FTC Decrypting Cryptocurrency Scams Workshop
June 25, 2018
Segment 1
Transcript

JASON ADLER: Good afternoon, everyone and welcome to the Federal Trade Commission's Decrypting Cryptocurrency Scams workshop. I'm Jason Adler. I'm the assistant director of the FDC's Midwest regional office here in Chicago. I want to thank you all for being here. And I want to thank DePaul University for hosting us. Before we get started, I just have a few housekeeping details to tick off. First, please set your mobile phones to silent. If you use them during the workshop, for example to comment about the workshop on social media, please be respectful of the others here.

If you do comment on social media, feel free to use #cryptoscamsftc as a hashtag. We'll be live tweeting this event using that hashtag as well. Webcasting the event today, and it may be photographed or otherwise recorded, by participating you're agreeing that your image and anything you say may be posted at ftc.gov and on our social media sites. At the end of each panel, if we do have time, we'll try to answer audience questions. We have question cards out in the hall. Feel free to write down a question. Raise your hand and someone will collect it.

And if we have time at the end of the panel, we'll ask them. We're also accepting questions on Twitter. So you can tweet a question to the FTC, so @FTC using hashtag #cryptoscamsftc. Finally, if you're here for CLE, please be sure and find Dan at the check in table. Your attendance certificates will be available [INAUDIBLE]. And now to start off our program, it's my pleasure to introduce Andrew Smith, the director of the FTC's Bureau of Consumer [INAUDIBLE].

[APPLAUSE]

ANDREW SMITH: Thank you, Jason. So good afternoon. Welcome to the FTC's workshop on decrypting cryptocurrency scams. I'm Andrew Smith, the Director of the Bureau of Consumer Protection at the FTC. And I'd like to begin by thanking our hosts here at DePaul University. And I'm particularly happy that we can bring this event to Chicago, which has become a hub for innovation in financial technologies, including blockchain, which is the technology behind cryptocurrency [INAUDIBLE].

I'd also like to thank the extremely impressive roster of panelists we'll be hearing from today, as well as our audience, including those watching on webcast and participating on Twitter. So today we're bringing together a law enforcement industry, researchers, and consumer advocates to talk about scams that are capitalizing on consumer interest in cryptocurrency and the ways that we can work together to fight this fraud.

First, let's start with the basics. What are cryptocurrencies? Mirriam-Webster, which added a word to its dictionary just this past March, defines cryptocurrency as any form of currency that only exists digitally. Cryptocurrencies typically aren't created by a government or a central bank,

though they can usually be exchanged for US dollars or other government-backed currencies. And rely upon cryptography to prevent counterfeiting.

Some cryptocurrencies, like Bitcoin, have been in use for years. Others are being created every day. By latest count, there are now over 1,600 cryptocurrencies with a market value of over $290 billion. With the rise of cryptocurrencies, we've seen many signs, from public sources to law enforcement actions brought by us and many of the other participants today, that scammers are using the lure of cryptocurrencies to rip off consumers. We've all seen media reports where cyber criminals target hospitals, schools, businesses, holding data hostage and demanding payment in Bitcoin.

Indeed, one source estimates that in just the first two months of 2018, consumers have lost $542 million just from known cryptocurrency scams. If the losses continue on that trend, consumers will lose more than $3 billion by the end of 2018. But as we say at the FTC, this ain't our first rodeo. And we do say that, don't we, [INAUDIBLE].

So, scammers using novel technologies to defraud consumers, this is nothing new, be it fishing or tech support scams, or bots that pose as real people. Over the past few years, the FTC has taken a close look at emerging financial technologies, including cryptocurrencies that have the potential to dramatically alter many of our financial transactions. And it's clear, like just about everything else in life, that there are consumer benefits as well as risks associated with cryptocurrencies.

Just last year we held a forum at Berkeley to talk about the consumer implications of blockchain technology, and heard about its potential benefits, such as enabling faster, cheaper, more efficient payments. Our focus on scams today shouldn't detract from the many pro-consumer innovations that blockchain-based technologies can bring. But our view is that by attacking and mitigating scams, we can remove impediments to technology innovators who play by the rules.

To help frame our discussion, let me tell you about some of the FTC's cryptocurrency-related actions. We've pursued deceptive mining machine marketers. We've pursued crypto jackers. And we've pursued fraudulent cryptocurrency investment schemes. Back in 2014, the FTC sued a company called Butterfly Labs that we said was deceptively marketing Bitcoin mining machines. As in so many other cases, the company was touting a chance to make money quickly and easily, for an upfront fee.

But, we alleged, Butterfly Labs often didn't deliver the mining machines or shipped them so late that the then obsolete technology left consumers unable to profitably mine Bitcoins. We ultimately reached a settlement that included strong conduct provisions, as well as monetary relief. In 2015, the FTC settled a case with a developer marketing an app called Prized, that supposedly allowed its users to earn prizes by completing tasks like playing games and taking surveys.

In fact, we alleged, the app actually contained malware that used the computing power of consumer devices to mine cryptocurrencies for the developer, without the consumer's knowledge. This practice is now widely known as cryptojacking. And a few months ago we sued

for individuals whom we alleged promoted deceptive cryptocurrency schemes, a few of which were what we call chain referral schemes.

According to our complaint, the defendants promised big rewards for a small initial payment of Bitcoin or light coin, as long as participants could recruit more members. In fact, despite a continuous chain of recruits, most participants would fail even to recoup their initial investment. This case is currently pending in the federal district court in Florida.

