THE BROOKINGS INSTITUTION

FALK AUDITORIUM

MAKING AMERICA'S PAYMENT SYSTEM WORK FOR A DIGITAL CENTURY

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OPENING REMARKS:

YESHA YADAV
Associate Dean and Robert Belton Director of Diversity, Equity and Community
Vanderbilt Law School

PANEL I - NEW UPGRADES FOR TRADITIONAL PAYMENTS:

DAN AWREY
Professor of Law
Cornell Law School

JULIE HILL
Vice Dean
University of Alabama School of Law

MARK TROUGHTON
Chief Operating Officer
Chime

MODERATOR: VICTORIA GUIDO
Economics Reporter
Politico

MORNING KEYNOTE:

ROHIT CHOPRA
Director
Consumer Financial Protection Bureau

MODERATOR: AARON KLEIN
Miriam K. Carliner Chair, Economic Studies
The Brookings Institution

PANEL II - PAYMENT RAILS OF THE FUTURE:

BRIAN BROOKS
Partner
O'Melveny & Meyers

RAJ DATE
Managing Director
Fenway Summer

CHRISTINA PARAJON SKINNER
Assistant Professor, The Wharton School
University of Pennsylvania

YESHA YADAV
Associate Dean and Robert Belton Director of Diversity, Equity and Community
Vanderbilt Law School

MODERATOR: CHRIS BRUMMER
Agnes Williams Sesquicentennial Professor of Financial Technology
Georgetown University

AFTERNOON KEYNOTE:

CHRISTOPHER J. WALLER
Board Member
Federal Reserve Board

MODERATOR: AARON KLEIN
Miriam K. Carliner Chair, Economic Studies
The Brookings Institution

CLOSING REMARKS:

DAN AWREY
Professor of Law
Cornell Law School

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YADAV: Here we are, thank you. Good morning, everyone. Am I loud enough? Good morning, everyone. It is such a pleasure to welcome you all on behalf of the Brookings Institution, Cornell Law School, and Vanderbilt Law School. Aaron, Dan, and I are truly thrilled, incredibly delighted, and deeply honored that you join us today in person as well as online to talk about the U.S. fina-- the U.S. financial and payment system. Given that it is a Friday of a holiday weekend, and you guys are here to talk about the payment system on a dreary D.C. day, I think it's safe to assume that you are here for a completely, unabashedly full-on nerd experience for the day. And so that is exactly what we're here to give you, because the U.S. payment system deeply, desperately needs it. It needs your ideas, it needs your technologies, it needs your policies. It needs your passion to get it ready and equipped for that digital century that we know is already here.

So, you know, we know, I think in this room, that the U.S. payment system has undergone a structural transformation over the last three or four years, certainly since the pandemic. And if we can do maybe a show of hands in the room. How many of you have been using cash maybe in the last 24 hours to pay for anything? Anyone use cash? One, two, three, four. How many of you have forgotten what cash even feels like in your wallet? Where does it go? You know, as much as so many of us are moving towards a kind of cashless universe, especially after the big pandemic, there are populations and communities across America, communities of color, lower-income households, single parent households, that have been left behind. A function of unbanking and under banking that has meant that the payment system is not working as efficiently as inclusively, as fully, and fairly as it needs to, right?

As much as we are all looking at our phones and seeing our money move seemingly instantly, right, money often takes several days to hit our bank accounts and be ready for us to actually use. And you know, as much as the U.S. is, of course, the uncontested, you know, the uncontested issuer of the reserve currency globally, our international U.S. dollar system remains, as we all know, incredibly unwieldy, slow, expensive, and globally becoming less and less competitive as we enter this new century. So this is, this is becoming a situation in which it is costing us a lot of money to move money and things need to change, particularly as we're entering this new technological era in a digital century to come.

So, we have an incredible panel, incredible day for you. A full-on nerd fest is nigh. And we have two fabulous panels. The first will be looking at the current payment system, followed by our later panel looking at digital technology, stablecoins, and CBDCs as potential solutions to the problems that we're seeing with the upgrades that we need for the U.S. payment system. And in between, we have two remarkable keynotes, of course, from Director Chopra of the CFPB, as well as Governor Waller of the Fed. And most of all, of course, we want to hear from you. This is very much a conversation. This is an issue uniquely and fabulously that affects each and every one of us. This is our experience. You will have thoughts, you will have opinions, so please be a part of the conversation.

And if you're joining us online, you can email us with questions and comments at events at Brookings dot com if you want to send an email or on Twitter if you want to go for the hashtag, the handle at Brookings Econ, hashtag future of payments. Send us your questions, submit your questions. We really want to hear from you. All right, so with that, I'm going to welcome and introduce our fabulous, wonderful first panel, which will be led by Victoria Guida. You all know her. She is the brilliant reporter for Politico who covers economics but really focuses her beat on the Fed and the Treasury market, and she is making incredibly complex, opaque, crazy hard topics, very intelligible and easy for all of us to get. And hopefully, she will do that with the first panel on the payment system. So, Victoria and the first panel, if you'd like to join us on stage.

GUIDA: There we go. Thank you so much for that, too kind, introduction. As, as Yesha was just saying, you know, we've seen a lot of shifts in the payment system just over the past few years, so this event is very timely. We've seen more non-banks jump into spaces that have traditionally been filled by banks. We've seen more diverse institutions trying to get access to the payment rails and we've also seen some updates to the payment rails themselves. And I have an excellent panel here with me today to talk about some of those things. So I have Mark Troughton, Chief Operating Officer at Chime; Julie Hill, Vice Dean at the University of Alabama School of Law; and Dan Ari, a professor at Cornell Law. So let's jump right in. So, Dan, I'd like to start with you. You know, you've written a bit about this sort of unbundling of of payments and how we've seen different different services that have traditionally been performed by banks now being performed by other institutions. And so to what extent are is is is the current system working and what to what extent are current policies holding us back?

AWREY: Thanks, Victoria. I guess I would divide sort of the world into two segments here. One is, is it working, functionally speaking? Are people getting paid and being able to make payments quickly, cheaply, and on the other side, is it working from a policy perspective? Are we making sure that the system is governed in ways that enable us to advance social objectives like cheap, fast, and secure payments, but also in terms of things like competition and ongoing technological innovation over time? I think the answer is we're not doing well on either counts at this point. And we can look at that domestically, so we can look at the costs of payments in the United States, where, for a very developed country with a world-class financial system, we pay more for payments, and especially poor people pay more for payments than they do in other countries.

