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WEBINAR

CRYPTO, DIGITAL ASSETS, AND THE FUTURE OF PAYMENTS SYSTEM

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P R O C E E D I N G S

MR. WESSEL: Good afternoon. I'm David Wessel, director of the Hutchins Center on Fiscal and Monetary Policy here at Brookings. I want to welcome you all to our conversation today about crypto, digital assets and the future of the payment system.

Now, I found that conversations about crypto can be overwhelmingly sprawling from intricacies of the blockchain and what the heck are NFTs anyways? To this debate about whether crypto is a commodity or is it a security? To concerns about illicit financing to some really big questions about trust in government? Economic power and financial inclusion?

So today we're going to focus on a piece of this. The role that crypto and other digital assets are playing and could play in the payment system. And how best to get the benefits of innovation while protecting consumers, investors, and the stability of the financial system.

Now, a payment system is a set of rules and processes for transferring money, checks, ACH transfers, credit cards, Venmo, PayPal, Apple Pay to the retail level. All of which go through the banking system and are overseen in one way or another by the federal regulators. The system works, but it can be slow. It can be inefficient. It can be costly particularly for cross-border payments and it does not reach every American.

So the question really is whether recent innovations, instant payment systems, stablecoins, digital currencies, someday even a central bank digital currency issued by the Fed can solve these problems or create new ones? So that's kind of what's on the table today.

We're going to start with a presentation by Nellie Liang who is undersecretary of the treasury for domestic finance and former member of the Hutchins Center team. Nellie who previously was the director of the division of financial stability at the Fed is going to talk about the series of reports that the administration, particularly the Treasury, has done in response to an executive order for the president just on these topics.

And after her presentation, she's going to join a panel, which I'll introduce when she's done. If you have questions, you can send them to us on Twitter hashtag #DigitalPayments or on the website sli.do, S-L-I dot D-O. Again, hashtag #DigitalPayments and we'll monitor both of those and ask

the questions as best we can in the hour we have.

So with that, Nellie, welcome back to Brookings and the floor is yours.

MS. LIANG: Thank you, David. Thanks for the introduction and thanks for inviting me to speak today on this topic. It has been a journey of many agencies, many regulators, industry participants, academics to focus on this issue and we really appreciate the opportunity to talk about this today.

So this is work including recent reports by Treasury that I'll focus on in response to the president's executive order on ensuring the responsible development of digital assets. And the remarks today will focus primarily on how digital assets could shape the future money payment system in the U.S. and recommendations in the report to prepare for that.

But I want to first take a few minutes to talk about the here and now of digital assets. How they are currently being used and their effects on consumers, investors, and businesses. And I also want to note that next month the Financial Stability Oversight Council will be issuing a report on the financial stability risks of digital assets and regulatory gaps in the system.

So to start, the first report that I want to talk about is crypto assets, implications for consumers, investors, and businesses. And the charge for this report was to focus specifically on current uses for crypto assets and especially use by and effects on vulnerable communities. And a main finding of the report is that the most prevalent current uses of crypto assets are for trading, lending, and borrowing.

And use of crypto assets to deliver other types of financial services like payments at lower cost, higher speed and without intermediaries has not materialized yet. And the report finds that significant areas for concern. There are frequent instances of operational failures, market manipulation, frauds, thefts, and scams.

Consumers and investors are exposed to improper conduct for a variety of reasons including a lack of transparency, noncompliance with existing regulations as well as that crypto assets are nominal and rapidly developing. In addition, all the data for populations vulnerable to disparate impacts are based limited. Available evidence suggests that crypto asset products may present heightened risks to these groups and there's been little evidence to date of financial inclusion benefits.

Based on these findings, our first recommendation is for agencies to continue to aggressively enforce their -- pursue their enforcement efforts focused on this sector. And a second recommendation is for agencies to clarify their existing authorities to ensure they're being applied appropriately to crypto assets and for regulators to work cooperatively so they can be more comprehensive and increase compliance with existing rules.

And these recommendations recognize that agencies including the CFPB, FCC, CFTC, DOJ and others have been hard at work to address harmful activity and to protect consumers and investors. Agencies have expanded and prioritized resources. And this recommendation also reflects the principle that financial services whether provided through crypto technology or traditional financial firms should be subject to the same rules if they pose the same risks. That is, we believe these rules should be technology neutral.

The reports also recommend that agencies work together through the Financial Literacy and Education Commission, for example, to improve the quality of information about crypto assets and the goal is to make trustworthy and consumer friendly materials accessible and inclusive.

So let me turn next to the report on the future of money and payment systems in the United States. Here we focus on digital assets used for money and payments as well as instant payment systems. And we make a set of recommendations to put us on a path to a more efficient, innovative, and inclusive money and payment system and to reinforce U.S./global economic and financial leadership.

The current money and people system has many strengths. The system has supported over a century of U.S. growth, processes an enormous volume of transactions and supports privacy, civil rights and other democratic values. But some parts of the system are expensive and carry high fees and other parts are slow. It is also not as inclusive as it could be and should be. The percentage of the U.S. population that is unbanked is higher than in all other G7 countries.

