Cryptocurrencies and Sanctions

A conversation with Yaya J. Fanusie, Daniel L. Glaser, and John Roth, moderated by Juan C. Zarate

ZARATE: Welcome, everybody. Welcome to the Foundation for Defense of Democracies. Thank you for joining us today. Really, a pleasure and honor to be with you, and this panel in particular, all three of whom are great experts in this space, as you know from their bios, and very good and close personal friends of mine. So for me, this is just a personal and professional joy to be up here today.

My name is Juan Zarate. I am the chairman of the Center on Sanctions and Illicit Finance here at FDD. I'm also the chairman of the Financial Integrity Network. We here at CSIF, as you know, founded the center to try to look at cutting-edge issues that relate to the use of financial power, and influence, and regulation in national security. In that regard, the center has been doing some cutting-edge work thanks to the work of Yaya Fanusie and others here at the center on looking at new technologies and their effect on not just the regulatory environment, not just the market, but also on issues of national security and the use of financial pressure, influence, and sanctions.

This discussion today is in furtherance of that work. We hope to have more of these sessions, and we hope to welcome you all back to further events. Without further ado, let me introduce the panel, all of whom are known to you. Their backgrounds, perhaps, may not be as clear. Immediately to my right is Yaya Fanusie. You know Yaya as the director of analysis here at CSIF. A former economic and counterterrorism analyst at CIA, Yaya and I worked very closely together when he worked at the National Counterterrorism Center, as well. He's one of the authors of a bitcoin laundering report published earlier this year, which I commend to you if you haven't read it yet. One of the great experts at this point on cryptocurrencies and their impact.

Next to him is my good friend, I would call him my brother, Danny Glaser. A fellow principal and partner of mine at FIN, but as you know, a 20-year veteran at the Department of the Treasury. No greater Treasury official in the modern era to work on the issues of anti-money laundering, counterterrorist financing. A former head of the U.S. delegation of the Financial Action Task Force, he was President Obama's assistant secretary of the Treasury for terrorist financing and financial crimes. I had the honor of working with Danny when we were in the Bush administration together. Danny, welcome.

GLASER: Thank you, Juan.

ZARATE: Last but certainly not least, to the immediate right, the far right, is John Roth. John Roth, a longtime veteran of the U.S. Department of Justice and the Department of Homeland Security, having left just recently his government service as the Inspector General at the Department of Homeland Security. At DOJ, he held several prominent roles, including being section chief for the Asset Forfeiture and Money Laundering Section, where he was looking at the application of U.S. laws, criminally and otherwise, to the issues of illicit finance and financial crimes.

Interestingly and importantly, John made his jump into the private sector into this space. He wrote a very important piece talking about why he made the jump into the space. He is now the chief compliance and ethics officer at Bittrex, as you know, a global leader in the blockchain revolution, and working on blockchain and bitcoin currency exchange markets. John, welcome.

ROTH: Thank you.

ZARATE: Just a few rules of the road before we start our discussion. Please turn your phones off, if you haven't already. We're livestreaming, so be on your best behavior. This is being shot out to hopefully hundreds if not thousands more who are with us. I will start a discussion. We really are going to try to have a discussion up here, talking about cryptocurrencies, sanctions, and national security. Then we're going to open it up to you all for questions and a discussion. When we do that, I'll ask you to identify yourself, wait for a microphone so those who aren't with us can hear, and then we can present a question.

Let's start. I'm going to start with John, and ask John to lay out for us his view. Now that he's been at Bittrex for a while, his view of where the market is going and where the environment is going for cryptocurrencies, blockchain technologies, and cryptocurrency exchanges. John?

ROTH: Great, thanks. I appreciate the invitation to attend and speak at this. The way I look at cryptocurrency right now is that this is in an enormous state of flux. I would say that the historical analog is where the Internet was in 1994. In other words, there are a lot of different players in this space. A lot of innovation is taking place at an enormous rate of change, but we have yet to see a maturity, or what I would call the killer app, the application of cryptocurrency that will fundamentally change things.

I think the people in this space—and there are very smart people in this space, and there's a lot of financial backing of various cryptocurrencies in this space, and blockchain technology in this space—are still evolving and deciding where it is that the industry will go. My prediction is, at some point, the industry will fork into two directions. One is in favor of legitimate, regulated exchange markets across the world, and the other will of course be sort of the dark web and the kinds of illicit finance that I think everyone here is concerned with.

ZARATE: John, let me just probe on that.

ROTH: Sure.

ZARATE: Because that's a really important point, and one that I think a lot of market observers have talked about. What do you see as the differentiator between those two options, the legitimate side of the technology and marketplace, and then the perhaps illicit or dark side of the market? Is it the nature of technology as it changes? Is it the nature of regulation as it unfolds? Is it the attitude and activities of the key market players, like Bittrex, or Coinbase, or others? What is it?

ROTH: I think it's going to be the intersection between the regulators, and the governments, and the individuals, the big players, the exchanges and other individuals who are pushing the cryptocurrency or the blockchain space. I think it's going to be less to do with the technology. The technology is going to continue to evolve. We've seen this over time evolving in very interesting ways, more effective ways, faster transactions, lower transaction costs, those kinds of things. As that matures, I think people will suddenly get the business purpose behind blockchain technology. That's when it's really going to take off.

ZARATE: Got it.

ROTH: In the legitimate space.

ZARATE: Right. Yaya, let me turn to you because you've been doing more and more analysis about the use of cryptocurrencies, the various types of cryptocurrencies that are out there, and what's happening in terms of not just use, but also government response and reaction. Can you give us just a quick lay of the land as to what you're seeing and what your research is finding?

FANUSIE: Sure. I think probably first is that there are three ways to look at how cryptocurrencies and blockchain technology are manifesting, and how states in particular are interacting with them. One is this activity or this development of independent cryptocurrencies like Bitcoin, Ethereum, and how those are spreading and being issued. That's something that's very specific, independent cryptocurrencies that states have no control over.

The second thing that you have happening is just the development of blockchain technology as a technology that states and other entities are interested in promoting and developing, just to transfer value, to transfer data, secure data. That's something that's distinct that might not have to do with cryptocurrencies, but is sort of a bridge.

Then the third thing that is happening—and I actually would say these three things are—I'm sort of ranking them in terms of how developed they are. The third one is this idea of central bank or central bank-backed digital currencies, the idea that a state, a central bank, can pretty much digitize its currency. That does not exist yet in a very formal way, but states are talking about it. Central banks all over the world are talking about it.

I'd say most states have some sort of engagement with cryptocurrencies and blockchain technology along that spectrum. Some are adversarial. Some may dismiss certain aspects of that. We can get into that. Some states are actually looking at how to leverage this technology—particularly the second and the third manifestations—to address or to go up against U.S. power. That's something we can talk about.

