tech side of being comfortable with that, and the hard asset theme, like those are the two real skill sets that help with the understanding. And I just have to confess, even though I've been aware of it since 2013 for sure, and even earlier then, so I know, we looked at setting up some mining rigs and went free power in 2013. I did not understand it until I read an article that talked about the 21 million cap, and I was like holy cow, like this could actually work. You know, the scarcity aspect of it just immediately leapt out at me. So that pulled me down the rabbit hole from that, literally that instance. And, yeah, I've just been talking to anyone I can in the space here in Canada and elsewhere. Just trying to make connections, that I've, you know I feel like it's a new paradigm. And it's very difficult for, you know, I think a lot of people to understand, but once you do understand it, I think you understand the power of it. So, you know, I feel like we have maybe a special knowledge or like a superpower almost at this point. And maybe we're wrong. Maybe I'm wrong. But that's what makes it very exciting for me. So that's my intro.

Mike: 00:13:07 And Rob, we're just, let’s just start jumping in, it’s called Riffs from here. Where do you think the, you've got a significant client base, 6 billion in assets, what do you think the retail advisor lands on that? And then from your institutional book, where do you think the adoption rate is? Where are we in the Overton window of the acceptance of this kind of strange, new, call it digital gold if you will, in the minds of sort of broad advisors? And I'll put that out to you, Matt, as well as on sort of second.

The Adoption of Bitcoin

Rob: **00:13:39** Sure. So we're very early still, like I think earlier than people, even people that are in the space or even in the financial space that are reading about it more than the average person. I don't think we truly appreciate probably how early we are, it's still very much the educational phase. And I can certainly say that for our advisors. I've written a couple of white papers, I've had conversations; we were part of the 3iQ product, the prospectus … Bitcoin fund. So we're having those conversations, but it's just, it takes time, like the, it takes time to accept sort of a new paradigm, a new asset class. And I would say that's, you know, in general, still where we are. There's a chart I saw on the internet yesterday, I think it was by Willy Woo, sort of a well known Twitter quantitative guy, tracks some good crypto metrics. And he was kind of making the argument that we were still in the innovator phase, and maybe just passing over into the early adopter phase. So kind of like 2.4% adoption and, you know, I sometimes feel like maybe we're farther along but, you know, truthfully, that's probably pretty accurate. We're just scratching the surface of, yeah, of understanding and adoption. So maybe I'll get Matt's thoughts here so I don't monopolize it.

Matthew: **00:15:08** Yeah, I fully agree with that assessment. I mean, it's quite clear to me that we are certainly in the early days. Our focus as a firm tends to be more on the institutional side of the equation, which is, you know, in my estimation at least, that's basically all whitespace at the moment. You know, there have been obviously some announcements relatively high profile here recently, with some of the publicly listed companies allocating some portion of their balance sheet to Bitcoin. And, you know, we've seen a couple of the endowments, and there's a piece over the weekend in Forbes, It's Forbes or Fortune, about Paradigm which is a very successful VC group.

Rob: **00:15:55** Yep.

Matthew: **00:15:56** That was able to raise a fairly significant amount of capital from the Harvard's, and the Stanford's and Yale's of the world. So we have seen a few more kind of institutional type investors, like the endowments and foundations kind of dip their toe in the space, from what we've been able to surmise thus far, the vast majority that has been more on the on the kind of less liquid side of the spectrum. And I think maybe, to Rob's point around sort of this whole notion of discovery and education, what have you, I think it's probably easier for these professional investors to kind of think about this as an innovative new technology, right? And so where do they have a budget for that in the context of the broader asset allocation, it's in the VC bucket, right? So it's kind of easier for them to perform that calculus in their own minds and carve off, you know, a couple of percent of the portfolio just to kind of see how this goes. We operate on the complete opposite side of the spectrum, which we think there's still plenty of opportunity there as well, to kind of complement that less liquid approach. But on that side of the spectrum, there just really hasn't been much activity yet. So it's all in our minds. It's all whitespace.

Rob: 00:17:13 It's interesting that the institutions have to kind of allocate it into a VC bucket or something that already exists. I mean, I think it was really noteworthy with the MicroStrategy. I'm sure you guys saw the Michael Saylor MicroStrategy transaction where, and for those who don't know what MicroStrategy is, it's a publicly traded NASDAQ company, a couple of billion in market cap and had 500 million in cash and the CEO of that company, a guy named Michael Saylor, publicly came out over the last couple of weeks and said we've allocated almost all of it, 425 million to Bitcoin. So we bought 38,000 odd Bitcoin. That, I think is the leading edge of what we're likely to see more of. And it makes more sense to me than trying to, you know, shoehorn it into a VC bucket notwithstanding, you know, we know how that kind of process works. People have their buckets, they have their processes, and they may not have room for an asset class if they're still trying to figure out if it exists or not.

Richard: 00:18:19 Yeah, that makes sense. It's, there's a lot of legacy frameworks of how to allocate capital that can embrace gold because it has this 5000 year history, but the new entrant in the field, the so called digital gold, will take some time for the acceptance. What do you think, the news of guys like Paul Tudor Jones coming out publicly and embracing the asset class as a huge opportunity and you know Ray Dalio, some of these guys that have made under their wings in the macro, global macro hedge fund space. what does that do for the space?

Rob: 00:19:00 I'm happy to jump on this Matt if you are –

Matthew: 00:19:02 Sure. Sure.

Rob: 00:19:03 I think it's huge. I think it's the leading edge of what we're going to see kind of a wave behind that. Yeah, I mean, guys like Paul Tudor Jones are very respected successful macro guys, and when they come out, you know, even though he did it through futures, and maybe not the purest way that, you know, Bitcoiners might want, recognizing the value of Bitcoin in a portfolio and the asymmetric returns, that's a big endorsement. And I think that gives social proof to other participants especially other institutional managers. So, I mean, there's a lot of chatter about Ray Dalio because he's basically, says, he makes a complete argument for Bitcoin except that he doesn't advocate for Bitcoin, right? And, you know, people will talk about Elon Musk, they'll talk about the, you know, the treasury of Apple, and a lot of this stuff is early but it paves the way, this stuff paves the way, similarly with the PayPal announcement, right? Like now you just got a major institution endorsing it as a business. And that brings legitimacy, apart from just, you know, the infrastructure that it brings, and potentially the wave of buying and the price signal that that quite possibly will, you know, will issue. Yeah. So, and we're seeing these kinds of things happen faster and faster, right? You've got one week, last week, you've got Mike Saylor and MicroStrategy, this, you know, and the week before it was Paul Tudor Jones. Now it's PayPal, now PayPal is talking about buying BitGo, Coinbase is going to IPO, right? So there's a stack of news, and there's, and we could go on and on about kind of all the things that are happening around cracking, about getting a bank licence, I mean, there's a whole bunch of things that are really tying it to paradigms that people understand. And that is very helpful.

