

The
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The Economic Club of New York

114th Year
631st Meeting

Scott Shay
Chairman, Signature Bank

Alesia Haas
Chief Financial Officer, Coinbase

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Webinar

Moderator: Anna Nikolayevsky
Founder and CIO
Axel Capital Management

Introduction

President Barbara Van Allen

Good afternoon and welcome to the 631st meeting of The Economic Club of New York in our 114th year. I'm Barbara Van Allen, President and CEO of the Club. As many of you know, The Economic Club of New York is the nation's leading nonpartisan forum for discussions on economic, social and political issues, and we feel our mission is as important today as ever as we continue to bring people together as a catalyst for civil conversation and innovation. A special welcome to members of the ECNY 2021 Class of Fellows – a select group of diverse, rising next-gen business thought leaders as well as joining us today we have students from the Columbia Business School, CUNY Graduate Center, NYU Stern School of Business, and Rutgers University.

So it's a special pleasure for me to welcome our guests today, Scott Shay and Alesia Haas. Scott is a Club member, a very active one, by the way, and co-founder and Chairman of Signature Bank. He's also served as a Director of Signature Securities Group and Chairman of the Board of Directors since 2006. Since 1980, Scott has been involved in the investment banking and venture capital industries.

Alesia Haas is the Chief Financial Officer at Coinbase. Prior to joining Coinbase, Alesia served as the Chief Financial Officer for Sculptor Capital Management, Inc., a global

institutional alternative asset manager. Alesia currently serves as a member of the board of ANGI Homeservices, Inc. She holds a BS in Business Administration from California Polytechnic State University, San Luis Obispo.

Today's program is going to be a conversation, and we are very fortunate to have Club member and Centennial Society member, and founder and CIO of Axel Capital Management, Anna Nikolayevsky, as moderator. So I want to say, in addition to using the chat box for this conversation, you can certainly enter your questions there directly into the chat box for potential use, we also appreciate the questions that were provided online by members in advance and those have been shared with Anna. We're going to end promptly at 1:00. As a reminder, this conversation is on the record and we do have plenty of media on the line. So without further ado, Anna, the mike is yours.

Conversation with Scott Shay and Alesia Haas

ANNA NIKOLAYEVSKY: Thank you, Barbara. I'm very happy to be here today. It's never boring in the crypto world. There's been a lot of diverging opinions recently. Some people say crypto is worth zero. Other people say it's going to the moon. Others say it's going to reform everything from finance to manufacturing to pipelines for everything, including inventory. Can you please talk about how you got into crypto and what was your aha moment? Alesia, do you want to start?

ALESIA HAAS: Sure. I'd be happy to start with that one. I'm so excited for this conversation, so thank you for having me on, and Scott, this is going to be a lot of fun. What got me into crypto? So, I think it's important to start with, like I was a crypto novice. I joined Coinbase, so I received a call from Coinbase and when I first heard Coinbase, my mental image was the store, grocery store machines where you drop the change in and you get dollars back. And I was like, Coinbase, CoinStar?

So I started conversations with Brian and our board back in early 2018. And what really brought me to crypto – and I grew up in traditional financial services and I loved my time there – was the promise of a new financial system based on technology that would offer faster speeds, cheaper transaction costs, create global inclusion by just lowering the barriers to entry and the opportunities that smart contracts, which is essentially the code on the blockchains that run transactions when predetermined conditions are met, created this new world of opportunity. And after lots of conversations, lots of research, I just drank the Kool-Aid and never looked back. I have not had more fun in my career.

ANNA NIKOLAYEVSKY: Scott...

SCOTT SHAY: Well, I started looking at this back in 2013 -'14, because I thought there was really something to this newfangled notion of blockchain. I didn't know exactly what it was, but living in the banking world, I knew that our systems were designed with the

thinking of the 1970s and 1980s and that sooner or later there had to be a better way to have the history of transactions recorded. And frankly, I didn't know enough in the beginning to be dangerous so I went and started reading and talking to people.

And we made a decision at Signature Bank that we, we consider ourselves innovators, we would start a bank, I started the bank with two other folks back in 2001, and we always had this really entrepreneurial sort of side to what we did even though we're an old – if you will – bank. We're not that old. And the thing was, that was stunning, is it really was the Wild West in the first few years. And it was hard to find folks that could pass our KYC and that we could bank. And so we ended up bringing on initially some clients and actually not being able to have them stay on because, again this was a different world in '14 and '15.

But we stuck with it and we kept thinking that there was something really important here, even though we didn't know what that really was. And over time, companies like Coinbase and others that were legitimate businesses that were willing to submit to regulation started to emerge. And that's when we really took off in this business. In 2018, we brought the right folks onboard here so that we could really build the business.

I'll just say one more thing. The one vision that we had from the get-go – I know I was thinking this way back when – is that we weren't looking to be a retail bank for this

industry. We wanted to go to our strong basic, strong suit, which is serving businesses. We are a B2B bank. And so we thought how can we be important to building the infrastructure because it's going to take off. We don't know exactly how. Not sure. But it's going to take off. There's something really different and special and new under the sun here.

ANNA NIKOLAYEVSKY: So can you, the asset growth has been tremendous, it's outpaced traditional banking asset growth by a wide margin, can you define what DeFi is specifically for our members?

ALESIA HAAS: Do you want me to start with that one?

ANNA NIKOLAYEVSKY: Yes.

