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Welcome to episode nine of The Brainstorm.
Today, we're talking Bitcoin and Bitcoin Monthly, a publication from Arc Invest, as well as the hunt for AI computing and what CoreWeave is doing to secure more chips.
We're joined by David Puell today, who's a Bitcoin associate at Arc, who is really, I feel like, changing the game with on-chain analysis.
David, maybe you can just give us high level for all of us out there.
What does on-chain analysis mean for Bitcoin?
Yeah, so on-chain analysis, in my view, is a sort of new field of financial analysis where you can take the blockchain data of any given crypto asset and use that transform it to get a sense of the demand and supply dynamics and the inter-economics of Bitcoin or whatever cryptocurrency you're analyzing.
So as opposed to traditional assets, the ledger on Bitcoin allows you to get a sense of several other factors that usually are not visible in traditional assets, like the number of addresses, how much Bitcoin are in those addresses, the time since any given Bitcoin last moved, et cetera, et cetera.

So with all that data, you're able to produce a set of metrics and indicators that are very easy to diagnose and read while having a full sense of the economics of Bitcoin or crypto in general at any given time.
And David, can you take us through the Bitcoin monthly and some of the charts you have in that and just give a high level summary of the Bitcoin monthly because there is a lot of on-chain analysis in that document and what you're looking at each month?
Sure.
So for the month, we have a lot of the on-chain activity in general looks neutral to positive, I would say.
However, specifically this month, it was very significant to us the very low levels of volatility, realized volatility on a 90-day basis, let's say, are extremely low, as low as never seen since the last quarter of 2020.
To give you a context of what was going on in that time, that was the period of prior that preceded the 2021 bull market that took us from the 20,000 area into the high 16,000 area.
And so what do you think is driving this low volatility?
It's not unusual given the stage Bitcoin is at the moment related to other cycles.
So you usually see what suggests to be a global bottom marked by the FTX collapse November-December
last year, and then you start seeing a lot of consolidation throughout the year following the global bottoms in Bitcoin.
And after that, going into the year of the halving, which takes place estimated April of 2024, that usually correlates with more emphatic and impulsive bullish moves during that stage of the more or less four-year cycle.
So right now it's...
Can you just...
Yeah, David, quickly, can you just give a high-level summary of what the halving is just for those that may not be too familiar with it?
Sure.
So the halving is the day that every four years or so, exactly 210,000 blocks on the Bitcoin blockchain, the issuance of new coins gets cut in half.
So what you initially would see as the Bitcoin pulse of 10 minutes producing new Bitcoins to the market.
Initially, it was 50 coins every 10 minutes in 2010, nine and 10.
And then after four years or so, that was cut in half into 25, 12.5, and currently 6.25.
So we expect...
That's why it's called a halving, issuance gets cut.
And so then maybe now you can talk us through this next chart here that shows Bitcoin liveliness.
What is liveliness and why is this being flagged as bullish?
Yeah, so liveliness in essence, if you recall, I mentioned how you can measure the time of dormancy of all coins.
So if you take an aggregate of that, you can get a sense of what coins have moved in aggregate as percentage of the total supply.

And what number of coins have stayed dormant over time?
Right now, after a PICA at about 62%, meaning that 62% of the coins of the total supply of Bitcoin have moved relative to the dormant ones, we have seen a reduction of that and liveliness, meaning the activity of the network has come down back to 60%.
And those levels are significant because, again, similar to volatility, we haven't seen them since the last quarter of 2020, which is the market conditions that preceded the bull market of 2021.
So David, here I have a question, because I get that makes sense, right?
You're looking on chain, there's less selling pressure, so I get that that's positive.
But for all those people out there who say, wouldn't you want liveliness to show that Bitcoin's actually being used and that there's merit to these assets?
So how do you balance liveliness with it's actually useful?
And whether that's bearish, that liveliness is going down?
I'll reply in two phases.
First, usually what we've seen in the inner economics of Bitcoin is Bitcoin behaving, first, it's a store of value, meaning very high volatility appreciation over time.
volatility is reducing for sure, but that's one of the factors that allows for its second use, which is medium of exchange, right, and potentially then unit of account and fulfilling all the functions of money down the line.
As of now, you could perhaps claim that we're seeing still the primary use of Bitcoin as store of value, but increasingly so, medium of exchange as well.
So it's what you usually want to do as a second point, what you usually want to see is a high amount of coins being locked up and never moved by long-term holders.
And at the same time, whatever coins remain in activity, you want to see them churning and trading hands a lot.
That suggests the network activity that you're implying, right?
So you can have the best of both worlds with a strong holder base using Bitcoin for store value and then therefore limiting the available supply of the asset in the market.
And on the other hand, a lot of activity on chain with the remaining coins being traded widely.
That's usually the most bullish scenario.
As of now, we have a strong holder base historically, and we're seeing an increasing transaction volume relative to last year, which is also a healthy sign, but we expected for that to improve over the last quarter of this year into next year.
Got it.
Hold all your coins before you can spend them, Sam.
David, what about this last chart where you're looking at the price action of BNB?
Can you give us a rundown of what the BNB token is, and then maybe we can talk a bit about Binance as a whole and some of these potential risks out there in the market?
Yeah.
Despite the bullish markers that we see in perhaps in price and on-chain activity, given what happened last year with Dera, 3-Iros, FTX, we always want to keep an eye on potential gray or black swans in the market that may differ from the main narrative that you may