Matthew: 00:21:03 Yeah, if I, I just had a couple of thoughts there, I think, you know, it's been interesting. Some of the earlier movers in terms of professional money managers have obviously come from the macro side of the spectrum, right? Paul Tudor Jones, obviously, being probably the most high profile, and most recent in terms of the big splash in the space, but guys like Novo, guys like Dan Morehead at Pantera, Dan Tapiero as well has been active in this space, it sort of, to me, it makes sense that macro practitioners would gravitate towards this space, you know, there's obviously the macro economic component of it in terms of, you know, we have this emergence or value that is literally just kind of taking shape by the day, and the potential inflationary protection elements associated with this finite resource. And I think that's what Paul Tudor Jones has focused on in his letters and so forth. So, but there's also this notion of asymmetry, right? And there's been a number of pieces, I think Fidelity was the most recent one to publish an analysis around, just take your typical 60/40 portfolio, and you carve off some percentage to Bitcoin. And notwithstanding the fact that Bitcoin in absolute return terms, is a highly volatile asset, right? And is therefore quite risky in traditional metrics. Via diversification effects would actually help to improve the risk adjusted returns of a portfolio, right? And I think they came up with the ideal, the optimal amount was somewhere like three or 4%, carved off to Bitcoin. So that's all well and good, and that case has been made a number of times, Fidelity was just the most recent one to publish something along those lines. But we haven't up to this point, at least, it has been mostly an academic exercise, right? Institutions haven't really kind of followed suit and said, “Okay, well, that makes great sense. I'm therefore going to allocate two to 3% of my book to Bitcoin.” And the reason for that, in my mind at least is thinking as an allocator, and thinking about how allocators make decisions, you know, the idea of this asymmetric risk return profile where you can make 10 times your money, or you could lose, probably not 100%. I'm not convinced Bitcoin could ever go to zero; I think there's too many believers out there in the world. There will always be a bid. But, you could lose, as we saw in 2018, you can lose 70, 75%, right? So if you think about it in the context of an allocator, that's a big ask, right? To be able to, even if the theoretical upside is 10 times, you still need to entertain the notion that you could be down 75% marked to market, that’s really hard. There's massive career risk, and there's massive blame aversion. And I understand all of it, as Zechauser refers to it as, you know, I get it. And, but for the macro guys, you know, asymmetry is what they do, right? They lick their chops at the notion of this stuff. So it makes total sense to me that the macro guys are getting involved in allocating to this space and frankly, in my mind, Paul Tudor Jones was by far the most bullish development from, just from a pure asset allocation perspective, I actually have a contrarian view on, a MicroStrategy, where I think it was not a bullish development at all. We can talk about that if you'd like but I think Paul Tudor Jones, for sure. you know, not just allocating to the space, but just his walking through his thought process, right? And in helping people understand, this is how we view this asset as a potential hedge against what he called the Great Monetary Inflation. But my own caveat to all of this is, this is all well and good, but I think the other thing that's potentially holding us back somewhat is this all still remains purely theoretical in nature, right? Because Bitcoin’s been around really since, you know, it’s been around the better part of 10 years now, right? And we haven't really seen it tested in a period of inflation, right? Or hyperinflation. So we don't really know how it would perform in that scenario, there's plenty of reasons to believe that it would perform well, for all the obvious reasons that folks have spoken and written about, but we don't know. So it's contemplating theoretical future states of the world. First of all, that inflation is going to come back in any form, which I think plenty people will debate. But also, in the event inflation does return, Bitcoin will actually serve as a hedge, which, again, I appreciate the sort of academic approach to it, and why people would believe that, but we don't really know yet, which is, I think, something else is probably holding some people back.

Resources and Stores of Value

Richard: 00:26:04 I kind of want to pull on a couple of threads that you dropped as you were explaining your thought process there. You mentioned "resource", in describing Bitcoin. And you also described it earlier as "a store of value". And obviously, I don't have to tell you guys that there's a lot of people that would like to take the opposite side of that argument and say that Bitcoin is neither of the two. So I was wondering if you guys might take a stab at making that argument. Why would investors see it both as a store of value and perhaps as a resource as well?

Rob: 00:26:37 As a store of value, I think, is relatively simple. Like, we've never had an asset that's got defined scarcity, right? Even gold, you can go buying more of it, it's whatever it is, 2% a year comes out, you could get more, you know, the price signals in the market, you should get more. So I think that, I don't think we have to overcomplicate that side of it. There's lots of question marks, there's so many, so called Bitcoin myths about why you might not be confident in, you know, the 21 million or the Bitcoin network, which we could spend a good, you know, day and a half debunking all of them. And I guess we're in the process of the market working through them, quite frankly. But yeah, I mean, I think if you can get yourself through the Bitcoin myths and get over the hurdles, right? It's, you know, it's not backed by anything, right? I mean, what is money, is money as an informational technology, where does it say you have to have intrinsic value? Nowhere, right? Scarcity is that quality. I think people confuse, you know, intrinsic for scarcity. And then there's all the other qualities which, you know, we don't need to get into that unless we want to. But, yeah, so I think it's, there's a discovery process obviously going on, but it is, I fail to see, none of the Bitcoin myths, they're all exploded for me, I've obviously spent, you know, I've got my own comfort on that. Obviously, and then there's the, and by the way, thank you for the Zechauser, I actually ended up reading that paper because of you Matt, which was great. I hadn't seen any work kind of on in that type of framework, which just makes so much more sense for, I don't know, for how I think of the world and so it was very helpful. But, I mean, yeah, there's so much "unknowables" and "unknowings" around Bitcoin. But I just can't, so I can't, but I can't conceive, I guess, by definition, they, you know, they're unknowable but beyond that I can't conceive of how it fails. If money converges, or if economic systems converge to one form of money and this is the best form of money, which was sort of the original thesis in the eureka moment for me, then, you know, that's the thesis right there, that's the store of value. And it just seems like the world is waking up to that. There's been nothing I've seen that's contra indicated any of that. And so I'm interested Matt in why you think it's a bearish on the Michael Saylor, I think that's an interesting place to go.

Matthew: **00:29:24** Well, I maybe I misspoke. I don't necessarily view it as bearish per se. In fact, it's probably quite bullish, but I just, I suppose our take is a little bit contrarian. And, you know, sounds like you've probably gone down the crypto Twitter rabbit hole and –

Rob: **00:29:47** Probably too far.

Matthew: **00:29:47** Probably too far, I certainly don't recommend it for anyone or everyone rather, certainly not those that are more faint of heart, but it's, you know, there is a, you know, I think there's an insecurity that kind of underpins the space and it's understandable because this is a space that, you know, particularly in its early years was, you know, it was really kind of the cyber punks, and then, you know, the misfits, and what have you, that are a little bit you lying outside the system, right? And on the periphery.

Rob: **00:30:20** Yeah.

Matthew: **00:30:21** And so, but that also means that there's a very strong sense of solidarity, right? And, but within that solidarity, there's a massive echo chamber. And so anything that could be viewed as potentially bullish or supportive of Bitcoin therefore must be good, right? No matter what. And I look at the case of MicroStrategy without going into too much detail, but I just kind of wonder, okay, so they basically just allocated, first of all, what's the purpose of a treasury function? And the second question would be, they just allocated 98% of their net cash to a single asset, right? Which happens to be one of the most volatile assets in the world, right? And so that in and of itself, I think is, should certainly raise some questions as to the responsibility of an action like that, right? If my friend were super bullish on Apple, and told me that 100% of his, 98% of his liquid net worth was invested in Apple, I'd be like, maybe, yeah, might want to diversify a little bit, you know, not. So that's one element and two, it’s, you know, I just find it interesting MicroStrategy came out of the blue, they had nothing to do with crypto as a business, Michael

Saylor had nothing to say about crypto. And then all of a sudden, you know, he's now kind of the hero of the Bitcoin universe tweeting every day about Bitcoin. You know, he's tweeted more in the past two months than he has in the past three years. And so I just think it's kind of interesting. And if you look at their share price, up until the point that they purchased Bitcoin, versus what the share price has done post that acquisition, I just think it's kind of an interesting chart to look at, right? Now that's not to say it's not a brilliant strategy, I think it is commercially, you know. And it could turn out to be a phenomenally successful strategy, and one that's quite profitable for everyone involved. But I just kind of look at it, I'm like, that seems, that's just sort of an interesting thing that happened. But the Bitcoin space loves it, because it's bullish, and it changes the narrative.