We've also taken steps to educate consumers about cryptocurrencies. Just a few weeks ago, we put out tips for consumers to look out for and take steps to avoid cryptojacking. We also have produced consumer education pieces, all of which you can find at consumer.ftc.gov that discuss the risks of investing in cryptocurrency, which not unlike other investment opportunities, cannot guarantee a return on investment.

The FTC is not alone in being concerned about cryptocurrency scams. Other enforcement agencies, including the SEC, the CFTC, and state agencies have brought actions and engage in outreach to try to prevent harm to consumers and to investors. And consumer groups, legitimate industry participants, and researchers have raised some concerns about cryptocurrency scams as well. So here's a preview of what's to come today.

Our first panel will provide some background on consumer uses of cryptocurrency. What is a cryptocurrency? How can consumers use it? And what makes it unique? For consumers thinking of buying a cryptocurrency, what information is out there? What information is missing? The second panel will dig into the types of scams that we've seen. Here, we'll be looking at some independent research into cryptocurrency frauds that has been conducted, including by some of our panelists, as well as the results of new law enforcement investigations.

We'll also discuss the challenges in detecting scams and what consumers can do to protect themselves and identify potential scams. The third panel will discuss effective approaches to fight scams. We'll hear more about the different roles that state-- that federal and state law enforcement play, challenges in enforcement, and effective coordination and complaint gathering.

We'll also discuss effective ways to reach out to consumers to protect them from fraud while encouraging innovation. I look forward to a robust discussion that helps further our common goal of understanding and effectively combating cryptocurrency scams. As we often emphasize at the FTC, consumer protection and innovation go hand in hand. [INAUDIBLE] consumer protection laws and regulations apply even as technology changes. Vigilant enforcement protects consumers from financial harm, ensures a level playing field for legitimate industry participants, and promotes consumer trust and confidence in the marketplace.

We will continue to be active in enforcing our laws to protect consumers as technology continues to evolve. I'm looking forward to hearing what our distinguished panelists have to say on these topics. And I want to thank everyone for participating. I again want to thank DePaul University for providing this terrific space for today's forum. And thank you to the FTC staff who put this together, including Elizabeth Kwok, Jason Adler, Dwayne Possa, Jason Moon, Sam Levine,

Bruce Jennings, Amy [INAUDIBLE], Nathan [INAUDIBLE], Brittany [INAUDIBLE], Susie McGee, and Nathan [INAUDIBLE].

Now I would like to turn the stage over to our first panel. Thank you very much.

[APPLAUSE]

JASON ADLER: For those of you who have just arrived, I'm Jason Adler. I'm the assistant director of the FTC's office here in Chicago. With me today are Rumi Morales, Christina Tetrault, and Peter Van Valkenburgh. They each have extensive bios, but to keep us on time, I'm going to briefly introduce them and then refer you to the bios out on the check-in table for more information. So Rumi Morales, to my left, is on the advisory board for the chamber of digital commerce. And she previously was the head of CME ventures, a subsidiary of CME group that invests in early-stage technologies. Christina Tetrault is a senior staff attorney on Consumer Union's financial services program team. And she specializes in banking, payments, and financial technology.

And finally on the end here is Peter Van Valkenburgh. He's the director of research at Coin Center, a cryptocurrency research and advocacy group. So with that, let's jump in. And I'd like to start, really, at the most basic level. So Peter, I'm going to hand this one to you. What is a cryptocurrency?

PETER VAN VALKENBURGH: Sure. So the first cryptocurrency to exist was Bitcoin. Paper released in 2008, a network that went live in 2009 in January, and it's been functioning ever since as a way of having peer to peer electronic cash for the internet. The 2008 white paper described Bitcoin as peer to peer electronic cash for the internet. And that's its design goal. And that's generally what people see that technology as doing.

You have money. You want to pay somebody else. In the real world, it's fairly straightforward. You can have cash so you take your $20 bill out of your wallet and you hand it to somebody else. They have it. You don't anymore. This doesn't work well online because online we don't have that kind of scarcity that paper bills or pieces of valuable metal have. Online, a file, like an MP3, can be copied endlessly. So if I was to email everyone on the panel an MP3 file and say, this is actually a $10 bill, I've paid you $10. They'd say, no you haven't. You probably just copied the same MP3 file four times, or five times, or six times. You've turned $10 into $50. You've counterfeited.

So that's just something that's true about the way digital files are. They're replicable. They are not scarce. So having digital money that worked like cash was a hard computer science problem. And Bitcoin was the first network or cryptocurrency, if you will, that solved that problem, that made it possible for me to show somebody online that I've given something up and they now have it without relying on a bank or other intermediary in the middle to keep track of who's given something up and who now has it.

Now, with that as the background of what is a cryptocurrency, I want to just go over a couple of other things. So terms here, this is an organic emergent technology with people building it all

over the world. There's no standard setting body that has any real authority, at least not yet, over the emergence of the technology. So the terms are messy because they're just common usage in something that's very new. And different people have different vernacular that they choose to use to describe it.

So blockchain technology is a broad set of technologies that are inspired by, frankly, Bitcoin's emergence and what that technology made possible. But it extends to things beyond cryptocurrency. It extends to things that are open networks, like Bitcoin, and things that are closed or permission networks, like a consortium that's working on a blockchain, like say amongst six or seven, or 50 or 60 different banks.

So you might have heard R3, a blockchain technology company. The blockchain itself, not blockchain technology, but the narrower term, is specifically originally the word was created to describe the ledger of transactions between all Bitcoin network participants. So if I sent a Bitcoin to Jason, that transaction is going to end up on the blockchain. That's how we know that I've given it up and now Jason has it. That's how you solve that scarcity issue with respect to digital goods.