On the other side of the ledger, we also have, relative to many of our peers in the G20 and the G8 and many emerging markets, not really invested in the governance of payments. So if you look to Australia, if you look to Brazil, Singapore, China, the United Kingdom, even the EU, that paragon of good governance when it comes to financial markets, they have invested more in building the infrastructure from a policy perspective to take advantage of all the technological change that's going on. So, I would say we're not doing great. There are roadmaps for doing better. And I think one of the exciting things today is to have the discussion about which sort of lessons we can take from those roadmaps as we went forward.

GUIDA: Yeah. And Mark, you have a very interesting perch where you're at, at Chime. You have a payment service that you provide. So is the payment system in a good place? Where-- how could it be better?

TROUGHTON: Thanks, Victoria. I think similar to Dan, you know, we we look at the payment system and our primary question is, is it working? We're a consumer-oriented company, so let me caveat that, I know nothing about business-to-business payments. We basically say, is the American payment system working well for consumers? And I think that, actually, this is where you really do have a digital divide, because I think if you look at middle to higher-income members of the American population, you know, it could be better. It's still too expensive, it's still too slow. But actually, it's not working badly. I think when you start looking at people who live paycheck to paycheck, the American payment system is not working well for our consumers in any, in any way. You know, we still have 60 to 70 percent of our population that's that's living paycheck to paycheck. And I think by definition, for us, that, that's an indication that it's not working. You know, just to give you an example of that today, you-- we look at the payment system very broadly and we include things like payroll. You know, we have, we have a lot of discussion from a policy perspective around how do we provide short-term liquidity to underserved communities, and what do we do with overdraft fees, and payday loans, and things. But actually, it takes two weeks for somebody to get their pay. American consumers are actually lending. effectively lending money to their employers and then having to go and borrow it from banks and other financial institutions. So, I think at a high level, I think my perspective on this would be it's not working for our neediest consumers.

GUIDA: And then, and then just sort of on the on the back end, you know, Julie, you are a world expert in the Federal Reserve's master account system, and, you know, we've we've actually gotten a lot more information about who actually has those accounts. And what does that tell us about the current state of the payments system? What have we learned from that?

HILL: Well, one thing we know is what the Fed has said all along, that the bulk of the people using the Fed's payment rails are traditional banks, banks that accept deposits and make loans. And if you are making payments, chances are good that that payment, even if you use a non-bank like Venmo, is eventually getting to a bank and is eventually getting to the Fed's payment rails. But the other thing that we've seen is that there are other businesses that want to make payments and that want to make them with a business model that isn't just accepting deposits and making loans. And what we've not been very good about is thinking about that space, about what pure payment companies might look like, and whether they can safely use the Fed's rails. I think the Federal Reserve has, so far, been rather skeptical of that business model for some good reasons and for some bad reasons. But fundamentally, as a matter of law, I'm not sure that it's the Fed's decision to make. Congress is the one that creates the laws surrounding who gets access to that accounts. So, it's a bigger question than than just the question of what the Fed's done.

GUIDA: Yeah, so functional but not ideal sort of seems to be the theme across across all of these answers. So, you know, I did want to use, you know, your comments as a jumping-off point about sort of the Congress's role here and who's in charge. There was a lot of talk, as most of you all will know about, you know, the Office of the Comptroller of the Currency talked about potentially providing charters, limited charters, to institutions that wanted to provide, for example, payment services. You know, more recently, there has been some talk, for example, from the Treasury Department about whether we should have a separate federal payments regulator. So, Julie, just sticking with you, you know, is there a way to make federal policy on payments a little bit more coherent on either of those fronts, or are either of those a good idea?

HILL: Well, I mean, I think that if you just asked an outside observer or the person who does--knows nothing but is dropped into the United States and said, "Is financial regulation or is payments regulation done in a reasonable and efficient manner?" They wouldn't say, "Wow, we've got all these regulators, and that's just awesome," right? I used to — way back in the day — I used to work in payments at a bank and my boss was fond of saying that "If everybody's in charge, then nobody is in charge." And that's one of the things that we kind of have going on here is that we have so many regulators that want to be or feel like they need to be, even, in the conversation. And that's very hard to figure out who is actually in charge. And then, I mean, I guess in D.C., it's probably sport, especially these days to pick on Congress and what they're doing or not doing. But really, I think that the responsibility for the regulatory framework and the regulators falls on Congress. And I guess you all are probably just as equipped as I am to make predictions about how likely it is that Congress will be able to develop something more functional for us. But it's a hard question and it's a hard question for regulators to agree on because they all want a piece of it.

GUIDA: Yeah. So from from a private sector perspective, what do you think would make the most sense here?

TROUGHTON: Yeah, I think, well, firstly, I think we're pro-innovation generally. I do think that-- and an example of this we are a non-bank to your point really. And you know, if you think about what the sort of sponsor bank model has done for competition in American financial services, it's been amazing. You know, it was five years ago we were talking about, you know, 30 plus billion dollars in overdraft fees. That's more than halved over the last, over the last five years. Largely, we believe, because of the competition coming from, from fintechs and non, non-bank, non-bank participants. So our starting point is we are pro-innovation, and we think we should create opportunities for non-banks to participate as fully as possible within the American payment system because it will drive that competitiveness and drive down costs and improve member experiences. You know, we're not-- we wouldn't be using a federal payments charter ourselves just because that's not the sort of sector financial services we're in, but we're definitely pro-inclusion here.

GUIDA: Yeah, and Dan, just to bring you in too, and I, and I also don't want to forget that there is, you know, a whole, a whole mosaic of state regulations here too. And Dan, I know that you've looked at this a bit. So, you know, what do you think about making federal policy more coherent? And where are we at the at the state level with regulation of, you know, money service businesses and things like that?

AWREY: Mosaic is a good word, but mosaics can often be beautiful in their complexity. And I think it's fair to say that there is nothing beautiful about having 49 different state regulators for payments. There are 27 federal countries on Earth. Twenty-six of them have federal regulation exclusively of payments. And then there's us. You know, my work has done a lot, I guess, on shining light on exactly how different some of that regulation is at the state level, how bad some of it is at the state level. And I do view it as a ticking time bomb that as non-banks get bigger into payments, as they start to amass more and more banking assets, that the inadequacy of these laws is going to cause a problem. It already has caused a problem. Everybody's favorite money services business has been in the news the last 12 months, that is FTX. That's the same regulatory framework that we use to regulate payments companies.