Rob: 00:32:34 Yeah. Yeah. Look, I think there was the echo chamber, I think, is a great point. I'll make a couple of counter points to that. So the treasury from MicroStrategy, I guess the, at least as per kind of Michael Saylor's version, he didn't feel like they are getting value in the public stock for the treasury. And I guess they don't need that cash, right? It's kind of accumulating, they don't need it for working capital, they don't need it to run their business. So I think it's fundamentally a little different for them to allocate 100% of that, versus, you know, your theoretical buddy who's allocating his, you know, maybe his net worth right? Where there's true kind of risk if things go pear shaped. And, but you're absolutely correct, I think, in the other respects, like he has become sort of this emblem for Bitcoin Twitter, whatever you want to call it. So the echo chamber is big, and it's loud. But the thought process that Michael went through, right? And he's been on every podcast, I think, that exists out there in the last couple of months, is exactly the thought process that I believe any intelligent capital allocator would go through, and he makes, and he's very articulate and going through, "Okay, well, if it's not cash, because it's, you know, it's a melting ice cube. You know, is it gold? You know, is it stocks?" And he goes through all the reasons why it isn't and then you get into the, you know, why Bitcoin versus any other alt coin? And he actually brings, I think, some interesting kind of new ways of looking at it in terms of saying, look, this is 100 billion plus market cap, and that's very similar to other, you know, dematerialized networks and citing Apple and Google that that's a threshold sort of size and Bitcoin is dematerializing money in the same way that we dematerialize these other networks and massive value was unleashed. And who knows, right?

Matthew: 00:34:33 Yeah.

Rob: **00:34:33** But I think that is new into the dialogue. And this isn't, you know, he's got credibility and a history in this space, and he's got a history of being very vocal about things, and not right about everything. But I think those are very interesting, the fact that he's shared his thought process. I feel like other people will go through that, that journey as well. So for me, that's, that was important.

Matthew: **00:35:02** Look, I think he's done a great job of shaping a narrative, I think he's done a great job of talking his book, as we say.

Rob: **00:35:11** Yep.

Matthew: **00:35:11** And I'll just leave you with one, one sort of point of comparison, which I think is important to consider. So a few days after that acquisition, you know, Square came out and announced their own, their allocation to their space was 50 million.

Rob: **00:35:29** Right.

Matthew: **00:35:29** They purchased 50 million worth of Bitcoin on, you know, I think their cash on hand is two and a half billion, it was, they've got 2 billion of debt, so it's 10% of their net cash, right? So 10% versus 98% is a meaningful delta, particularly when you contemplate the fact that Square is a business that derives a meaningful percentage of its revenue from Bitcoin, right?

Rob: **00:35:48** Yeah. Mm hmm.

Matthew: **00:35:49** And Jack Dorsey, the CEO of Square, as you know, is also CEO of Twitter. And he has one thing on his Twitter profile, which is, Bitcoin.

Rob: **00:35:56** Yeah.

Matthew: **00:35:57** So that, I think, is interesting to contemplate.

Rob: **00:36:00** I think that's a study in personality contrast. And it probably speaks to the ego. And let's just call it focus to be diplomatic.

Matthew:	**00:36:11**	I just think it's, you know -
Rob:	**00:36:13**	But I don't think he's wrong either.
Matthew:	**00:36:14**	Yeah, look, he'll probably end up being proven totally correct. And this will be a brilliant strategy. But, you know, outcome bias cuts both ways, right? You know –
Rob:	**00:36:23**	What's the downside of that?
Matthew:	**00:36:23**	If the outcome is a positive one, you know, it doesn't –
Rob:	**00:36:28**	If he has the cash then what's the downside? It goes to zero, and, you know, you've generated another couple hundred million, presumably from your business in the meantime. So maybe, yeah, so maybe it's, maybe it is a brilliant strategy.
Matthew:	**00:36:39**	Yeah.
Rob:	**00:36:40**	Well, time will tell.
Matthew:	**00:36:40**	Yeah.
Mike:	**00:36:43**	Well, it's interesting, right? The idea of the, this is narrative economics, so I like to talk about the Rolling Stones, and probably the band of our era, the one that represents the music that we most listened to, but there are no Mozart, and they haven't been around 500 years. Gold has been around 5000 years, it has a proven track record to hedge inflation, to give us that inflationary hedge when we get into sort of MMT type scenarios, which we're in now. So we think about the global macro scenario, I wonder to what extent, you know, money being a store of value, a unit of account, or a medium of exchange, I mean, those are the three things that create money, and I think the, you know, the unit of account's, probably pretty good, we can all agree, I mean, 10 minutes might be a longer time than you might want, you know, the technology is going to improve, the medium of exchange and the store of value are the two things now that, they're sort of interwoven as compromising one another, if your volatility is too high, that compromises the ability to have a medium of exchange. If you owe me X dollars on an invoice or X bitcoins on an invoice, and that's going to vary by 20 or 30% between my billing and my receiving, that's a bit of a challenge both for the unit of account and the store value. So, but again, it's early stages, you know, but what do you guys think of that side of it?

Like if we're going to argue that Bitcoin is digital gold, I suppose, you know, gold's not worth anything either. Just, you know, I can get a brick of it and I can hold my door open on a windy day. But there's no economic use to it. And it's just the perceived notion of that value of the commons if you will. And I guess we're crossing that labyrinth for Bitcoin is that what we're supposed to believe? I'm taking a bit of a sceptic's point of view here only just for a moment, just for fun. But what do you guys say to that type of question or discussion?

Rob: 00:38:54 I've got a lot to say. But Matt, you should take the first crack at this one.

Matthew: 00:38:58 Yeah, sure.

Matthew: 00:39:01 So, look, I think in my mind, the way I think about it is the current use case and the future use case. And we're speaking about Bitcoin in particular at the moment, obviously, there's plenty of other digital assets out there. But so in the case of Bitcoin, in my mind, the primary use case at the moment is purely speculation, right? And I think entertaining the possibility that folks will use this for transactions, I know some of the hardcore believers do. And in fact, I've done it myself, but the reality is for an asset that's so volatile, as you know, it's hard to use it as a medium of exchange, right? Now that may change in the future. I myself, I'm skeptical that governments will allow that to happen. I think, you know, the "render unto Caesar", you know, I think it's going to be hard to expect that the US government or China, or whomever, will be willing to sort of give up control and allow for this currency to facilitate transactions. Not because, you know, it's super, the rally in Bitcoin isn't super private, I mean, you can actually audit the trail, the transaction trail pretty easily. It's more because they just need to control the monetary supply, right? And they need to know what that looks like. And I think giving up that sort of control is going to be hard. Now, it's totally possible, I mean, people peg their currency to the US dollar, right? Countries do that, and they give up complete control of their monetary policy on the back of it. So there is every possibility that the Venezuela's of the world and so forth could do the same, right? And that'll create a pretty interesting situation. But I view, you know, that is sort of down the road. I think if Bitcoin achieves some sort of critical level, and volatility gets stripped away a little bit, and people will be less likely to be incentivized to use it as a medium of exchange, then that could certainly happen. But for now, it's purely speculation, right? People are owning Bitcoin because they think it's going to go up in value. I think in the future, the only use case in my estimation is stored value, right? This notion of digital gold, this digital scarcity, which Rob referred to, I mean, this is what's attracting the Paul Tudor Jones of the world and so forth, is the possibility that this thing could serve as an inflation hedge, which means, you know, something that could actually retain its value over time in the midst of all the other madness, you know, going on in the world. But that in my mind is again contemplating a theoretical future state, because we just haven't seen it yet. But it's certainly, that's really kind of the primary impulse. And that in my mind is what's going to attract, you know, the smart money, the Paul Tudor Jones', you know, the big institutions to come to this space. Michael Saylor obviously is, done in a pretty big way. I think more and more people are going to latch on to it's store of value notion. And that'll be what drives real adoption over time in my mind.