Other terms, coin, token, cryptocurrency, initial coin offering, initial token offering, these terms, coin, token, cryptocurrency, they are used interchangeably. And there is no fundamental difference, technologically, in general, between something that might be called a token and something that might be called a cryptocurrency, necessarily. And they're used arbitrarily. So just because something calls itself a cryptocurrency, calls itself the token, doesn't mean that they're necessarily different from a technological standpoint.

And then last thing I want to say is, what do all of these technologies seek to do? So beyond Bitcoin, we now have several cryptocurrencies and several tokens, which as I said, are functionally equivalent to cryptocurrencies. What's the general purpose of all this? Is it just craziness? The general purpose is to decentralize, in most cases. And what I mean by decentralization is this, you have a company online that does something like money transmission, and that's PayPal.

Bitcoin, or a currency that is focused on payments, seeks to take Paypal, which is a company that we trust to perform a function, online money transmission, and turn it into a network of computers that are running the same software. And then that network of computers running the same software does what PayPal did. And there's three things, essentially, that PayPal does, just to give an illustrative example, they open accounts for people and they authenticate transactions to make sure that someone else isn't pretending to spend my money on PayPal.

They keep a record of who sent money to who. And they have a management team that makes sure that those first two functions, authentication and record-keeping, are being performed with fidelity by the employees of the company. Now, without a company, there's no employees to perform those functions and there's no management to make sure those functions are being performed well. So what you have instead is computers around the world doing all those functions in a routinized fashion because they're running the same software.

And you don't have management making sure the computers are doing that faithfully because every computer is independently incentivized, or the operator of that computer, is independently incentivized to perform faithfully because they're able to claim some sort of reward from the protocol. And that is referred to, often, as mining. If you faithfully do the authentication work and the record keeping, blockchain keeping work, you can give yourselves new bitcoins. Or you can get bitcoins from any fees that are attached to transactions.

And so that's, basically, what these systems do. But they're not all focused on payments. So just like you could decentralize PayPal and have a blockchain keep the record, and have cryptography for the authentication, and have incentives for management, you could also do centralize any other web company, in theory. You could decentralize Amazon, their S3 product, which is a Cloud storage project.

And now instead of Amazon providing you with cloud storage as a customer, you have a network of computers around the world running the same software, providing the cloud storage. And then the last way to differentiate between the various cryptocurrencies that have emerged is that they have different focuses and they have different aspirations, or real life accomplishments, in achieving basically four different things that maybe Bitcoin doesn't do well or could do better, privacy, flexibility, scale, and maybe a tie-in to the provision of a digital good or service.

So by privacy, I mean these transactions in the blockchain are all public. So if you knew my Bitcoin address or the series of addresses I use, you could see my salary, if I was actually getting my salary paid in Bitcoin. If we were going to run a global economic system like this, it would be vastly more public and more transparent than what we currently have. So there is a desire amongst cryptocurrency developers and technologists to find ways to retain some level of privacy as we move forward into a world that's increasingly using these things as currency.

Flexibility. So, there's more than just a peer to peer transfer. We have financial derivatives. We have contracts or payments that are triggered by external events. What we could code a lot of that into the automation and put it in the blockchain, smart contracting is what this is called. So if it rains in Peoria and Reuters reports it, my $50 automatically goes to the farmer who was doing swaps based on weather or things like that. Ethereum is probably the most known cryptocurrency that's focused on this flexibility or putting those contracting language, in addition to the payment language, into the blockchain.

Scale, Bitcoin handles about seven transactions per second on a good day now. Really, it's more like two. And that's globally, across all persons sending money to other persons on the network. And that's because everything has to go in the blockchain and then every computer has to independently verify the blockchain. So this is a hard problem and there's several different cryptocurrencies that are trying to solve that, in addition to Bitcoin's core developers. And then finally the tie-in to a digital good.

Some tokens or cryptocurrencies are really primarily used for payments. But the network is designed to do something else, like I was saying, to decentralize Amazon, for example. So you'd go to this peer to peer network to get cloud storage, which is measured in gigabytes, but you'd pay for it using a native cryptocurrency to that Cloud Storage network, which could be File coin

or Saya coin, or Storage, which are some of the examples of companies that are doing-- or communities and companies that are doing this.

So that's a rough overview. This is a lot, I know.

JASON ADLER: That's helpful. One of the key points you hit on there was decentralization. So the very nature of cryptocurrency is that it is decentralized, which means that there is no third party intermediary governing it. And obviously that has consumer implications. So I definitely want to come back to that. But just to give us more of a basic understanding of how consumers interact with cryptocurrency-- and I'll turn this to Rumi first, and others feel free to join in-- how can I get cryptocurrency? How can I use it?

So for example, can I walk into a bank and withdraw a cryptocurrency? Can I buy a loaf of bread with cryptocurrency at a corner store? Can I buy a loaf of bread online with a cryptocurrency?

RUMI MORALES: Sure. The answer varies depending on the merchant, right? I think there are-- I think Overstock.com being one of the first, or the most well-recognized of the first companies to accept Bitcoin as a method of payment, or for transactions. There are Bitcoin ATMs. There are a number of them, actually, even here in Chicago where you could actually get Bitcoin through an ATM machine.

But I think it's not necessarily helpful just to think about it in terms of analogies that we have today. Because people are obviously using digital assets for things that are not normal consumer usages. And for example, for those who are familiar with Mt. Gox, we all know about the Mt. Gox hack, right? Mt. Gox being an early Bitcoin exchange. Mt. Gox, actually standing for magic the gathering the online exchange, was actually a place for gaming cards.