ZARATE: Especially for the audience who may not be as steeped in the technology and the research as you are, can you explain the spectrum of field and technologies we're talking about? Because you do have the virtual currencies themselves. You have underlying blockchain technologies. You have exchanges, which John is a part of. You have exchanges of these. Then, you have initial coin offerings and such that are market evaluations and opportunities tied to these things. Can you give folks a sense of what that spectrum looks like?

FANUSIE: Sure. It's good to think about virtual currencies, digital currencies as being part of a new ecosystem. You have the technological side of that, which is creating something using, usually, cryptography, even in some cases a bit of game theory, and computer software code to create some sort of digital asset. That's the technological side. That can exist. It can be issued. You have the technology, which underlies this blockchain technology, which is how you build these tokens, but that's just the technology.

What interacts with this in the ecosystem is entities like exchanges. For example, let's say some developer creates a token. How do you get that? How do you gain control of a token? You have your dollars. You want bitcoin, or you want Ethereum, or whatever. Most people go to cryptocurrency exchanges. These are usually websites where you can sign on, get an account. There's some interface where you can put in maybe your credit card, put in some other fiat currency, government legal tender, and purchase the token. Then that's all done by the software. These exchanges are a big part of how people trade cryptocurrencies, and then you get into the issue that you brought up, of legitimacy, also issues of anti-money laundering. How do you know who's purchasing these tokens? It opens up a whole new world that the regular fiat banking industry has dealt with before, but now we have a whole new technology to engage.

ZARATE: Thank you, Yaya. Danny, let's turn to you. You sat at the Treasury Department for a long time, worrying about the anti-money laundering system, trying to create systems around the world that were more transparent, more accountable systems that allowed for more traceability. How do you see the evolution of virtual currencies, and what's your sense of how both the markets as well as governments are reacting to these in terms of regulation, or as Yaya said, even confrontation, or exclusion of these technologies?

GLASER: I thought that John's analogy to the Internet in 1994 was a good one. Just as you had the various players within the technology portion of it experimenting and trying to come up with what's going to be—I forget what phrase you used, the ultimate app?

ZARATE: The killer app, yes.

GLASER: The killer app.

ZARATE: Right.

GLASER: Just as you have on the technology side the search for the killer app, on the regulatory side, you also have a certain amount of confusion, competition, and a competition of ideas, and trying to understand what's the best way to approach this, and a lot of anxiety associated with that. Some of it I think warranted, and some of it probably not as warranted as it needs to be.

There are some countries that have approached this, as Juan, as you alluded to, simply by banning it, just simply by banning virtual currency. It's an approach. Whenever you think about regulating a new technology, the first thing that you want to think about is, how are you going to balance the need for regulatory safety and security with the need to encourage innovation? Banning it certainly settles that problem on one side, and that's not the way the United States and most Western countries normally approach the regulation of technology and the regulation of financial transactions.

The way the United States has approached it, the way FinCEN has approached it, is defining these virtual currency exchanges as money services businesses. We could have a discussion as to whether that's the perfectly right way to think about it, and I'm not so sure that it is, but it's a way to think about it, virtual currency exchanges as the gatekeepers to this world of virtual currency. And then, you apply your standard money services business due diligence procedures to it. So there's really no magic to how do you know who you're dealing with. The virtual currency exchanges will have the same challenges and have to do the same type of things as a Western Union would have to do, or as a MoneyGram would have to do, and in some instances as a bank would have to do. That's fairly straightforward.

The real challenge, though, is we in the United States and everywhere else in the world are terrible at regulating money services businesses. We're terrible at it, because we don't have enough money, we don't have enough people, and there's hundreds of thousands of these things in the United States alone, to say nothing of the rest of the world. For me, the challenge of regulating cryptocurrency and even the mystique of cryptocurrency is buried in the fact that we're choosing to use that word. The challenge is not so much a technological one. I think the technology issues are very easily overcome. The problem is are we prepared to invest in a regulatory regime that could actually account for it? I think the answer right now—certainly even in the United States, who is probably more serious about this than anyone—is no. That's where the real challenge is, is there's just not enough regulatory resources to go in to manage this whole new system.

ROTH: If I can amplify those comments—

ZARATE: Yeah, go ahead.

ROTH: —I'm encouraged to hear Danny talk about the fact that there is actually no magic to this. The same kinds of good KYC, AML policies that any financial institution works applies almost perfectly to a cryptocurrency exchange, or other people handling cryptocurrency. It's fairly straightforward. While the technology is new, there's nothing magic about the transfer of money.

What I worry about—and again to sort of amplify Danny's comments—is in the U.S. I think we're probably pretty forward-learning. We're pretty thoughtful about it. We can argue about whether an MSB is the right way to pigeonhole this, but it's not a bad way to do it. What I worry about, of course, is the international arbitrage, that's regulatory arbitrage, that's occurring right now because there are a number of countries who just refuse to regulate exchanges. I think that's where some of the dark money is going to go.

ZARATE: Yeah. I want to come back to this question of thinking about different jurisdictions, the arbitrage. Danny, I do want to ask you about how we think about global standards the way that we have with anti-money laundering in the past, given that you do have different countries treating this differently. John, let me ask you, from your vantage point, because you really are privileged. You wear the white hat of having been in government in privileged roles, worrying about these issues and issues of financial integrity, for a long time. You're now sitting at the center of a very important exchange in this space. How do you deal with the issue of anonymity, and to Yaya's point a bit earlier, the varied nature of the currencies and the fluidity and openness of some of these technologies? How do you deal with it now being in the space, given that anonymity is a feature of these currencies?

ROTH: There I'm going to push back a little bit.

ZARATE: Yeah, good.

ROTH: Because they're not anonymous. They are pseudonymous.

ZARATE: Thank you. I was hoping you would.

ROTH: I can fire up my computer right now, and I can take any blockchain transaction and trace it all the way back to the source. We can tell when it was transferred, how much was transferred, all those kinds of things. The only thing that we can't tell is identity. Now, that's where a well-regulated exchange comes into play because if you have the kind of KYC so you can watch the jumps, and in fact you can see where something jumps into a Bittrex account because that's identified within the blockchain as a Bittrex account, then law enforcement or whoever it is puts a subpoena in to us, and can match then those transactions with the identity.

Compare that with the traditional fiat financial world. I was a money laundering prosecutor for 25 years. I specialized in international investigations. I can start with the first jump. There's a wire transfer from point A to point B. Well, point B is in the EU, so now I have to fire up my MLAT process, wait six months. Maybe I'll get the transaction, maybe I won't, but in any case, my case has been delayed for six months. Where's the next jump? The next jump is into Albania. What am I going to do there? Do we have a treaty? Can I get it in a realistic time frame for my investigation? The rule of thumb we had as prosecutors and investigators is if your money laundering goes overseas, add a year and decrease the chances of success by 50%.