Rob: **00:42:11** Yeah.

Richard: **00:42:13** Sorry, go ahead.

Mike: **00:42:14** And so -

Richard: **00:42:18** I think Rob is good.

Mike: **00:42:18** I just, I've got a question too. Like, how does the value of the asset -

Richard: **00:42:24** I think we're getting a little bit of a –

Mike: **00:42:26** I'm getting a bit of a slow connection. So I'm going to –

Richard: **00:42:27** Yeah, that's fine.

Mike: **00:42:28** You go ahead.

Rob: **00:42:29** I'll respond to your original question, Mike, and then we'll see if you're kind of back on stream. But, yeah, I mean, I would largely agree with Matt, this is definitely a speculative store of value at this point by and large, there're definitely are use cases as the, for medium of exchange, forget unit of account, the volatility is off the chart. So it just makes no sense to really price anything for any length of time in it. That's probably a long way off. So, yeah, it's speculating that this will continue to be used as a store of value. Speaking to the kind of the government side of things, which is, you know, one of the big fears, I think absolutely you're going to see continuing bans, I mean, China's ban, they've unbanned, then banned, and they've re-banned again, I like expect that soap opera to continue. And we'll see that, you know, and I don't even think we've seen the beginning of the real battle with governments, because this is a, ultimately if you believe in it as a store of value, and it starts to actually, you know, increasing in value, then you're going to run head on with the central banks of the world. And I think we all understand that they are in no way shape or form willing to give up the ability to print money which is the seat of their power more than anything. So that battle is coming. And this is why it's very important to be a decentralized network. And this is why the alt coins that don't have this decentralization where they have figureheads, actual people that can be, you know, subpoenaed, jailed, whatever. You need to be truly decentralized. And Bitcoin is the only network that comes close to a true level of decentralization and at the mining level, and the node level. And for that matter, the developer level, although that might be kind of the most easy vector of attack, is actually attacking the developers, and the GitHub repository and things like that. But if you don't have that, then you're more vulnerable to it. What I expect to see is jurisdictional arbitrage where, and we've already kind of seen that in kind of a light version. Or as I said, you know, we've seen China, we've seen India ban and we've seen lots of countries ban it, and then they flip flop, you're not going to see every country ban it at the same time. And if they do, if one country bans it, they're banning it because it's working. Not because it's not working. So that is an endorsement. So okay, if you want to, you know, if you want to ban it in the US, go ahead. We're going to Malta. We're going to Argentina. We're going, maybe not Argentina, they might fight it pretty hard. But -

Richard: **00:45:10** Yeah.

Rob: **00:45:12** But people come back.

Richard: **00:45:14** Rob, on that a little bit, because I think from a sort of reflexive argument there, the very fact that it's super decentralized and kind of outside of the purview of the monetary system, might be the major hurdle for it to grow into the institutional space because of what you got what you're describing. So, right now Bitcoin is what, at 220 billion market cap, give or take?

Rob: **00:45:43** Like 240 billion roughly.

Richard: **00:45:46** 240 billion, okay, sorry, I got it wrong by an order of magnitude. But it's still –

Rob: **00:45:52** Still super small by any measure of an institution.

Richard: **00:45:52** Yeah. And the diehards, the cypherpunks, they're going to huddle their satoshi's. And they're probably not going to want to use that as a medium of exchange. And Matt was describing people in Venezuela; they're probably going to want to actually use it as a way to escape hyperinflationary scenarios like that. But once it becomes, once it's no longer flying under the radar, and it does become a real threat to central banks' abilities to keep the party going in the manner that we're seeing, and now MMT within the Overton window probably coming into policy sooner or later, isn't that going to probably scare away some of the bigger institutions that might bring this asset class into the next stage of its evolution as you guys are describing it?

Rob: **00:46:47** Well, it's already scared them away. They're just coming around one by one. So, yeah, it's a completely novel asset, there's no precedent, right? Currencies issued by central banks and countries, that's what we've known for the last 200 years. And so now you've got to get your head around the fact that it's a bunch of cypherpunks that have, you know, an open source development and people running nodes somewhere some way, and Chinese miners, and whatever you think it is. You've got to get your head around it. But if you don't, then you've got to look at kind of what the reality is that you're left with. And the reality is crazy MMT and buying ever escalating overvalued assets are becoming more and more of a speculator, I mean, this is what is driving people and thereby and ultimately institutions to it. We're all forced to be speculators, crazy speculators, because the money printing is distorting the price signals so much. So, how do you, you know, you're, at a certain point, you know, the pocket's so hot that it's, you start thinking outside of your normal, you know, paradigm. You're like, "How can I avoid?" You know, and we've seen that in countries where things are more advanced. We've seen it in Argentina. We've seen it in Venezuela. We seen it in some of the African countries, right? Where, and there's big premiums in some of those countries to Bitcoin because it's needed now. So you're right, like, yeah, they're not, this is not something that the, you know, the masters of the universe that run these hedge funds, they don't really, probably want to contemplate it. But if they don't, at some point, the world's going to flip potentially into pricing everything in Bitcoin. And then your returns aren't going to look so good.

Richard:	<u>00:48:33</u>	Matt, you want to take a crack at the, or are you fully in agreement? And Rob has dropped the –
Matthew:	<u>00:48:42</u>	Yeah, I mean, look, I appreciate Rob's enthusiasm, and I think it would be, it'd be amazing for all of us if assets were one day priced in Bitcoin, as opposed to US dollars. But, you know, look, I think the best, the most realistic long term kind of strategy for Bitcoin is just to go away from the medium of exchange side of the equation, and just focus on the store of value and be happy with that. And I think, you know, thinking about the US government and other governmental authorities who want to retain control, you know, it's sort of the boiling frog, you know, in the water, just allow it to sort of slowly chip away at the periphery. You know, what is gold at, eight or $9 trillion market cap today, Bitcoin is 250 billion. There's a lot of real estate between there and here. And just let it kind of slowly do its thing. And let it earn its stripes. And that's a value add, right, in this moment in time, in particular, given all the money printing going on that we've discussed, that store of value thesis makes sense. And just let that play out, right? And if it just does that, and more and more institutions want exposure, because of that thesis, and just good to do away with, you know, we want to be able to go to the grocery store and purchase things in Bitcoin, you know, let's just forget about that for now. And just appreciate it for what it is, which is an emerging "storer" of value. And that'll give you a much longer runway where, you know, the authorities of the world, I would imagine, are less concerned about people deciding, "Hey, I'm going to own some gold. I'm going to own some art and some wine and I'll own some Bitcoin." You know? And just let it happen sort of naturally that way.
Richard:	<u>00:50:27</u>	And maybe outside of the VC bucket, and but rather sort of maybe substituting part of the gold precious metals, that part of the alternative bucket in general, do you see that as something that might be the reality for Bitcoin institutional holders in the coming years?
Matthew:	<u>00:50:47</u>	So, I do, obviously I'm talking my own book here a little bit. But –
Richard:	<u>00:50:54</u>	Slog away.
Matthew:	<u>00:50:55</u>	Look, you know, I, as I referenced earlier, in my estimation, the primary use case right now is speculation. And, you know, even when people put statistics up there around, you know, there's been a trillion dollars or what have you in terms of transaction activity, right? The reality is all that activity is, for the most part, people just trading on exchange. And so I, and I view it purely