And I think about this because I've got two young kids, for example. But as you think about the increase in gaming, right, and the importance of virtual currencies, in that aspect it's being used frequently today. So this is things that it's not just about the corner store and buying bread. You know, this is about doing payments online through gaming and gambling, so on and so forth.

And then you can increasingly, as this technology continues to develop, assume-- and now this is going to get back in the weeds again. But I really appreciate, Peter, everything that you said. And you'll notice that Peter barely talked about this as a currency, focused much more on its technological aspects. But as we get further in the evolution of this technology, for people to use any type of digital asset as any type of representation of value, one example that I love to give is about Facebook.

Right now you use Facebook and you put your pictures on there and you put your stories on there, and you get compensated zero for this, right? And there are many people who say, well, wait a minute. This is my intellectual property. Shouldn't I get compensated for that? And there are certainly Facebook-like companies that are being launched now where you do get compensated for your IP through a digital asset or a token, or cryptocurrency, whatever you would like to call it. The same goes even for Google.

You know, if time is money, think of how much time you spend simply on Google searching for things. You should be compensated for that time. This would be another usage that people are developing right now for cryptocurrencies and being able to pay and accept money based on that. So this is going a little bit further out, but guys, this is where it's going. So it's not just about finding analogs for today, but in future industries that are going to be created.

JASON ADLER: So you mentioned that there is this distinction between whether cryptocurrency should be seen as a currency versus seen for it's technological value, and I'm curious to drill into, can consumers understand that distinction? If consumer are looking to acquire cryptocurrency, are they treating it as a payment mechanism, or more of an investment, or something else entirely? And I'll open this to the panel.

CHRISTINA TETRAULT: So I would say that that's the crux of the issue right here, is are we talking about a financial asset or are we talking about a technology? And it used to be pretty clearly that $1 was $1 and the Visa network was the Visa network. And we see this blurring of the lines here with the advent of these cryptocurrencies. I think there is another layer to that, which is if we're talking about a financial asset, what type of financial asset are we talking about. Are we talking about money?

Are we talking about a security? Or are we talking about a commodity? If you think about it as money, the Consumer Financial Protection Bureau has a consumer advisory that's written from that perspective. If you're thinking about it as a security, the Securities and Exchange Commission has given a not very clear line about what-- and we can disagree about that, but about is it security? Is it not a security? And kind of where that is.

And then the Commodities Futures Trading Commission has a different opinion about when these assets are commodities. And I think to the question about whether or not there's consumer confusion is, I think it really depends, one, on the sophistication of the consumer. But there's also a question about how is this asset being acquired. And I think that can provide a lens into how to appropriately view what it is that's happening and what level of consumer disclosure needs to be there and that sort of thing.

So for example, if it's acquired by mining, which Peter has discussed what mining is, probably pretty high awareness on the part of a consumer, right? You have to be very sophisticated to buy a mining rig, hook it up-- I mean, unless your phone is hijacked, which is a whole other thing that was referenced earlier. But that's a separate issue. But if we're talking about people who are affirmatively mining to generate coins or value, I mean, sort of generally, because again, there's the question about what even the terminology is.

And then you've got one question. If we're talking about storage of these assets, so if you're acquiring them through an exchange and the exchange is holding your value for you, you have a whole separate set of risks. And that is a question about whether or not you're aware, say, of hacking or some of the other things that can happen. Like if you lose your key to your wallet, what remedies do you have? And then we have the question around transacting.

So if this is money and you're using it to buy something at a store, and you had paid with, say, your credit card, you would have a whole panoply of protections that apply when you use a credit card. If you're transacting with the distributed, decentralized network, and that isn't always the case when you are transacting at a merchant, but if you are, that transaction, as Peter has said, is irreversible. And then the question is, are consumers aware that you don't have those same sort of chargeback rates and some of the other questions.

So I think it's really hard to answer because this is one where regulators don't have a common definition where there isn't necessarily even a common terminology to talk about it. And I think, also, over clouding this whole thing is a lot of the hype and a lot of, perhaps, you know, a lot of fear of missing out by not engaging with this technology, even in its very early days where that may not necessarily be advisable.

RUMI MORALES: Yeah, it's one of those things where, at least for me, it looks like a duck and quacks like a duck, but it's not a duck. Right? And I also think that maybe marketing is a funny part to it. I mean, it's called Bitcoin. So people think it's a coin. It is a currency. And I don't feel like, for example with Ethereum, and Ethereum, or ether, is the second largest digital asset out there by market cap. People think of Ethereum somehow vaguely like not as much of a currency as Bitcoin. It has something more about programs. It has smart contracts.

But it's as much of a currency as Bitcoin is. I don't know, though, to your point, like do consumers understand that differentiation? Is it a payment mechanism or is it a technology in and of itself? I doubt it because the other factor, obviously, is these are traded on exchanges. Exchanges, again, in air quotes because it's not any regulated exchange. But because it acts so much like a duck, people assume that it is. And that's the grey area that you all have to navigate.

JASON ADLER: Can you say a little more about what an exchange is, and how that plays a role, and how consumers can get cryptocurrency?

RUMI MORALES: Do you want to take that one?

PETER VAN VALKENBURGH: Sure. So in the early days of Bitcoin, the only way to get Bitcoin would have either be to find somebody else in the world who has it and say, hey, I'll give you $5, you give me a Bitcoin. Might have act-- for a time, it was just $5 per Bitcoin. Or to mine it yourself, which as Christina said, is a technologically sophisticated activity. Your average person is not going to do this.