Is blockchain any different, really, than the traditional international fiat world? I would say no.

GLASER: I completely agree with that, and this is why I made the point that in some ways blockchain, in some way cryptocurrencies based on blockchain, are more transparent than traditional fiat currency or wire transfers. The challenge is entry and exit into the system, and again that makes it a regulatory challenge, not a technological challenge. Now, of course there are some really sort of seedy cryptocurrencies that are set up to make it a little bit more difficult, but those are relatively small players in the market. When you look at the major cryptocurrencies, the major virtual currencies, these are not—I really don't think of these as a technology that offers anonymity as a feature.

These technologies are—I don't want to be Pollyanna-ish about it—these technologies are attractive to criminals for a variety of reasons, one of which is the poor regulatory space they exist in, and there's other features. But the idea that there's something baked into the system which makes it more amenable to criminality than other systems I think is maybe not entirely incorrect, but I think a pretty vast overstatement.

ZARATE: Yaya, you want to jump in?

FANUSIE: Yeah, I want to jump in because I agree I think with what everyone is saying, but I will back just because of the spectrum that we're seeing. I wouldn't discount the minority of more anonymous cryptocurrencies and more decentralization which is occurring within this industry. I'll give a good example of something that we have actually seen.

But before I even do that, I want to say that I mentioned the idea that cryptocurrencies or digital currencies, they're part of an ecosystem. I really see that we've got two different ecosystems. We've got the regular financial sector, and we've got the tech sector. So much of what is happening, what is developing is happening in the tech sector. You might not see it all just looking at the financial sector, although they're both sort of combined, so it's really important to note the tech sector is where a lot of this innovation is happening, moving I think beyond what those of us that are always dealing with the financial sector are aware of.

I'll give you one example. This is all public, open source. There is one particular jihadist group that's based in Syria, apparently, that has been trying to raise money mostly using bitcoin for the past several months, since November. Like Danny and John said, they had a bitcoin address that they were fundraising to. We were able to look at that address for several months and see how much money was in there, amounts, transactions, analyze this data.

This is an investigator's dream, as we pointed out, but over several months, we noticed that the same group, which was on TeleGram—public channel, anyone can log onto it. After a while, they said, "Okay, now you can donate to us not just in bitcoin, but also in several other tokens, one called Monero." They put the Monero address. We're like, "Okay, great. Let's track what they're doing." When you go to a bitcoin address, you can pull it up and go into your Google browser, Google Chrome, and you will get all the transactions there in your regular browser.

When you go to a Monero address—we had the address. This is the address that they're raising money to. You click on it. You go to a Monero browser, and I'm paraphrasing here, but literally—well I can't be literally paraphrasing—but what comes up in the browser when you click on the Monero address, it says something to the effect of, "Oh, are you trying to see this guy's Monero account? Dude, we don't play that. No, sorry." You cannot see the transactions. You can confirm that that's an account, but you cannot see the transactions. You can't see the history because Monero was built to be more private.

Now, scope and scale. Monero is tiny. Most transactions are in bitcoin. Most illicit activity is in bitcoin and other cryptocurrencies, but I think we have to—what I'm really interested in is looking at this development because often this innovation is happening totally outside of what we are seeing through our centralized, focused AML regime.

ZARATE: What I want to do now is pull the lens back just a little bit. We're going to pull it back even further in just a second, but John and Danny, I want to come back to what John started to allude to, which is the regulatory arbitrage. Because I want to give the audience and have our discussion illuminate what you're seeing in terms of jurisdictional treatment, what you consider, John, from a Bittrex perspective, where you want to operate, where you have high-risk red flags, that kind of thing. Danny, I want to ask you to help us think through what do global standards begin to look like here? How has the FATF begun to think about this, and how should we be thinking about it? John, I want to turn to you, and then Yaya, I'm going to come to you on how other rogue states are thinking about the use of these technologies.

ROTH: I think around the globe, different countries are taking different approaches at it. Certainly, some countries are deciding that this is a new technology, so we're going to sandbox the entire thing. In other words, go ahead and do whatever it is that you're going to do, and we're going to wait and let the industry evolve, and then we will place regulations in there. There are jurisdictions with massive exchanges, cryptocurrency exchanges, that have no regulation. They have no know your customer. They have no transaction monitoring, no suspicious activity reporting, no responses to legal subpoenas, none of the kinds of things that a U.S.-based exchange would do.

I think what it is doing is it's driving the market overseas. I would have to say that we are the largest U.S.-based cryptocurrency exchange by volume in the United States. We are seventh in the world. The other six that are bigger than us—bigger than us by quite a bit—are operating in jurisdictions that are unencumbered by the kinds of regulations that we have, which is not to say I want less regulation for us because we think that good compliance and good regulation is actually going to be a business advantage as the industry matures. But what I would love to see is more international standards.

ZARATE: Danny, what do those international standards begin to look like, or how should they be formed?

GLASER: Let me just also clarify, when I say that I don't think that there is some sort of illicit finance weakness that's baked into the technology, that doesn't mean I don't think there's illicit finance risks, or that I don't think this presents a new set of problems that we as a global community need to address. I certainly think that we do, but as I keep coming back to, I think it's a regulatory problem. I don't think it's so much a technology problem.

The regulatory problem is pretty significant. As John said, there's a lot of different ways that you could think about virtual currency. You could think of it the way we do here in the U.S. as a money services business. You could think of it as a bank, given that there is generally an account relationship. You could think of it as a commodity, think of the actual cryptocurrency as a commodity. There's a number of ways that you could approach it, but the important thing—even if countries take a variety of approaches, whether you're dealing with a bank, whether you dealing with a money services business, whether you're dealing with a commodities broker—you're still going to have to apply basic due diligence to get in and out of the system. That's the key, is controlling access into and out of the system.

Maybe someday, maybe 10 years from now, 20 years from now, who knows, we get to the point where you could live your entire life inside the bitcoin world. Everything that you need and everything that you do is inside the virtual currency world. You never have to come out back into the system, in which case that's going to present some real challenges from a regulatory perspective. But until that day comes, and that day is far in the future, you're going to have come inside and into and out of the bitcoin world or the virtual currency world, and that's where you get them. You get them in the virtual currency exchanges, and you apply your standard due diligence. There might be different things that you're looking for, different questions that you have to ask, but the basics are still the same. Know your customer, understand your customer, manage your risk. The virtual exchange currencies have to do that, need to do that just like everybody else needs to do that.

Again, the problem, though, is that it's very articulate to those standards, and FATF could articulate those standards, and the world can adopt those standards, and that would be a big, big step back forward given what John just said, but even so, the enforcement of these types of standards on money services businesses is terrible. It's absolutely terrible. We have a well-developed system around the world to regulate banks and to ensure that banks are following their regulatory obligations. There's not a similar, effective system with respect to money services businesses, even in countries like the United States where there is an attempt to do so. You can imagine what it's like in countries where there is not an attempt to do so.