as an asset class to trade, right? And, of course I am longer term bullish in terms of the space probably defined, not just Bitcoin. I think there's so many interesting ways that this space can innovate. I think there's all sorts of crossover potential around tokenization and so forth. I'm definitely bullish. But I also try to be a little bit pragmatic about the here and now. And in my mind, the here now is, first of all, how often are you introduced to an entirely new asset class, right? Like when does that happen? Not often, right? And we're witnessing it. And we can trade it now, in the here now. So Bitcoin trades, as much as SPDR's do daily, right? So you can, it's tradable. And it happens to be incredibly inefficient by virtue of the fact that of course, it is a nascent asset class. You have, you know, sort of developing yet fragmented and very immature infrastructure, you know, with all these different trading venues across the world, different regulatory regimes, different instruments that can be traded, emerging instruments around derivatives and options, what have you. So there's so much opportunity for, call it arbitrage per se, right? And unlike, you know, the liquid capital markets that we're all accustomed to, that are 90%, dominated by institutions, this is a space that is dominated by retail flow, right? And so if you're coming in facing off as a professional investor, whether you're a former FX trader or quant, or what have you, you come into the space and it's just ripe with opportunity, right? So, I view it as purely an asset class to trade at the moment. And to the extent we think about, you know, where, what does that mean for us in our business? You know, you've got an incredibly interesting risk return profile available on the back of the fact that this is such an inefficient asset class, right? And there's so much alpha on offer. And that, you know, when we think about what's going on with absolute return portfolios for most investors and their broader asset allocation, you know, there was a point in time when hedge funds could deliver on the original promise, which was to maximize absolute and risk adjusted returns in an uncorrelated fashion, right? But today, as you all know, hedge funds are … plus, right? No volatility to speak of. Hopefully, that Sharpe gets close to one. And hopefully they're somewhat uncorrelated, you know, that's just less interesting, because a lot of the opportunities have been arbed away and markets have become much more efficient. Whereas you come here, and it's the early days of hedge funds, right? Back in the days when all the ex-Bob Rubin risk arbitrage guys were crushing it because their spreads were so fat, and then those spreads got robbed away and they became something else. It's the same thing now, like early innings now for folks that are willing to go out there and set up vehicles to capitalize in a liquid form on an incredibly inefficient asset class.

And one more thought on that, you know, we think about in terms of binary versus continuous thinking, right? So, most of the arguments in favor of Bitcoin, for example, are around, you know, this asymmetry, right? Which means, you know, Bitcoin goes up or it goes down, you know, and then with VC allocations, which we love by the way because they're helping to fund the infrastructure build up that's required in this space, but VC is sort of binary squared, right? It's betting on the future of Blockchain technology, you know, happening or not. You know, crypto sort of going up as an asset class or going down, you know, entrepreneurs executing or not, right? Whereas, so that's very binary in his thinking, whereas we think about things more continuous, you know, so along the spectrum between the denialists and the maximalist, lies a whole host of opportunity in between that, you know, they're there purely to trade the chop, volatility is a good thing, and can make money theoretically in up and down markets. And so if I were an institution, thinking about attacking this space, you know, I would contemplate that sort of barbell approach, you know, having a less liquid approach that's geared more towards, you know, the future seven to 10 years down the road and a more liquid approach, where you can kind of solve for both outcomes.

Richard: 00:55:30 Yeah, that makes sense. I think Mike continues to have a little bit of a technical difficulty there, but I think he was going to pull on the thread of Jasen Mackie's question, which is, how do you value an asset that is completely replicable, and why should any one digital asset class created out of thin air be worth more than any other, right? And I think that dovetails into what we might be moving into, I think, for this conversation, which is we focused a lot on Bitcoin, but I think there's, you know, these other crypto assets. Matt, you're actually focused on this space as a whole, so I think it might be interesting to maybe tackle this question, both of you. But I think maybe discuss a little bit more of some of the other assets and why perhaps Bitcoin isn't just because it was the first one, it has the longest Blockchain and perhaps it is the one that everybody benchmarks itself to, but why don't you take over?

Other Crypto’s

Rob: 00:56:22 Well, we have our first Bitcoin myth. So the ball’s rolling now. Yeah, look, the code of Bitcoin can be copied. It’s out there. It's on GitHub. It's, you know, it's designed to be forked, fork away. But what, and so you can get the code, you can get the UTXOset, right? Which is basically a fancy way of saying the bitcoins, right? The same database, and that's happened. We saw that, the four cores of 2017, we had Bitcoin cash, we had Bitcoin SV and everyone who owned Bitcoin at that time, now we're owners of Bitcoin cash and Bitcoin SV and Bitcoin gold and there's some worse ones than that. But what they can't replicate, you cannot replicate the miners, you can't replicate the "devs". You can't replicate the network effects, that's where the value comes from. Not from the code, which anyone could see at any time. Not from the UTXO set which is out there in the public Blockchain. So, and this has been the flaw in Peter Schiff's thinking all along, right? That it has no intrinsic value, and I can copy it. Well, yeah, you can create Peter Coin tomorrow. You can create the same exact rules or, so why don't you, right? Why doesn't anyone? Because they don't have the other factors. And it's, that's just what it is. It's actually that simple.

Richard: 00:57:43 Matt, anything to add there? And, I guess, sort of, getting into some of the other coins, maybe talk a little bit of Ethereum and Litecoin, and some of the other majors, let's call them. And why Bitcoin as the standard-bearer of the –

Matthew: 00:58:01 Yeah, so, I guess, you know, maybe playing a little bit on Rob's previous point, you know, sort of the protecting nature of Bitcoin in the context of digital assets more broadly. And this speaks a little bit to some of the thinking around Michael Saylor and what he's talked about on the topic, you know, sort of Andreessen back in the day of software eating the world, you know, within the context of digital assets, it's clear that Bitcoin is kind of going to be the new world. It is the winner, in the sense that one of the beautiful things about this space is, it is kind of cutthroat capitalist, so to speak. In that people vote with their feet, and it's very democratized in that respect. And so to Rob's point around, there's already been forks, people vote with their feet, right? And you've got Bitcoin Cash and Satoshi's Vision, and obviously the market sort of looked at those and puked them out, and went back to Bitcoin. And Bitcoin continued its steady march, right? So, you know, it's certainly possible though, in my mind, that there could be another innovation somewhere along the way that the market decides is more interesting, right? I think replicating to Rob's point, this notion of decentralization, you know, sort of interesting, Satoshi Nakamoto, comes out of nowhere, writes this white paper, and the next thing you know, 10 years later, it's a $350 billion market cap, right? It's a pretty remarkable situation and the, sort of the Nakamoto consensus, algorithm and what have you is, is sort of beautiful in its simplicity. And again, I'm not a technologist, but the notion of being able to solve for a group agreement and/or disagreement in purely algorithmic fashion, is kind of interesting, right? And the fact that it is decentralized that no one can sort of push the buttons, I think speaks to the sort of the strength in the ethos that underpins Bitcoin as really sort of a belief system, right? And so it's hard to imagine, it's going to be really hard, I think, for someone to come and chip away at that. However, you know, ETH has a lot of, I think, you know, utility, right? This whole notion around smart contracts, and so forth, I think is super interesting, super helpful, can do a great job of eliminating middlemen in the form of lawyers, for example, much more cheaply. And there's all sorts of other coins out there that have, you know, potentially some degree of value and utility to them. I'm open to that, I'm here for it. I hope that happens, because I think it'll be an interesting evolution in this space. I think, if it's only Bitcoin, then that'll be a disappointment in my mind, to see, again, the emergence of an asset class not really happen, right? And it ends up just being one. I think there's other types of use cases out there, carve out the store of value use case for Bitcoin and then move along to other ones, potentially, with other coins. I would, I frankly, would love to see that, because that just creates more opportunity for us, of course, in our business.