Once these technologies gained a little bit more attention, after the first few years of their use primarily by people on the internet who find these technological problems fascinating and want to solve them, once it got more attention, you saw a number of businesses start up where they create an order book. They create accounts for buyers and sellers. And they smooth out the process of finding somebody who will sell you cryptocurrency for dollars, or for other currency pairs.

Now, that wasn't always a smooth process. As Rumi said, one of the first exchanges was Mt. Gox that gained a lot of widespread use. Mt. Gox was created by some guys who wanted to start

a magic the gathering card exchange on the internet. And they built all the infrastructure to do payments and markets for these Magic the Gathering playing cards. And then they got into Bitcoin and said, oh, well we could just use the same infrastructure we just built for our website to allow people to trade Bitcoin.

Now, at that point, Bitcoin was worth very little. You're talking about like $1 or $5, maybe even less when Mt. Gox first started. I actually don't know for sure. And their security with respect to how they were holding people's Bitcoin for them, because they were holding it for them-- it's not peer to peer at that point if you're working with an exchange, because the exchange is kind of like a middleman to help you find someone to buy and sell the Bitcoin-- their security for the Bitcoin that they're holding was concomitant with a low Bitcoin price, or maybe with a Magic the Gathering card type security model.

And during Mt. Gox's rising popularity, the price of Bitcoin started skyrocketing because demand went up and there's only so many bitcoins and supply is constrained. Their security did not rise concomitantly with the rise in the value of the assets they were securing for their customers. They were still rather amateurish. And they either got hacked or there might have been an inside job. There's still ongoing debate about what exactly happened. And there's legal actions and things like this.

So that was the beginning. It sounds like a bad beginning, right? They were the first major exchange. But today, the story is very, very different. There are several exchanges, many of which are here in the US, and compliant with the US laws that apply. And these are things like anti-money laundering law, and in some cases, state money transmission licensing law for prudential and consumer protection purposes. You may have heard of the bit license in New York, which a number of these exchanges have gotten, which is another consumer protective prudential regulation.

And the Uniform Law commission has worked on a model state law for licensing these exchanges, which hopefully will be passed into law in several states. And I would imagine we'd see exchanges complying with that as well. There are still some rogue exchanges primarily based overseas that do not comply with laws, whether for anti-money laundering purposes or consumer protection purposes. But the story is very different than where we were with the days of Mt. Gox where there was basically no compliance.

And the cybersecurity story has gotten better, although you'll consistently see headlines about Bitcoin thefts from exchanges, and that's because it's very hard to secure bitcoins and do it effectively. So if you're holding a lot for your customers, you better have a very thorough plan as to how you store them. And there are things you can do, cold storage and multi sig are terms that you'll hear. And we can talk about them in a different format than this brief panel.

But the major exchanges, in general, I think have gone far beyond what you saw in the early days of exchanges. And you actually have a fair degree of protection and good cybersecurity practices at those, especially US-based and regulated exchanges. So what does it look like to a consumer to put some sort of meat on the bones, it looks a lot like online banking, or maybe like a Charles Schwab account, where you're able to buy and sell this thing that has a fluctuating price.

And you connect your bank account to it. You do ACH transfer or Swift transfer to move money, dollar money into your coin base, or Zappo account, which are some of the exchanges, and then you can trade. And it could be a brokerage service where they will go out and buy Bitcoin, or they have Bitcoin and sell it to you at what they think is a fair market price. And frankly, I think, usually they are fair market prices for the more liquid cryptocurrencies because the prices are so widely reported.

Or it could actually be an exchange where you are matched with a seller, if you're a buyer, or vise versa if you're a seller. And there's an order book and it looks rather like E-trade or something like that.

AUDIENCE: [INAUDIBLE] drug cartels get all their [INAUDIBLE]. Because that was a big part of it also.

PETER VAN VALKENBURGH: So I don't know about drug cartels. But there were online drug markets, like the Silk Road, where people were buying drugs from people who were willing to sell them for Bitcoin. And so in those cases, you had people who were selling on these online drug markets rather than on the corner, using Bitcoin, which is a peer to peer electronic cash instead of dollar bills.

And in those cases, we've roundly seen a lot of those online drug markets shut down thanks to law enforcement investigation that has benefited from the transparency of the Bitcoin blockchain. Because all of those transactions, though they don't have human names on them, they have basically like account numbers but they're Bitcoin addresses, they're all there. So you see this address paid this address. And this address took a little cut of it. That's the dealer. That's the guy running the drug market.

And this was rather unimpeachable evidence against folks like Ross Ulbrich, who was the one who started the Silk Road. And so you do see that kind of illicit use. But yeah.

JASON ADLER: And I'm sorry, I should have mentioned this at the beginning of the panel. We're going to take questions on notecards. So if you need a notecard, just raise your hand. Someone will come around and give it to you. And if we have time at the end, we'll get through as many as we can.

So Christina, do you--

[INTERPOSING VOICES]

CHRISTINA TETRAULT: I just wanted to-- I think Peter's done a great job of describing these on and off ramps. And one of the things that I wanted to underscore about what he said is that there is varying oversight state to state of these off ramps. And so as yet, there isn't sort of one way that states are approaching. So for example, consumer disclosures might vary from state to state depending on where the acquirer is located.

And one of the sort of neato things that I would like to mention is anyone who's familiar with the Cash app, which is where sort of person to person, it started off as sort of person to person payment app, but you can actually acquire Bitcoin on that. So the friction to get some of these assets has diminished significantly. And I think that's a really important thing to think about while we think about what are the risks to consumers and whether there is appropriate disclosure. You know, what is the environment in which these transactions are happening? And that can help frame, sort of, the appropriate ways that we may need to think about, what does it look like to make sure that there's appropriate consumer protection.