Looking forward, recent innovations in digital assets and other technologies could have far reaching implications for money and payments. These innovations include essential bank's digital currency, a CBDC, retail instant payment systems and stablecoins. The report builds on the work of the

president's working group on financial markets which recommended legislation for consistent and comprehensive oversight of stablecoins.

The report does not make any new recommendations regarding stablecoins but instead considers the implications of stablecoins for the payment system.

So now, let me just turn to the recommendations in the report. I'll turn first to CBDC. So CBDC just as a reminder is basically a digital form of a country's sovereign currency. It's a liability of the central bank. It could serve as legal tender, be convertible one to one for paper currency or reserve balances. It would clear and settle with finality and nearly instantly.

The report's first recommendation is for the U.S. to advance work on a possible CBDC should one be determined to be in the national interest. There are many important design choices that would require additional consideration. For example, a U.S. CBDC could be retail meaning broadly available to the public or wholesale limited to financial institutions, and it could use direct or indirect access models. Choices such as these could affect the availability of private credit in (inaudible) normal times and insurance periods.

There's also a need for further research and development on the technology to support a U.S. CBDC which could take years. For the U.S. to build the capacity to adopt the CBDC even as deliberations continue about whether one is in the national interest, the report suggests work in a number of areas.

In addition to supporting continued evaluation and periodic updates to the public by the Federal Reserve, Treasury will lead an intra-agency working group to support the Fed's efforts and advance further work. The working group will consider the implications of the CBDC in areas such as national security, financial inclusion and privacy.

Leadership from the Federal Reserve, the White House and Treasury will meet regularly to discuss the progress of this working group and to share updates on CBDC and other payment innovations.

Turning to instant payments, retail instant payment systems transfer funds nearly instantly as opposed to the multiday settlement period that occur on some legacy systems. In the U.S.

examples include the clearing houses' RTP network launched in 2017 and the Fed Now Service which the Fed plans to launch in 2023, next year.

Global experience suggests that instant payments can contribute to making the payment system more efficient, inclusive and innovative. Yet frictions may limit the extent to which potential benefits of instant payment systems are realized. Consumer, businesses and financial institutions may be slow to adjust their habits and procedures to new technologies. In addition, instant payment systems are generally accessible only to depository institutions.

So maximize the benefits from instant payments, the report suggests efforts in three areas. First, the U.S. government should continue outreach efforts on instant payments with a focus on inclusion of underserved communities. Second, the U.S. government should promote development and use of innovative technologies that allow consumers to more readily access instant payment systems. And third, in settings where appropriate U.S. government agencies would send and receive millions of payments a day should consider and support the use of instant payment systems.

The report's third recommendation is to consider establishing a federal regulatory framework for nonpaying providers. This recommendation recognizes that nonbanks are increasingly providing payment services and are contributing to enhanced competition, inclusion and innovation. But today oversight of nonbank payment providers is generally at the state level if there is significantly and it may not address risks in a consistent and comprehensive manner.

A federal framework could provide a common floor for minimal financial resource requirements and other standards that may exist at the state level. It could also complement existing federal AML/CFT obligations for elicited finance to deter illicit finance and consumer protection requirements that apply to bank premium providers.

A federal framework for payments regulation could work in conjunction with a U.S. CBDC or with instant people systems. It could provide oversight of firms that potential U.S. CBDC may rely on for a range of financial services. It could also lay out a path for nonbank payment providers to participate directly in instant payment systems.

The report's final recommendation prioritizes work to develop a faster, cheaper and more transparent international payment system while considering the potential risks of greater integration of cross-border payment systems. Indeed, private sector innovations have been driven partly by the inefficiencies in our current cross-border payment system.

Cross-border payments can take days to clear and have high fees. And the U.S. has a strong national interest in supporting global standards for cross-border payment systems that reflect U.S. values including privacy and human rights are consistent with AML/CFT considerations and protect national security.

So to conclude as laid out in the executive order, new technologies when developed responsibly can lead to significant efficiencies and further innovations. The future of money and payments report set out a set of recommendations with a deliberate pass forward to determine if the CBDC is in the national interest and to support the responsible development and adoption of other innovations.

This path should achieve the potential benefits of innovation while making any risks to consumers and to economic growth and stability. So thank you for the opportunity to present this.

MR. WESSEL: Thank you, Nellie. I forgot to give my usual admonition about keeping acronyms to a minimum. So AFL is money laundering and CFT combating the financing of terrorism compliance. I can't promise we'll stick to that, but I'll try and ask people to define their acronyms.

So thank you very much for that good overview of the Treasury reports which are quite extensive. I'm really pleased by the panel we've assembled today to discuss this. Tonantzin Carmona is our Rubenstein fellow in our Brookings Metro program. Before joining us among other things, she was chief of policy for the City Clerk's Office in Chicago. Where among other things she launched Chicago's municipal I.D. card which simultaneously serves as a transit and library card.

