Demetri Kofinas:	00:00	Today's episode of Hidden Forces is made possible by listeners like you. For more information about this week's episode or for easy access to related programming, visit our website at hiddenforces.io and subscribe to our free email list. If you listen to the show on your Apple podcast app, remember you can give us a review. Each review helps more people find the show and join our amazing community and with that, please enjoy this week's episode.
Demetri Kofinas:	00:48	What's up everybody? My guests on this episode of Hidden Forces are Michael Anderson and Van Spencer. Mike and Vance are the founders of Framework Ventures, a thesis driven venture capital firm whose team of technologists, researchers, and investors partner with founders and teams to build token based networks and develop the requisite crypto economics, governance, and community to scale. The team's focus is on the hot new space of decentralized finance known as DeFi for short and are the largest owners of the decentralized oracle provider Chain-link and derivatives platform Synthetix outside of the core team and exchanges.
Demetri Kofinas:	01:31	Hidden Forces listeners have been begging me to cover this space and I'm very happy that I finally got around to it. My choice to bring on Framework is because when I'm new to an industry, I find that speaking with investors who are focused on that space is usually the best way for me and by extension for all of you to get a sense of the ecosystem, what's important, who the players are, and what they focus on?
Demetri Kofinas:	01:58	Likewise, the rundown to this week's episode is especially helpful to anyone new to the space, but honestly, even if you think you know this sector, the rundown will probably help you. It's over 20 pages long and I really focus heavily on two networks in particular: Chain-link and Synthetix, which are the two platforms that we spend the most time covering today. We also discuss crypto economics and valuation models and how they've undergone a process of creative destruction since the 2017 ICO boom, where you might recall formulas like MV=PQ were pretty popular and where people tended to think of these protocols in terms of utility value versus store value.
Demetri Kofinas:	02:41	I learned a ton both preparing for this conversation, but also in talking with Michael and Vance who are both very smart and passionate guys and who I think have a very clear and well thought out perspective on DeFi and the opportunity it presents to investors, but also to users of many of the applications that we discuss today.

Demetri Kofinas:	03:02	As a reminder, Hidden Forces is listener supported. We don't accept commercial sponsors and I don't interrupt the podcast with advertisements or product pitches. The entire show is funded from top to bottom by listeners like you. If you're interested in supporting the program, which also gives you access to the episode often times including the rest of my conversation with Mike and Vance the transcripts and show rundowns, head over to patreon.com/hiddenforces and subscribe to one of our four content tiers.
Demetri Kofinas:	03:37	If you haven't subscribed to our mailing list yet, you can do that through our website at hiddenforces.io and don't forget to rate the show and write us a review on Apple podcasts and anywhere else you listen to the show. Since this episode deals with investing, it's important to make absolutely clear that nothing I say on this podcast can or should be viewed as financial advice. All opinions expressed by me and my guests are solely our own opinions and as is the case with all of my episodes, these conversations are for informational purposes only and should not be relied upon as the basis for financial decisions.
Demetri Kofinas:	04:18	And with that, please enjoy this week's episode with my guests, Michael Anderson and Van Spencer. Michael Anderson, and Vance Spencer, welcome to Hidden Forces.
Michael Anderson:	04:35	Thank you for having us.
Vance Spencer:	04:35	Yeah, good to be here.
Demetri Kofinas:	04:37	It's great having you guys on, how are you doing?
Michael Anderson:	04:39	Doing well.
Vance Spencer:	04:40	Doing great you know. DeFi is going pretty crazy, but we're definitely managing it.
Demetri Kofinas:	04:45	So, you guys know this because I tweeted it out, but the rundown for this week's episode became a monster rundown because I ended up having more time to research DeFi than I intended, because we're supposed to record this initially last week. So, I spent today... Since I already had a rundown completed, I spent today looking at Synthetix, which is basically derivatives on DeFi and how they work and stuff like that. So, we're going to get into all this stuff. It's super interesting. I'm glad I finally got a chance to do it and sit down with you guys, but before we get into it, especially since you're both actually in

		the same room using the same microphone and I want listeners to know who is who, it's a good opportunity for each of you to give our listeners a sense of your backgrounds. Like where you've come from, where you worked before you got into this space, and like how your individual experiences are relevant to starting a crypto fund.
Michael Anderson:	05:39	Definitely I'll kick things off. This is Michael Anderson for the listeners. I started my career working in technology. I was a product manager at Dropbox and then Snapchat. At both places, I was working on commerce and payments so, we can get into it, but definitely FinTech, Financial Technology has been a common thread throughout my career. In 2018 Vance and I were living together and decided that it would be a good time to throw our hat in the entrepreneurial ring. We started a company called Hashletes, which was a digital collectibles company. It was built on top of the Ethereum and it was digital collectibles that were licensed by the NFL. It was a great experience, we learned a ton and from that experience in our investing track record as angels, we started. Framework.
Vance Spencer:	06:25	And this is a Vance Spencer for all those listening at home. Similar kind of consumer technology background as Michael. I came out of school as a management consultant and then worked in a corpdev for Netflix. First in Los Angeles, more on the content side and then in Tokyo, helping lead kind of expansion into Asia for Netflix. You know, Michael kind of covered the Hashletes part of our background. We sold that company about a year and a half after starting it and from that we raised this fund Framework, which is a venture capital fund focused on FinTech with the idea that the consumer applications of tomorrow that are financial in nature will be powered by crypto and today we've been pretty much the biggest fund investing in just specifically DeFi and yeah, just glad to be here and saw Demetri's effectively a book of memes and notes about the space and excited to see kind of what type of rat hole he got into.
Demetri Kofinas:	07:19	Yeah. Yay memes. So, what... Are there... That was something else I wanted to ask you guys which is, are there other funds in the space that focus exclusively on decentralized finance? And I think you kind of answered that. The answer is yes, but how many are there? Like is that a common thing?
Michael Anderson:	07:38	Well, one thing that I think we are strong proponents of, and I think that most in this space are starting to recognize this as well. Basically, block-chain is eating finance, and the same way that software is eating the world, our perspective is that block-

chain is eating finance and with that any venture fund that's investing truly in block-chain technology is starting to gravitate towards a DeFi thesis as well. I'd say that we were one of the first to promote this and promote this as our core focus, but there are probably a handful of others that in the last three to six months have come on board and started to promote themselves as a DeFi fund as well.