So I'm a big fan of a federal payments charter, but I do think it's only just the beginning of a more fundamental rethink. A charter is great, but it doesn't do much for things like competition and innovation, to be honest, in and of itself. It's great for prudential safety and soundness, but we still have problems like the problems that Julia's exposed in her work, around access to that system for non-banks and around, you know, the governance of the networks themselves, where — just to riff off the earlier part of your question — we don't need more regulators, but gosh, do we need more mandates. The OCC, the FDIC, the Fed, they all regulate payment institutions for safety and soundness. None of those regulators have a responsibility for promoting technological innovation and competition or really consumer welfare, let alone individual or personal privacy. And I would be loath to add to the number of regulators. But I think there's a discussion to be had about adding to the list of things that regulators have to take account of these other very important social policy issues.

GUIDA: Yeah, so, so kind of drawing out a couple of of strings from that. You know, you mentioned FTX, which is sort of a poster child for one of the issues in the payment system, which is, you know, whether the funds are there, right? And there's-- I think when I-- when I think about institutions facilitating payments that aren't banks, I feel like it raises a lot of questions about, you know, how people can be sure that that the money is actually going to be there and go through. So does there need to be-- you know, who should who should look more into that? Are we in a good place with that? Dan, I'll stick with you.

AWREY: Yeah, I think we should go with the crowd and make this a federal responsibility. I think existing, you know, I think there's a lot to debate, and one of the few things I don't have a passionate position on in payments is which federal regulator, prudential regulator, should be responsible for this. All of them have their bright spots and dark corners. But I do think creating a single federal regulatory framework for this is great-- with a single regulator. Now, from there, I also think that you know, if you want to do banking, get a banking license. And the converse of that is if you want to do payments without banking, I think what you should be able to do with customer money should be very limited. And we have structures that enable us to then "Put all of that money in one basket and watch it," to misquote Mark Twain. That is-- we have third-party custodians, we have reserve accounts at central banks, we have master accounts where it becomes much easier to verify that your total stock of outstanding monetary liabilities and the total assets sitting in that account are the same, and that the backing that you have then is something that is relatively easy to monitor and verify over time.

GUIDA: Julie and Mark, I'm also interested in your take.

HILL: So I think I'm less optimistic than Dan that federal payments regulator leads us to the sort of innovation that we want in the payments space. And I'm much more, I would say, bullish on the possibility that states could do a good job of having a payments charter or managing that payments charter. I think that if you look out at what's happened so far, I think that states have kind of been on the forefront of considering how a payments charter might work. Certainly, we have seen litigation in that space over Wyoming's attempts to have a payment charter and connect it to master accounts, and now we're seeing some other master account litigation. We've seen states kind of taking the lead in adopting blockchain technology laws. And also, as a historical matter, I think states have done a relatively good job enacting the UCC, everybody's favorite law, right? The Uniform Commercial Code that's adopted as state law, which largely governs questions like, what happens when payments go wrong? So I am not as enthusiastic about saying that we ought to just hope that the Fed gets this right and that, that spurs innovation because everyone knows what the law is because I'm somewhat skeptical that the Fed is equipped to be a leader on this, or, I mean, beyond the Fed, the OCC. So, I guess I'm still hopeful that there's some space for states and state regulation in this debate.

TROUGHTON: I think I'm probably a little more optimistic than Julie, maybe I'm misguidedly so. And I think if the question goes to how do we make sure that money's there, I think, I think the Fed is actually quite well positioned to ensure that. We operate under this model today. You know, we have responsive banking models, so we have two nationally chartered banks, and our deposits all sit in, in one of those two, and they are-- they're all FDIC insured, the FCC regulated. And, and it gives, it certainly gives our members — it's not the most efficient system — but it certainly gives our members, and I think the broader banking system, comfort that that those funds will be there when they need to be there.

GUIDA: Yeah. And I kind of want to ask a broad question from, from your perspective. When you think about the shortcomings of the payment system, do you see it as more of a technology problem that needs to be solved with, with you know, more innovation or is it more of a policy problem? Which it seems to be that we're leaning more towards the latter in this conversation. But I--.

TROUGHTON: I think the answer is both. But I do think it's actually more of a, more of a policy problem. You know, the reality is we, we spent a lot of time talking about faster payments like the-- when you talk about innovation in the payment system, the first topic is faster payments. And this is about like eking out a few more hours, a few more days, or a few more seconds, making sure you get that P2P payment from your friend like instantly, and that is important. I think what's the reality of those, the reality of it is the lack of a of a federal instant payment system. What's happened is you've had private enterprises actually step up and develop some of these systems. You know, you have a number of solutions out there today. They're not as good as, as had we had, you know, 20 years ago, an instant payment system. I've been encouraged by the degree of progress on that. You know, if you think about the last five years with-- and plus in terms of Same Day ACH, and Real-Time Payments, and FedNow, I mean you need to be a fintech geek to be able to keep up with innovation in terms of faster payments.

So, I think that's that's been a real, real positive. But I think the from a policy perspective, I think there's there's a long way to go still and there's still a lot of on-ramps onto these federal payments rails that are required. And I still come back to this point around, around the fact that, you know, we need, in addition to technology, we need, we need to be able to have open data and we need to start to drive innovation in some of the core inputs like payroll and some of these other systems we've been talking about if we really want to drive effectiveness in the payment system. And I think a lot of that falls on on policy.

GUIDA: And maybe we'll hear from Director Chopra on some of those data questions. Julie, I mean, I did want to ask you, Mark, give me a perfect segway here to talk about faster payments. And, you know, we have FedNow, we have the big bank infrastructure. You know, how quickly do you think this will take to actually really be felt by consumers? When do we actually get faster payments? And is this playing out the way you sort of expected it so far?

HILL: Well, I think the jury is still out on FedNow. I gue-- I've been calling it Fed in The Future for so long, I feel nervous about calling it FedNow, but I think that that sort of illustrates the trouble with innovation coming from the government. Now, let me be clear, I totally understand why community banks wanted FedNow. I understand why if you're a small community bank, it gives you heartburn to think that the fastest payment rails is a payment rail provided by the Clearing House, which is a consortium of the largest banks, your largest competitors that would probably just as soon not exist. Now, I'm not saying that the Clearing House has acted inappropriately, but I certainly can understand why from a community banks perspective, they would like the Fed's payment rails to be faster and more competitive.

Now, I think what we're still waiting to see is what exactly the community banks do now that FedNow is operational? Do we think that they'll embrace it? Do we think that lots of the payments that have been traditionally processed on the slower rails will convert to FedNow? So I think the jury is still a little bit out on whether this makes payments faster or whether it makes payments for consumers, in particular, faster or whether, you know, third-party innovations like Chime or non-banks are what really drive faster payments for consumers.

GUIDA: Yeah. Dan, what do you think it's going to take to get this infrastructure to work? And, you know, should we do what Aaron Klein has written many times and require that you know, the Fed change its policy to have banks make funds available immediately?