Paige Paridon is senior vice president and the senior general counsel of the Bank Policy Institute, which I should note is a donor to Brookings. Before that she was with another banking association, a clearing house and before that she was at the Fed where she was responsible for every rule written under Dodd Frank; is that right? If you have any complaints about Dodd Frank, talk to Paige.

And finally but not least, we have Kristin Smith who is executive director of The Blockchain Association, which is what the name implies looks out for the interests of the crypto industry in D.C. She has been there for four years. Before that she was lobbyist and worked on the Hill. So thank you all for joining us.

Kristin, I want to start with you. And I think we'll get into some of the details, but a number of people have posed sort of an underlying question which is what exactly are the problems that we think are best solved by these new technologies?

Whether it's bitcoin or stablecoins or all that that can't be adequately solved by the existing payment system if it was just got on with it? The instant payments which Nellie responded the bank Zelle things. What is it that digital assets, crypto does that these other things can't do or can't do as well?

MS. SMITH: Thank you, David. And I think it's an incredibly important question. And, you know, bitcoin was the very first crypto currency. Since that time, there are many other assets out there, but the big innovation there is it allows for a digital peer-to-peer transfer of value.

And, you know, if you think prior to bitcoin, there really wasn't such thing as digital scarcity on the internet. That's why you didn't see an internet made of money because the problem is you would spend something one time and then you can spend it again and again and again. And it has no value because, you know, you have no scarce element to it.

So bitcoin allowed for these peer-to-peer payments to be done because the blockchain maintained the ledger for, you know, who has made what transaction. And stablecoins have been an attempt. And there are many, you know, stablecoins is a term that is used to mean different things.

I think from my perspective when we talk about stablecoins, we're largely talking about dollar-backed stablecoins. But there's been an attempt to do other models. What stablecoins have attempted to do is that, hey, we like these features of being able to transact 24 hours a day, seven days a week, 365 days a year in really big amounts or really teeny tiny amounts instantly without an intermediary.

And stablecoins have been an attempt to do that with digital assets in a way that doesn't have the fluctuations that you see with bitcoin or some of the others. And so, we think these are all really desirable qualities.

Today, the stablecoins market is about \$150 billion. Most of the testing of stablecoins have been done in the trading of other digital assets. So it's actually a pretty high bar testing grounds because the demands of this ecosystem that are, you know, participating in this trading, these are very sophisticated actors that are moving things very quickly.

And the thinking is, boy, if it works in this context, it could probably work really well for smaller everyday payments as well. And so, I think that's a transition that we're starting to see. But I would say the one thing to note is when you have less intermediaries, the cost of the transaction is significantly lower. And, you know, every intermediary that's in the system today, you know, takes a piece of the transaction so if we can reduce those and allow people to transact more directly then the cost of making those payments are cheaper.

MR. WESSEL: From the point of view of an ordinary consumer, I don't know about you guys, but I don't daily move a million dollars a day. You're saying that why can't we do this with a real time payment system? Why couldn't this be done with Zelle or Venmo or the next generation of those where the intermediaries, in part because of the competition from the (inaudible) people are basically forced to bring the transaction cash low. Is there some advantage to pulling out the -- taking the intermediaries out?

MS. SMITH: Yeah. No, I mean I think the advantage is just that, right? I mean as you just said they're forced to cut their fees because there's competition. I think the more options that consumers have, the more inclusive our financial system would be.

And I think that by being able to transact on a peer-to-peer basis, you can effectively reduce the cost of that transaction to nearly nothing. And I think that's a good thing. It doesn't mean there's not other ways to do it, but I think having multiple avenues out there are really good options because, you know, when you reduce the fees, you can start to do microtransactions, right?

Like imagine every time I went to a website and I could read an article and pay a fraction of a penny in order to compensate the author of that article. You know, there's a lot of interesting things you can do.

And the other thing that I left out that's actually hugely important with stablecoins is they're programmable. And so, you can have these payments automatically be made when certain conditions are met. And, you know, that's something we haven't seen in the traditional finance space. It doesn't mean those aren't good as well, but this is an alternative that a lot of people found value in.

MR. WESSEL: So, Paige, let me put the same question to you. Don't we need stablecoins and crypto? Or could we do it all without it?

MS. PARIDON: Yeah, thank you. And thank you so much for having me and I really appreciate being here with all of these esteemed panelists.

Yeah, I mean I think, you know, as EPI has kind of (inaudible) in some of our prior writings and speaking engagements. You know, we don't yet see that there's a need to turn to a stablecoins or a crypto or, you know, that type of asset in order to speed up payments.

Obviously, you know, we have P to P payments right now through Zelle, through Venmo, PayPal and then on a larger scale, I think you referenced, you know, RTP and Fed Now which will be coming online in 2023. But, you know, additionally the idea of a digital representation of a deposit or a store of value to use also as a means of transaction is something, you know, that the banks themselves are innovating in and looking at via tokenized deposits and Blockchain-based deposit accounts.

So, you know, leveraging, you know, the benefits of kind of this evolving technology. You know, the bets that a distributed ledger may present as Kristin noted. But doing it sort of within the supervisory and provincial regulatory framework that banks are subject to. And, you know, backed by FDIC insurance.