Vance Spencer: 08:17 In the background of DeFi basically growing up and finding product market fit was... You know, the 2017 ICO bubble, VCs, huge funds throwing tens if not hundreds of millions of dollars at things like Telegram and smart contract platforms that are competing with ETH and you know, the industry is largely getting over this hangover from this huge party that it had in 2017 and 2018 that funded a lot of really interesting experiments, but not a whole lot of focus was put on the application layer. Really, anything that consumers could interact with and so... You know, we were the first in this category just because it was so nascent, we had the specific focus and we are seeing the industry start to pivot and kind of copy what we've been doing and it's funny to show up to conferences and see funds that were describing themselves as kind of like smart contract focused funds. Now describe themselves as DeFi, but it's good for the space and it's good to see it growing and it's good to see more dollars going to things that are actually productive.

Demetri Kofinas: 09:13 So, besides that, besides the focus on the application layer and I don't know how much that differentiates you guys. Obviously, it is some source of differentiation just based on what you said, but what is it that differentiates Framework Ventures from competing funds in the space?

Michael Anderson: 09:29 So one thing that I think we really have focused on from day one, and I think this stemmed from our experience as entrepreneurs in the space, but also just we came at it with a first principles perspective and have a very different fund entity, legal entity structure for how we organize and frankly how we participate post investment and we've talked about this a bit in other publications, but we have Framework Ventures, which is the fund and then we have Framework Labs, which is a new type of management company and its structured as a company. We have a number of engineers working on proprietary technology. We're the largest liquidity provider in most of the networks that we back. We're staking actively in one of the largest stakers in the ecosystem and so what this allows us to do is not only have a post-investment participation where we can bootstrap growth, we can benefit the networks in a productive

way, but it also leads to proprietary deal flow and it's something that we've gotten a lot of access to just with competitive deals because we're the biggest users of the platforms before there's an investment round. So, we think that this is a huge differentiator and probably our unfair advantage.

Demetri Kofinas: 10:42 You know, that's super interesting. I do want to talk about that. I want to discuss Framework Labs. It's an interesting model. It's one that we... I think the three of us discussed some other examples of this in a previous conversation, but before we do that, why don't you... Well, I want you guys to walk me through your investment thesis, but before you do that maybe you can give me a really... A much more clear definition of what is DeFi? What is decentralized finance?

Vance Spencer: 11:08 Yeah. So, there's two really interesting things about finance that when we look at this industry and if we try to assess, is this real? Is it moving? You know, what type of potential does it have? You know there's basically two things. The first one is that finances is the largest market that exists for consumer applications, for enterprise applications, for generally just any technology and the second is that there's been almost no innovation in finance over the past 30 or 40 years and the reason why there has been no innovation in the past 30 or 40 years is because there's not a developer sandbox to experiment, to push stuff out, to see what works. You know if you want to launch a consumer app whether it's pizza delivering or it's disappearing messages or it's a femoral messaging or whatever can go to the app store and you can write a simple app, you can put it on test flight and distribute. You know boom, you've kind of got yourself a company. Finance there's really no such thing. You can't just walk up to Morgan Stanley or Goldman Sachs or any prime brokerage and say, "Hey, I have a new idea for a financial primitive or a new financial instrument."

Vance Spencer: 12:09 And so DeFi for us is just this developer sandbox and when you look into this developer sandbox, the lingo of what crypto people use is money-legos and what that basically means is that you don't have to build all this stuff from scratch. People have built synthetic US dollars, they've built options protocols, they've built futures protocols and so you can really quickly spin up a basic MVP of a new financial product as long as you've got some type of data feed to tell us what it's worth and some type of collateral pool to back up the value. You know, this is an explosion in terms of the amount of innovation you're able to do in this space and really what DeFi is to us is this sandbox, is this developer sandbox that people have been waiting for forever that exists permissionlessly and what that means is that

by permission-less, anybody can build on top of it and from a regulatory perspective, it's much friendlier than if you were to just start a centralized company and so that explosion of innovation is what makes us confident that this is real and that we are just at the beginning of something.

Demetri Kofinas: 13:10 When you say though innovation, what do you mean exactly? Because there has been tons of financial innovation in the industry in the last 30 years.

Michael Anderson: 13:18 Definitely, and not to say that people in the financial industry haven't been innovating. I think the major difference is what we're talking about is an architectural re-orienting of the stack of technology that anything financial is running on top of and whether it's Wells Fargo iOS application that I use for my personal banking needs or it's Venmo, you're still relying on the internet protocols that existed and started in the 1970s and the 1980s. What we're talking about with block-chain is a re-orienting of what that underlying technology stack is and-

Demetri Kofinas: 13:56 Systemic disruption.

Michael Anderson: 13:57 Systemic disruption, creative destruction, all of these are monitors that we talk about in terms of how we think of block-chain orienting or re-orienting the financial technology sector.

Demetri Kofinas: 14:08 Okay. All right, so what is your thesis in this space? How would you articulate that?