ALESIA HAAS: Happy to. So DeFi is decentralized finance and we commonly just use the acronym DeFi when talking about it. And what it is, is a transaction that requires no intermediary. I referred earlier to a smart contract. So smart contracts perform transactions for DeFi and their program is stored on a blockchain that execute a transaction when predetermined conditions are met. And they reduce the reliance on intermediaries. It's just a code that is essentially enabling transactions. They allow for data privacy. They don't have storing of financial information. And they reduce time to

process transactions.

So just to put this in a good example, it was really funny when Coinbase went public and our employees sold stock for the first time. And so they sold their stock on the day we went public and they didn't see the proceeds for four days. And they couldn't figure out where they were. They weren't in their Shareworks account, which is our internal stock admin. They weren't in their bank account. And they were like, so many people were like, I lost my money, I don't know where my money is.

The difference on a smart contract is they're instant settlement. You see the transaction recorded on the blockchain so it provides transparency, speed, and that is what we call decentralized finance. And so there's a number of new applications in this world that are creating peer-to-peer financial transactions. There are peer-to-peer loans. There are insurance. And there are just new forms of financial applications that are all being built with code in the smart contract.

ANNA NIKOLAYEVSKY: So when we talked a little bit earlier, you mentioned the value of the creator economy and how smart contracts are going to revolutionize everything from art and music and what that means to society.

ALESIA HAAS: So let's go into a whole new area of crypto. So DeFi is like the

underpinning also of what we're now referring to as NFTs. And so what is an NFT? An NFT is a non-fungible token and that contrasts to a fungible token. So fungible tokens are what we refer to as bitcoin, Ethereum. It's like a U.S. dollar, it's fungible. Like we don't know the difference between any of the bitcoins.

But a non-fungible token, an NFT, is a unique specific asset. And it lends itself to things like art, like music, for what we call the creator economy. And you've seen now these NFTs coming and they're built on the blockchains. They're built commonly as either ERC-20s on Ethereum or they're built on another protocol called Solana that is built on top of blockchains, and you can create art. You can then receive ongoing royalties on that payment. So you have that ownership lineage. Because one of the things, and Scott just talked about this, and what is fascinating is you see every transaction on the blockchain.

So unlike the world today, and I'll give a simple example, if you go and buy a concert ticket, the person who sold you the concert ticket receives the proceeds. But then when you have that ticket, you can sell it on StubHub, you can sell it to a ticket broker, you can give it to your friend. No one knows you did that. No one gets benefits back to the original artist who sold that ticket. But on the blockchain you see that. You all of a sudden are like, oh, gosh, Scott now has my ticket. And Scott's paying gas fees, and so the person that created that is getting money for every one of these transactions.

So it creates lineage. It creates ongoing royalties. It's going to transform the way that we think about creation and creator communities, and I think that is the promise. And when we think about this, one of the things that you might have seen in the press or you might have heard if you're diving deep into crypto like many of us, is a lot of people are now talking about Web 3.0. And maybe I should just explain what, Anna, should we go into this or should we pull back and not go into it?

ANNA NIKOLAYEVSKY: Yes, this is very vital, I think, definitely should go into it.

ALESIA HAAS: Okay, let's talk about Web 3.0. So Web 2.0, the way that we talk about Web 2.0 is the companies that created mobile social apps. And what we really think is missing from that is then the combination of payment and identity.

So what Web 3.0 is, is it's building on top of Web 2.0 and it's merging content, payments, and identity into one concept. And you can see this really with NFTs. It's these three concepts come together as content, payments, and identity. And so we think that what started with DeFi is actually just a harbinger of what will come to disrupt the entire Web 2.0 and how smart contracts will just create an incredible change to the creator economy and we're really excited about that future promise.

ANNA NIKOLAYEVSKY: Thank you. So it seems the industry is moving a lot faster than

regulation. It's very hard for people to keep up. So I think, Scott, you're definitely involved in this. So can you talk about what's happening from that perspective? And also, by the way, congratulations on your new book, *Conspiracy U*.

SCOTT SHAY: Thank you. I appreciate that. So, a lot has been happening in the banking industry and a lot hasn't been happening in the banking industry. So we are one of the few banking pioneers in supporting the cryptocurrency arena. We've grown dramatically. The last time we publicly disclosed our growth over the last few years, we put on \$23 billion in assets from this arena by supporting the infrastructure. And we brought to the regulators a new concept a few years ago, actually we kicked it off at 12:01 a.m. on January 1 of 2019, just to make the point that this is a 24-hour economy. We kicked off a new product called, Signet, which was the first banking product by a U.S. FDIC-insured, regulated bank, that permitted 24 x 7 trading of money.

So, in other words, an institution could trade money anytime, could trade an asset anytime, any type of asset, a boat, bitcoin, movie rights, whatever they wanted to, an office complex, and they could close their deal on December 31 at 9 p.m., whenever. And this really was a new concept for regulators, and I have to give credit to the New York Department of Financial Services because when we brought it to them, it was something really, for the regulatory community, new under the sun, and they got it.

And I think that the rest of the regulatory community, particularly the national regulatory community has been working very hard to get there too. And we know that the President's working group, which is an amalgam of a number of regulators, put out a proposal, not a proposal, put out a plan to provide federal regulation for this arena, which is sorely needed because I'm worried very much that we end up regulating to sort of the lowest common denominator, which won't let the United States lead in this crucial area of finance and actually risks us. I actually think it's a national security issue in the long run because having the leading economy in the world, with the dollar being the hinge-point, is vital from a national security, from an economic security, from a senior _____. I could go on and on. So I think I'm thrilled that the President's working group has brought a template, but on the other hand, we can't let grass grow.