Rob: **01:01:14** So I've got, I've got a couple points to add on there. So, you know, I said there was no, it was that simple in my last comments. But, Matt, what you said there in terms of people, you know, didn't want to obviously get on to the forks of Bitcoin. And we're really, I think, we're trying to articulate what we call the shelling point which is, you know, the fancy way of saying that people kind of agree on one form of money, or they agree right on a common form of exchange. And you typically, as we talked about earlier, converge on one form of money, at least that's, you know, Bitcoin is that form relative to any of the forks. So that's, I think, just maybe, hopefully better stated than what it was before. But he also said it was a, you know, there's a belief. But it's not just belief, this isn't a, I think it's more properly talked about as proper incentives. And that was, I guess, the genius if you will, of what Satoshi Nakamoto created in the game theory that that exists with Bitcoin, that the incentives for miners to spend their energy, their resources in exchange for a token, which then is exchanged only if the blocks at the minor form are properly formed, and the nodes, you know, enforce those rules, the so called consensus rules. So, I mean, that sounds like gobbledygook, but which is what makes it difficult in many respects to appreciate. But within there, there's deep incentives. You don't have to have a belief, you just have to follow your own incentives. And that's why it works across time and space with multiple parties that don't know each other. And so that's important, I think, just for people that we're not trading on faith here. And beyond that, I envision a much different future, where we have a lot of things being built beyond just a store of value, even medium of exchange, unit of account. My vision of how we get there, I think, is not multiple coins, I believe we should be building, kind of in a modular fashion with Bitcoin as that base layer. And there's analogies that we can make kind of in the tech world around Unix and other computer systems where it's very simple modular, and you have so called kind of ossified layers where things don't change. I guess another analogy where people might understand it is the internet where we have the TCPIP layer, this is, you know, sort of the nuts and bolts of the internet. That doesn't change even though there's lots of reasons why we could make a better, you know, we could make a better way to exchange information than IP addresses, as we actually are pretty much running out of them, but we don't because it's stable, and it's, and people agree. There's sort of a shelling point with TCPIP; that this system works. And there's more value in that stability, and then adding layer two, and layer three, whether that layer two is lightning, and then layer three, who knows what it looks like, and layer four, layer five, on and on. So that ultimately, we have a very robust kind of DeFi system, and we can have smart contracts, but we're not building it out of the gate. And that's my issue with Ethereum and other coins, or other networks, is that they tried to build in too much functionality, too much complexity at the base layer. And that's why you continually see hacks at the base layer, which you've never seen with Bitcoin. Bitcoin has never been hacked, right? You've had exchanges get hacked. And people confuse that with Bitcoin being hacked, but Bitcoin has been attacked, it is probably the most hardened computer network that's ever existed, there could not be a bigger honey pot than Bitcoin, and it has resisted every attack. And, you know, that brings us into sort of the Lindy effect, and the fact that it's existed for a long time. And the longer it exists, the longer it is likely to exist. No other coin has that. And I think it's because of some of the choices that were made that, you know, and so there's still being changes made at the base layer, there's propositions of putting in, you know, Taproot and changing the Schnorr signatures, and these gets into technical details. But there's a debate whether we should even do that, or whether it should just be left alone and build on top of it. And let's go with Lightning. Let's go with Liquid. Let's go with these second, third layers. I very much favor that approach. So let the games begin, I guess, but, yeah.

Matthew: **01:06:00** Yeah, you know, I suppose where I might deviate a little bit there is, again, I appreciate why Bitcoin is the dominant coin in the space and why it will likely remain so for the foreseeable future. But when, one area where I disagree, I think with a maximalist idea around Bitcoin is, you know, I just find it interesting that folks that are indeed maximalists are willing to sort of poopoo gold, for example, as an alternative, which has been around for millennia, right? And Bitcoin has been around for 10 years.

Rob: **01:06:34** I agree with you on that. I think there's a real role for gold. Yeah, I agree.

Matthew: **01:06:39** I mean, I think, there's a role for gold, but also just like, so Bitcoin has been around for 12 years, or whatever it is, and suddenly has supplanted gold in the minds of maximalists, that has been around for a millennia, yet there couldn't be something else that comes along, you know, to supplant Bitcoin, right? In terms of relevance and dominance, again, I think it's unlikely, but ideology in my estimation, I think, Paul Graham said, is constraining. And I just like the idea of being open minded, right? To –

Rob: **01:07:07** How would that play out though? I've thought about this, and I can't conceive how you could have the so called immaculate conception of Bitcoin. Because everyone knows that it exists and how it exists.

Matthew: **01:07:16** Yeah.

Rob: **01:07:17** And so I don't, and actually I think that's maybe one of the biggest threats, conversely, as well. If there was some sort of unknown failure to say quantum computing. And even though there's reasons to think that you could, you know, work around that. But let's just say it fails. I don't know how you would easily recreate the Bitcoin network, because everyone would be like some crazy ICO, right? Everyone would want a piece of this.

Matthew: **01:07:43** Yeah.

Rob: **01:07:43** And so, but similarly, I just don't see anything supplanting it. How can you have that fair distribution? How are you going to replicate? Like, there's no functionality, right? That Bitcoin can't incorporate at some layer as well, you know, privacy, people talk about that. They talk about fungibility. Yeah, those things can come at layer two, and layer three, like, the important properties can't be replicated.

Who in the World is Satoshi Nakamoto?

Matthew: **01:08:07** But one of the important properties which is maybe neither here nor there, but it is one thing that fascinates me, is the fact that, you know, Satoshi Nakamoto, if it is an individual, or a group of people, has remained completely anonymous, right? Throughout this entire period.

Rob: **01:08:23** It's a feature, right…

Matthew: **01:08:24** Which is a total, a total, you know, that's why, maybe to your point, Rob, how do you replicate it, right? And part of the magic there is this person or people who created this thing, basically just put it out into the world, you know, accumulated, I think, a million or so Bitcoin along the way as part of the genesis block and thereafter. And has not done anything with it, right? Basically, just stayed silent.

Richard: **01:08:49** It adds mystery to this space by not, I think there was talk recently that there might have been a little bit of a movement in his account. But from when I actually looked into it, he hadn't moved it since the very beginning.

Rob: **01:09:00** No, no, his coins haven't moved.

Matthew: **01:09:03** Yeah.

Rob: **01:09:03** There were some very early coins that moved, but, yeah, there's very strong circumstantial evidence as to which coins are his.

Richard: **01:09:13** Do you think that it was a guy, it was, there was a guy called Satoshi, or that that's a pseudonym for a group or a particular guy.? Would, do you guys have a take or does that even matter at this point?

Matthew: **01:09:22** I have a theory but only because, I think, it's a fun one. I don't think it's true.

Rob: **01:09:27** Yeah, let's hear the fun one first.