Vance Spencer: 14:14 So there's basically... And I'll start out by saying we're DeFi fund. We have a very long term thesis in 15 to 20 to 25 years. You know, we can see a lot of things being operated on block-chains, whether that's a decentralized form of Twitter or decentralized form of Facebook and where all the algorithms you can see the recommended content or open source and things are much more auditable and transparent. You know that's where we see the future going. In DeFi today and where things stand, we kind of divide the world up into two different kind of thesis and their financial innovation and their financial inclusion. Financial innovation is moving financial incentives closer to a web two companies as people understand them today.

Vance Spencer: 14:57 So being able to hook up a Spotify playlist to a collateral feed and being able to bet on how many likes or shares or comments it will get and just generally you can see this happening in Reddit with people starting to incentivize communities with

their own native token, which allow them to vote and decide things for how the communities are run. So, that's kind of the financial innovation side and we see that eventually pushing closer and closer to web two as they kind of exist today and putting financial incentives directly into the kind of user experience. You know, right now you have advertising, you have subscription and you have micro-transactions, but really the fourth business model that these things stand to create is this token native economy where people can transact and earn token value through interacting with protocols and doing different behaviors that the protocols themselves tried to incentivize.

Vance Spencer: 15:46 So that's kind of the first one. The second one is financial inclusion and this goes from... You know, there's two and a half billion people that are on banks. That's obviously like a big stat a lot of people like to quote with Bitcoin, but a lot of the financial markets of the world today are geo-fenced. You know, if you're a Canadian citizen, if you are in China, you can't get the same access to the US stock market to commodities, to financial products, to financial instruments that you can if you were living in the US and so the opening up of those markets through just this global transparent financial standard that's built on block-chain is the other kind of big thesis we have and I think we'd like to be kind of opinionated on some things that are kind of in the day to day, but relatively un-opinionated on where this lands eventually and as we kind of said before this developer sandbox, when things get a hundred times easier, a hundred times cheaper innovation just naturally explodes and so while those are kinds of two theses that we have right now it's a pretty wide berth for where things could go, but it's very exciting at the same time.

Demetri Kofinas: 16:49 So one of the thoughts that came to my mind is how much of the innovation that's happening in this space is because it's unregulated or largely unregulated relative to the legacy financial space, or maybe I'm mistaken to think about that, but that came up when you mentioned creating financial products that would allow you to basically speculate on how many likes you get. I think a lot of people will wonder, what's the value of that? What's the point of that? Or maybe there really doesn't have to be a point. Your point is simply that it is, it just is. It's something that people will do one way or the other, and you want to be in the space to capture the value, but let's... And by the way, feel free to respond to those two points, but I also want to drill in deeper on this point about financial innovation and financial inclusion, because I am interested in how token economies can capture value and create economic efficiencies

that would otherwise be either impossible or much more difficult to achieve in a more centralized system or sort of a classical financial market and then we can, I think discuss financial inclusion and talk about that, but feel free to either one of you take those questions.

Michael Anderson: 17:56 Yeah. These are both great questions and stuff that we talk about constantly and consistently, I think to address the first point on regulatory situations. One thing that has become clear is that there is a difference between certain jurisdictions and how they regulate this industry, but what's also clear is that there's a reason for the US having the greatest capital markets in the entire world and a lot of that stems from trust and oversight in the regulators for the financial markets and so this is all to say, we view DeFi as an opportunity to enhance that as opposed to usurp that and what we think with the purpose of regulators and the purpose of regulation and financial markets ultimately it stems from the idea that you want things to have trust and to be fair and open with the ways that people use it and that is the ethos of DeFi.

Michael Anderson: 18:52 What it does is it instead moves that barrier of trust from a regulator allowing that securities exchange or that trading entity to operate within the financial markets. It moves out from the regulator to code. It moves toward contract and when there are specific pieces of code that control these and dictate the parameters and dictate the rules, all of it is open, all of it is fair and it's auditable and so we view DeFi maybe in comparison to centralized finance operating within the crypto ecosystem as a more fair and transparent way of making the same issues clear and open and fair for everybody else and so we really actually view that DeFi will ultimately be on the right side of history and it's clear that people like Hester Pierce at the SEC are thinking about it in the same way, which is why she has proposed a three year grace period for token projects and I think to the Vance point, one of the things... To address the second question.

Michael Anderson: 19:55 One of the things that we really ultimately get excited about when it comes to tokens and when it comes to decentralized finance is that in 2019, we have established two new token models that relate value back to the token holder and the first one which was popularized by maker is a buy and burn. Where the earnings or the revenues of the network are actually flowed back to Maker holders by the protocol buying more major tokens, and then burning them.

Michael Anderson:	20:26	So increasing the ownership for existing major holders and the other one, which is popularized by Synthetix is this concept of a dividend that's issued to active participants in the network where the revenue is actually flowing to active participants and in terms of both of those, these are very easy to understand concepts that people in traditional finance can understand because you can do a DCF to evaluate what the value of these tokens are based on their earnings and this really, I think ultimately shows that these valuation models can exist in the token ecosystem where there's value and those are some of the things that we evaluate when we're looking at new investments.
Demetri Kofinas:	21:05	So is the dividend what people are talking about when they talk about yield farming in DeFi?
Vance Spencer:	21:13	The dividend is not specifically what they're talking about, but it is kind of under the umbrella of the larger concept of yield farming. Yield farming in DeFi refers to you're effectively putting capital to work in a protocol in its very early stages and the protocol is offering a disproportionately share of high sheriff tokens at the beginning to incentivize user behavior so that it can help to build a more bootstrap network effects and really start to incentivize and build the muscle memory for participators in that protocol.
Demetri Kofinas:	21:45	So when I stake my SNX and I get additional SNX through inflation as well as SNX as a result of the transactions that are happening on the network, are both of those considered a dividend?
Vance Spencer:	22:00	Those are both considered a dividend. I mean, those are kind of the concept of yield farming, I think is the real kind of deep in the weeds crypto heads would define it. You know, you are staking your SNX, you're minting debt, and then you're taking that S-USD denominated debt, putting it into another protocol, generating more yield, and then maybe going two or three steps forwards, and totally acknowledge that this obscene is a little bit absurd, but I think this concept of community ownership and retail being able to put capital to work to bootstrap venture capital style return projects is very powerful in a world where, you know and my heart goes out to all the 2020 year old's, who've just graduated college and they're looking for a job and they're in a culture of Wall Street bets and Dave Portnoy pulling out letters out of a Scrabble bag to buy stocks.