And I just want to say one last thing. When you look at the federal template for funds transfers, particularly among consumers, you've got to go to the Electronic Funds Transfer Act of 1978. I've had the, I couldn't really call it the pleasure, I plodded through this law. And it's almost funny, it's like watching, you know, That 70s Show, on television, and that people are sending complaints in the mail and there's all sorts of things. Sixty days, consumers have 60 days to question a retail transaction. I mean we were just talking, and Alesia was talking about instantaneous surety of money.

Well, you can't have instantaneous surety of money if the guiding federal law and Reg.

E says you've got 60 days to think it over. And that's going to be a major issue and it's something that I encourage Congress to deal with because it is vital. And not doing something about it will allow the rest of the world to have a major advantage.

ALESIA HAAS: Scott, maybe I could just add on, if you don't mind, one of the things that we think about is the changes that we were just talking about that are made possible by these innovations. They just, to your point, don't fit in the existing financial system because that financial system, the supervisory categories were codified before the use of computers. I mean we are talking about rules that were written in the 30s, in the 70s, that never contemplated, could not have possibly contemplated a distributed ledger, could not have contemplated the use of blockchain technologies.

And so one of the things that we advocate for and that we spend a lot of time talking to policymakers, industry folks, academics, is the need for more thoughtful, purposeful regulation for crypto because these are new underlying technologies that will remove the need for intermediaries. And the way that we have worked for many years is just through intermediaries with different structures. And so we align very much with the spirit of the laws, the alignment and the need for consumer protection, for market structure, for protecting against illicit activity. But I think we can have really good debates on how we get there and how we get there may look dramatically different today than it did in the 70s. So we agree with you completely that that is so necessary

to revisit some of these laws.

ANNA NIKOLAYEVSKY: So what do you think the best way to educate the regulators is right now, given the complexity of everything you've mentioned?

SCOTT SHAY: Is that a question for me?

ANNA NIKOLAYEVSKY: Sure, Scott, yes.

SCOTT SHAY: So I think engagement. I think that the regulatory community wants to hear more, but I think, on the other hand, there needs to be Congressional engagement too because ultimately, and we've looked at this, a lot of the issues cannot be fixed regulatorily. As much as regulators might want to do certain things, these, the Electronic Funds Transfer Act is the law of the land. And other provisions of the banking law, again was done when people couldn't even think about what's going on today.

So we actually need new law and we need it to be bipartisan because we need everybody to be, to embrace this, because the last thing we need is a law that could be revisited or could be changed, depending on whether one party or the other has control. So we really, really need this to be bipartisan as much as anything because we're talking about money. And one of the primary definitions of money is that everybody has

to accept it regardless of your political party, regardless of whatever, any political opinion that you have. So it has to be a core value and it has to be freely accepted.

So I think we really do need to have this debate put forward in Congress, I think, in 2022. And I think that more folks are talking about these issues because I do feel that when I talk to some folks in Congress, that they don't know yet what they don't know. And there are all these sound bites out there, CBDC, central bank digital currency, that people talk about without having really a clue about the implications, which are huge. And people don't, I would say many, I'd say if you took poll – we were talking about using polling techniques on the internet before – if you took a poll of Congress, members of Congress, I don't know how many would be able to differentiate between stablecoin and bitcoin. I wouldn't want, I'd take the under on an under-over bet, let me just put it that way.

ANNA NIKOLAYEVSKY: Wow. So how do we feel about the overall gamification of investing and finance? Because onboarding has become a lot faster, simpler. Do you think that we're basically finding a new generation of investors and how is that changing everything from volume to trading to holding times, volatility, everything else? Do you have any thoughts on that, Alesia?

ALESIA HAAS: So we believe firmly in disclosure education, making sure that our users

understand the risks, because this is a nascent asset class and it is risky. Like we don't shy away from that. So we don't think of it as gamification, but we do think that the trend and the trajectory of crypto is moving toward social. And so I think that we are going to see more and more intersection of social building into the crypto community and building into the products and services.

But I share that with the overlay, which is you can't have that without strong education, without clear disclosure. So the risks that are easy to digest, in layman's form, not buried in terms of services. So we don't seek to have gamification. We don't seek to be turning this into something that isn't properly disclosed about what people are getting into.

ANNA NIKOLAYEVSKY: When you think about the demographics of who the typical crypto investors are, what are you seeing there and is it different from traditional investment?

ALESIA HAAS: You know I don't really think of it as traditional investing as clearly, but I was really excited about a Pew research report that came out just last week. And the thing that was most telling to me in this research was that 16% of Americans now invested in crypto in the last year. And we cited another research report in our Q3 shareholders letter which said, from the World Bank, over 200 million people around the

globe have now transacted in crypto in the last year. This is mainstream. So going back to Scott's comment, while regulators may not be educated, this is now in the hands of Americans. This has well moved past fringe or early adopters and it's really mainstream.

But more exciting, to your question about demographics, is, yes, it's skews younger.

Yes, you see more 18- to 30-year-olds using it than you see 65+. But race

demographics, income demographics, really well distributed. So I encourage you to look at this research report because it shows that this is really adopted across all different

demographics. And it speaks to crypto, because crypto is inclusive. Crypto has no

barriers. Crypto doesn't care who you are, where you come from, because it's code.