AWREY: Yeah, there are many things I love about Aaron, and there are many things that we completely agree on. And this is one of those ones where I think I'm even more radical than Aaron. I think the FedNow is going to fail. If I, if I tried to imagine a system that was designed not to work — not from a technological perspective, but from a governance perspective — we're pretty close to it. I have a system, and that the largest banks aren't going to use because they already built one, that has no competitive advantages over that system, either in terms of the cost structure, which is identical to RTP, in terms of the technology which is not interoperable with RTP, and in terms of what it actually requires banks to do. It is the most optional payment governance and technological network I've ever come across. So, I don't know if any of you have a bank that is signed up to the FedNow network? Just kidding, you haven't. Of the 50-something banks that have signed up, most of them have signed up — well, actually not most of them — but many of them have signed up simply to receive faster payments. And we all like to get faster payments, sure. And that would be great if customers got faster payments. But as it is, if everybody just signs up to receive faster payments and nobody signs up to send faster payments, nothing really happens. And for the community banks that would most benefit from this, this involves huge changes in their technological infrastructure necessary to do this. You have to build an API web-enabled interface that then gives your customers the option to say, "I want to send the faster payment." That's super expensive and we're not seeing a lot of uptakes because of that.

And lastly, to go back to Mark's point from before, really, I don't expect a lot of the the inherent benefits of having an API-based payment system really roll out until we've moved forward on open banking and open finance. That's the ticket to making all of this worthwhile for customers. And at the moment, you know, Dodd-Frank 1033 has-- its 13th anniversary has come and gone now, and we are still — although fingers crossed for today — waiting for some real leadership on that particular issue. So that's a long way of saying we're nowhere near where we should be on this.

And where we need to be on this is understanding that having the Federal Reserve responsible for safety and soundness makes tons of sense, but actually delivering on technological infrastructure and promoting consumer welfare in payments is going to take more people. It's going to take Congress. If this wasn't-- if you close your eyes and these types of issues weren't in finance and banking, the current FTC would be all over this, right? This is big incumbents controlling access to a set of infrastructure that results in consumer welfare losses on a number of dimensions. If it was anything other than finance, we'd probably moved on this a long time ago. I don't think there's one single solution, but I think the first thing we need to do, like all good 12-step programs, is admit that we have a problem and then have honest discussions about moving forward. And I think that's kind of what today is about.

HILL: I didn't know I was going to be the "glass is half full" kind of person. Yeah, we had a little switched dynamic there. Mark, you, you from that you from a private sector perspective, I mean, you know, you have partner banks. How are you thinking about real-time payments infrastructure? Are you wanting to use it? Where is Chime situated with FedNow and RTP?

TROUGHTON: I think we, we probably share Dan's thoughts on this. I think, you know, the thing about the thing about it now is that, to Dan's point, everybody has to now go and create an onramp onto this. Not only a sort of technological one but a user experience one and incorporate this into their apps. And I think the challenge is most of us have already done that with, with leveraging other technologies. If you think about sort of person-to-person payments today, I mean, the most prevalent is probably like the Visa Direct system today, which operates a lot of that infrastructure. And so, you find a lot of private enterprise has actually spent a lot of money integrating into these.

So, I do think I think over time, as you know, this is a network problem. As more banks are able to opt in and develop the infrastructure that's required, I think you will find people adopting it. But it's a bit of the chicken and the egg, and I think there isn't a-- there isn't a sort of force function to initiate that system upfront. So, I don't think-- it's not something we're going to be leveraging in the short term, just to, just to give you a direct answer. And again, for us, faster payments is important. But, actually, we think because we serve people who live paycheck to paycheck, we should be talking a little more and maybe more about faster pay rather than just faster payments, because we think that's actually a much bigger problem today in the American financial services system.

GUIDA: Yeah. So does that-- you know, when you think about, you know, earned wage access and things like that is, is something like the payment's rails facilitating faster payments, is that meaningful in terms of helping people who live paycheck to paycheck?

TROUGHTON: It is. It's necessary but not sufficient. So it is, you know, if you just think about the payroll system today, most companies are doing this every two weeks and there's a notification that comes by the Fed. And even once that notification is there, it still takes two-plus days. And on a holiday weekend like this, it could take three or four to get into someone's account. It's ridiculous. And the irony is, you know, we sit here talking about seconds and minutes on faster pay, but actually we should go upstream. Payroll is the largest source of of input into consumer funds today. And that system is entirely broken. It's, it's antiquated. So, yes, real-time payments would certainly help reduce that two-day delay. And that is a necessary requirement but it's not sufficient, because what we need is we need more innovation on the payroll in real-time, access to payroll, and helping particularly the neediest Americans access the funds they've worked hard for that are now locked up inside their employer’s bank accounts.

GUIDA: So I do, I do want to pivot back to the Fed accounts question, because I personally think this is very interesting. And so, you know, this has been a big policy debate as to who outside of the banking system should be able to have access to the Fed's payment rails directly. So, Julie, I guess I'll pose it to you. You were saying earlier that you didn't think that the Fed should be the one to decide this question, but, but how, how should we think about who should have access to the payment rails?

HILL: Well, I mean, I think that Congress has set who gets access to the Fed accounts and they did it way back before any of us were thinking about these sorts of payments. They did it back when they created the Federal Reserve banks and said that the Federal Reserve banks could accept deposits from, originally, it was just member banks in the United States but then became broader to be all depository institutions and some trust companies, and still the United States. And so for better or worse, Congress has a law on the books that says that the Fed is supposed to provide accounts to banks and depository institutions — banks that accept deposits, institutions that accept deposits. And so I think now how we ought to be thinking about it is we have a law on the books, and the Federal Reserve ought to follow the law.

Now, I mean, I guess sometimes we're sort of understanding when the Fed stretches its authority a little thin. If we have a massive financial crisis, we want them to save us. Maybe we can be a little forgiving if they stretch the law. But this isn't one of those circumstances. This is a circumstance where nobody is gonna-- the financial system isn't going to implode tomorrow if the Fed doesn't stretch its authority to keep people from having access to Fed accounts. So in my mind, if we want a different set of institutions to have access to Fed accounts — and I mean, maybe this is understandable to all of, as Yesha called us, the nerds in this room — but the account is what facilitates payments. If you don't have an account, there's no real way to settle the payments. So if you can't have access to a Fed account, you can't have access to the Fed's payment rails. But it seems to me that we ought to, first and foremost, follow the law. And if we want the law to change, we ought to ask Congress to change it.

GUIDA: And do you think that we should change the law?

HILL: No, I'm fine with it the way it is.

GUIDA: Dan, what about you?