Vance Spencer:	22:50	Like you know, in kind of downturns if you look at history, speculation entertainment kind of tend to converge as a form that you can generate income and so this is all... And DeFi's emergence kind of all against the background of these really weird set of macroeconomic events, but it's this almost perfect proving ground for anybody in the world with any amount of money can go buy SNX, they can stake it. They can earn a reliable dividend and they can live off that and basically what you're doing is you're a service provider to anybody who wants to trade it against that collateral pool and previously that was really only open to market makers trading at large centralized exchanges and that was kind of the only game in town for them and this... You know, and I hate saying this stuff, but democratizing X, like this is an example of that and so that's why kind of we're so bullish on this opportunity and the memes and all the good stuff that comes with it is just kind of a natural byproduct of it.
Demetri Kofinas:	23:45	Okay. So, we'll get into... We'll like put a pin in SNX because I don't want to like... I don't want to intimidate people that are coming into this and need kind of an explainer because I would like us to get into that. We might get into that in the overtime. Let's go back a second because I want you guys to give me some examples, because I think the sort of market maker functionality and derivatives marketplace may be a good example and we'll get into that with SNX, but give me some other examples of token based business models or cryptocurrency enabled business models that have a competitive advantage over traditional business models. Like what would be examples of that?
Michael Anderson:	24:22	Yeah. One of the ones that we're really excited about is decentralized borrow, lend markets. The two predominant players here compound and AVE and full disclosure, we just announced an investment round in AVE, but we are really excited because what this allows is natural forming capital through the use of supplying one asset to borrow another creates markets where the cost of borrow and the ability to lend enables a lower APR than you would find in most other markets. For instance, the ability to put any sort of asset into a collateral pool like Ave and then pull out dollars. The interest on that loan is an order of magnitude less than you would find, even if you were getting a personal loan from a bank.
Demetri Kofinas:	25:12	Why is that though or how does that relate to the fact that these are tokenized economies?

Michael Anderson:	25:16	Because they're all controlled through smart contracts and the creation, delegation and servicing of that borrow is done through software, there's no need for the middleman. There's no need for a bank. There's no need for operations where people to be involved, it's all controlled through code and through this control via code, the total end to end flow can be optimized to reduce that intermediate fee or rent or whatever is being charged within traditional finance and this is going back to exactly what Vance was talking about with the sandbox for developers. You know before 2014, there was no feasibility of smart contracts in the form Ethereum now and since 2014 with launch of Ethereum, any developer in the world can write essentially a bank account in about 25 lines of code and this bank account does all of the primary functions that you would find at Wells Fargo or Chase Bank, but now it's owned and operated by you and it's on the block-chain and fully able to be used by anyone.
Demetri Kofinas:	26:16	So I haven't looked into compound or Ave, which one were you talking about and are they both... What are they lending? They're like banks? Like decentralized banks?
Michael Anderson:	26:26	They are both borrow and lend decentralized money markets and they're both the same general flavor of this money markets concept. They have different strategies and different tactics about how they go about approaching the market and approaching growth, but yes, they're both decentralized money markets.
Demetri Kofinas:	26:42	How is cost of capital determined? The cost to borrow for example.
Vance Spencer:	26:48	Yeah. So, this gets back to your original point about like why does the token matter? There's two reasons. One, when you are borrowing in Compounder Ave, you are effectively subsidized with the native token and that lowers your borrowing costs. What that helps do at the beginning of a protocol's life cycle is it helps to bootstrap the network effects of that protocol and so you're seeing Compound which has been around really in earnest for about a year, year and a half. You know it uses tokens, and now it's bigger than most of the centralized borrow, lend and crypto and so that's the first part of why tokens are important. So, bootstrapping-
Demetri Kofinas:	27:23	You are saying people because they're going to be compensated in the native token additionally through sort of a controlled limited period of time inflation that this incentivizes them to put capital up to be lent out at lower rates?