Matthew: **01:09:31** And I doubt that I'm the first one to think of it this way. But, you know, I would love, I like the logic around Elon Musk being behind this in some form. Only because if you think about it, you know, it's going to, you need someone with moonshot visionary thinking, right? You need someone with the technical chops to pull this off. You know, at that point in time, he was knee deep in PayPal, which is all around, you know, he knew his way around, you know, payment rails and so forth. Probably encountered a ton of annoyance with all the different regulatory structures and systems, and given the fact that this person hasn't moved their coins, which at this point are probably worth like $15 billion, you know, they need to be wealthy already anyway, you know, or they're dead, right? So, those are the only two outcomes or they're the most extraordinary human being in this in the history of mankind. But I think it's, I think that's already been poopooed. But I kind of like the logic of it.

Richard: **01:10:28** He and his cryptic tweet a while ago sort of added to that, to the mystique around that theory, which I've heard as well, right? The, I forget what it was, but he did drop a hint around that theory at one point.

Matthew: **01:10:42** But I know he said, he's actually said he doesn't, he owns like .2 Bitcoin or something. And he, but of course, he would say that right? If you're Nakamoto, of course, you're going to say that, right?

Richard: **01:10:53** How about you, Rob?

Rob: **01:10:54** It's probably one of the, it's probably one of the people that have been identified. I think it's one individual. You know, there's Hal Finney, there's Adam Back, there's Nick Szabo. Probably Adam Back.

Matthew: **01:11:06** Not Craig, right?

Rob: **01:11:09** No. No, that actually, yeah, everyone's Satoshi, except Craig. Satoshi, yeah.

Richard: **01:11:18** How about the other guys?

Rob: **01:11:19** But it doesn't matter. It's, what matters is that they're anonymous. It's so much better that way. And I think the coins haven't been moved probably because it's been incredibly difficult to move them without de-anonymizing yourself. And so I do think they will be moved or value will be extracted from them at some point, though I don't think they're lost.

Richard: **01:11:48** Yeah.

Rob:	**01:11:49**	There's a lot of material out there if you want to, this is the least interesting part of Bitcoin.
Richard:	**01:11:59**	It might be –
Mike :	**01:11:59**	The most common.
Rob:	**01:12:00**	By a matter of fact, yeah.
Mike:	**01:12:04**	This part is going to get all the comments for sure.
Rob:	**01:12:06**	Yeah, exactly, who is Satoshi Nakamoto? It's Elon Musk.
Richard:	**01:12:11**	There's another -
Rob:	**01:12:13**	He's a Dogecoin supporter, I mean, come on. He's pledged his allegiance.
Matthew:	**01:12:18**	That's right.
Rob:	**01:12:19**	That's what my kids like. they like Dogecoin, I mean, how could you not?
Richard:	**01:12:24**	There's another question that I thought we might entertain. And I think this dovetails a little bit with what Matt mentioned earlier about Paul Tudor Jones owning crypto, but only Bitcoin, but doing so through futures, so not in the purest sense. And so, any thoughts on the development of crypto ETFs? So what are your thoughts there gents? That might attract more people into the space because of the whole difficulty of actually having a digital wallet, and a lot of people might see that as too steep of a curve to embrace. Probably not the institutional space, obviously, but what are your thoughts there? Do you think it's a less legitimate way to play the field?

Crypto ETFs

Rob:	**01:13:09**	Well, legitimate is a loaded word. But, you know, not your keys, not your coins, but it's, you know, it's probably a decent proxy for exposure to the asset class, again, depending on how it's constructed, and there's a lot of devil in the details. So we'll see. I don't think it'll be that long before we see an ETF at this point, right? It's been, they've been bouncing off the regulators for

quite a while now. I actually am a little maybe contrarian to a Bitcoiner anyway on this, I'm not waiting or even hoping for an ETF. I think it creates elements of centralization that, you know, kind of were, the whole point was to avoid a lot of them. And, yeah, there's risks, I guess, that come with that centralization. Like what happens if there is another fork even though I don't believe that, I think that the forks are over but then you've got, you know, an administrator making a choice as to which chain you follow, you know, there's things that are outside of your control. And that's the issue with gold, right, that a lot of Bitcoiners have with gold is that it's become centralized, right? It ends up in a bunch of vaults and governments can seize it and you have a, you know, you have a certificate, you have a claim, but it's been hypothecated, it has been lent out, does it even exist, let's audit the Fed. So, you know, it pushes Bitcoin a little bit in that direction. That being said, it will be, it will open it up for more people to buy it, so probably is going to help the price.

Mike: **01:14:40** So we have some, you know, we've got what was it? We've got –

Matthew: **01:14:45** I would, I would certainly agree with that. I think relative to some of the alternatives at the moment, right? So there are, you know, so the Grayscale Bitcoin Trust, for example, is probably kind of the closest estimation to it. But I think, you know, we have seen obviously, there are some unintended consequences on the back of that, right? As retail, its exposure to a BOTC, you know, at a premium, right? So, that obviously, I think, in my mind sort of necessitates the development of an ETF, right? You know, particularly to the extent the SEC is interested in protecting retail investors, and, and so forth. I think it makes it a more efficient way to access. And so, I think, it also saves them from the potential pitfalls around managing their own keys and what have you, where they're just not quite maybe technically proficient enough to understand. If you've got someone who can do that for them in a relatively liquid form, and hopefully accessible and cheap form, then I think, I think it's probably necessary. I totally appreciate Rob's points around, you know, the potential downsides of that. But it seems to me it's an inevitability. It is probably a healthy development, I think, for this space more broadly.

Mike: **01:16:06** Don't we want the financialization of the asset class more and more though, from a spec, if it's a speculative asset?

Rob:	**01:16:16**	Yeah, I mean, if you're just purely concerned with price, then you want ETF, you want every kind of access to the, available to the retail or institutional investor for that matter. But the financialization, I would say no, not necessarily. Like that implies all the things that I just kind of spoke about where we're lending, we're fractional reserve, like that's where a lot of the problems that, I think, Bitcoin alleviates, you know, stem from. So, yeah, personally I'm not looking for the financialization although it's coming, I mean, Matt has some great points. I actually agree with all those, people are not by in large in a position to manage their own keys especially with the current state of it. It's difficult, it's technical, it’s prone to loss and a lot of people are losing their Bitcoins. So as much as I say not your keys, your coins, I can in, you know, the same breath say like it's a risky thing that requires a fair bit of attention and maybe some technical chops to pull off. So any ETM does democratize that access to it and in that respect, it's a good thing.
Mike:	**01:17:31**	Alright. Did you guys talk about the one, any of that, how, did we talk, I missed some of it. So did we talk about how an investor might consider this as a portfolio asset at all, was that covered? Yeah?
Richard:	**01:17:48**	Yeah, I think so, in a –
Mike:	**01:17:50**	Good. Okay, awesome.
Richard:	**01:17:51**	To a large degree, I would think. So, I guess, I mean, we're running up at around an hour and 20 minutes, just to maybe sort of summarize this in a very kind of institution-family office, someone out there that is considering this space and thinking about how maybe getting access to it, if you guys were to summarize how they might consider it for a portion of the portfolio, I guess, dovetailing with what Mike was asking. The best ways to focus on Bitcoin, go, go purist.
Rob:	**01:18:28**	Irresponsibly long.
Richard:	**01:18:32**	I had no doubts, Rob. You are the biggest hoddler in this group here by far, no doubt.
Mike:	**01:18:38**	Matt's like, “I’ve got a fund.” Rob's like, “You should just be long.” We're doing a bunch -
Matthew:	**01:18:41**	Yeah, obviously, we're, I mean, I spoke to it a little bit earlier around the barbell approach. You know, I think, you know, there's certainly the directional nature of the exposure which makes

great sense. But there's also that more, perhaps less directional nature, which is capitalizes on the inefficiencies on offer, which can allow for more continuous thinking, which doesn't sort of command 10 year plus lockups, doesn't command willingness to stomach 75% draw downs. I think there's a number of different ways this can occur out here, and I come at it from the hedge fund side. Putting aside the philosophical belief in Bitcoin and crypto and how it can be world changing, I come at it more as a trader and view it as just another asset class to trade at the moment, which just so happens to be incredibly inefficient and therefore highly compelling.