see on chain.
Right now, we're especially keeping an eye on Binance and next Huobi, but as it pertains to Binance, we're seeing a multi-year long, perhaps three years and a half, descending triangle formation in the chart that has the Mercational Line as support at the $210 USD price for BNB or Binance token.
Now, we think that this line is very important because we have touched it a lot before and it seems to be a highly defended level for price action in BNB, and given all the regulatory pressure Binance is under right now from the CFTC, SEC, DOJ, we want to keep an eye on it in terms of the accusations that has been put forth by this set of organizations,
and also, the fact that it's an offshore, non-regulated exchange always makes it most worrying in terms of the potential transparency that the entity may showcase historically.
And so what's happening with Huobi now?
Yeah, that's a new side and that became more relevant over the weekend.
Apparently, there's rumors, as of now only rumors, as of the time we're recording that a few executives from the exchange have been arrested in China, I believe.
And also, if you look at the on-chain data and the balance on exchange from several cryptos like Bitcoin, USDT, and Ether in the exchange, the outflows have been massive pretty much since the peak in 2021. People are emphasizing a lot of the 75 million outflows over the last few days, I believe, but the exchange, especially since the
crypto trading ban in China has pretty much been completely climbed by every metric since 2021 and 2022. So it wasn't as, it's not the brand is the newest of information, you could say, but it's still worrisome given that it's another formerly major entity in the crypto market that seems to be in major risk of insolvency or perhaps worst.
Got it. Great. David, thank you so much for joining us. You can read the Bitcoin monthly every month. Go to our website, arc-invest.com, and David's putting out some excellent research in addition to that. So be sure to follow his Twitter. David, what's your Twitter?
Deepwell arc. There you go. Awesome. Thanks, David. It is really crazy. Some of the metrics that you've gone into, you're kind of unpacking the blockchain in a way that I think will be looked at in the future and people will be pretty amazed at what you're onto. So if you're interested in going in the weeds, definitely check it out. Thanks, David. Thank you, David. See you guys. Thank you. Okay, Sam, let's jump to our next topic here. We have CoreWeave, which was formerly, so here's a nice segue, it was formerly a crypto mining company. Now it's turned GPU focused cloud service provider. And there's some interesting news surrounding this company. What is it? What's happening here? Give us the quick rundown. Yeah, so you said it, you're right. They've already been in a place where they had assets and then that kind of got pulled out from under them. They had to pivot. So they are doing cloud service providing with those GPUs. What's interesting is they just got $2.3 billion in debt financing to buy more GPUs. And the interesting thing here is that that $2.3 billion financing is collateralized with their existing GPUs. It's worth noting that the GPUs they're buying, right? So they're getting the newest chips from Nvidia. Nvidia is an investor
in their company. And so people speculate that this is Nvidia allocating supply of these chips, which are in great demand, to CoreWeave as a way to diversify away from Amazon, Microsoft, and Google. And we spoke about this before, but Tesla can't get enough chips. That's