Vance Spencer:	27:37	Right. And you know, at the current juncture the token doesn't do anything other than it gives you governance rights over the protocol and this is kind of akin to wishing for more wishes. So, you get this governance token, it controls the interest rate calculation. It controls the assets that are listed. It controls the general corporate strategy. It controls the smart contracts themselves and all of this stuff is great and the governance is amazing and you can vote in even cash-flows that accrue to the protocol to be distributed to the token holders themselves, but really the second point, which encapsulates all of that is just this idea of community ownership and distributing ownership and voting rights and control to the network users is really something that isn't possible in equity capitalized companies today.
Vance Spencer:	28:27	Like if you look at Twitter it's a great product definitely. Is it managed by the community? It's not. It's managed by Jack and his two buddies and Elliott the activist and that's cool, but like really kind of what you're seeing with internet culture and the Tik-Tok generation and memes in general is that community ownership is powerful. You know memes are powerful, making things go viral is powerful and really this is just kind of like... It's just corporate equity on steroids. It allows you to do things with protocols that you really can't do with equity companies and allows you to kind of cut the life-cycle of a building traction and network effects by order of magnitude and that's the really powerful stuff about tokens is just the community ownership.
Demetri Kofinas:	29:05	Oh you know, I should also specify these are all collateralized debt, right? These are collateralized loans across the board?
Vance Spencer:	29:12	They are right now, but we're making investments into things. So, like for the people at home, if you put in 150 bucks of ETH on Compound, you're able to borrow a hundred bucks. So, then your notional exposure is 250, but very rapidly things like credit scores and identity are being brought on chain. So, when you go up to these protocols, they have a sense of who they are or who you are and they can start to evaluate credit risk and they can start to build bespoke insurance and credit risk models around your particular personality and so really what you're seeing is like okay, you know, DeFi is this really weird experiment. It's growing really quickly. Okay, it's eating the centralized crypto exchanges like Coinbase and finance.
Vance Spencer:	29:53	Like sure, that's definitely going to happen, but like the next stage of this is bringing on identity and people who are used to traditional banking experiences, which are just terrible or if you're living in a developing country that don't have any

banking experiences and once you have that, you can really start to replicate a bank and insurance company derivative exchange on chain and in addition to being more transparent, it's community owned, you know the rules, you can impact the governance if you want and you're earning tokens from anywhere in the world if you're just interacting with these and that's a very powerful concept, especially today when everybody's locked inside.

Demetri Kofinas: 30:27 Yeah. I listen to you talk, the more I think that when you talk about innovation it sounds to me like what you're really talking about is retail and consumer innovation. Innovation at the consumer and retail level, right?

Michael Anderson: 30:38 Absolutely.

Demetri Kofinas: 30:39 Because a lot of the innovation we've seen in finance has happened B2B.

Michael Anderson: 30:42 Exactly. And a lot of this is innovation in terms of what this consumer viable product category ends up becoming, but a lot of this innovation is just in the fact that as Vance said, tokens are corporate equity on steroids, but it's also a completely open design space for any concept and if there are open and fair and transparent controls, like an open governance process and one token, one vote, those are things that can be controlled by wishing for more wishes and you get a chance to dictate the outcome, but also participate from a user level.

Demetri Kofinas: 31:15 Yeah. You know, also what you said about as DeFi becomes theoretically speaking, more integrated that brings up oracle's like chain link and if you're pulling in data about consumer reputation score, credit scores, et cetera, that's where that becomes really important. Now I do want to get into that because that's a huge part of... I mean, you guys are, I think the biggest investors in Chain-link outside of kind of core founding team members, you can correct me if I'm wrong. I've repeated that before, but I can't remember if I got it wrong. Before we do that though, give me one more use case or opportunity that you're most excited about and let's say that you haven't already, but we haven't seen. Like, right because I know you're excited about Chain-link, but you guys have already invested heavily in it. Chain-link has been gaining a lot of traction and momentum and Chain-link is going to get us into a conversation about memes by the way, which I'm very excited to talk about because it's actually it's fun, but it's also actually really interesting and smart and I think our audience will appreciate it,

but give me one more use case that you guys are super excited about.

Vance Spencer: 32:20 Synthetic assets are a huge product category that deserve to be broken down into a bit more detail, but you know just to give you an example of one of the more powerful ones. The stable coins on Ethereum, there's almost $8 billion of them and I think that's up from about 4 billion at the start of 2020. Really the fastest growing asset class on chain and one of the most interesting use cases. Specifically, Synthetic US dollars are used in Asia for medium exchange store value in a country where, or a set of countries where you can't really get access to stable currency. So, you know, you-

Demetri Kofinas: 32:55 When you say synthetic US dollars, are you talking specifically about sUSD on Synthetix platform?

Vance Spencer: 33:00 S-USD, USDT these are all being used at fairly large scale to settle transactions within China, across borders in Asia and amongst a lot of different other countries. Like in so many of these developing countries, you simply cannot get access to US dollars through the traditional financial system. Like it's just a nonstarter, but if you're able to get money on chain, which a lot of countries still allow like crypto Vietnam ramps are totally fine and then once you're on chain getting to USDT or S-USD is really just one more hop and you're into a stable currency and this kind of depends on where you sit and how bullish you are in the US dollar, but for a lot of people, that's their best bet and so you have these use cases emerging of people really like buying and settling with these assets and this is just going to dovetail.

Vance Spencer: 33:48 Like now you have synthetic Japanese yen, you have synthetic Korean Yuan, you have synthetic Australian dollars. There's so many different use cases that these things can be used for. You know, the existing credit system, really when you use a credit card what you have a claim to is the intermediary and their credit risk. When you use stable coins, you're able to replicate a cash like certainty of a transaction between two people without the volatility of something like Bitcoin and so synthetic assets, you know finding real use cases among retail people who have no other reason to interact with crypto and are not in kind of this speculative audience of DeFi or punting Bitcoin around. You know that's one of the most encouraging use cases we're seeing because that's just real people using this stuff.

Demetri Kofinas: 34:28 Okay. So, maybe we should actually use this opportunity to dig deeper into Synthetix since we've seemed to keep going there. Why do you guys feel that we need a new derivatives

marketplace? Why can't someone who wants to speculate in the Japanese yen, do it to their satisfaction today in existing options markets or futures markets?