Rob: 01:19:30 I've got a question for you, Matt.

Matthew: 01:19:32 Yeah.

Rob: 01:19:33 So Sharpe ratio. There's a debate straight off of whether that's even an appropriate way of assessing Bitcoin returns, and I can think of a number of reasons why it isn't. So, I guess, that's the, you kind of answered part of my ... If it's not, why not? And how do you assess kind of the risk versus return profile when it's so, you know, asymmetric?

Bitcoin and Sharpe Ratios

Matthew: 01:20:02 Yeah, so we, so, the Sharpe ratio is in our minds sub-optimal, purely because it just, it penalizes volatility up and down, right? And so naturally, the hope and expectation is that the vol will exist certainly to the upside. And even in a relatively kind of, call it hedged or opportunistic format, you can still capture a decent percent of the ups while mitigating the downs. And you don't want to be penalized for that, because you're Sharpe maybe it's going to be a little bit less appealing, but your Sortino is going to look nice, right? So we think about risk adjustment more in Sortino terms, you know, even, you know, Calmar, for example, could be interesting for this space. Where you're just looking at the annualized return vs via peak to trough drawdown, which could be another way of thinking about things which we do. But I agree with you, Sharpe is not the appropriate metric here.

Richard: 01:20:53 So would you say Sortino, given the –

Matthew: 01:20:56 Yeah. We've, that's the way we think about things, it's Sortino. We measure ourselves in Sortino terms, not Sharpe terms.

Richard: **01:21:03** That makes sense.

Mike: **01:21:04** You get the Ulcer in there too, anyway, moving on.

Richard: **01:21:09** But, I guess, to just sort of put a bow on that earlier question that I had, other than Bitcoin, Matt maybe you take this first, but since you're looking at the space as a whole and looking for arbitrage opportunities, what are the other interesting coins that you are looking to speculate if you're so inclined to speak, to talk your book up a little bit more?

Matthew: **01:21:32** Yeah, I know, I mean, we're not, this will be a quick answer for Rob I know, he's smiling over there. We're, again, we're more interested in the trading aspect, right? And so we're not wedded to any particular coin. We think there are some interesting emerging theses around DeFi, for example, you know, which could be interesting. But, again, it's all for us, it's a trade and, I think, that means we gravitate more towards the top 10 coins. And, again, we're only, we're interested in folks who are just trading them, right? And arbing them, and we're not really, we're not here for the buy and hold. We're not here to sort of underwrite a thesis around, you know, ETH as a platform and, you know, vis a vis Bitcoin, we're just here for folks that are extracting inefficiencies, and that's what we're focused on. So I'm afraid I don't have a super interesting answer there. But maybe a little bit more to say than Rob who I know is just going to say buy Bitcoin and call it a day.

Rob: **01:21:29** No, well, look, not entirely. I can be a little bit more nuanced than that. Which I actually, so accept that there's absolute inefficiencies in this space, I mean, it is nascent, all the reasons that you kind of mentioned, right? It's like they're, it's, it is ripe for exploiting those. So I accept it. I mean, does that give you exposure to the space? I think there may be fundamentally different things and there's nothing wrong with that. It's just what are we getting exposure to. Like you trade, you know, you could arbitrage, you could pretty much pure arbitrage Bitcoin for quite a while even the last run up, there's big premiums in South Korea and other places, so, yeah, and people were doing that, right? You know, guys are running across the border from South Korea to Hong Kong with Rolexes and stuff. I mean, it exists and it will continue to exist for people who have the tools and insight that you guys have. But, you know, if you're arbing out those inefficiencies from day one, you probably would be not any better off in absolute terms, for sure, than if you just bottled. So there's a lot of nuance in between that and, you know, Sortino ratios and, and risk adjusted returns. So I don't think we're necessarily disagreeing. I think it's just what kind of exposure do you want? How do you use your exposure to crypto, I like the fact that you're not trying to take a diversified, kind of a naive diversified approach, saying we're going to hold a basket of the top 10 cryptos because, you know, the top nine cryptos probably don't have a use case, in my opinion. And that's the reason why they keep turning over every couple of years.

Matthew: 01:24:16 Yeah.

Rob: 01:24:16 You know, it's a lot different than holding a diversified basket of stocks in companies that have, you know, proven businesses or there's something that they're doing that it adds value other than just, you know, issuing a token and creating kind of a Wild West speculative market. So, I appreciate that orientation. And, yeah, there's folks that are doing it. And they should do it, right? Like it's going to take a while to mature the ecosystem.

Matthew: 01:24:42 Yeah and I view it more. I mean, you bring up a good point around, does that make sense to solve for exposure, right? To this space?

Rob: 01:24:52 Exactly.

Matthew: 01:24:52 And when, and we don't view our job to come in and speak with clients around the notion of here's why you should have exposure to this space, right? We don't think about things in terms of let me tell you what Bitcoin is, and let's go through the, this whole educational process. We think about it purely in terms of risk return. That's it.

Rob: 01:25:13 Yeah, which is perfect. Yeah.

Matthew: 01:25:15 And these are just numbers on a screen. This is another asset class to trade. And the one thing that I find, you know, a little bit challenging, of course, is there's plenty of investors that think about things in terms of, you know, we don't invest in things we don't understand, right? And, of course, they want to get educated which is great. But the, it's just kind of interesting, because there's, you know, you encounter these investors who had lots of exposure back in the day to CDOs and CDO-Squared and so forth. And there's plenty of things that go into that that they don't understand. And our point is, we're trying to sort of disarm control that -

Rob: **01:25:53** So it must be good.

Matthew: **01:25:54** Yeah. Just like in our in our minds, you know, of course, you should try to understand and become educated. But for us, it doesn't require a ton of technical proficiency, you just need to understand, look, this is an asset class to trade. You know, these are numbers on the screen, a quant is a quant –

Rob: **01:26:13** The underlying's something is different. You don't have to care about that. It's all settled off, you know, into fiat and, yeah, yeah. I. So I think we absolutely see eye to eye on that.

Matthew: **01:26:25** Yeah.

Mike: **01:26:27** If we can get someone to just give me a call and explain the derivative books of any one of the banks, just so that I can understand it before I invest in that high dividend, you know, safe company, do please have them give me a call.

Rob: **01:26:40** Yeah, I'm still waiting for that too.

Matthew: **01:26:42** By the way, is Mike speaking because I can't hear him at all? So I see you guys nodding. I'm like, are you guys reading something or –

Rob: **01:26:49** Yeah, he is. He was commenting on the derivative books of the banks.

Matthew: **01:26:54** Okay.

Rob: **01:26:55** And how much you'd love to understand them as we all probably would.

Richard: **01:27:01** On that note gents, it seems technology might be getting the best of us. So I want to say thank you to both of you, Rob and Matt for taking the time. I know we've taken an hour and a half of your time today and it was great. I mean, it's a nascent field, I know, close to zero about it. So it's, it was a great learning experience for me. I hope everyone is watching and listening, they did as well. And, Mike, any closing remarks?

Mike: **01:27:31** Nope. Just thank you. You guys did a great job carrying the torch without me and the show always must go on. Good job.

Richard: **01:27:39** Alright, gentlemen, enjoy your weekend. Thank you for joining us.

Rob: **01:27:43** Thank you for having us on. It was a lot of fun.