So, you know, from our perspective at least right now in addition our banks have -- we've discussed a lot of these developments with members and they have not yet had customer demand for retail-based, stable clients or crypto assets as a means to make payments or P to P transactions.

MR. WESSEL: Right. I think everybody acknowledges there's not much retail ordinary demand for stablecoins. As I read the summary of the Treasury reports and other commentary. Is that we should figure out some guidelines, some rules for this because they could very well be used.

And we've kind of learned hard way, when you let sometimes these things multiple, they can pose risks to the system and to individuals that we didn't -- weren't prepared for. And given that we're in a world here where there's not a lot of regulatory clarity about who's in charge of what? And there's a lot of ferment here. It seems to me it's good to be -- in this case, it's good to be ready.

I was on a call earlier today where somebody in the industry said, yeah, but the regulators are going to choke off all the innovation before we can actually figure out how to use these things. And that's of course the balance.

So, Tonantzin, where are you going to put yourself in the Paige/Kristin spectrum here? The best thing we ever did? Or totally unnecessary? Carmona

MS. CARMONA: Oh, my gosh. Well, first of all, I'll just say that I appreciated the question because it's a lot to unpack and the thought-provoking framing simply because I've often wondered if we in the United States had already had a robust, real-time payment system that was accessible to all the way other countries have figured out would we be having as many conversations as we've had on CBDC, crypto, stablecoins?

And so, you know, and even listening to Undersecretary Liang's remarks, you know, she mentions specific areas for improvement in the payment system. It was, you know, parts of the system are slow. They're expensive. They're inaccessible to the unbanked community.

And so, if we actually start with the (inaudible) pain point, you know, the real-time payment system that, you know, is scheduled already to be introduced would likely address some of those -- at least the speed issues and then likely cost issues. So then you kind of go back, well, do you really need crypto and stablecoins given that they come with all of these added operational risks and to what the data is showing people aren't really using crypto currencies or stablecoins for making payments. They're using them largely to trade or to use the larger crypto ecosystem.

And, you know, on the innovation that Kristin was talking about in terms of the P2P that it's gotten rid of intermediaries. I'd actually argue that we didn't. We just have a whole new set of intermediaries that not only do we have to think about and that they themselves are presenting a whole new set of risks.

So I'm obviously of the mind that crypto, stablecoins are probably a solution in search of a problem. But I'm happy to hear out some of the other panelists as we continue on with the discussion.

MR. WESSEL: So, Kristin, I think you deserve a chance to respond. So let me ask to respond and then if you could speak a little bit to the -- what the things that the Treasury is talking about in this report? So of them are -- sorry about this now, a little vague.

Some of them suggested a direction they're going. I'm sort of curious, A, how do you respond to what Paige and Tonantzin said? And secondly, sort of how do you feel about the direction that the administration is taking here?

MS. SMITH: Yeah. No, I mean listen. I remember when I was in -- it might have actually been in middle school or maybe high school when I got on the internet for the first time. And I like tried to read a new article. It's probably like, well, why do we need this? You've got like paper magazines over there.

And, yeah, I was like maybe a mild improvement. Maybe not because you had to like tie up the phone line to dial on. It was sort of a pain. That doesn't mean that wasn't an important step to getting to a point where, you know, right now we're on this path to having programmable money.

And I agree. It is not used for payments today, but that doesn't mean it can't be used on a widescale for payments tomorrow. And I think there's a lot of interest in being able to reduce those transaction costs. Of making it easier for businesses to keep more of the money that they're making. Make it easier for friends to transact with one another. You know, when you are using Zelle or Venmo, you do go through multiple intermediaries there.

And they feel peer-to-peer on the end, but, you know, underneath that it's not as great. And then particularly when you're transacting overseas and sending remittances back home, those fees are so high. They're taking a big part of people's money that they're trying to transfer to their loved one.

So I think there's a lot there. And again, this programmability idea that a payment is initiated or some kind of complex transaction when certain conditions are met that's something that's not available today. So we do think it's worth it. But I agree, it's not something that everybody is using today.

You know, I would say in response to Treasury's reports. Listen, it's -- I'm not going to sugarcoat it. But the crypto industry because it is early has had, you know, a rough year, right? There were some really bad things that happened in the marketplace and, you know, I'm glad to see that some of the bad actors are getting weeded out. And some of the crazy experiments that should never have gotten that big are going away because those aren't good for consumers.

And we certainly don't want that to be what crypto is. We think it's a much, much broader thing. And so, it's understandable that the reports, we think took maybe overweighted some of the risks that are out there, though there are risks and failed to sort of acknowledge the promise or potential of the technology.

But that being said, you know, I think that the president's working group did a pretty thorough job looking at this already. And we would -- you know, the industry is very eager to see a legislative framework put in place. It will provide more regulatory home options for stablecoins issuers. You know, we think there needs to be audits. We think that there need to be a guidance for how you can manage the reserves.