And so this is the most inclusive financial system that I personally have ever seen in my

career, and I think it's because the costs are low, the barriers to entry are low, and we're

going to see just huge promise. And what Coinbase stands for is economic freedom, we

hope to bring economic freedom globally, and we think that crypto is the way to do that.

SCOTT SHAY: If I could add to what Alesia just said, because I'm saying this again. We

don't deal with retail clients. We're totally an institutional bank, business to business

bank. But there's no question that institutions, and one of the reasons they've embraced

and it's really powered our growth in terms of providing this infrastructure is that

institutions are longing for regulated environments.

If you're a major pension fund, you want to be dealing with regulated entities. You want to be dealing with a Coinbase. You want to be dealing with a Signature Bank. You'd rather not be dealing with less, with unregulated entities. I mean they do, in all candor, have at this point an aversion toward dealing with totally decentralized finance because ultimately they want to make sure that there's some regulator on the beat. And I think as, if Congress can provide a regulatory framework, I actually think we're in the first inning, maybe even the first half of the first inning, you know, with the first batter having just come up, if you can allow me that baseball analogy, having just come off the World Series.

So there's a long way to go, and I think we really need and welcome the regulators to, and more than regulators, Congress to really take a fresh look. Because a lot can happen and they can make this happen and we can, as the United States, retain our economic leadership in this world.

ANNA NIKOLAYEVSKY: So how do you think the job of the Federal Reserve Bank changes with CBDCs?

SCOTT SHAY: So my personal take on CBDC is I don't think the consensus view. Way back in 2013, I started thinking about this and I wrote an article called The Cashless Society, which you can still google. I wrote it for CNBC. And I didn't have the vocabulary

CBDC but I was talking about essentially a government-issued security. I actually don't think that a government-issued security will have tremendous appeal for most people. Because I think people will fear that in one administration they will be able to, they will be prohibited from giving donations to Planned Parenthood. In another administration, they'll be prohibited from giving donations to the NRA. And I'm not saying anything about any of those organizations, but we live in a divided society and there is no more powerful tool than controlling one's ability to expend money. There's nothing that controls people so much.

By the way, that's one of the reasons that China is enthusiastic about a central bank digital currency, because then they will know every transaction. Do you like watching rom-coms or horror movies? Well, they will know. And if they think you've been watching too many horror movies, your money won't be good for that. I mean in New York; I think Mayor Bloomberg might have not allowed anybody to use money to buy sugary drinks a few years ago.

So there is tremendous, I would say, I think there will be tremendous resistance to a government-issued currency. And I also think there's tremendous, there will be tremendous issues with, well, if the government is the repository of all money, it will also have to be the lender of all money, directly or indirectly. And you will have by force, not by force, by financial process, essentially government-allocation of private capital. And

so I think the implications are huge.

There are some ways to mitigate that, maybe to have a CBDC only up to certain amounts. There's even a solution that they've sort of worked out in Cambodia where the banks and the central bank are partners. But I think these are extraordinarily complex issues. We shouldn't just wander into it, which is what I was saying before, with a few slogans. Because I think that CBDC has become sloganized as opposed to thinking about these long-term, huge implications. I actually coined a term a number of years ago called econgularity, which is the point at which all transactions are visible that an individual makes to the government.

Now, I'll just say one last point and then I'll stop talking. Right now, the United States can find out whatever you're spending money on as it wishes to if it goes and gets a subpoena, if the court says okay, all the banks have to show what this person is doing. That's very different than a central bank being able to view what any individual is doing with a couple of keystrokes. We all know the dangers of that. And so I think once people are confronted with that, I think CBDC will start to seem a lot less attractive than meets the eye.

ANNA NIKOLAYEVSKY: Thank you. So, Alesia, I guess there's been, there's going to be a big reduction in friction costs, so a lot of employment will change kind of drastically.

And you've seen dramatic employment growth in your own company, having seen it double recently. So can you talk about how you think employment will change and what you're seeing in your own company right now?

ALESIA HAAS: That's a big question. I do think that we're seeing drastic changes in the types of jobs that will be available, not only through crypto but through electric cars, through artificial intelligence. So I think there's a lot of major trends going on in the broader economy that will change the labor force and the types of jobs available for the next 50 to 100 years. And what we see is, yes, there's going to be the reduction of intermediaries. So back-office settlements or reconciliations, those types of roles, when they can be automatically performed by code, no longer need to be performed by humans.

However, as I just mentioned, the creator economy, I think is going to grow tremendously and those opportunities for creation, innovation, will create new income streams. We also see a lot of interesting, and this is, I need to just impress on everybody, we are in the early, early days, these are nascent, these are small transactions, so I don't want to over-extrapolate, and so I'm sharing these as just anecdotes of, we call them, like green shoots or saplings internally. Like we're just starting to see something, but these are not, I don't want to overemphasize anything, I guess is my point here.

There's a whole concept of contributors-in-residence or entrepreneurs-in-residence where people are now contributing to multiple projects in like part-time capacities. And they're going to projects that they're just motivated by the work and so these are engineers who are working on code on Smart Contract A over here, Smart Contract B over here. And I think that you're going to find people are going to follow their passions a lot more. They're going to have unique opportunities to do multiple things in part-time capacities and it's going to change the way the labor pool has worked.

ANNA NIKOLAYEVSKY: Thank you. We have a question from the audience about potential ESG impacts from crypto?