why they're building Dojo. The talk of the town in Silicon Valley is who has access to these H100, the Nvidia chips for the highest end chips out there. And this to me is concerning, right? This is like the start of a bubble in my opinion. You're taking an asset that depreciates extremely quickly. You're using that to collateralize a loan, and you're actually buying more of those assets in return. And I don't know of a time when this has ended well. I'm not saying that this is the end right here, right? I don't think so, right? But you obviously never know. This just seems like unhealthy behavior, particularly when you see a narrowing of investment into AI companies and AI leaders going through the roof. And now this is to me an even further narrowing where you're not even talking about the company, you're talking about a specific chip from that company that's now being levered up. Yeah, I think three points stand out to me. One is just on how many times are we going to talk about a company shifting their focus from crypto into AI? I feel like that's happened 100 plus times in the past six months. We have companies chasing hype. The second is the favoritism that NVIDIA is potentially showing core weave right now in allocating these scarce chips to a company. I think that in and of itself is a very interesting fact. And then the third is to your point, how fast these assets can depreciate. NVIDIA is known for accelerating performance each year in their GPU units. And so how long until these units are not performing in the way that core weave may need them to? And so how do you lever or leverage these assets? I think it's an interesting structure to be able to finance on the back of these assets. And I think an interesting point was brought up in the brainstorm on Friday. Someone said, this is not unique. Companies will borrow against assets that depreciate all the time. And I think someone brought up airplanes. But the difference here is those assets are potentially most of those assets depreciate at a much slower pace. Airplanes can be used for 30 plus years if they're made well. GPUs, we don't necessarily know how long these can sustain in the market at a competitive performance. So that, I think, really stands out to me as a hey, let's reassess this because this could be dangerous to your point. I don't believe that this is the end. I think it shows the strong demand for AI. But if AI doesn't pan out in the way that most people think it will in the next few months or even years, what does the pricing of the GPU market then signal? And this is self-fulfilling prophecy. You have AI demand coming in. GPU demand then comes in as well. The secondary pricing for GPUs, because there is a large secondary
market for GPU units, that comes in. And then does core we find themselves in trouble because the assets that they've pledged have lost market value because the demand for AI that they had expected
isn't materializing. So there are risks. And the other thing is, if this does work and nothing to say that off the bat, it wouldn't work, you have Nvidia as the investor offering them the chip's exclusive supply here. So maybe it works and they get comfortable with this. But oftentimes, what we see happen is it works the first time, it works the second time. And each round, you're like, oh, it worked. So I'm going to go bigger. I'm going to go more money. And that's kind of what builds up that leverage that leads to the ground falling out from underneath. So this is definitely something that I would keep a close eye on as companies are investing and chasing after the short supply of AI compute out there. Yeah, definitely. Okay, we're two topics this week. Short, I think this is the first time we've had two topics. But that does allow us some time to look in and address some of the questions. Thank you, everyone, for the code word pizza.

Everyone that submitted questions, we picked out to this week that we thought we could really dive in
on. And given, you know, we only have two topics, let's let's let's get right into these. So Sam, one of the questions I think is for you. You've been much more focused on this than anyone else at arc, maybe aside from Brett. But on the superconductor news we talked about last week, this room temperature superconductor, how fast this is the question how fast will the soup if if this is real, how fast will room temperature superconductors be in the market and have real life applications? Yeah, and then maybe just to catch everyone up. So it seems as though there have been various replications of this. Still, some people think it's fake or whatnot. I think my take at this point is, you know, is LK 99 the substance that the Korean researchers put out the paper on? Is this the Holy Grail? It doesn't seem like this is necessarily the Holy Grail, but it seems like it's totally illuminated a new tech tree for people to explore. And given that there have been, you know, some first stage recreations, you know, it's very promising and there's probably going to be a lot of research and tinkering that goes on. And so, you know, when I was just looking at this, I think a useful timeline here is kind of looking at the plastics industry, right, another material science type thing. And I thought it was useful just to note Gore-Tex, you know, our favorite raincoats made out of that. The technology or the material science breakthrough for that was in 1969. And the first commercial orders were in 1976. So, you know, that is seven years. And I'd say that's fairly quick. There are people who responded to that tweet and they said, you know, so much has changed since then, shouldn't it happen faster? I think it's possible. But in my mind, that seems like a reasonable timeframe if this really is something. And again, you know, people will find out the inherent properties of, you know, LK 99 or other similar compounds. And maybe there are things in there that make it more less difficult. But, you know, I think that's just a useful frame of reference for how long it could take to commercialize something.
Sam, I have a before we get to that question, just one follow up question. I know we touched on this last week, but what would be some of the real world applications of a room temperature superconductor? Yeah, so I think there's applications in electric motors. People talked about, you know, distribution. And if you look, it's really, I think the losses on electricity distribution for the grid are in the five ish percent range. And it's off, what I'll say is broadly speaking with new technologies, and they're probably more expensive to produce at first, even with the efficiencies they give you, it's probably going to unlock new use cases. And that'll be kind of those first R and D applications as opposed to ripping and replacing, you know, the existing infrastructure that's already there and good enough. And so I could see maybe some electric motor application and super high power to weight ratio here. You know, maybe someone makes like a cool rail gun or a maglev train. That'd be pretty cool. That'd be pretty big. I don't think that necessarily the first I'm going. I'm going electric motor. I'm going electric motor as one of the first applications, but we'll see. And that that'll change. So don't hold me to it.
Nick, this question for you. Your thoughts last week, we were talking about advertising revenue and the landscape there. And the question was, TikTok wasn't mentioned. Is it not essentially a TV in your pocket and a much better alternative for shifting advertising video budgets versus meta, which is still very much a social media platform? Yeah, that's a great question. And I should apologize for not mentioning TikTok last week. I think this is absolutely right.