We want to see more consumer protections in place because I don't think we're going to be able to get to that next level where this is utilized as a payment technology until we have that regulatory framework. So I think we need the regulation. But what we have that some of these other ideas don't have is the technology is here. It works. It can be deployed.

Like we don't have to go through the process of trying to build a new system. The system exists, but we just need to have the right framework so that we have more, you know, sort of regulatory framework so that the usability and the consumer adoption, they'll have more confidence in the system if we do have some regulatory oversight.

MR. WESSEL: Thanks. So now I want to ask you a little bit about the current thinking on stablecoins. As was said earlier, stablecoins are the crypto currency but it's the ones we're talking about

are linked to the value of the dollar. And the idea is that you have a token say issued by a company like Circle. You can turn it in for a conventional dollar, a dollar bill or a dollar bank deposit.

So right now, it's kind of -- lots of people are issuing them. There's not much as far as I can tell, discipline in the market. Initially, the president's working group talked about this as that we would maybe limit this to -- in the jargon of the trade insured depository institutions like banks would issue them just the way banks can make deposits in checking accounts.

But in the report, you talk a little bit about nonbanks. And I'm just sort of curious how you're thinking about if stablecoins are going to develop. How do they fit into our existing set of financial institutions? Banks versus nonbanks? And is this something that we can address with regulation? Or is it going to have to take legislation to accomplish?

MS. SMITH: Yeah. So I'm linking it back to the first question a little bit. Reframing your first question is a bit strong. What are the problems that could be solved? To what should the future system look like?

And I think the approach has been in these reports and even in the PWG report to allow for multiple technologies and to allow them to develop but with the right guardrails. And it could turn out that in the future some of these will go away and won't work. But and as you -- you know, with our payment system, we still have cash. We still have checks. We still have, you know, everybody is Apple Pay and Zelle. And so, it's not like one eliminates the other and different options I think are useful.

So stablecoins, I think we saw that, the PWG report saw that as an innovation that could currently being used in crypto trading. Potentially could be used more broadly for payments on a more broader scale. And I think the main initiative of the PWG report was to identify the key risks. And they were the run risk because it's like to the dollar. And were the reserves adequate? They were the payments risk. You know, they have to do with redemption and the custody and the safety of your holdings, et cetera.

And the basic recommendation was for Congress to write legislation on this that the existing regulations among the securities regulators, among the production regulators really was not sufficient to address these particular risks. So in my view, I do think we need legislation.

We proposed in that report and IDI framework, which is sort of, in my view, code for a prudential regulatory framework that has not just disclosure and transparency as its fundamental future, but some oversight into the redemption features, the payment features. Look at the reserve assets that kind of thing. So we proposed a prudential framework.

That was one proposal. There are plenty of others that this generates a lot of conversation that was the intent. There certainly are proposals out there for some kind of firm that would have prudential regulation but does not have to have the full set of IDI regulations. I think that's really where Congress is -- where the discussion is right now.

MR. WESSEL: So, Nellie, a couple of people online have asked some questions about if we have stablecoins and the stablecoins issuers are required to keep their money in dollars or short-term treasuries then obviously we're not going to allow them to lend it out the way that banks lend out their deposits. So is there a problem here of stablecoins get really big that we may interrupt the flow of credit in the economy?

MS. LIANG: So if they invest -- I mean in some sense you could say, we have money market funds. I think -- and that hasn't, you know, it flows in a different way. It's not through banks. But banks could offer stablecoins products.

I don't think it's like, you know, if you allow nonbanks under some formulation, if some nonbanks were to offer, it does not mean banks couldn't offer. So just to be clear on that.

MR. WESSEL: Okay. So the reports by the Treasury and the Fed talk a lot about central bank digital currencies, which is as Nellie said a digital version of the U.S. dollar. It doesn't really involve crypto.

So I'm interested in what the other panelist think about -- and I would say that there's a lot of emphasis on we should think about this. We should get ready. It's not an endorsement of doing it, but it certainly isn't saying like this is crazy and we should shy away from it. And as you know the Europeans and the Chinese have already moved in this direction.

So I'm wondering what the other panelist think about the concept of a Fed's central bank digital currency including if we have that then do we need a stablecoins at all anyways? Paige, you want to start? But I'll let each of you speak to that since there seems to be a lot of interest in that.

MS. PARIDON: Sure. Yep. Well, you know, I mean I think first we kind of each have distinguished as I believe that as the Treasury reports do between between, you know, a retail CBDC and a wholesale CBDC.

So, you know, obviously retail would be something that consumers and small businesses and entities such as those beyond just commercial banks would have access to a direct liability with the central bank. And, you know, I think that Tonantzin referenced the title of one of Governor Walters speeches which is CBDC a problem? A solution in search of a problem?

So, you know, I think that in terms of a retail CBDC some of the purported benefits include increased financial inclusion, increase speed of payments. And, you know, so far, we don't see any evidence that those benefits would be realized by retail CBDC.

And, you know, furthermore we believe that there would be significant risks from a retail CBDC because having a direct liability -- the ability to have a direct obligation of the Federal Reserve would probably especially during times of crisis lead to significant flight to quality out of deposits from banks and even potentially money market funds which could significantly disrupt the ability of banks to perform their credit intermediation function. And, you know, could result in significant financial risk that could cascade through the economy.