I think that to the extent that this technology offers, quote unquote, anonymity, and again I don't think that's the only thing that makes it attractive to criminals. I think there's other things that make it even more attractive for criminals. To the extent that it offers anonymity, it's going to be because countries are not applying enough resources, and I'm not arguing for resources. This is a really tough problem. It's a really tough problem. You have 100,000 or whatever money services businesses in the United States. How do you regulate that? There is no regulatory agency for this. There's the IRS. How do you do that? That's going to be the fundamental challenge, but again, from a theoretical perspective, it's actually pretty straightforward.

ZARATE: It's interesting that the Financial Action Task Force has been doing a lot of outreach now to the technology committee. Yaya, to your point, the two communities, the standard-setter internationally for anti-money laundering standards have been trying to understand the technology world better. That's interesting. Yaya, let me turn back to you on this question of how countries are thinking about these virtual currencies. Because in some ways, you've had countries have a love-hate relationship with the technology at times. You've seen this in South Korea, for example, proposals to outright ban exchanges, and then public outcry, and a backpedaling. Or in other countries, a real desire to not see open systems outside the control of the central bank, for example in Russia or China, but then a realization that there may be advantages to creating a virtual currency that's pegged to the official currency or controlled by the central bank. You've got a lot of love-hate issues going on with governments.

How do you see that environment? Importantly, how are countries that are trying to break free from the existing strictures of the international system, how are they beginning to think about virtual currencies?

FANUSIE: One I think you actually identified. What I would say would be almost the three stages of blockchain engagement that I think most countries go through or are going through. That first stage is, in a lot of countries, crackdown on these types of cryptocurrencies. Then that's usually followed by a second stage, which is the growth of the technology, maybe sometimes in the general public, because the tech sector is pushing this. A central bank often comes out and says, I think Iran just did this yesterday, “Banks cannot deal with cryptocurrencies.” India has done that, Nigeria, because of the threat they pose, because of the potential for money laundering, because the financial sector doesn't have a handle on this, so there will be a crackdown.

The thing is, again, the tech sector ecosystem, a lot of this stuff is based in software. In those environments in particular where there's incentive to maybe try some of these emerging payment methods, the technology usually grows. Even if banks are outlawed, if the central bank does not allow it with the banks, people engage with the technology. Look at Venezuela, where people started using bitcoin because they had cheap electricity. The Bolivar, the Venezuelan currency, was so devalued people started really engaging the cryptocurrency.

ZARATE: We saw this in Argentina a few years ago under the prior regime, when the currency was struggling.

FANUSIE: Exactly. It's very difficult. Even with the ban, it's very difficult to stop new technology. I think what that usually leads to is an acknowledgement, the third stage, which is interest in the technology itself. Maybe not the independent cryptocurrencies like Bitcoin, but states saying, “Okay, let's study this. Let's understand if this technology could be used for efficiencies to benefit the state.”

Russia, in particular. I would say if you want to talk about adversaries who are signaling them using this technology to circumvent U.S. power, I would say Russia has been the actor that has been loudest in terms of that aim. Russia went through that stage trying to ban bitcoin, and now Russia is saying it wants its crypto rule in whatever year, two or three years from now, and is saying outright, “This could help us avoid sanctions.” We have high-level officials actually saying this. They're developing blockchain platforms. They're piloting programs. It's interesting. Places like Russia, they're even considering making a depository. They're planning to make a depository for digital assets that the state will hold and facilitate, so they're very bullish on the technology.

Other states, not so much. I don't know if you want to get more into it.

ZARATE: Yeah, go ahead, Danny. I'm going to ask a follow-on questions from this. Go ahead, Danny.

GLASER: What I thought was really interesting about Yaya's riff just there was that you could take the term virtual currency out of it. Again, there's nothing particularly unique about virtual currency's role in that. Again, if we're going to think about virtual currency exchanges as money services businesses, money services businesses throughout the world are already having a hard time getting bank accounts. That's one of the fundamental components of the de-risking issue we see around the world, is that banks don't want to deal with money services businesses because they consider them risky, because they think that their client base is high risk, because they think that they're poorly regulated. I could say, “Well, virtual currency is another kind of money services business.” It has the exact same challenges, the exact same issues.

With respect to the use of sovereigns like Russia or other sovereigns, Venezuela, to try to circumvent sanctions, I think virtual currency presents a pretty significant set of challenges and problems for law enforcement in certain ways with respect to enforcing narcotics laws, or enforcing fraud laws, or enforcing other types of laws targeting criminal activities. I'm really not at the point where I'm overly concerned about it as a means of sanctions evasion, depending on how you define sanctions evasion. Whether you're Iran, or the Assad regime, or Russia, if you want to engage in a particular transaction, you're going to be able to figure out a way to do that. Even when the sanctions regimes were at its toughest with respect to Iran, and even if you were to crank them up past there, if you look at the sanctions we have against North Korea, when those regimes want to conduct a transaction, they have ways to conduct a transaction.

If virtual currency maybe gives them another way to conduct that transaction, then okay, that sucks, and we should try to stop that transaction, but that's really not what the sanctions regime is there for. The sanctions regime isn't there to stop a transaction. The sanctions regime in those cases are there to provide broad financial, economic pressure on a target to get it to change its broad policy. The idea that you could run an economy right now on virtual currency, it's just not the case, and it's not going to be the case for a while.

Again, Juan, you and I have had this conversation many times, not in the area of cryptocurrency. I don't know what the world economic system is going to look like 50 years from now. Maybe the dollar won't have its exalted place. Maybe there will be significant pressures on the United States or limitations on the United States in terms of our ability to apply financial sanctions because the dollar doesn't hold its place anymore. Maybe one of those reasons is going to be because there's going to be cryptocurrency alternatives. Maybe one of those reasons is the dollar's just going to lose its place vis-a-vis the renminbi or the euro. Who knows? I don't know what the world's going to look like in 50 years. 50 years ago, we couldn't have predicted the world we live in today.

What I do know is that in the next 10 years, the idea that the United States is not going to be able to use the dollar as leverage against countries that it considers its adversary is false. We are going to continue to be able to do that, and cryptocurrency is not going to stop that from happening in the foreseeable future.

ZARATE: Go ahead.

ROTH: Just to add, this idea that there will be state-sponsored cryptocurrencies, that only works if there is a market for them, that if exchanges around the world will actually trade them for other things of value. I think probably what you saw with the petro is going to be instructive for rogue states attempting to do some sort of cryptocurrency coin of their own.