I think TikTok in and of itself is a disruptive force within social media. It really did pioneer a new way to distribute content. And that was through, you know, AI recommended content. So as you're watching, it's picking up on how you interact with these videos and then feeding you videos that are in a similar vein versus what historically social media has done has focused on just a follow and feed methodology. So if Sam and I are both friends on Instagram and Sam is, you know, liking dog photos, it will then assume because we're friends that I may like dog photos. TikTok flipped this entire distribution mechanism on its head when it introduced, you know, AI recommended content. And I think you've seen how big of a disruptive force it's been, because every single social media company has now copied and replicated this distribution of short form videos in the same manner that TikTok introduced many years ago. And you see it in the numbers as well, you know, TikTok commands a growing portion of advertising revenue. And the MAU base is, I believe, well over a billion users, which is, you know, in rarefied air when you look at, you know, the billion user platforms. So it's absolutely right. I'm going to just hand up. I should have brought it up last week and just slipped my mind. I really admire what TikTok did to the social media landscape. If you can put all of the, you know, the rest of the story behind you, I think just, and when you look at the platform, the technology they introduced, I think it's, you know, something that we haven't seen in social media, you know, it came in, it disrupted the space, and now everyone's trying to play catch up. So I think it's one to watch, and it really is pioneering new formats as well. It's continuing, like what they're doing now with live streaming, you know, they are pushing the boundaries within the social space. And I think to this question's point, it's not as much of a social media platform as say Instagram or some of these other sites. It's much more just an entertainment platform. And that shows up in kind of how people tend to use it and for how long they use it. I think more people spend, if you look at the average time people spend on TikTok, it's much higher than most social media platforms. And I believe the last time I looked at this, it was actually categorized as an entertainment app and not a social media app in the app stores. I don't know if that's changed, but that was when I was looking into this originally back in 2020, 2019, that was the case. So I think they understood at the time what they had, it's not necessarily social media site, it could be looked at as a TV in your pocket. Nice. Well, Nick, you got a question for me, we can use the word for next week's questions. Yeah, what is your favorite ice cream?
Ooh. I'm going cookies and cream. Cookies and cream?
Cookies and cream. Nick, you're looking pretty tan. Where are you coming from?
I'm back in St. Pete. I had a nice run outside yesterday in the sun and the heat wasn't as much fun as the sun, but I appreciate that compliment, Sam. Thank you.
Nice. I did also, I'll just throw this out there. I run a bunch. I'm looking for my new trainers. The ones that I always get, now all of a sudden ASICs, they've adopted it too, like the giant foam cushion. That's what I'm just like. Hocus. I know, but I don't want that. And then now they're charging $140. I tweeted it out. Who's disrupting this? I just want like the ASICs neutral trainer from like 10 years ago. It was fine. Let me get it for like 70 or 80 bucks. Who's making it? If you know of anyone in the shoe industry, let me know.
Yeah. So we'll wrap on that and thank everyone for listening as always. So please comment. Cookies and cream is the code word for this week. Any questions you may have and then tweet or comment at Sam, your favorite running shoes, so he can stop complaining about these.

No, not favorite, not favorite running shoes. I know my favorite running shoe. I just want a running shoe disruptor. Okay. There you go. A running shoe disruptor. That's what we need everyone to comment at Sam. Thank you as always. That's our show. See you.