Michael Anderson: 34:50 Yeah, so they absolutely can and to speak to Synthetix in particular and then maybe derivatives exchange is large Synthetix is more than just an exchange. It definitely has an exchange called Synthetix exchange where users can transact in Synths which are Synthetic assets that represent underlying assets themselves. They can transact in that exchange, but what really Synthetix provides is a set of price feeds for all these Synthetix assets, which is powered by Chain-link and a collateral pool with which to derive value and after you have both of those two components, anything can be made into a Synthetic asset so long as there's a reliable price feed and then collateral to use and so that's what really gets us excited about Synthetix. It just becomes a new form of design space for DeFi and what Vance said earlier about we see there being money-Legos everywhere and that's really kind of how we get excited about different concepts. Well, Synthetix kind of just becomes a Lego box in and of itself where anything can be created out of it and be used elsewhere. One example of this is Curve, which is a stable point automated market maker where users can transact DeFi for S-USD for USDC, et cetera.

Demetri Kofinas: 36:05 DeFi make a stable coin.

Michael Anderson: 36:07 Exactly, but that S-USD which is created out of the Synthetix ecosystem out of the Synthetix platform is then one of the largest collateral pools within the curve ecosystem. So, these assets don't stay endogenous to the Synthetix platform, they actually proliferate and become major components of other platforms elsewhere and that's the composability aspect of it. So, to answer the first question, Synthetix is just a ton more than just an exchange. Why there needs to be an exchange as it becomes for these assets? It becomes the large value accrual method for pain or compensating those people that put collateral into that backstop for the Synthetic assets. It's one of the most powerful reflexive models that we've seen in crypto because as more synthetic assets are minted the best in primary place to transact those assets is the Synthetix exchange itself and exchanges as we've seen with Binance, with Coinbase, with BitMax, there are some of the best value tool mechanisms in this space and it's where you can actually derive real revenues and having one of those for the assets that you're creating to compensate the people who are collateralizing those assets is just purely reflexive.

Demetri Kofinas:	37:22	A dubious word in finance reflexive. It can--
Vance Spencer:	37:24	It works both ways.
Demetri Kofinas:	37:27	It can work both ways. So, let's get into Synthetix because this can get very complicated, but I actually want to see if we can sort it out for people. It is a very interesting model I will say and originally Synthetix, as I understand it was actually the stable coin Haven and the team's founder and then the larger team, they kind of pivoted at a certain point. Maybe was like two years ago or a year ago they pivoted to create Synthetix?
Vance Spencer:	37:52	It was about a year and a half ago. Yeah.
Demetri Kofinas:	37:54	And a lot of these stable coins seem to share some very kind of similar principles and a lot of them sort of operate like a bank and in some sense, the way I think of Synthetix, it feels a lot like a gambling pool. It's where everyone kind of throws their money in a pot and then they'll get a share of the winnings over time with no kind of end in sight. You can kind of pull out any time. How would you guys describe the Synthetix platform, the network, how it works, how the token name economics work.
Vance Spencer:	38:25	Yeah. So, the best... So, there's two things happening on Synthetix. The trading is what Michael described over the last question and the staking is kind of the other side of the house, which backstops all those trades. So, if you think of a bank... You know, you go to a bank for a loan and they have a large pool of collateral and you assert your credit worthiness and they'll give you a dollar denominated loan. Synthetix is kind of a more aggressive version of a bank where they have a large collateral pool. So, every dollar of debt they give out is back stopped by $7 and 50 cents of collateral on the other side that's denominator in their SNX token
Demetri Kofinas:	39:07	Now in their white paper, they had an 800% figure. Was that just like that was... They changed that recently. They lowered the amount of collateral they needed.
Michael Anderson:	39:14	So the collateralization ratio is actually a mechanism for re-balancing the synths in the marketplace and so it's a fluctuating number and will probably be decreasing over time, but it's been up to 850, it's been 800, 700, 750. You can change it.
Demetri Kofinas:	39:30	Okay.

Vance Spencer: 39:30 But it is generally the system gets more stable that collateralization ratio will drop. So, back to kind of my point about the bank, instead of just giving out dollar denominate loans, Synthetix is effectively giving out loans denominated in synthetic Bitcoins, synthetic Ether, synthetic Tezos, synthetic gold, synthetic Korean Yuan, really anything that you want in terms of the sense that are listed on the platform, you can go up to Synthetix and either by S-USD and then reprice it for that other debt or you can just mint that debt when you stake your token and so what you have is you have this basket of assets that the debt is denominated in and a huge collateral pool to backstop it because that debt fluctuates a lot more than just US dollar denominated debt and so from that, you basically have this huge collateral pool that if you have S-USD, that S-USD is a dollar, but it's also the right to reprice it into any other of that exists on the platform.

Vance Spencer: 40:26 So you can go with S-USD, send it into this Synthetix exchange contract, and you can get synthetic ETH back, or you can get synthetic Bitcoin back. So, it's really this interesting thing that's... You know it's debt, but it's also a right to reprice it and this repricing is really kind of the exchange out of the equation where you're able to trade debt and speculate on options or futures or whatever financial instruments are listed on the platform, but it's all denominated in S-USD. The other part about the collateralization ratio is that, say people could mint as much synthetic data as they would want just with a dollar Synthetix. What would happen would be when you would take that S-USD and you would try to sell it for USDC or USDT that selling pressure would eventually cause the peg to deviate and so controlling the supply of the synth in the market is largely a factor of the collateralization ratio.

Vance Spencer: 41:23 If it's super high, there's not going to be that many synths and so the peg will rise. It may even go over a dollar, but if there's too many, it'll go under the peg and it'll trade at like 95 cents S-USD to USDC and so it's really kind of hits on our philosophy of like, yeah, sure. We buy tokens and that's all nice and good, but we are really managing these things like a central bank. We are extremely activists. We have proprietary technology dashboards and a team of six engineers that are literally working around the clock to keep the system healthy in the face of massive price increases, lots of synthetic debt in the system, huge amounts of trading activity. It really does take a village to kind of pull off the management of one of these platforms.