PETER VAN VALKENBURGH: Robin Hood, the app-based stock trading application, which is fairly popular, is also gradually unrolling cryptocurrency buying and selling on their app as well, which is interesting because Square is more of a payments. And they're making it possible for their users to access or by Bitcoin. And Robin Hood is more of an investment portfolio management app, and they're also. So we've got convergence from varying areas of Fin tech and consumer applications.

JASON ADLER: And I think-- so Christina, you mentioned the various on ramps. And I think that's obviously a helpful factor for thinking about how consumers are interacting with cryptocurrency and what they might need to know before acquiring it. The other that we mentioned earlier, and Rumi, you mentioned this, is just really what are you buying it for? Are you thinking of this as a payment mechanism?

Are you thinking of it as a duck, to use your analogy? And I want to touch on that a little bit. What are the reasons? What is inherent to a currency that is making it not take off as a payment method right now, something that I can just use at any store around the country to buy a loaf of bread or whatever else.

RUMI MORALES: I have thought about this a lot. I wish there was a good answer. I'm sure you two probably have a better answer than I do. Because if you go to Starbucks right now, you want to buy your coffee. You take out your phone. It has an app, the Starbucks app, you zap it. You get your coffee. It's easy, right?

So if somebody says, well, you can do, you know, peer to peer payments in Bitcoin. But they'll be like, no, but I just got my coffee. So for the consumer, I think, it's been hard to understand, well, you know, why Bitcoin is somehow easier or better. If simply all you want to do is buy a coffee. At the same time, what makes it hard is the cryptocurrency community is still so clubby, right? And just listen to the way we're talking.

I'm sure some of you are like, what in the world. You know, it's hard to kind of enter. It's easy to feel like, I don't know what these crazy people are talking about. I can get my Starbucks coffee just fine. I don't need this anymore, right? So I almost feel like there is kind of like almost a marketing push that the community needs to do for everyone else to really be able to explain what the benefits are, why something like, you know, tokenized economies in the future will actually be very empowering to the individual.

But it's going to be very hard while you just see people having wars on Reddit and Twitter about what the best crypto is right now and how to get in the latest ICO. It seems stupid. So I get that. But I mean, for me, again, for my own aha moment when I fell in love with this stuff and I realized there was no way back, at least for me, was a story that the Wall Street Journal had written several years ago about a guy who was a crypto enthusiast in New York watching the TV of a protest in the Ukraine.

And on the television screen he saw, you know, a picture of the guy in the Ukraine with a QR code and it says BTC, or a B with the two lines through it, which is the symbol for Bitcoin. So the guy in New York watching this TV recognized that, oh, that guy probably has a Bitcoin wallet. He did, too, right? He's an early enthusiast. So what he did is he freeze framed his TV. He took out his phone. And he just zapped Bitcoin through the TV screen. And that guy in the Ukraine got his money for his revolution.

That, to me, is the power of the technology. And we-- let's take that let's imagine, or re-imagine, future financial services or any other type of services, not in between people but between devices who choose to pay and transact with each other in the future. So again, it'll take a while, I think, for the beauty of the technology story to work its way through. And until that time, people are going to be using their Starbucks app to pay for their coffee.

PETER VAN VALKENBURGH: Yeah, I mean we're still in the early days of this as a technology. You can think about how difficult the internet was to use in 1994. And the small number of clubby dorks who were like, yeah, I really want the New York Times to start using the internet to send me my paper instead of the paper. And then everyone else would say, well, we have papers. This is fine. What are you talking about?

I don't want to have to type in a command line, you know, entry in order to get the latest story. But ultimately, the efficiencies of that technology of the internet, which really is the original sort of peer to peer networking, is the peer to peer networking technology. It is a world where you remove a lot of trusted central parties and you allow greater communication person to person. Ultimately the inefficiencies of that novelty, they fall away. And then the beauty of that system emerges.

So I think we're a ways away, just like in '94 with the internet we were a ways away. But there are real-- there is real value here in having a mode of exchange or a mode of establishing trust between two parties that doesn't go through someone in the middle. And that's especially important even today in countries that don't have the benefits of a functioning financial system, that don't have the credit card in order to get the coffee at the cafe.

And so you do actually see some uptick in cryptocurrency use in countries like Venezuela, where the national currency is being hyper-inflated into worthlessness. And families, if they have somebody in the family who is technologically sophisticated, think that they find a way to actually hold on to some wealth by moving it into something that is not dependent on the trust in their government or something like that.

But that's a very narrow use case and not the type of user that we're talking about today when we're talking about generally mainstream US consumers.

CHRISTINA TETRAULT: I would just add that on a lot of the enthusiasm that you see, so we've talked a lot about the confusion in terms of terminology. We've talked about the different approaches that regulators have taken. But I think one of the things that we're not talking about that I would like to name is some of the immense hype that is around is. Is there really was this huge leap forward in computing-- it solved an immense computing problem, as Peter has outlined.

But you don't necessarily have the consumer understanding of what exactly that means. And again, we've talked about this difference, financial assets versus technology. But I would overlay that with the environment in which, financially, many Americans exist. And there was a report from the Federal Reserve that said 40% of Americans can't handle a $400 expense. So you see this asset that, until December, when you're looking at Bitcoin, it basically was like this with a bunch of troughs.