SCOTT SHAY: I'll just say this. We do think about this a lot. So when we designed Signet, we designed it to minimize its carbon footprint. And everything that we do in the crypto world, we think about it because again what we've created here is a native blockchain within Signature to power Signet. It's based on Ethereum, the ethereum20 protocol. But we have actively analyzed how we're getting, how we're utilizing the electricity to power that. And the good news is that, and this is from estimates that we've made, is that the cost of doing a transaction, the carbon cost of doing a transaction on Signet is less than swiping your Visa card for a coffee at Starbucks. So we've really tried to natively keep that down.

I do think that this is an issue that the industry has to grapple with. We've tried to be supportive in talking to actors in the industry because at the margin, I do think it's a, I think that there's a huge difference between protocols. I don't think, I know. There's a huge difference between protocols, between the bitcoin protocol and, for example, the Stellar or Polkadot protocols in terms of utilization. And I'm not picking them out, those aren't recommendations. Let me emphasize that. But in terms of pure ESG, huge differences. And they go heavily toward whether or not you have proof of work versus proof of authority, where the miners are located, and the like, and I think it will be an emerging issue.

But I will say this, that when any industry that's currently a large one started, in the beginning nobody was thinking about the energy utilization. And over time, people have become more aware of that. And I think we do have to encourage the industry to self-correct and to give the industry the opportunity and time to self-correct. It is a nascent industry.

ALESIA HAAS: Maybe I could just share a couple of additional thoughts, Scott. I agree with everything you've said. So, from the Coinbase perspective, we are greatly appreciating the focus on energy consumption at this very early time in the industry because I do think we have the opportunity to get this right and pivot. So it's something we pay close attention to. From the biggest picture, though, we expect the crypto

economy by design to bring net benefits to the world. And as we talked about, financial inclusion, when I talked about just the social perspective, I think relative to our legacy fiat financial system, we're going to see this be a net positive to the world.

But since the industry is nascent, this industry is already making great strides to becoming more energy efficient. So Scott spoke about the shift from proof of work to proof of stake. Ethereum, which is the second largest cryptocurrency, second to bitcoin, decided to move from proof of work to proof of stake. Specifically, one of the top reasons was energy efficiency. And so they're in the middle of that converging right now, to the new protocol, and it is more energy-efficient. And we're seeing that as the trend. More and more new protocols are choosing more energy-efficient protocols than the initial bitcoin white paper.

But even bitcoin, which again is not energy-efficient, now three-quarters of bitcoin is mined using some form of renewal energy. And what I think is important to understand here is the miners, they're portable. They don't have to be fixed in one location. So this is not the same as other industries where it's hard to address the energy use. So the bitcoin miners, they're motivated for cost reasons to move to use renewable energy and they're also using energy in areas where they can use excess capacity or off-hours and so they absorb excess energy.

So I do think that this is something that people are very focused on. We're an investor, for example, in a company called Crusoe Energy, a company that works with oil drillers to minimize flaring from natural gas and use that to power bitcoin mining. So I think that you're finding a lot of creative solutions that the industry is already focused on, and I think we can do a lot more.

ANNA NIKOLAYEVSKY: Also, Alesia, you have a pretty large venture capital portfolio for Coinbase. Can you talk about what opportunities you are finding most interesting right now? Because I'm assuming you have access to basically every single startup and founder currently.

ALESIA HAAS: It's a really exciting part of our business. So we've made over 200 ventures investments now. And we think about them finding, first of all, what are the right areas of crypto and then who are the best teams within crypto. And so some of the things that we're really excited about are the new DeFi apps, the new NFT space, how do we help this creator community start to emerge. But we're equally, to be honest, excited about continuing to do what we call, like picks and shovels. So we do more infrastructure, more scaling solutions, the level, layer two, which is all of these protocols that we just talked about – bitcoin, Ethereum – now there's like layer two so you can help with interoperability of blockchain.

Just for the audience, one of the things that we talk about internally at Coinbase is when the internet first started, like people talked about infrastructure and they talked about, you know, the TCP/IP and HTML and how are we going to do all this? We think that the same is going on now in crypto where we're talking about these protocols, but in a few years this will be behind the scenes. No one will be talking about protocols and all we'll be talking about is the app development, the UX layer on top of this new technology stack. So we're like deep in that early innovation and kind of comparable time period to the internet, but we'll move on past that.

So infrastructure protocol layers is where we invest. We invest then in apps on top of that, both centralized finance. We're an investor in OpenSea, for example, which has seen huge growth this year with NFTs. We're also an investor in Uniswap, which is a decentralized exchange, which is like the pure matching of buyers and sellers on an exchange. So lots of excitement. Our goal is to just let 1,000 crypto companies bloom and just grow the ecosystem, and that is really the mission of our venture investing.

ANNA NIKOLAYEVSKY: So do you think it's still so early that you're not seeing too much capital chasing too few ideas?

ALESIA HAAS: Oh, my goodness, it's become so competitive in recent months, I would even say. I mean this has become an area of focus for many investors because they're

seeing the future potential in the growth. What we benefit from is we have deep relationships with the developer community and we know sort of the founders. We have a lot of former Coinbase employees who go off and start these companies. And so we take passive investment stakes. These are minority positions, and so we're not leading. And so I think it's more competitive to lead an investment round, but to be able to participate at our level, we get invited regularly.

ANNA NIKOLAYEVSKY: Thank you. Scott, how do you think the bank, the traditional banking industry will evolve in the next ten years as a result of this? Who will win? Who will lose? And how will everything adjust?

SCOTT SHAY: I think that the payment rails of banking will change over the next ten years. I think that more and more folks will recognize the value of immediate payments, and we're going to leave the normal wire transfer hours of banking. I think sooner or later there will be the ability for banks to transact with each other and for clients to transact with each other on significant sums anytime day or night. But I think we're a long way there because we, to some degree, have to get over some of these rules.