Demetri Kofinas: 42:04 So you guys are running what is effectively a stable coin against every other derivative asset, every other derivative in the pool, right?

Vance Spencer: 42:12 I think I get this. Yes, we are. We're effectively managing the peg of all the synthetic assets alongside the core team alongside other core contributors and we're just generally kind of stewards of the protocol's health.

Demetri Kofinas: 42:25 The threat against the solvency of the pool, which provides this kind of frictionless liquidity since you don't actually need individual counterparties. Everybody is a counterparty to the pool itself to the debt pool that is SNX collateral, right?

Michael Anderson: 42:38 So to be clear, everyone who is staking is a counterparty to the debt pool, to everyone who is trading and that dichotomy is sort of a fine nuance, but it's really important in that you can absolutely be a user of the platform just by going onto an exchange and trading your dollars for synthetic US dollars and then trade synthetic US dollars for synthetic ETH or any of the other binary options or futures products, but as a staker-

Demetri Kofinas: 43:07 On a third party exchange. On a separate exchange, not on the SNX platform.

Michael Anderson: 43:10 Not on the SNX platform.

Demetri Kofinas: 43:11 I see.

Michael Anderson: 43:11 You're just interacting with the synthetic assets, but if you're a staker you are both staking your SNX to get S-USD participating in the collateral pool as a counterparty, and you're receiving fees and compensation for doing so, but then you're also having to manage your S-USD as a trader. So, one is inclusive of the other.

Demetri Kofinas: 43:33 So I have a question. This is interesting. I hadn't realized that. So, there can be a whole sort of spectrum to which the people actively trading these derivative products. These Synthetix can also be actually staking at the same time. Correct?

Michael Anderson: 43:49 Absolutely. We are a... Yeah, we're a staker and we're a trader.

Demetri Kofinas: 43:52 It seems like the most stable safest environment is one where everyone who's trading is also staking, which is actually why I had thought about it as a gambling pool where we all throw in and then we just kind of trade pieces of paper the entire time

and you know, some person gets up, some person gets down. If you've got the opposite scenario where you've got let's say a 100 billion dollars or a 100 million dollars of money is being staked by individuals and you've got a bunch of let's say third party traders, who aren't actually staking. What's the likelihood that some significant number of those people staking get spooked and they withdraw, they pull out and then that sort of dries up your liquidity-

Vance Spencer: 44:36 And this goes back to your point on reflexivity and so it works in both ways, but this is where the proliferation of synthetic assets is a crucial strategic imperative for Synthetix the platform and the ecosystem, and having a diversity of participants on the staking side as well as the trading side, but most importantly on the integration side. So, Curve is one example of a place where S-USD is used. Ave as you mentioned earlier, is another example of where S-USD and SBTC are used as collateral options.

Vance Spencer: 45:08 So the more use cases you have, the more stability you have in getting access to these assets, but at this point the collateral pool and the state your ecosystem is so large and so diverse that it's hard to assume that there would be one or two large players that would be able to change the market and I think the other aspect here is that when you are a staker you're receiving inflationary rewards as you described, but you're also receiving a cut of the fees that are generated by the exchange and as we see this excitement in DeFi and the proliferation of these assets, there's more fees that are being generated and that cashflow is pretty attractive. So, that is a reason in and of itself to want to be and stay a staker.

Demetri Kofinas: 45:48 Yeah. Although there is a ton of volatility in this space, even more than traditional foreign exchange markets and we've seen currencies come under attack and pegs break in those places. So, I mean, it's not something to sneer at. Not that you were sneering.

Vance Spencer: 46:03 No, definitely not sneering.

Demetri Kofinas: 46:05 Yeah. And also, another way I could envision there being issues as again, although this would be, I guess less traumatic would be if there was a sort of a major move or a major unexpected move in a synthetic asset in the pool. Yeah, this all kind of just gets to the larger observation, which is that these are extremely complex markets and as you add more synthetic products you logarithmically expand the complexity and so like I wonder, and I'm almost afraid to ask this question because I don't even know where it would lead and I don't want to get caught in the

weeds, but I do wonder how does your software maybe high level manage kind of liquidity needs in the face of such fluctuations?

Vance Spencer: 46:49 Yeah. Great question. And we agree about the complexity and logarithmic scale. It is definitely not for the faint of heart. I would say one of the reasons why we describe ourselves as a DeFi fund is that it is dangerous to be investing in the space without living in the space and it's really all that we do and that's why we have framework labs as an entity to really test this stuff and try this stuff to the point where it's battle-hardened and we feel good about it before making a large investment and our software leverages a number of other platforms like Ave and like Curve as I described, and the advent of Curve in and of itself, and the addition of synthetic assets to Ave present a new opportunity to manage that liquidity programmatically and the software itself is definitely extremely complex and definitely very interesting, but we're leveraging a lot of other platforms that exist where there's collateral there's a peg, there's traders, there's users and Curve I think is a great example of this, where you've got 100 of millions of depth of stable clients and a new swap mechanism that allows for millions of dollars of trading volume in single transactions without moving that peg very much, and we've done it, we've tried and it's really interesting to see the advent of those because that benefits us and it benefits the Synthetix ecosystem and we get to leverage them through our software.

Demetri Kofinas: 48:17 So you guys are managing your internal... Oh you guys, sorry. I mean this is so easy to conflate the Synthetix team with you guys who are investors in it, but they have an internal ledger that they're keeping account at all times of who owns what or what percentage of what. Like how does the team secure the debt register from being altered for example? Like that seems also like a very simple, but very important problem.