So let's be clear about the volatility. But I mean, it went from-- I started looking at this five years ago and it was a couple hundred bucks. You know, it was trading close to $20,000 per coin at the end of the year. If you look at the precariousness of most Americans financial situations, and you see some stories out there of kids who moved in their basements and bought Lamborghinis, it might seem really, really appealing to jump in here. And I think against the backdrop of all the confusion of the regulatory uncertainty, and the true sort of promise that we've talked about here, you end up with this environment where it can be very dangerous for consumers because there may be, as is documented by someone the scams that have already been shut down, people in this environment who are playing on that.

And I think that's a really critical element of thinking about what it is that we're talking about, and what the environment is, the larger environment, the larger financial services environment that we live in. Because also, you know, the Bitcoin paper was published while the financial crisis was going on. So again, this is the backdrop. And I think that's an important element to think about when you think about why some people may be jumping in, say, for their retirement money and they want to put in a virtual currency, which may be fine if you're 25, but probably not so good if you're 65.

And you know, again, it's about the appropriate level of caution, I think, at this time.

JASON ADLER: Yeah. So let's go down the hype and the excitement a little bit. A lot of that surrounds investments, investment opportunities that relate to cryptocurrency or that involve cryptocurrency. One of them that's been really big recently is initial coin offerings. Can we talk a little bit about what an initial coin offering is and what are the other investment opportunities that involve cryptocurrency.

PETER VAN VALKENBURGH: So in short an initial coin offering is a bunch of guys and girls, usually guys, frankly, get together and say, oh hey, you like Bitcoin. We could make some changes to the core code. It would work, as I said, I had my possible improvements, privacy,

flexibility, scale, tie into other digital goods that are delivered by decentralized network, we could do those things better than Bitcoin's doing them. And we'd like to raise money to write the software that eventually will be a new running network like Bitcoin out there that's decentralized. But today, it's just me and my friends making promises that we're going to write that software and that it's going to work when actually implemented by that running network out there in the world, people running it on computers.

So Christina's right, Bitcoin is a risky investment. And we don't usually comment about price. We don't try and push people to think about investing in these things because of that risk. I think nobody should ever buy any more cryptocurrency-- put any more money in cryptocurrency than they're completely willing to lose, a tiny amount, if you want to participate at all. And that's a message that needs to be repeated and repeated because we see consumers seeing some people get rich and they think, well, I'll just bet the farm on it. And it's terrible.

But to the extent cryptocurrencies are volatile and risky investments, these initial coin offerings, where you're handing your money to a software developer who's just promising a future decentralized network, hasn't actually built it, that's even more risky. Satoshi Nakamoto, whoever he, she, or they were, that was the name on the 2008 Bitcoin white paper, they didn't raise money to develop that software. They did it on their own dime and they released the software open source to the world, and then people started running it on their computers.

And then eventually Bitcoin had some value. So they didn't take any money up front. They didn't create that kind of information asymmetry. They didn't create those kinds of incentives where like, oh, well I've already got the money. Why should I continue working on this thing? They built it. It worked. And then it achieved some level of value. These ICOs, you're just often buying promises that someone will build it and you're handing them a lot of money with not many guarantees that they'll do what they do.

So buyer beware.

JASON ADLER: So why would an ICO be any more risky for a consumer to invest in than a stock IPO?

PETER VAN VALKENBURGH: So stocks give you actual legal rights. And assuming that they've done their registration, which anyone who's doing an IPO in the US with the SEC, they'll also have to make disclosures in a very regularized fashion. Here is what your rights are. Here's what you're going to get when you invest in this thing. And it might be a rights to profits or revenue streams. It might also include things like the privilege to vote as a shareholder to determine how management will actually run this company to hopefully make it profitable in the future.

Now with an ICO, as I said, somebody has said we're going to build a better Bitcoin or it's going to do something differently than Bitcoin, but it will be a decentralized token, like Bitcoin, and you'll get the token. That's what you're going to get. And I guess that's a kind of right, although some will even disclaim that. Some will say, no, you're just donating to a foundation whose mission is to make this decentralized token enter the world. And maybe, if that works, you'll get

a token. So your rights are far-- they're not spelled out well. They're spelled out poorly. And you're really reliant, then, on the good nature of that developer.

Now, I want to be clear, because I probably sound very negative on ICOs, which might surprise some of you if you thought I was some sort of industry pumper or something like that. Coin Center is a nonprofit that just wants good information about the technology. So I'm not that person. But I will also say, just to clear the air, there are some compliant or more compliant token sales out there. In the US, these are people who have said, I think maybe this thing is actually a security. So I'm going to try and comply with securities laws.

Now, we haven't seen anyone do an actual S1 and register their token as a security. But we have seen people say, look, this promise of future tokens is effectively an investment contract, which is a type of security. And I'm going to register this investment contract-- or I'm not going to register this investment contract, but I'm going to do a reg defiling with the SEC and sell it under Rule 506(c) only to accredited investors, because that would then be a way of complying with securities laws and it would also be a level of consumer protection because that means you're only selling to people who have over $1 million net worth and/or can prove an income of $200,000 for the last two years.

These are the people who could afford a $400 emergency purchase. So they're less vulnerable. And so there are those who want to sell tokens who are doing it in a way that I think is more responsible. I don't mean to say that all token sales are bad. But in general, token sales are risky business.

RUMI MORALES: Another question for the ICO, is well, where's the o? Right? Where is the exchange upon which these tokens could be traded. I mean, for those familiar with Coin base, for example, Coin base only has, what, six of the major cryptocurrencies at this point being traded, out of the 3,000, 4,000 plus digital assets that are out there. So not only if you'd be buying into an ICO do you have to understand that the technology that the developers are purporting to achieve as an improvement on what exists today, but where is it going to be traded?