AWREY: I don't think the law is fine the way that it is. You know, some of you in the room have seen this. I've gotten so far as drafting legislation that I think Congress should consider in this regard to expand the universe of firms that have access to the settlement rails. We often talk about payment rails, but we really should distinguish between clearing rails and settlement rails. Reserve master accounts, Julie's absolutely right, these are the settlement rails. You can't operationally send and receive money in U.S. payment networks without it. But the fact that we focus on the settlement rails is really been a question, going back to your question, one of safety and soundness. Who do we trust with our best first and last form of money? And that's an institutional question about the types of firms that we want to let in. Our traditional answer is banks and things that look a lot like banks. And I think the policy question right now is one of, are there other types of firms that just don't present settlement risks where we could expand this to? And I do think the answer is yes. Some of those firms are in a legal fight right now in order to get access on existing terms. But I think the fact that they're having to fight the Fed on this is one reason for Congress to intervene. And then there's other types of firms who would like access and I think should have access who are then not the type of firms that we typically think of in a safety and soundness way.

And this is why I make the distinction between clearing and settlement rails, it's that banks suck at technology. I know this. I've done technology for banks in my career. It's not that there aren't great people, but the challenges of legacy technology stacks huge, often amalgamated businesses. And the fact that they're full of bankers and not software engineers means that when it comes to moving the clearing rails ahead — using new technology to do things that the next generation of Indian consumers, thanks to UPI, like getting your paycheck right after you do the work — are gonna take for granted and simply aren't going to happen in the United States as long as we continue with the peculiar decision to let banks be the things that provide the clearing technology and develop the clearing technology for the payment system. Their record is spotty at best. You're more likely to be a French humorist and-- than a bank when it comes to developing trend-- transformative payment technologies. One to zero, basically. If you're wondering, it's the EMV chip technology. It's just not something that they do well. And so one of the reasons to bring them in on the settlement side is because we want all of that technological innovation on the clearing side, on developing an ecosystem that actually enables us to do much cooler things, much thing-- things that are more helpful for consumers than simply faster payments.

HILL: So I guess, just to clarify, I'm happy with more people getting access to the Fed's payment rails. I don't think that we need a change in the law for the people who are current litigate-- litigating over it. I think the court should just tell the Fed they're wrong. But I don't really have any problem with banks that pro-- non-banks, whatever we want to call these institutions that want access to the payment rails but presents little risk getting access. But I think sometimes the question is presented as, should we take away access from people who seem to be included under the current law, and I'm sort of skeptical of that.

GUIDA: Right. So you're basically saying we don't necessarily need to expand it to beyond depository institutions, but for institutions that are given a state charter?

HILL: That's right. They, they should have access. Okay. Even if they're involved in crypto.

GUIDA: Even if they were involved in crypto, which now Dan’s going to fight with you.

AWREY: Yeah, I'm I'm going to clarify. I don't think we're-- I don't think we're fighting on this at all. So the-- we are obliquely referring to the custodial litigation and I don't think I would say state charters. At the Wyoming SPDIs are the Rolls Royce of safe state charters in terms of the business model that they permit. It is basically a payment sector node within a network. It's all about a technological connection, not financial intermediation. If you look at state money transmitter licenses, which lots of crypto firms have used, there are incredible sort of different ranges of assets they can invest in and many of them can invest in all sorts of crazy stuff. And importantly, many of them can completely escape. As a former transactional lawyer, you look at these things and you're kind of like, "Oh, well, that's how you evade that." And the way that you can do it in most states is simply to say, "Look, one of the things I'm allowed to invest in" and I'm pretty sure this is how FTX did it. "Oh, I can invest," in quotation marks "in the death of my affiliates," which is another way of saying I can just loan all the customer funds to my affiliate. That's not subject to state money transmission laws.

And all of a sudden, I'm a regulated, empty shell that has an illiquid asset in the form of a loan that I've extended to my affiliates, that can then, because it's not subject to any of these laws, go out and do other stuff. And it's not subject to state money transmission laws because it's not responsible for sending and receiving payments. That's the sort of thing-- that tells you the variance, right? Wyoming SPDIs, that money is locked there. It's not going anywhere. There's really no financial intermediation. There are lots of states that pretty much enable you, pretty much roll out the red carpet for you to be able to evade their own laws.

HILL: So let me just say Dan's right. I think the other litigation that, that you can kind of compare and contrast is currently the Banco San Juan Internacional. It's a Puerto Rican offshore bank. So Puerto Rico's offshore banking sector provides loans, makes payments, engages in securities transactions, and they can do that as long as they don't do it for people in Puerto Rico. So they do have some risk in their business model already. And there are, what, more than a handful of these Puerto Rican, I guess, IFEs or IBEs that have access to the Fed's payment rails without any sort of deposit insurance or anything. And to me, those present a much bigger risk to the payment rails than Wyoming's Special Purpose Depository Institution Charter. So maybe it does make some amount of sense to distinguish based on what state or local law allows these institutions to do, but I don't have much heartburn about trust companies that do payments.

GUIDA: Mark, I want to bring you in here. Who should have-- who should be able to have payment accounts?

TROUGHTON: Do you really want me to get in the middle of this?

GUIDA: Well, I don't know. Do you want to get in the middle of this?

TROUGHTON: I thought I was a fintech nerd, but I'm clearly out of my depth. That's a compliment in case you're wondering. You know, I think, again, I think our starting point here is pro-innovation. The reality is we do need to provide more access to the, to payment rails. We're not best qualified to comment on specifically who. I do think there are a lot of institutions that don't pose a risk to the payment system today that are excluded from that. And I think, I think finding ways to develop a better framework around who should have access, we think is an important, important piece of innovation for the, for the American payment system.

GUIDA: So soon I will turn to audience questions. So keep your, keep your questions in mind. But before we do that, it would not be a fulsome payments discussion without talking about interchange. So, I wanted to ask about the-- you know, so we have the Durbin amendment that, you know, caps fees on on on interchange for debit card transactions. And now there's legislation that wants to try and create, you know, more competition for for Visa and MasterCard in, om credit card transactions. So, Dan, I'll turn to you. You know, how do you think that Durbin has, has you know, has it helped the payments landscape? Has it hurt the payments landscape? Where are we on that?