Vance Spencer: 48:43 It's a huge problem. And the solving of that is what enables Synthetix in and of itself. It is all kept on chain. It's all managed through tens of different smart contracts that are interacting with each other to build the network and build the ecosystem. It's all written and open and transparent for anyone who would like to view it. You can see the different transactions that are being processed through it in real time and now the team has announced, it is transitioning from a team based model where the core team has the admin keys for the control or upgrading or changing of those contracts that's moving to a dowel based model where there are multiple parties that need to literally sign... Cryptographically sign a transaction to upgrade these

contracts, to change them in any way and doing this all with users that are actively looking at the network, actively looking at the code is really what DeFi is all about and it's the ability to see that happen in real time for anyone anywhere in the world that adds to the level of trust and transparency and you can do very, very complex things like managing an entire debt ledger on chain.

Demetri Kofinas: 49:50 What kind of... That's really interesting. So, like you guys, how long after a transaction is completed on a platform like Synthetix is it actually written to Ethereum space layer?

Vance Spencer: 50:05 It all happens in real time. So, there's a website called etherscan.io and it's the predominant place to go and view different transactions. It looks like a Facebook page almost, and you get to see different wallet addresses, you get to see different smart contracts that people are interacting with those wallet addresses and you get to see everything happen as it happens on the Ethereum blockchain and so from message signature to proliferation, to the peer to peer network, to actually viewing it on Ether scan is seconds.

Demetri Kofinas: 50:37 That's really interesting. So, you guys are really dependent on Ethereum being able to meet its roadmap goals and to continue to be able to scale?

Vance Spencer: 50:47 Yeah, so if you look at Ethereum today, an average transaction might cost you a dollar or $2. If it's super complex $10. This is a network where demand for services exceeded supply of computational power and so to your point, we really do rely on Ethereum to scale itself, but we also rely on a number of third party scaling solutions that are really going to start coming into production level usage in the next six to nine months, but you're totally right. We need to get to visa, Facebook level speeds 10 to 100,000 transactions per second and that'll in time. You know, Ethereum really it had this huge coming of age moment in 2017 and then it wasn't really clear what the leadership was, what the plan was, who was going to do what.

Vance Spencer: 51:38 About a year and a half, probably two years ago they had a meeting and they were like listen guys, like we got to figure this shit out. Like or else this just isn't going to work and so they've kind of set up on this ambitious roadmap of ETH2.0, which is effectively breaking the blockchain into different shards. So, you might have a DeFi shard, you might have a stable coin shard. You might have any number of context specific shards where the amount of data you're processing and putting on the base

chain is a subset of kind of what's happening in that shard and so that was probably the long winded explanation of saying-

Demetri Kofinas: 52:14 Sure. Also, very complex though and very good-

Vance Spencer: 52:16 It is so complex.

Demetri Kofinas: 52:18 Yeah. I mean, I'm not a person who's qualified to assess its difficulty, but just as an amateur, it seems very, very, very difficult and I think it's also partly why they've not just sharding but a number of their different proposed solutions including POS I think it's partly why they really haven't made a lot of progress in the last few years.

Vance Spencer: 52:40 It's super complex. And I think there's an aspect of... You know, when you log on Instagram or Facebook, you don't know what database architecture they're using. You just notice if it's slower or faster than usual on that day and at this point in the UX of ETH, you're sitting there and you click hit send, and then you probably have to wait a little bit to kind of see your transaction on chain and that is... You know, when you're participating in these C5 protocols, when you're arbitraging a stable coin pegs, when you're moving really quickly in real time around features or options, exchanges, that type of latency is just not something you can really deal with.

Demetri Kofinas: 53:17 Well didn't they have some something happened in like around March where the network clogged again?

Vance Spencer: 53:22 Yeah. I mean, so that, I think you're referring to, I think it was black Tuesday or there's some colloquial term in the crypto community, but prices dumped on a centralized exchange and effectively what you see between all of these centralized exchanges is that Ethereum is basically the highway between these two cities. If you want to send stable coins from one exchange to another, you're sending them on Ethereum and if the highways are closed the two cities can kind of get dislodged pretty quickly. So, you saw BitMax, which is a large Hong Kong based futures exchange their price totally deviated from the rest of the market and that is the example of like everything that can go wrong did go wrong and as Ethereum starts to scale less and less of those things will happen. I will say that at low dollar amounts figuring out these complexities and these hiccups it's good to do it now rather than when we have 100 of millions, if not billions of people on these platforms and their money is living there in real time.

Demetri Kofinas:	54:26	Yeah. So, listen guys, I'm going to move the second half of this conversation to the overtime. I want to... As I mentioned, I do want to discuss chain-link obviously because that's been, I think your most successful investment by far, and there's just a tremendous amount of community support for the project and that'll get us to a conversation about memes. I also want to try and talk about token economics or crypto economics because this is something that I covered on the show a few years ago with some other crypto fund managers the time and this is something you guys hinted to at the beginning, which is that the thesis of fund managers at that time was very different than it is today. Similarly, the models that people used to try and value these software ecosystems were very different and that's been kind of one of the interesting, exciting, fun things about the space, which is trying to understand like how do I put a value on this thing? What is this? How do I value it? It's so difficult.
Demetri Kofinas:	55:20	So that's kind of what I'm thinking and then whatever else we can get to. For regular listeners, you know the drill. If you're new to the program Hidden Forces is listener supported. We don't accept advertisers or commercial sponsors. The entire show is funded from top to bottom by listeners like you. If you want access to our premium content, which includes transcripts to every conversation we've ever had on the program, copies of my rundown which this week is something like almost 30 pages of research that I put into to prepare for today's conversation or if you just can't get enough of the podcast and you want to hear more from my guests, head over to patreon.com/hiddenforces and subscribe. Not only is the content worth it, but it's a great way to show your support for the show and the work we do. Guys stick around, we're going to move the second part of our conversation into the overtime.
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