ZARATE: What was the market reaction? Because I think the counter to what Danny is saying is, what if you have ecosystems that emerge that allow for the exchange or are enabled by some of these currencies, the crypto-ruble, the petro. You have enough of these emerging in the market and enough market players willing to engage with it that it actually does become the marketplace.

ROTH: That is the issue. Do you have individuals who are willing to engage in that, who are willing to trade in that, in the face of broad international sanctions? We were never going to touch the petro ever, regardless of what the White House did. I think we were probably typical of other kinds of exchanges, that they would never touch that.

The other thing about a government-sponsored cryptocurrency is you have to understand blockchain technology, which is it's a distributed ledger, which means there's a bunch of different ledgers out there with individuals mining coins to facilitate the transactions that are happening. Widely distributed, anonymous, has to have participation from a great number of people. If you don't have the miners, if you don't have the individuals who are willing to do the kinds of transactions on the blockchain, it will fail.

ZARATE: Yaya, final point before we go to Q and A, so get your questions ready.

FANUSIE: Sure.

ZARATE: I want you to touch on this idea of sanctions resistance, which is a term of art that you've coined.

FANUSIE: Yeah. There's an issue of we have to make sure we don't, I guess, suffer from a lack of imagination about the future. The way I look at the point that 50 years ago, no one could have predicted what today would look like, which is absolutely true. The thing that I think is important to keep in mind is, when things change, when there is a new disruption, when there is a new ecosystem, there usually are signs. There's usually activity that precedes it. We have to really be careful that we're not ignoring—I don't want to say ignoring the signs—but ignoring the fact that activity is going on.

My idea is that, my thought is there are two different ways to approach this phenomenon. I think states are either doing this. They're either dismissing it or developing it. There's very little, and it's not to say that cryptocurrencies or blockchain technology is going to take over the financial system in the next few years. It's not, but I think it's important to be clear that the technology is moving. Something is going to happen. Who knows? None of us, no one sitting in the panel, or in the room, or being livestreamed watching the video, know exactly what the world is going to look like, but it's very important to, I'd say, sort of be in the ballgame. Other countries are really focused on this. It doesn't mean that what they say is going to happen is going to happen, but I think we have to be sure that we're in the game. I think that's one of the things that I just want to point out.

ZARATE: Just to tie a bow on the point that John made earlier, and Yaya, to your point, there is a legitimate development of the technology. There's others who may want to exploit it or develop it for other reasons. You've seen that with nation-states as well. The G7 countries are all grappling with this. Japan is developing the J-Coin. There's lots of grappling with what countries can and should do with the technology.

Let's now go to questions. Hopefully, this has stimulated some thoughts. Any questions from the audience? Please raise your hand. Yes, in the back.

SHULSKY: Thank you, Juan. Abe Shulsky from the Hudson Institute.

ZARATE: Thank you for coming, Abe.

SHULSKY: When I was trying to learn about this, I played around on the web and stumbled across a company called Brave New World. It's in Sweden. It wants to invest. It's a private equity company. It wants to invest in Iran, and they couldn't get a bank account from a Swedish bank, presumably because the Swedish banks figured that the amount of trouble you'd get into with the U.S. if you did this wasn't really worth the value of that account. So they decided to not have a bank account, entirely be in bitcoin in the rest of the world, and of course in rials in Iran. Now, the interesting thing about it is it got registered in Sweden last year, and then there's nothing more I can find about it, just playing around on the web.

Just wondering if any of you had heard of this, and more generally, do you see this as a possibility? Because one thing that's struck me is that we have gotten much, much cleverer over the last 10-15 years in exploiting the centrality of the dollar, but of course the flip side of that is that we've given people much greater incentive to find out ways around the dollar. I was just wondering how you would evaluate that. If you know anything about it, I'd love to hear because as I say, I couldn't find any more traces of it.

FANUSIE: Yeah.

ZARATE: Go ahead.

FANUSIE: I'll just say, just real quick, I am familiar with that company, that case, and you're right. I actually haven't heard much about it. I think it was almost a year ago where the news broke about this. I think what happened is this actually indicates what's happening in the tech sector. As companies find new ways to transfer value, they're going to do it. If the financial system is going to not allow them to do it in a more direct way to engage the financial system, they'll come up with ways. I don't know how—I think they're still around. There's probably investment going into that company, which is being transferred to Iran. I don't know if there's something that that can be stopped, per se, just from a financial regulatory perspective.

GLASER: I guess I don't know what you mean by stopped. This is a great example. I don't know about this particular company or this particular case, but you know about it. We're having a conversation about it, so I guess it's not quite as secret as people imagine these types of things. If the United States was particularly concerned about it, we decided we wanted to walk away from the JCPOA and we wanted to start imposing secondary sanctions, we could do it on some entity if we believe that entity is conducting financial transactions with Iran in a way that we're not happy with. They could be targeted with our sanctions.

Again, it sounds to me like this is some company that decided it wanted to figure out ways to invest in Iran. Is that what they want to do? They want to figure out ways to invest in Iran? Again, I always sound like I'm minimizing. When I was assistant secretary, we were looking for just that kind of thing to try to shut it down, and we would have been able to shut it down. You'd go to the government of Sweden, or you'd just do it yourself. You can do that. There's no way—we can't shut down a bank. We can impose sanctions on a bank. We can impose sanctions on another financial institution. That's how we shut it down. We can't ourselves do it.

Again, remember the purpose of sanctions on Iran wasn't to stop individual transactions. It was to stop Iran from profiting on its oil wealth, from Iran accessing its currency reserves in a broad way. We talk about broad economic pressure. It's sort of a euphemism. What we're trying to do, we were trying to do, is crash their economy. That's what we were trying to do. Bitcoin is not going to save them from that. Again, maybe in 10 years, Bitcoin will save them, or some version of it will. I'm not saying that we shouldn't be smart and we shouldn't be trying to think about what's coming in the future, but I think we should approach it with a degree of equanimity, and not this panic that there's some sort of thing out there that's really at this moment gnawing at our ability to apply financial pressure. Again, I think this is a much more serious issue with respect to crime—and I think it is a serious issue with respect to crime—than it is with respect to sanctions evasion.

ZARATE: Yes. Right here, this gentleman.

MASSARO: Thank you for the great panel. My name is Paul Massaro. I'm the anti-corruption policy advisor at the U.S. Helsinki Commission. Daniel and John, you have hinted a lot at the problem I think of adoption, really, adoption of decentralized, third-party cryptocurrencies. Because adoption is not at the level it would need to be to, say, stay in the bubble, is the term you used, John, these are not yet a big sanctions threat. When I think about sanctions, generally I think about targeted, individualized sanctions like under the Magnitsky Act or Global Magnitsky, something like that, or like we've seen under CAATSA.