So, you know, that's a concern that we've raised. And, you know, there have been some potential ideas floated about how one could control those potential risks. You know, putting caps on the known CBDCs is one that someone discussed. And then one would be limiting or preventing interests paid on a CBDC, a retail CBDC.

You know, and we would just note that, you know, kind of the concern with some of those solutions is, one, putting a cap on the amount of CBDC one could have access to. You know, it still could potentially drain a significant amount of deposits out of the financial system such as they would not be able available to land of fund, you know, economic functions.

And with respect to, you know, capping the interest rate or limiting the interest rate. You know, just historically looking at other times when supposed caps or limits have applied to the Fed. I believe we looked at one of the repo base facilities recently, an overnight repo-base facility that was supposed to be capped and limited. And then, you know, political and financial pressures ultimately led the Fed to increase the caps on the volume of that facility. So, you know, there's some concern that any cap maybe would not essentially be held to.

In terms of wholesale CBDC, I think particularly as many have discussed and work continues. I think in the cross-border context especially, you know, there could be a potential use case there. But, you know, the same kind of -- some of the similar obstacles currently that sort of are the reason why international payments are slower and more expensive. Still need to be addressed including, you know, differences and BSA, AML, elicit finance requirements and transactions.

MR. WESSEL: And you're mentioned BSA, Bank Secrecy Act?

MS. PARIDON: Oh, sorry. Yes, yes. Sorry, yes. Bank Secrecy Act, elicit finance we can say. You know, just differences in countries' controlled requirements in that regard.

You know, and then in terms of cost, I think Kristin mentioned the possibility that stablecoins could reduce cost on a cross-border basis. And, you know, currently they're still kind of effect the cost of the effects aspect of the conformed currency exchange rate. And again, you know, at some point if it's not a denoted in a fiat currency there still maybe transaction fees to off ramp back into fiat currency. And, you know, maybe even potentially off ramp from a U.S. CBC to, you know, a euro CBDC.

You know, so I just think there's a lot of work to be done which Treasury obviously has catalogued extensively in these reports.

MR. WESSEL: So, Kristin, where are you on the CBDC question? Do we need one? And would it eliminate the use case for stablecoins?

MS. SMITH: Yeah. No, I think it's an interesting question. You know, I think the crypto industry is sort of agnostic to mildly negative on the idea of a CBDC. I think it really kind of goes to what Paige was saying.

Like there's retail versus wholesale. Two totally different discussions. And I think that the design choices that go into a CBDC are incredibly important. I mean if we look like at China's version of a CBDC, for example. Like that is largely a tool for surveillance on their citizens.

Like we don't want that here in the U.S. And I appreciated that the report acknowledged having democratic values and privacy as part of the CBDC because I think particularly at the retail level, the last thing we do is the government has the database of all the transactions. We don't necessarily want them to be able to get in and follow every little single thing that every individual citizen is doing.

I think having privacy is a feature of that is important. You know, it's interesting because we sort of opened this discussion as well, why do we need stablecoins if, you know, the existing system works fine? You know, we would sort of like be like, well, why do you need a CBDC because we're already doing that over here.

So, you know, eight years later when you figure this out, we'll have already taken over the world. So, yeah, for the theoretical conversation, it's like I mean look at Fed Now, right? It's more like Fed When? Is that coming to (inaudible)?

This is like, you know, we're doing stuff in crypto. We're innovating. And we're able to do it because you don't have to have the same level of research. You can kind of go out and touch these ideas. And use kind of the power of opensource software to power these things.

But again, it doesn't necessarily mean that there isn't a role for one. And I don't think it would necessarily mean the end of stablecoins either. I think there is a real question though as to like what are the goals? What are the reasons we want to do this? Is it retail versus wholesale? And ensuring that there is an appropriate level of privacy, I think would be really important.

MR. WESSEL: Thanks. Tonantzin, you could speak to that, but let me ask you another question as well.

I understand what you think about some of the arguments in favor of these new technologies, but if tomorrow you find yourself in Nellie's job. What are the things you think the government should be doing to balance the tension I identified at the beginning of our conversation?

Encouraging social useful innovation but avoiding putting consumers, businesses, the federal system at risk or entrenching incumbents. What do you think?

What would you recommend to them? But you can speak to that or just if you want to add one to the CBDC thing that's fine, but I think we pretty much covered it.

MS. CARMONA: I'll touch a little on the CBDC point just to say that I echo what the panelists talked about in that a lot of it will really depend on the design choices and the fact that we have to factor in like financial, technological, geopolitical and privacy concerns. Like I'm somebody who thinks a lot about communities at the margin, historically excluded groups, vulnerable communities.

And so, for me, I would be just very curious to see where the privacy concerns like land and making sure that actually is something that is front and center. And I was also happy to see that at least the language in the report reflected that.

But in terms of your other question. If I found myself understating.

MR. WESSEL: As you can see, it's a very nice office. I don't turn out the offer.