How are you going to get liquidity? If you want to get your money back, can you? So there's another like outsourced level of trust that you almost have to have. And I find it so ironic because this is all supposed to be about the lack of-- you don't need trust anymore, right? It's amazing how centralized all of this still is.

CHRISTINA TETRAULT: So Christina, can you comment more on, if a consumer is about to invest more in-- or considering investing in an ICO, considering investing in another cryptocurrency-related endeavour, or even just acquiring cryptocurrency on an exchange, what sort of things should the consumer know? What kind of information would they want to know before they go ahead?

CHRISTINA TETRAULT: Sure, so there are any number of resources. So anything I'm going to say right now is certainly not the final word. But I would suggest that consumers, just overall, is pump the brakes. I mean, that absolutely is sort of my fundamental message here. You know,

there are a lot of really cool things that the technology can do. And obviously there are these wild financial stories about these assets, or whatever you want to call them.

But you know, again, in the environment in which we exist where so many of us are financially fragile, a huge dose of caution, I think, is necessary. So the CFPB has a great consumer advisory that sort of lays out some of the risks about volatility and transaction costs may not be clear and some other things that I think is a terrific resource. And then I think doing your due diligence. And in this environment, it's very difficult. So that's why that wasn't my first thing. But I would really suggest to pump the brakes. Do your homework.

JASON ADLER: Other comments to the panelists on things you want to think about before investing in a cryptocurrency?

PETER VAN VALKENBURGH: I mean, if you, yourself, are not capable of explaining to somebody such that they understand what the token is supposed to do, you shouldn't buy the token. Because sometimes you'll read these white papers and it's just not even clear what this thing is designed to actually achieve. And the bottom line is, when there's a lot of hype and excitement and people seeing other people get rich, there's a lot of just outright fraud.

So apart from that maybe good natured bunch of folks who truly do want to build a better Bitcoin and are taking money upfront to develop the software to do it, apart from them, there's bad natured folks who think, well, it's easy to make that promise. And with money flowing all around, all I need to do is string together the right series of words, like blockchain, DLT, decentralized, distributed--

RUMI MORALES: Or you get Dennis Rodman to wear your Potcoin shirt in North Korea.

PETER VAN VALKENBURGH: Sometimes stunts.

RUMI MORALES: The marketing stunts have a big sway on an uninformed public.

PETER VAN VALKENBURGH: Centra had Floyd Mayweather as a spokesperson on Twitter, it seemed. And he had a picture of a table of money on his private plane and said, I'm going to get rich in the Centra ICO, which is now under investigation for unregistered securities issue. Centra, that is, not Floyd Mayweather. Although I don't know. Who knows? So be very wary of the scams and the word soup.

And if you don't feel like you can actually separate the wheat from the chaff as far as whether this is techno gibberish or actual real innovation, then you probably just shouldn't be participating. Maybe find a dear friend who you really do trust and is sophisticated with these things, if for some reason you feel compelled to get involved in the new technology. And then and then run it through them. Do your own research but be cautious even when you're doing your own research because word soup is word soup.

JASON ADLER: So we have just a couple of minutes remaining. And so I want to close with, what's on the horizon for cryptocurrency? And particularly I'm curious, are there developments that you see down the road that will pose new challenges or growing challenges for consumers?

RUMI MORALES: That's a lot to fill in in two minutes. I'll just give myself like a PSA. For anyone who's interested, I will be giving a talk this Wednesday here in Chicago. It will be live-streamed as well, at 12:00 at the Connectory. I'm going to be launching-- I'm going to be launching a new investment platform, but it's focused not just on blockchain but its interactions with AI and IOT, other advanced technologies. And here we are, we've been talking about cryptocurrencies in isolation.

But the fact is there are a number of other advanced technologies that are being innovated upon at a fast if not faster rate. And you have to think about the interaction of crypto with that as well. So those are the thoughts that are in my head and I'll be talking more about that on Wednesday.

PETER VAN VALKENBURGH: One of the things that I always say as far as like how these things get adopted, right now it seems like no one is using them for payments, Rumi talked about a decentralized Facebook where you could get paid for your participation in a social network by the network, instead of all that money or that value going straight to Mark Zuckerberg. That's a good idea. And there are several projects that are trying to build that.

And most of them won't succeed but maybe one of them will. And that is maybe how these things really do eventually gain traction, someone will be using that without knowing they're using cryptocurrency, not really. It'll just be the best way to get the service, social networking, at the best price, frankly. Because we don't realize it but we pay a price every time we use Facebook. And if we were actually getting a positive price, or a negative price, actually, when you get paid to participate in a social network might be better.

But that kind of use, because people don't even know they're using it, means that there's all kinds of risks that are embedded in the system that you don't even know about. It's actually the exact same problem as Facebook at that point. You thought, this is just a great way to connect with your friends, but underneath there's a massive data mining operation that can swing American elections.

It's going to be the same with cryptocurrency. You thought you were just using a social network that was able to connect with your friends well, and oh hey, now I'm getting a little payment. But are you getting the right payment? Or is your data still being manipulated? Is it encrypted? It says it's encrypted. Is it robust? We're just building new layers on top of things. And that could make more efficiencies but it could also make it harder to disentangle fraud out of something that looks really slick and actually works until it doesn't.

JASON ADLER: OK, so with that, we'll end. You've all been great. And thank you for participating. We'll bring in the second panel now.

[APPLAUSE]