AWREY: Saving the tough questions for last I think. It has helped and hurt. I think the whole interchange environment in the United States, which I think you then have to combine with the other side of this, which is credit card reward points and the like, have created a system where conventional credit card companies have been responsible for a lot of payments innovation in the United States. At the same time, that ecosystem is a huge source of cross-subsidization from the people in this room — well, to the people in this room — from the Americans who don't get access to my platinum Visa Delta SkyMiles card. And it's an awkward thing for those of us sitting in rooms like this where we have to admit that we have a different payment system because of things like this. And because we like points, and at the margin, we don't really care about high interchange fees. Where there's another half of America — and half is probably putting it too modestly — who neither get the points nor do they get the technological advantages that come with this payment system. And guess what? And so, as far as they are, they're still paying the high fees. And so it's a bit of a mixed bag in that regard. It's a good news story for what technology there has been. But I think overall, a bad news story where you think that-- especially, you know, as Yesha mentioned earlier, as we move further and further away from a cash-based system, the electronic payment system becomes this hugely important social infrastructure that then different people experience very differently. I know that's a high-level question and we can totally geek out on the size of interchange fees and the platform economics between, you know, card providers, merchants and the rest of the ecosystem. But at a very high level, that's the thing that strikes me about this entire debate.

GUIDA: Mark, how do you see interchange affecting your business, your customers? Because you serve a lot of these types of lower-income customers that don't have the the credit card rewards.

TROUGHTON: This is something we're even more passionate about than we are in terms of faster payments. And I think that I agree with Dan, you know, the-- we, we come from the consumer perspective, so we approach two things. One, we're pro-consumer, and two, we provide financial access. And, you know, if you look at, if you look at the research, if you think about sort of Durbin and reducing interchange, if you think about the pro-consumer angle, there's lots of research out there that shows that reduced interchange was not passed-- those benefits were not passed on to consumers. Ultimately, they're largely passed onto merchants. So this-- and it wasn't good for consumers.

Number two, it certainly hasn't facilitated access to the payment system. You know, the, the carve-out to the Durbin amendment is something that really did enable companies like Chime and many others to start to be able to provide more access to Americans to the payment system. So we think — I'm not gonna comment specifically on the on the Credit Card Competition Act — but I think, I think we need to be very careful, because to Dan's point, there are two, there are two different constituencies here. It's one thing to reduce rewards for people like us in the room, but we need to be very, very careful as we do this, that we're not actually lining the pockets of merchants and reducing financial access to the system by, by reducing interchange, which is a very important factor in this in this discussion.

GUIDA: Julie.

HILL: Yeah. I mean, wouldn't it be great if payments were just free for everyone? But as it turns out, to make the magic happen, somebody has to pay for them, and the big question is who? And any time you have, you know, sort of a two-headed market, so you've got the people making payments and the people receiving payments, it's not sort of abundantly clear just that we can all look at it and agree who ought to be paying and how those fees ought to be divided up. And it gets more complex when sometimes some people make the payments and receive payments. And then we also have trouble because not all of the people receiving payments look exactly the same. So, you think of the merchant receiving payment when you go buy something.

But when you think of Chime, you think of the person receiving the payment as a person getting their paycheck. So people and businesses are on both sides of that transaction, and that fundamentally is what makes the pricing of payment such a tough nut to crack. That, and that we really need everybody to use the payment rails in order for them to be useful for all of us. And so this is, I think, a question that there is no objectively clear answer to, and this is why you see debate about it over and over and over again, regardless of what technology we're using. But to the extent that you can make payments faster and cheaper for everyone using them, everyone is better off.

GUIDA: I think from Congress' perspective, there also isn't a politically right answer. So, I do want to open it up to questions now, if we have any in the room. I see someone over here.

AUDIENCE MEMBER: I just want to [inaudible].

GUIDA: Sorry. Yeah, and if you could stand up, identify yourself? And questions rather than comments would be great.

AUDIENCE MEMBER: Okay. Can I, can I identify myself and sit though?

GUIDA: Sure.

AUDIENCE MEMBER: Thanks. I'm Staci Worden. I'm the CEO of the Algorand Foundation. We are a layer one Blockchain. And just with respect to FTX, I don't think it's a-- it's not a payments question so much as it is a exchange, I mean, beyond exchanges when you commit fraud — exchanges should not have customer accounts, nobody in the United States has an account at the New York Stock Exchange. So I think that's really the framework in which we should be talking about that rather than a payments framework. Secretary-- Chairman Gensler has not been forthcoming about his conversations with FTX, so we don't exactly know what happened there. But anyway, that's my point there. My question is to Ms. Hill and Mr. Awrey. Assuming that we had the right regulation around transparency and collateral for stablecoins, would you advocate for stablecoins having access to Fed accounts?

AWREY: See, I'm a big believer in technology-agnostic access. And, you know, I'm on the record for having pretty tight controls on financial intermediation for payments businesses. But then the way that those businesses-- you know, to me the, the the defining factor of a stablecoin — although to be fair they vary a lot in practice — is the way that they process payments, right? The distributed, distributed ledger is a way of clearing and recording settlement. And to me, that doesn't pose in and of itself prudential risks that we worry about when we worry about things like master account access. Where the rubber hits the road is that it does create or rather expose the challenges that we already have around things like AML and CTF. So I'm in favor, as a prudential matter, of a well-regulated stablecoin having access to the payment system. I think we are still some distance from fully understanding the very different structures that these, network structures, that stablecoins use and how we need to upgrade or update our Bank Secrecy Act framework in order to accommodate them, which is a different-- an important but a different question. So yeah, I'm in favor.

HILL: Yeah, I agree. I mean, as long as your stablecoin is actually meant to be a stablecoin, right? Like so, different people use the word stablecoin for lots of different things. But if you're talking about, you know, they have hard assets that are held by a legitimate custodian, I don't have any real concern about that. If you have an algorithmic stablecoin that isn't really tightly tied to anything, I think we probably ought not be calling that a stablecoin. Fair enough.

GUIDA: All right. Other questions in the room? In the back there.

AUDIENCE MEMBER: Thank you. Linda Jeng, I'm with Crypto Council for Innovation as well as Georgetown Law, and I have a question about access. My two favorite coffee joints in Washington, D.C. are Compass and Blue Bottle. They both don't accept cash. And then over the summer, both my bank debit card and my credit card were hacked at the same time. So for about a week or two, I got to experience what it was like to be unbanked, essentially. I could not get., obviously, my favorite coffee — that was like the least of my worries — but it did make me wonder 20-- up to 20% of Americans are either unbanked or underbanked. And considering that only banks can access FedNow, my question to you is what policies do you think ought to change, especially in AML, KYC, at the, at the front end that could help improve access to these new technologies like FedNow?

GUIDA: Mark, do you want to start with that?