Because banks are regulated, they're heavily, heavily regulated. So Signet which provided 24 x 7 money transfer was a step that, you know, we had to go carefully and slowly. And thankfully, the regulatory community accepted it. But it's not fast. I think

what we're trying to do in terms of, I think, first of all, I think that banks will be using these techniques, period. There's no question about that. In ten years, a normal money transfer will probably be something that people will be reading about in textbooks, and I think it's going to happen.

I think that the big use of blockchain, though, will be for banking maybe elsewhere. I think the recordkeeping environment, and I don't remember whether we were talking about this before or after the call started. But the whole 2008-2010 crisis and who owns my mortgage would have not existed, and that would have tremendously helped liquidity during that time frame, would have meant less institutions in the mortgage-banking business going under if there were a blockchain that recorded every transaction so it was clear who was paying their mortgage, who wasn't paying their mortgage.

There wouldn't be a dispute, well, X bank said they never received my money, but here are my checks. Or who actually owns the servicing? Was title to this mortgage transferred? And the beauty of the blockchain technology is that this becomes all indelibly embedded as opposed to, well, I've got this system that doesn't talk to that system and I have to go dig up this record, that record. That's where I actually think that the revolution in banking will happen, at the core operating system level. And I'm excited about that because again we are, we are working and many banks are working with technologies that are just really so 20th century. And it's easier to transform to

something that's on a blockchain than to make incremental improvements in these existing technologies which are difficult and arduous and it's not always clear how much benefit you're getting for the buck.

So I'm very excited because I think it'll return to the idea, the central idea of finance is taking credit risk out, taking all risks that you possibly can out of a transaction, taking operational risk, and to the extent that someone can pay for something and not have to wait four days and wonder where their money is, well, that's removing a lot of credit risk. It means that if I hand you a package at the same time I can transfer, you can transfer money to me, which means (a) you're not taking my credit risk, (b) I'm not taking, you know, product risk. And even more importantly, you don't need to borrow the money from someone to pay for me. It just takes so much out. So I think the revolution in payments and the revolution in recording and certainty of transaction, now on a blockchain it's recorded. I gave you a package, you gave me money. There's not a lot to go to court about. So I think it'll be fundamentally better for commerce.

ANNA NIKOLAYEVSKY: Could we talk about the metaverse? It's a large topic right now especially considering the fact that Facebook recently changed their name. Do you think that you're going to live in a virtual world very soon? Do you have avatars? How do you think about that also impacting your business?

ALESIA HAAS: Aren't we living in one right now? I mean, I think many of us for the last two years have been living in a digital world unfortunately. I do not subscribe to the belief that we're all going to be living in a virtual world 100% of our time. I think we are going to see more and more time spent in environments like this, in digital time spent, but also I think we've all recognized through the pandemic how valuable in-person time is and really treasure that opportunity. At least I do with my friends and family.

So I think it's just a recognition, though, that we'll have the opportunity to have more time in a digital space and that environment is going to become richer, more robust, more tools and then crypto underpins that. And so it's an online native form of internet money that you can see in video games as an example. One of the exciting things that we see is kind of this rise, very early days again, of play-to-earn video games where you can play a video game, you earn NFTs but you can monetize those into your own fiat currency. Those are examples of how I think that crypto and the metaverse come together.

Crypto is the financial system essentially or what powers the metaverse or Web 3.0. Those are one and the same words. We use those interchangeably. And I think that we're going to see just more exciting online environments. But I don't think they are going to replace our in-person living.

ANNA NIKOLAYEVSKY: Scott, do you have a view on this? Do you have an avatar?

SCOTT SHAY: I don't. I guess I'm a metaverse dinosaur. I have experienced and played with virtual reality and virtual reality feeder, but I still prefer face-to-face. Personally, I prefer face-to-face interaction. That may be a function of my age, but it doesn't actually have a huge attraction for me yet. I think once the technologies are better and, again, I've tasted it, I've touched it, I've virtually touched it, as it were, experienced it. I'm looking forward to sort of the next generation and then I'll try again.

ANNA NIKOLAYEVSKY: What do you think the risks are to the industry going forward given how fast it's changing?

SCOTT SHAY: Is that for me or Alesia?

ANNA NIKOLAYEVSKY: For both, please.

ALESIA HAAS: Go ahead and start.

SCOTT SHAY: Okay. Well, look, I think one of the major risks going forward, and I think everybody sees it, is quantum computing. I think quantum computing is probably, I can't say I'm an expert, but I have spent some time looking at it. And whereas I used to think

it was five years in the future where cryptography would challenge technologies that are in the crypto – not just cryptocurrency space, but crypto space, period – in terms of security and the use of pretty good security protocols, I think as soon as five years, I think cryptocurrencies and other cryptographically encrypted technologies are going to need a revamp. I just, you know, like many things it's happening, it was happening slowly and now it's happening very, very fast. So I think that is a major issue.

And look, I think, in all candor, Tether is a major risk to the cryptocurrency universe because so much money is in Tether and clearly it's not regulated by anybody at least on this planet. And, you know, certainly, and again I'm not giving away any secrets to say, you know, our institutional clients are quite reluctant to enter that, and Tether is an important part of the cryptocurrency ecosystem. So it's clearly a systemic, it's clearly a systemic risk, and I think that the cryptocurrency ecosystem will be healthier when there are more regulated alternatives. And there are many now, I mean now there's a list of, a score of other crypto-encrypted stablecoins.