Right now, there's a big push on Capitol Hill to update the anti-money laundering system through AML bills in both chambers, as well as to install in the United States a beneficial ownership transparency standard, which doesn't exist at all in the United States, even though it exists in a pretty clear way in that European Union, through a number of bills in both chambers. It looks like those might move this Congress. I'm wondering whether—we really want to close the loopholes in the fiat currency money laundering system because it's very, very efficient right now. We catch less than 1%, at the last figure I heard from Treasury. So long as it is that efficient, why use cryptocurrencies, right? It's just, why look for alternatives if I can just make a bunch of shell companies?

Let's say we reach the point where it is no longer that efficient. We're closing the loopholes. We're shutting down the specialty law firms that help out criminals and work in money laundering, or at least we make it impossible for them to work in this. Should we be anticipating the growth of a bubble, as you say, of specialty, anonymous cryptocurrency, of adoption of anonymous cryptocurrencies, of specialty companies that are very subtly or maybe not so subtly marketing to sanctions evaders, criminals, things like that, saying, “Okay, well, the shell companies system doesn’t exist anymore. We can help you out.”?

ZARATE: Got it. Good question. John, do you want to take that?

ROTH: Yeah, I'll start. Again, any cryptocurrency needs a market. If you need a market, that means it is subject to sanctions, and it is subject to the kinds of pressures that the international financial community can put on it. It's no different than fiat currency or anything else. If you decide that Monero is a bad thing—and by the way you should look at the Wired article from late March that talks about the fact that they found that Monero actually isn't as anonymous as people thought it was. In fact, you can drive through to see the blockchain technology. In any event, if you think Monero is a bad thing, or there are bad actors out there, you simply sanction them. You have an international sanctions regime, because again, like any other currency, it requires a market to make sense. If you can apply pressure on those markets, if you can regulate those markets across the globe, then you will be able to do the same kinds of things that you would do with fiat currency.

GLASER: Let me just also say, if people are serious about passing laws and regulations relating to money laundering, the single most important thing they can do is what you said, is pass beneficial ownership legislation. It is the single most important thing. I would take issue with your blanket statement that there's no beneficial ownership requirement in the United States. There are beneficial ownership requirements, but I think it's just so patently obvious that that's the most important thing.

I think, though, that there is a narrative that we sometimes get into, which is this notion that we're going to crack down on money laundering, and then it's going to get pushed somewhere else. I wish we were so good at cracking down on money laundering in any particular place that it would get pushed. The fact is money laundering is going to happen throughout the system. I don't think it's a question of sequentially, we're going to crack down here, it's going to come here, then we're going to have to worry about it there, and then we'll have to worry about it in the next place. I think we always need to be monitoring the system as a whole. To the extent that there are issues within the virtual currency world, we really need to address them in addition to all the important work we need to do more generally on beneficial ownership.

ROTH: Right. Ultimately, an AML regime is not to stop money laundering, because you're not going to stop money laundering. It's to increase detection rates, and increase the cost and risk of illicit transfers of money.

FANUSIE: A couple quick points. One, just something to keep in mind. You can't sanction a software, per se. I just want to say that if we're thinking about how do you sanction—if you're going to sanction Monero or something, who do you go after? Someone creates some software that other actors are going to use. Do you go after the person who wrote the code, even though they wrote it as a public source software? That's sort of an issue. If someone creates a platform and bad actors use it, can you go after just the person that created the platform? Do you go after the Internet because people use the Internet improperly?

I actually want to respond to answer a question, which you asked, which I don't think was answered, which is this idea of sanctions resistance. I'm a former counterterrorism analyst. One of the ways that I look at threats is I think we've actually answered the question of will something like this, will cryptocurrencies, how can cryptocurrencies actually be a threat, by stating what the gap is now. We see a lot of experimentation. Everything happening right now is experimentation, whether it's Venezuela, Russia, or whatever. That's the status.

What I think about, as someone looking at threats, I think about yeah, they don't have the ability. This actor does not have the ability to do anything to the U.S., really. Why don't they? It's because of the market. You create this token. It's not going to be valuable. When I look at Venezuela, Venezuela is a really good test case. I know someone mentioned that there are going to be lessons learned. With Venezuela, you look at it. On the face of it, this is going to be really a non-valuable token. But then I ask the question, what would allow it to work? What would allow it to gain value? It would probably only work if there were some other state actor or state actors that decided to collude and buy in.

Anything when you think about ecosystems, it's all about the belief system. Do you buy into it? We all buy into the dollar. If I take out $100 here, which I don't have, but if I take out $100, you all believe because we believe in the United States, because whatever. We have a complicated belief system about why this is valuable. There's no belief system. There's nothing really that you could bank on for the token. There is a belief system around bitcoin for whatever reason, even if we don't agree that it makes sense. These actors would have to create a system, an ecosystem, where there is belief in it, probably because they're able to get other state actors with a lot of money to buy into that system.

That's what we should be looking for, which does not exist in this, but there's a sign in Venezuela because with Venezuela, it looks like Russia is taking an interest and maybe is helping them. We don't have that much insight into how much money they've raised, maybe very little at all, but that's what I would look at. Those are the signposts. Will we see—again, not painting an alarmist picture that China is going to take over the financial system and displace the dollar, but we should be looking at those indicators that would enable them to get there some day, possibly.

GLASER: I completely agree with that, but there's more that goes into the value of the dollar than just everybody waking up one morning and saying, “We believe in the dollar.” I mean, I understand we're not under the gold standard anymore, but there's a complicated international monetary system in place with institutions and systems that go into the value of the dollar. The dollar fluctuates based on a whole wide variety of things. Yes, I understand that at the end of the day I suppose we could all wake up one morning and say, “We're not going to accept dollars anymore,” but it's not going to—Even if Russia were to be helping Venezuela, again, I'm genuinely interested, Yaya. What do you mean by that? Because Russia helping Venezuela, does that mean Russian merchants one day are going to—Russia says, “We're helping Venezuela now." Does that mean they're going to instruct their merchants to accept petros? Because I think that would be, even for a guy like Putin, an unpopular move.

FANUSIE: Yeah.

ZARATE: I think one option, to answer your question, and to imagine a possibility, is, do you imagine a virtual reserve currency, which allows for debt inequity to be offered?

GLASER: Right. Then you start to get into a real—

ZARATE: —Then, to your point, Danny, it's obviously trust and belief in a currency, but it's also the underlying value and perception of value. Is it pegged to oil futures and reserves? You can play out a scenario where, especially if Venezuela were not in so much trouble, there would be more credibility to offering a currency that's pegged to underlying value. To Yaya's point, if you had other nation-states willing to buy in as a reserve currency, not for use in Moscow but for purposes of trading, or for oil, etc., then you start to see an ecosystem begin to emerge that is potentially problematic. I think that's what Yaya is referring to.