TROUGHTON: Sure. Firstly, I'm sorry you were put in that predicament. It's unfortunate to have both your cards hacked at the same time. I'm sure your coffee company missed you as much as you missed them. I think that you know, I don't think the issue here was actually FedNow. I think we can argue whether FedNow would've have helped you access your funds faster in that situation. I think, I think, I think what you probably needed in this case was better, better controls, better security controls at your bank and credit card company, frankly. And by the way, I'm not saying that ATOs don't happen. Those things those things do happen, and it's a reality of our system today. But I don't-- I'm not sure that access to FedNow necessarily would have helped in that situation. You know, the the KYC, in this case, is probably a bit more of a KYC challenge, AML Challenge. Today, we think actually the-- we don't think the rules of that are that bad. We don't think that KYC and AML are the primary restrictors of access to the financial system as you talk about, you know, the 20% of people that are banked or unbanked.

Frankly, a lot of the people who don't access the banking system today are people who opted out of the banking system a while back. If you think back 20 years, you know, the free check, when WaMu came out with their free checking account — I don't know what that was maybe 15, 18 years ago — what that essentially did was it subsidized free checking for wealthier customers at the expense of underserved customers. And the overdraft fee burdens and the additional fee policies that were placed on on lots of everyday Americans actually drove a lot of people out of the banking system. And we still have a situation where many of them haven't come back based on those experiences. And they're using, they're using sort of more flexible accounts today. So, I think that's actually what we need to do is to is to drive more general access, I think, to the to the banking system here. Create these flexible charges and payment systems that allow non-banks to continue to innovate and I think create better experiences. And I think that's going to bring a lot of these unbanked and underbanked people back into the banking system who've who've had this experience.

GUIDA: Do either of you want to chime in?

HILL: Yes. So look, the question for unbanked folks is really why are they unbanked? Right? Why have-- are they not in that space? And they do surveys of this every so often. And of course, surveys are collect what people say. And you wonder about whether you've got the right population of folks. And so, you know, surveys are are what they are. I mean, one of the reasons they say is that it's too costly or they can't afford it. And so to the extent you can make payments cost less, you might get fewer unbanked folks. Another thing, though, that they sometimes say is that they just don't trust banks. And so then the question is, is there something banks can do to be more trustworthy? Would these folks trust something other than a bank, or would they perceive non-banks that provide these sorts of services as just another bank? Or could you move them to-- some folks have suggested that the Fed ought to be in the business of providing consumer accounts. Some folks are really enthusiastic about that. I am, I guess, not understanding why people would trust the government more than banks. but, you know, everybody has their own background on that. So I think to serve the unbanked population, you have to be very careful about why you think that they're unbanked before you start fixing that problem because just making it cheaper doesn't solve the problem if what they really didn't want to do is deal with the bank.

GUIDA: Other questions? Here up front.

AUDIENCE MEMBER: I have a question about [inaudible]. Thank you. From — correct me if I'm wrong, I'm by no means an expert — but from what I've seen, a lot of times, they talk about, you know, interchange fees and credit card rewards. And a lot of times it comes up as poor or, you know, low-middle income people are the ones who lose because they're paying for these rewards, but the people who are really gaining from it are those who have, you know, the best cards and the highest interchange fees. But just from personal experience, I feel like for me, it seemed to be more of a financial literacy issue sometimes, in terms of if you can get a card, it's not always based on your credit score or anything like that. And if you can get a card, it can help pay for pretty everyday needs in terms of, you know, especially when the pandemic hit, at least for me, it was a big thing that helped out paying rent and, you know, just everyday necessities, using rewards to kind of like subsidize things. And obviously, I'm still, you know, paying with it, but I just wondered your thoughts on, is it really just, you know, helping the the top platinum card owners, or is it also, is it kind of a different problem?

AWREY: To clarify what the I think the dominant story here is, is that credit card markets are two-sided markets where you've got to get a critical mass of merchants on one side and a critical mass of consumers on the other side. And for people who provide platforms like credit cards, then you've got to make a choice about how you're going to simultaneously attract all of those people. And typically what happens is one side of the market receives a subsidy and one side of the market pays a price to get there because they want the other side of that market. And in credit cards, historically, the candy, if you will, are higher earning, high spending consumers who then make it very undesirable for merchants not to accept payments that those consumers want to make. The added wrinkle in credit card markets is that we have a small number of big companies that are negotiating with those merchants, but we actually have a tiered system of credit card holders. So when I get my Delta reward miles — although thanks to Delta, I'm sure all of you all know, they're not going to be worth very much fairly soon — I am the type of customer they want. Although little do they know that I'm completely cheap, but that's beside the point. But somebody who has the basic run-of-the-mill Visa or MasterCard that does not have points and are paying high fees, are paying the same interchange.

And that's the part that makes for the subsidy that we're talking about, is that they're trying to attract the "mes" of the world. And to do that, they're willing to pay points. And then on the other side of the market, I don't care about the fees, but there are other consumers within that market who have credit cards or who using the Visa, MasterCard networks, for example, who then aren't getting the points. And from that side of the market's perspective, they're just there for the ride. But on the other side of the market, they are paying the costs that are associated with not only the technological infrastructure that the card networks develop, but also the fact that somebody is paying for those points. It's--this isn't free. And when you look at the system as a whole, the answer becomes pretty clear who's actually paying for that. And despite the fact in their own individual perspective, people might feel like it's very helpful they are the ones who are the the ones paying the price in the room when you look at the system as a whole.

AUDIENCE MEMBER: [Inaudible]

AWREY: It is exactly "women drink for free" happy hours, yes.

GUIDA: So, so we're about out of time. I want to do, I want to just do a quick lightning round. If you could snap your fingers and change one thing about the payment system right now, what would it be? I'll start with you and we'll just go this way.

AWREY: My word, if I would change one thing about the payment system, I think it would be to send every American on a trip to their choice of either Singapore, India, Brazil, or the United Kingdom and spend a day making payments and realize what's possible and realize how cheap it is to do. What we're talking about today is not some futuristic scenario — that's the panel later — what we're talking about is our failure to actually build and offer consumers things that already exist all over the world. So rather than a policy, I'm just going to want to show everybody what we can already do.

HILL: I just want the Federal Reserve to follow the existing law with respect to master accounts. It's not too much to ask. It's very reasonable.

TROUGHTON: I would give Americans real-time access to their hard-earned wages.

GUIDA: All right. Well, that's all the time we have. Thank you all so much for joining us and thank you so much to our panelists. We have an excellent program for the rest of the day. Up next, I think we have Director Chopra, but we'll we'll have a quick break before then. So, just stay seated and we'll get you started.