ANNA NIKOLAYEVSKY: Alesia, how do you feel about this?

ALESIA HAAS: Those two are not on my list, so I'll switch over. Look, I do think we have a fear that we push innovation outside the U.S. by not thoughtfully addressing the regulatory environment for U.S. innovation. I agree completely with Scott that we need

Congress to act. And what we've pushed forward is a proposal that we would get a single regulator who really deeply understands the technology and the issues. So I do have a fear that we will see regulation by enforcement, regulation by not engaging in the hard conversations, and that will then create a movement outside the U.S., which will change the shape of this environment. But it will continue to grow because these are technologies that are borderless in many ways.

The second risk I see is just the proliferation of assets without good infrastructure. And so I think that we need to make sure that we continue to invest in infrastructure as Scott said. One of the things that Coinbase prides itself on is we're an infrastructure provider. We lean into compliance. We care about KYC. We care about tax information reporting. We care about all of the blocks that we need to build to make this industry succeed. And I think that that needs to catch up.

And then the next thing I think that's just a risk, is can we get these chains to scale, I do think we would have a risk that a lot of these new assets are young projects and they haven't been tested for scale. And we could see a significant loss and we could see consumers get harmed if there's a loss in one of the protocols, a bug in a protocol. And I think that would just be a big cloud that affects the industry. And so I do worry about scaling of infrastructure in crypto broadly.

ANNA NIKOLAYEVSKY: Can you envision a world where every city has its own currency and its employees get paid in bitcoin? I mean is this how we're heading? Obviously, New York is going to compete with Miami on that front, with the new mayor.

ALESIA HAAS: I don't think every city will have its own currency. I don't think we'll need to go there. I do think you're seeing a broad movement towards being paid in crypto and Coinbase pays our employees in crypto, their election. And they choose to get paid in a broader variety of cryptos than you might imagine. Some as bitcoin, some as Ethereum. They get paid in stablecoins. But I think that you'll see more choice in how people get paid in assets that work for them and their personal needs. But, no, I don't think we're going to see a proliferation of cities each issuing their own coins.

And I think that today we're seeing bitcoin as a store of value asset. We're seeing Ethereum being the network that you're seeing the building of apps. You're seeing DeFi built on top of Ethereum, and so it's really an app platform. You're seeing DeFi, which are specifically like small companies, that are applications, and then you're seeing the NFTs that...and then you have stablecoin. So I think it's important that we talk about crypto, but crypto is now many unique different things with different attributes, different risks, different opportunities, and we're starting to see that diversification. But these things will converge. I think that you'll start to see winners emerge from each of these items that will grow in scale and then you'll start to see projects that fail. Just like we did

with the dot-com bubble, like we saw a lot of growth of internet companies that then converged into platforms that grew in scale.

ANNA NIKOLAYEVSKY: Scott, what do you think?

SCOTT SHAY: Well, I think that you wouldn't necessarily want to be paid in a currency from Miami and a different currency from New York. So I think that interoperability is a critical part of the usability of a currency in that I don't have to pay, if I'm going from one city to another, I don't have to essentially pay a foreign currency spread. So wide acceptance is going to be important. And I think that ultimately the winning protocols for currency will be those that are easily interoperable.

I think it's a different story with respect to stores of value. I completely agree with Alesia that bitcoin primarily now is a store of value as opposed to necessarily a payment. Very few people actually buy a pizza with bitcoin anymore, although the first pizza was a fantastic deal. But it wouldn't be efficient. It wouldn't be certainly energy-efficient. It wouldn't be efficient in any way, shape or form.

So I think that people will want to get paid in ways that they'll know that the money that they have today is not affected. Today, the bitcoin happens to be non-substantial. They won't want to get paid yesterday and find that they can't make rent today. So they're

going to want to get paid in a way that they know there's hard payment value. But like others, and this is why I think that we're at the first, you know, I keep using this baseball analogy, we're in the first half of the first inning, is that I do think people are going to say, well, I want some of my money in bitcoin, but there are these other stores of value that I think are attractive because of other reasons.

And they may have a portfolio. Not only they may, I think they're likely to have a portfolio. And the reason again why I think that a regulatory framework is so important is I think institutions getting into that will provide tremendous liquidity that will go way beyond retail. So I really, I really welcome that. And again, I think sooner or later it'll happen, but I just really, really want the United States to be in the lead.

ANNA NIKOLAYEVSKY: Well, look, institutional adoption is still below 1% in this country. How do you think about the best educational resources? Because there's no standard clearly and the two of you have obviously gone pretty high up in your career, so what did you rely on to gain information to provide an opportunity for yourself?

ALESIA HAAS: I'll start there. While institutional adoption from an asset allocation perspective is roughly 1%, we're seeing huge institutional adoption on the Coinbase platform. We now have the top 10% of hedge funds by AUM as customers on our platform. We're seeing an increasing number of corporates making allocation to bitcoin.

And we see conversations happening across each of the institutional pockets, whether it's endowments, charities, asset managers, hedge funds, family offices, pension insurance. And so it is now being discussed in all corners of asset management about what their allocation will be.