MS. CARMONA: Lovely office. I love it. So I think I would actually urge people to go back to the problems, the pain points, the actual needs of the group's report to serve because even with the reports -- and I understand that likely it was because the executive orders wanted responses to specific things. But it seems that when we're talking about future payments, we started with a technology first.

And not necessarily thinking through like is this -- I don't want to say that you didn't think it through so please don't misunderstand that. What I want to relay is that a lot of these debates are just kind of reimagining the technology itself, the digital assets themselves and the solutions. And trying to tweak the solutions here and there to then retrofit to the problem versus start with the problem, the pain points first.

Because even words like financial inclusion will get thrown around and then there's not a specification that still will -- well, what element of financial inclusion are we actually addressing? And so, if we just look at digital asset space, crypto assets, stablecoins, I would start with then the operational risks. Like looking at the technology. What makes it more susceptible to bugs and hacks? What are the

governing structures that might disincentivize people to, you know, make changes when necessary? Or the governing structures that might lead to additional conflicts of interest?

Because if you start with the technology first, you might arrive at like different solutions in terms of maybe we don't want certain elements to enter our ecosystem. Or maybe it is fine. Or we have a response to some of these risks. But it's always start with the pain point, start with the problem, build from there.

And I think even that was kind of a reflection of my first comment which is I feel like a lot of our debates around payments in general have been skewed towards the technology first and not necessarily thinking, well, are there alternatives? Like why do they have to fall within the digital asset space to begin with?

And we're seeing this even with the real-time payment system. This took forever, yes. But if this is -- and I was glad to see this was part of the recommendation. If this is a priority, then let's make sure that this is done well. Let's look at the technology that's going to be introduced.

Does it fit within our existing infrastructure? Is it interoperable with your existing infrastructure? And then thinking through very thoughtfully about then how do we make sure that we actually reach the marginalized communities that we say that we want to reach?

MR. WESSEL: Paige, on this little site we're using to collect audience questions. People can load up questions. And I don't think you'll be surprised that it doesn't look like the banks are the most popular people on this audience.

And I think there's a general sense. The question is a little bit poorly framed, but some people seem to think that the banks have held back on real-time payments and providing access to payment rails because you're trying to protect your cut of the pie. And I just wonder how you respond to that. I was treating for that claim. But somehow the banks have been obstacle to progress because all that's going on.

MS. PARIDON: Yeah. No, I mean, right. I'll certainly answer that claim. And I mean, you know, the response is I think I tried to mention previously. No, banks are very pro-innovation, pro-competition, but that said, pro-competition so long as competition is kind of done on level footing, right?

So same risk, same regulation, basically. And so, banks are subject to obviously, you know, everybody knows significant -- as Nellie mentioned in that the PWG report outlines. Significant prudential regulation but also significant Bank Secrecy Act in AML. Not just regulation but oversight, supervision, examination, direct eyes of the regulators and the supervisors in the banks. Significant obligations with respect to managing cyber risk, right?

I mean we've seen a lot of hacks, a lot of crime occurring. And not just in the crypto space, but certainly there. And, you know, the banks have for years been developing robust technology and systems to detect and deter bad actors. And I think that is a space where the government and the public and the private sector should come together and sort of launch a whole of government, public, private initiative to root out criminals that are targeting unsuspecting consumers. And, you know, we have seen it in the PDP space, for example.

And so, there's also the consumer protection element, right? I mean we've kind of been saying to ourselves and then discussing some of these consumers to the extent they've gotten involved in the crypto space, you know, have been sort of unsuspecting. There hasn't been adequate disclosure. There hasn't been adequate education.

You know, so we'd like to see as I think the Treasury report has recognized, you know, the CFPB to work with other regulators across the government to provide robust education and oversight of these entities that are basically operating in the financial services marketplace. And for the oversight in all of these regards to be consistent across the regulated entities, the banks and then the unregulated.

MR. WESSEL: So, Kristin, I'm going to caricature what the banks have said. This is not to be associated with Paige. The banks say, we have all sorts of oversight and regulation. In fact, we have too much, and we'd like to undo some of it. And if we have to compete with all the people in decentralized finance, the crypto, we want to make sure they have the same regulatory burdens that we do.

The ones that we think are justified and the ones that we think are unjustified. How do you think about that? And to what extent do you think the industry thinks that we need more regulation here both to force out the bad actors, but also it seems to me that the regulatory and (inaudible) can

provide legitimacy to some things that other people are suspicious about? I didn't mean to give you your answers but that's what I'm thinking.

MS. SMITH: It's usually important because I think that it's funny, right? Because there's often this criticism of, oh, there's no regulation there. And then when different crypto companies attempt to become a bank or try to be regulated then there's like, oh, well we can't regulate you.

And it's like sort of this chicken and egg thing. But I think -- I mean, listen. I think Congress is really getting close to getting stablecoins bill done. I know that the House Financial Service Committee on both sides of the aisle have been looking at this very closely. And I think as the president's working group report found like there is a gap here. This is agreement different that we need to make sure we have an appropriate framework for.