ROTH: It's problematic only if people don't sanction them. Once you get that kind of an infrastructure, then it can be susceptible to sanctions, just like a fiat currency can.

ZARATE: Let's go to another question. Let's get back over here, because I can't see behind the post. Apologies to this crowd.

MEREDITH: Jake Meredith, ACG Analytics. I have two questions. The first is on market volatility. Are we seeing illicit use fluctuate with market volatility? The second is on regulation. We've danced around the difference between an ICO, a token, and a true cryptocurrency. Should those be regulated differently? I'm hoping you can talk about that. Thank you.

ROTH: I can certainly answer the second part, which is, there is a lot of regulatory uncertainty, particularly in the United States. We don't actually know who, other than FinCEN, is our regulator. CFTC believes it's a commodity. SEC, depending on when you talk to them, says that some may or may not be securities. We have the FTC. We have a number of other agencies who are looking at this space, which we welcome, and we think is appropriate. As a citizen of the United States and a consumer, we want a well-regulated industry when it comes to cryptocurrency.

This is ultimately going to shake out, but it's not going to shake out this year. It's going to take some time before people understand the technology and understand the ecosystem that's surrounding that. There are certainly things that look like securities. We'd never list those, because we're not a registered exchange under the SEC. There is an economic value to those. We just don't touch them. We will see where we go with this, but right now, I've been actually fairly encouraged by the regulatory approach that the U.S. has taken, which is everybody's got an interest in it. Everybody wants to talk to us. Everybody wants to learn about the system, because once you learn about the system, you can understand it, and understand how it is that you can regulate it.

As far as the first one, we haven't seen any evidence of illegal use being tied to volatility, but who knows?

ZARATE: Yaya, do you want to take a crack at the first one? I'm happy to help.

FANUSIE: Yeah. I haven't seen—if the question is, are there illicit actors who are promoting the volatility, or benefiting, or causing the volatility? Feel free to—

ZARATE: —Both that, and also does use depend on volatility, one way or the other? Because one argument is part of the reason you don't have greater adoption by more illicit actors, international organized crime groups, is it's hard to use it, first of all. There isn't a set ecosystem. To the point Danny you made earlier, you've got to cash in and out of the system, but it's also you're not quite sure what the value's going to be tomorrow when you hold it, especially when there's market volatility around the value of Bitcoin, etc., or Ethereum, to use two examples. Have you in your research seen any kind of correlation or evidence? Intuitively, that makes sense, but I'm not sure.

FANUSIE: I'm not sure. What I can point to is that we did notice, during the run-up in price last year, the price of Bitcoin and other cryptocurrencies, we noticed more illicit groups, particularly the jihadist groups, which is very small. There's not a whole lot of terrorist financing through bitcoin. It seemed that we saw a lot of attention and focus on raising through bitcoin during the run-up, but in terms of the price drop, I haven't seen much.

ZARATE: I think one thing we've been worried about, and we've seen this with North Korea, is to the extent that the value remains high, that there's more incentive for them to get engaged in ransomware attacks, the WannaCry attack for example being attributed to the North Koreans, as a way just of making money, just another platform and vehicle. Next question. Yes, sir, in the back.

STANLEY: Yeah, Aaron Stanley, here on behalf of Forbes, Forbes.com. The Government Accountability Office issued a report last month talking about fintech regulation and basically talking about the labyrinth of federal agencies and state money transmission requirements that fintech companies, with crypto and blockchain companies being a subset of that, that this regulatory environment is really hurting the industry's development here at home vis-a-vis other countries. I'm just curious to hear your thoughts on that, and then also, what's the risk of the U.S. really falling behind in terms of developing this industry? There's a lot of anecdotal reports floating around about cryptocurrency innovators and companies just leaving the U.S. It even says that in the report outright, that a lot of folks are just saying, “We're going elsewhere because we can't afford the compliance costs of staying here.”

ZARATE: John, you had mentioned this at the start. Can you talk to this?

ROTH: Yeah. I think it's a huge risk. What we're seeing is coin developers or blockchain developers are thinking twice, at least as far as U.S.-based exchanges. We have a very rigorous compliance process that we bear the costs of, but it's hundreds of thousands of dollars a month to onboard coins, which not everybody can bear the cost of those kinds of things. That would be one.

Obviously, we have 50 states, which means we need 50 money transmission licenses. Recently, there has been some move to have a uniform law with regard to money transmission, which would include, for example, reciprocity. Once you're licensed in one state, then other states will recognize that as being appropriate. We would welcome that, because again, the regulatory and compliance costs are enormous in the United States, and not being borne in other countries. Again, I'll just repeat, if we're number seven and we're the largest in the U.S., I think that's more than anecdotal. That's evidence that in fact people are moving this overseas.

ZARATE: We're certainly seeing from a commercial standpoint lots of activity, especially in the Asian markets, where there's a ton of interest both in usership, and establishing ecosystems, and even jurisdictions that facilitate the development of technologies and exchanges, etc. There is a race to capture the technology in these markets in some interesting ways that puts pressure on U.S. companies and developers, no doubt. Yes, up front here. Thanks for being patient.

O'NEILL: Hi. Thank you so much. My name's Tim O'Neill. I'm embedded at State and Treasury for U.S. Army AFRICOM. My question is, what would you consider to be implications of de-risking for the folks like Danny's mentioned with MSBs and such on legitimate clients?

GLASER: De-risking, as a general matter, obviously has big implications for financial inclusion. One of the ways de-risking manifests itself, it initially presents itself with respect to a bank, normally a bank in New York, saying it won't provide correspondent relationships to a bank, say, in Mexico. That's how de-risking initially manifests itself.

What winds up happening is the de-risking gets pushed down the chain. What the bank in New York will actually then say is, "Actually, we'll let you keep your correspondent relationship, but you need to get out of everything we regard as risky," which often includes services, and products, and clients that serve underserved communities, like money services businesses.

There's huge implications OF de-risking. De-risking is a complicated topic that we could have three more panels about and not get to the end of the discussion, but certainly the main— When de-risking first presented itself, the main problem that was feared was a financial stability issue, that it was going to cause a real break in global financial relations. That never happened. What it's now become is a financial inclusion issue. As we work—and there's lots of things that are going on, both in governments, and places like the IMF and World Bank, and even within the private sector itself—to address the de-risking issue, the real issue that's trying to be addressed is making sure that people have access to financial services. De-risking certainly presents a challenge in that regard.

What's ultimately going to, quote unquote, solve the de-risking problem? I think ultimately, there is going to be a market solution that solves the de-risking problem. Already, de-risking is getting baked into the international system in a way that's regularizing it. Perhaps, cryptocurrencies are going to play a role in that.

ZARATE: Time for maybe one more question. We have a shy crowd. This is unbelievable. One more from Forbes.

STANLEY: If no one else is going to ask—

ZARATE: The reporter's not shy. This is good.