The other thing that I think is an important trend to point out, what started with bitcoin, meaning a lot of institutions' first investment was bitcoin thinking about it as a store of value, a hedge against inflation, they're quickly moving down the spectrum as well and they are interested in how do I get exposure to DeFi? How do I think about an index fund on NFTs? Can I get that exposure? Can I figure out how I play this game, play this long-term wave of adoption that I see in crypto? And so I do think it's coming, and I think it's thought of right now much like a higher risk asset, which it is, and so they're making the right allocation. But it is growing and I think we've seen that quarter after quarter at Coinbase in terms of just that adoption curve.

The education, we provide education. There's many crypto research companies out there that are providing data. All of the large investment banks now publish crypto research. Like since going public, it's been amazing, just the crypto primers and adoption that you've seen in the general research community. And then the best research tool in crypto is Twitter. You can see transparently, these communities will not, there is no behind closed doors in crypto. Everyone wants to share what they're doing.

Every project wants to be talking. There are conferences. Everyone is happy to talk. And so it is a much more community environment than I've seen in other asset classes, but get on Crypto Twitter, follow the leads and you will learn everything you need to know.

ANNA NIKOLAYEVSKY: And read your white papers, the white papers are amazing.

ALESIA HAAS: Phenomenal.

ANNA NIKOLAYEVSKY: So how do you guys decide what coins will be listed and which ones will not? What's that process like internally?

ALESIA HAAS: We would like to list everything that is safe and legal to do so and so we're seeking to be coin-agnostic. We are not picking the winners and losers. But as long as they meet criteria about it is not a security under U.S. securities law. It follows our compliance processes. And then we also do fiber security testing. I mean is there bugs in the smart contract? Can we properly custody this and protect our users from losing value in the asset? So those are our three criteria to list an asset. And then do we see client interest? Are there market makers? Can we actually make a market and there's going to be liquidity in this asset? But we're looking to really accelerate the asset addition on our platform to give our users what they want to trade.

ANNA NIKOLAYEVSKY: Thank you. Can you also talk about how the security is evolving, because obviously that's been the largest fear from a retail perspective and how you've adapted to that?

ALESIA HAAS: So we're very fortunate that we have not had a loss on Coinbase due to a breach of our systems or our controls, but this is an area that people need to be very thoughtful on. And so protecting the private keys, these are bare instruments, no different than you walking around with a cashier's check or cash. Like, if you lose your private key, the value is gone. It's not like a bank account where the bank is going to bring the money back. So it's a really critical aspect of crypto is to understand security.

Security is getting better and better. I mean we're getting smarter and smarter, and it's evolving. So I think that new protocols are developing with security in mind. There's audits that get done. There are hacker communities out there that are looking to try and find those bugs and so it's becoming more sophisticated. And then I think it's just advancements, for example, in multi-party computation, which we call MPC technology, will provide more and more security to users. So there are ways to protect yourself and it's just a key to become educated to make sure that you are doing the most to protect your assets.

ANNA NIKOLAYEVSKY: Thank you.

PRESIDENT BARBARA VAN ALLEN: I'm going to jump in here and thank all of you.

This was just a terrific conversation, so full of insights. And we obviously need to do more around this topic as we go forward, and I promise you, we will. Thank you again.

I want to just mention that we have a lot of events coming up, and so, just to run through a few of those for you. Tomorrow actually, November 17th, we have a really interesting panel featuring Joyce Brown, the President of the Fashion Institute of Technology, Brandice Daniel, the Founder and CEO of Harlem's Fashion Row, and Terry Lundgren, our former Chair and also former Chair and CEO of Macy's in a conversation around retail, fashion merchandising opportunities for underrepresented groups and developing career paths. That's going to be followed actually also this week, on Thursday, by Bob Zimmer, the Chancellor of the University of Chicago, together with Lee Bollinger of Columbia University. And that will be an interesting one around freedom of speech and some of the tensions around that on campuses and how they're working through that at their institutions. And they'll also touch base on some of the social media giants and the privacy issues that are coming up there. On December 2nd, we have Lareina Yee, who is the Senior Partner at McKinsey & Company in New York. She's going to be talking about a research study on women in business and that should be a very interesting event for us. Jonelle Procope, who is the CEO of Apollo Theater, will join us on December 3rd in a conversation with Charles Phillips. Carla Harris, the Vice Chairman of Global Wealth Management, Senior Client Advisor at Morgan Stanley will join us

December 7th. We have Ken Bentsen, who is the President and CEO, and a Club member, at SIFMA, is going to join Lindsey Piegza, who is Chair of the Economic Roundtable. And they're going to discuss the forecast from the Economic Roundtable, which is a large group of financial institutions' economists, their forecast for what's to come next year. And that's December 7th. And then we're delighted, finally, to have an in-person event on December 9th, and that will be Gina Raimondo, the Secretary of Commerce, and tickets are still available for that. There will be social distancing and full vaccination is going to be required. On December 13th, we have Cathie Wood, the CEO and Chief Investment Officer of Ark Invest, joining us. And then that will be followed on December 14th by Dr. Mary Schmidt Campbell. She's the President of Spelman College. So plenty to come. Please do stay tuned.

We look forward now, we're starting to put together our 2022 agenda and it's shaping up nicely. We'll have Thasunda Duckett Brown will be speaking in mid-January, the new, relatively new CEO of TIAA. So we're excited about that. I would also like to encourage you, if you're interested in membership, your guests, to get in touch with us using the email that's there on the screen.

And then finally we want to be sure we recognize our 338 members of the Centennial Society, some of whom are joining us today, as their contributions continue to be the financial backbone of support for the Club and enable us to have this diverse

programming now and actually into the future. So thank you everyone. Please stay healthy and safe, and we hope to see you at our next event tomorrow.