And so, yeah. No, I think we would welcome appropriate regulation. You know, we want to make sure that it's not something that is so burdensome that it applies solutions to risks that aren't there given that this is a slightly different technology, right? I mean we often hear sort of same service, same risk, same regulation.

Well, it could be the same service, but it could be different risks because the Blockchain is different, right? And so, we want to make sure that if there's additional risks, we see in digital assets that we don't see in the traditional world that we have new regulation. But vice versa, if that risk is mitigated because there is a Blockchain and there's transparency then we don't need to have that in kind of a regulation.

But no, I'm very hopeful and would love to see Congress get something done. I don't think it's out of the question that that could even happen before the end of the year. I mean I think there's a lot of momentum right now around getting a bill done. You know, some of them we've seen. We have some issues with and we're having good dialogue, you know, with members of Congress to try to provide some suggestions on how to fix that.

But yeah. No, I think it would be an important step and one that the industry has come around to, right? When I started this job four years ago, I don't think there was a whole lot of appetite for

new regulation. And I think the industry has really evolved in their thinking and that, yeah, the time has come that we need to put some guardrails in place.

MR. WESSEL: Right. So I want to ask one final question from the audience and then I have a final question for Nellie.

A couple of people in the audience have asked about Brazil's Pix system, P-I-X, with which I'm not familiar. But I understand it's basically a central bank run, instant payment system. It doesn't involve crypto. Are any of you familiar with it enough to talk about the pros and cons and its applicability to the U.S.?

MS. LIANG: I can mention it. So Pix is in some sense a retail instant payment system. It's like a real-time gross out payment so I think of our RTP.

What they did was introduce it maybe two years ago through their financial system, through banks and nonbanks. And they kind of pushed it out like pretty aggressively. The take up rate was like 70 percent within 18 months. It was very, very successful from that. So it's just real cheap payments.

So Sweden and Norway have instant payment systems too that everyone can access and has all the efficiencies that I think that now could create. So it is through the central bank, but I would also -- I think a really important thing is the central bank is getting into wallets available to consumers of which you can access the interested payment system, a stablecoins or a CBDC.

So it is just an illustration of there are alternative technologies that can, you know, generate the same service and they're trying to create a system that includes and allows for all these things including cash probably. They may still use cash with the appropriate guardrails. And they might be different for each one, but it would allow for that.

So there's a nice paper that I know the Central Bank of Brazil has a nice paper that BIS also has a paper on the future of money and payments, and it discusses the Pix system and, you know, similar types of things. It's quite nice.

MR. WESSEL: So, Nellie, can we close on just tell us where you see this going in the near term. The report talks about enforcement and existing rules, and it talks about new rules. And as Kristin said, there's constant hope that Congress will pass a bill.

What are the milestones to look for in the next six to 12 months recognizing that I'm not asking you to predict what Congress will do.

MS. LIANG: Yeah, I'm glad you're not asking me to predict what Congress will do. But as Kristin says, there is a lot of movement to discuss stablecoins. There are also bills out there on broader digital assets. I'm not as with all those pieces.

One of the first things of the money and payments part is this Treasury lead working group to promote further work on advancing a CBDC and that would look at policy issues as well as technological issues. And I think there was a commitment through this report for the Treasury, the Fed, the administration more broadly, the regulators who might have equity interests here to further make proper (inaudible) on it. Really push hard on some of the tougher decisions.

The Fed has said they would not move with the CBDC without broad public support, administration support and congressional support. So one needs to sort of create and determine how one -- to get that input and allow it in a way that addresses how the Fed can implement monetary policy and control its balance sheet with a CBDC as well as the broader social issues such as democratic values, national security, U.S. global leadership, financial inclusion.

So I think there will be immediate setup of this working group and there will be more communication by the Fed on their consideration. And there will be more public engagement on the CBDC.

MR. WESSEL: On the other aspects in the report do you anticipate rulemaking in the next 12 to 18 months? Or are you just -- or waiting for Congress? What's the --

MS. LIANG: So I think in the future on money payments, there was not an explicit recommendation for Congress to act except for recognizing the PWG report that it also asked for legislation.

The consumer report that I mentioned, the use cases was more of a recommendation that urged regulators to use their existing authorities. Understand how they should apply to crypto. Maybe more collectively in a way that might provide more comprehensive regulation.

I also mentioned that there is yet another report to come from the Financial Stability Oversight Council. And that report they were charged with -- one of their charges was to identify regulatory caps. And so, that which was not for some of the others. So, you know, I of course can't front run anything the council will want to say and determine. But there's more to come, David.

MR. WESSEL: I'm sure there is. Okay. Well, our hour is up. I want to thank Paige, Tonantzin and Kristin for helping to give us such a good perspective on the Treasury report and of course thanking Nellie from taking the time from what I know is a busy schedule to join us today.

The hope is that by doing these things, we can improve the quality of public debate. And you've seen I've tried to avoid getting so far into the weeds that the only people who can follow the conversation are the people who already have defined views on it. I want to thank each of you for helping in that modest goal. So with that thank you all and stay well.

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