STANLEY: I'm thinking out loud here a little bit, but the more I think about this, it strikes me that maybe the solution to some of these anti-money laundering questions and concerns about the technologies being used by criminal groups, and these things, is maybe embedded in the actual technology itself. We think about bitcoin as being this decentralized, global economic game, where people are rewarded for playing by the rules. What if we were to design a currency, or somebody were to design a currency, that was transparent, that couldn't be used for these nefarious purposes, but would generate enough financial reward for the people that are playing the game correctly so as to render money laundering and these other illicit things uneconomical? Just a thought.

FANUSIE: I think maybe that takes us full circle to how John started, which is maybe the way this is going to evolve is this technology becoming institutionalized, formalized. Everyone's using it. It's totally AML-compliant. We're all happy, but for those that want to be bad actors, there's an underground. Maybe. That's what we're dealing with today, right? You have the black market, and you have the aboveground market. So I think that's possible.

In order for it to happen, I like your suggestion, which is there should be a concerted effort to use these decentralized solutions or decentralized technology to do AML, to do the things that we know we need to counter illicit financing. I don't think we're thinking enough about it.

ZARATE: I think, just to add to what Yaya said, I think there are demonstrations of exactly what you've described happening in different pockets. John at Bittrex, folks at Coinbase, and others are trying to design systems that implement and adapt existing anti-money laundering rules and regulations into the exchanges and into the system. You've got that happening, and to John's point, a legitimate world happening.

You do have designers thinking about new technologies that bake in AML requirements, or transparency, or even ultimate beneficial ownership into the digital currency itself. Then you've got countries, Japan we talked about, and others, that are thinking about what does a legitimate, state-sponsored cryptocurrency look like, that the state itself controls, and controls in terms of usage, controls in terms of transactionality, controlling the bounds of that. That's happening.

Then finally, and I have found this to be the most interesting and the biggest shift over the course of even just four or five years, is the formal financial sector getting very much involved. Five years ago, if you talked about adoption of blockchain or cryptocurrencies at a major global bank, they would have looked at you like you had a third eye in your head. Now, every major global bank is thinking about how to use these technologies, how to adopt them, how to perhaps create blockchain ecosystems around trade finance, FX trade, etc. Now it's just part of the innovation environment, even for the formal financial system. I think this is a really dynamic environment, and I think you're starting to see that in different ways.

Let me ask the panelists at this point to close us out, each, with a lightning round of maybe a closing a thought on where you see the future going. What's maybe the most interesting thing you see happening in the future, and maybe something that worries you most from your vantage point? John, why don't we start with you?

ROTH: Okay. I think innovation and rate of change is key here. We don't have the killer app yet. I think there is going to be some disruption within the cryptocurrency space. I think the traditional currencies are probably too slow and too expensive to make the jump into what the potential is for distributed ledger technology.

What I worry about is what I always worried about in DOJ and in Homeland Security. Obviously, any kind of technology can be abused, and the question is, do we understand it, and what countermeasures can we put in place to prevent it?

ZARATE: Perfect. Danny?

GLASER: The next six months are key, John.

ZARATE: There you go.

ROTH: Very good.

GLASER: John told me to say that. I agree with what John said. I think that right now, we're in a really interesting moment. When you think about the fact that I still have $100 in $20 bills in my wallet right now, and this is the way we conduct transactions in this day and age, it is pretty curious. Obviously, there's going to be technological innovations that take us to new, and more efficient, and more interesting ways of conducting our financial transactions. Certainly, virtual currency, cryptocurrency is going to play a role in that. That should be, I think, largely a good, exciting thing that might even have, as we said, positive externalities with respect to financial inclusion.

The key is going to be figuring out where the holes are in the system that's going to allow criminals and rogue actors to abuse it, just like, as John said, with every technology and with every form of financial service. That shouldn't be paralyzing. We should be vigilant. We should understand where the weaknesses are, and we really need to make sure that this is adopted globally. For some of the reasons that John said, and just generally that if we only do it in the United States, and frankly if we only do it in the G7, or if we only do it in North America and Europe, it's not going to be successful because that's just the way the world works, but frankly, that's true for all forms of financial regulation. It needs to be globalized. That's something that we need, too. To the extent that FATF has started, it's important and it's great. It's something that FATF needs to really pick up on, and it's something that responsible governments around the world need to make sure pressure is being put on the countries that are being less responsible about it.

ZARATE: Yaya?

FANUSIE: Yeah, I guess I have a closing thought, which hopefully is very practical in the sense that what can people do, agencies, companies, banks. We've been looking or I've been looking at cryptocurrencies a lot the past couple of years, engaging different agencies who are doing the same. I think a key point is there's no need to totally pivot and for organizations to start focusing 50% of their time on this technology.

What I think is critical is that any organization that is dealing with finance, dealing with law enforcement, intelligence, counterterrorism should have a dedicated person who focuses solely on this technology. Because that in itself is—you have to get into a different mindset to look at this technological ecosystem. I would advise that people dedicate resources to institutional expertise within their organizations just to understand that, and not to try to split it up across all the things, because of course this technology touches everything. It's really important to have someone, some resource, that is going to really just focus on that, and then that will benefit your other areas, even if it's just one person in your organization.

ZARATE: Yeah. I'm going to take the moderator's prerogative. I can't help myself with you guys. I want to share a couple thoughts, too. I think one promising and interesting thing to watch is how the development of cryptocurrencies and blockchain technologies meshes with the modernization of the payments system, which has been in debate for a while, and also matches with, in particular, developing countries' desire and willingness to modernize and to move from a cash-based economy. It may be that you see the innovation and adoption, just like we saw with mobile banking, happen less in places like New York and London, and more in places like Nairobi and Kabul.

ROTH: Interesting, yeah.

ZARATE: To me, that's really interesting, because it's a convergence of a lot of dynamics and factors happening in the space, and it may be where you see some of the best innovation happening.

On the flip side, I subscribe a bit to some of Yaya's analysis. I worry about the emergence down the road—to Danny's point, not tomorrow, not even in the next five years—but an ecosystem of financial rogues that figure out a way of using the digital marketplace and even virtual currencies, as a way of sidestepping if not creating alternates to the existing system, as a way of creating the sanctions resistance, Yaya, that you've written about. Those are maybe just some closing thoughts.

I want to thank the panelists. I want to thank all of you for joining. Here at CSIF, we are trying to work on cutting-edge issues. You're going to continue to hear from us and see great work, in particular from Yaya and others, on the issue of cryptocurrencies, blockchain technologies. We're going to have more events. We continue our work on cyber-enabled economic warfare, led by Dr. Samantha Ravich. Hopefully you'll see some events coming up this year on that, as well.

Please join me in thanking the panelists, and thank you very much for coming.