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KLEIN: We're going to keep the program rolling. Rolling, rolling, rolling. It is-- that was a lively and fantastic first panel that covered the waterfront from credit card reward points to cryptocurrency, from payment nerds to real life, what do you do when you need to access your money? And real life is really the focal point of our next speaker. Director Rohit Chopra has been running the CFPB, and I like to say whether you agree or disagree with what the CFPB is doing, they're doing. And that itself is a massive accomplishment in Washington that I think is often underappreciated. Time in government is finite. The ability to effectuate change is one metric that we ought to judge public servants by —we can do a separate, whether we think it was changed for the good or for the ill — but I can think of very few people who are as skillful and as impactful in their career in effectuating change. Before becoming director of the CFPB, he was confirmed unanimously to be a commissioner at the Federal Trade Commission. Before that, he had a prior stint helping found the office of CFPB as its ombudsman for student loans, a topic that is still-- plagues and impacts us very much today. At this moment and thinking about the future of our payments, we've had a big conversation where we talked about back office and structure, but we need to now have a moment to talk about front office and how this impacts people. And I can think of nobody better than a person whose sole job is to look at the financial system from the consumer's point of view. So, Director Chopra, please come on up, give us some remarks, and then we'll have a conversation.

CHOPRA: Well, thanks, Aaron, and thanks Brookings and everyone who helped organize this today. You know, let me start by saying over roughly a decade I'd say, digital payments, mostly conducted through mobile devices, rapidly became ubiquitous in China. And two dominant Chinese big tech company services, Alipay and WeChat Pay, began to process millions of transactions and now millions of transactions every hour. They capture an extraordinary amount of Chinese citizens' personal data and the movement of money throughout the Chinese economy. And in the same vein, in 2019, Facebook announced that it had hatched a scheme to create a new global currency called Libra. And while Alipay and WeChat Pay have undoubtedly succeeded in capturing so much information and market share, Facebook did not succeed, and Libra did not become a new global currency for consumers. But the questions it provoked in the West for consumer and data protection authorities, for financial stability watchdogs, and national security agencies and central banks still live on. Importantly, the vision at the heart of the Libra project, control over the flow of money throughout the economy and over the sensitive data generated, remains alive among big tech companies around the world. Their incursion into finance comes at a uniquely vulnerable moment for the historical separation of banking and commerce, a debate that traces back to the earliest days of our republic.

Two modern trends are colliding: the erosion of traditional lines between core banking activities and commercial financial activities, and the growth of e-commerce and our digital economy. So today I want to discuss digital dollars and digital payments from the consumer, household, and retail perspective here in the U.S. First, I want to talk about how money and payment systems are essential infrastructure for our society. I want to share some analysis from the CFPB's inquiry into payment gatekeepers, especially those large tech firms, as well as some observations about surveillance and censorship. Finally, I'm going to close with this summary of the dangers of allowing very large non-banks to issue private money outside of the banking system and wield inordinate control over payment rails, as well as some policy considerations for the future.

So, we've long known that sectors like transportation and telecommunications are critical pieces of the infrastructure of our society. Technology that increase the speed of ships and railways dramatically changed the nature of commerce. High-speed internet fundamentally changed how we work with colleagues around the globe and see family members living far away. And I would just argue that banking money and payments are just as essential. Without this, there could not be the trade and commerce that is foundational to our standard of living. But this infrastructure is also somewhat different, relying heavily on confidence in addition to any physical or technological attributes. And banks are the primary way through which money is created and moved. And when we keep money in banks, we can demand it back immediately in physical cash. We can also use this bank money deposits to make payments.

As a society, we give banks very special legal treatment to issue this and influence the supply of money in our economy. We afford them access to the public safety net when they get into trouble so that we can ensure for consumers and businesses that their money is safe and reliable. In return, we subject banks to oversight regulation and require that they meet the needs of the community. And to prevent all sorts of conflicts of interest, whether it's with railways, energy, utilities, the list goes on and on, we also limit banks to certain financial activities rather than allowing them to engage in commercial enterprise or merely be an arm of a larger conglomerate. It didn't always work this way. Banks used to issue sketchy private money. And at times in our history, banks and their executives created and managed sweeping conglomerates across commercial sectors, dictating to the economy rather than serving it.

In many ways, aligning our national currency and bank-issued money while structurally dividing banking and commerce promoted a neutral standard for money and payments that instilled confidence and stability. The creation of our nation's central bank, the Fed, was a further acknowledgment that banking, and payments had important public infrastructure components that needed public investment and governance. Just as aging bridges and outdated power grids demand public investment, so too does the nation's payment systems. And as the payment systems evolved, driven in part by technological adoption, like the telegraph and eventually the Internet, the Fed invested in an architecture that created public utilities for wire services, ACH transfers, and now real-time payments. And to be sure, our country has not always devoted the necessary resources to ensure fast and open payment options, especially over the last few decades.

So during this time, lots of private gatekeepers emerged. Decades ago, new private electronic payment networks, like Visa and MasterCard, started to grow. They had different names. They grew over time. But ultimately, they still move money through the regulated banking system on the back end, relying heavily on communication rails built outside of the Federal Reserve system. At first, these networks mostly were facilitating short-term borrowing, largely through charge cards and credit cards. Over time, modern-day debit cards grew into a massive portion of those networks' traffic. And general purpose reloadable prepaid cards, where funds could enjoy pass-through deposit insurance and other products also write these rails.

Now, more recently, we've seen new private gatekeepers emerge. Some are mobile payment apps with enormous bases of users. And here at home, PayPal, Venmo, and Block's Cash App are among the most popular, especially when it comes to facilitating personal payments between friends and family. There's also bank-owned apps that travel within bank rails, like Zelle. Others are big tech firms. And as I mentioned in China, Alibaba's Alipay and WeChat's WeChat Pay became dominant in retail payments. In the U.S. and across the globe, Apple and Google traffic a growing number of payments through their digital wallets. So starting in late 2021, the CFPB began to study these payment platforms, including the big tech firms. We issued orders to many of the major players operating in the U.S. And last month at the Federal Reserve Bank of Philadelphia, we released our analysis of tap-to-pay features, describing the regulations imposed by Apple and Google. We've also spent considerable time evaluating the complex data handling practices and privacy protocols at these firms. Now, these firms' regulations are often long and filled with legalese, we often click right through them. And to make things even more confusing, they sometimes refer people to other policies to understand what data is being ingested, how it's being used, and what, if any, rights a person may have.

And while their regulations are convoluted, there are clear takeaways for us. First, these firms collect a significant amount of data about the consumers using their payment products, and they use this data for a variety of purposes, including to develop, market, and sell payments products, and for a majority of them, other products and services to potential third parties. Second, these entities retain much of the data they collect for extended periods of time. The companies generally require that consumers consent to their data being collected to use the product and that the lack of such consent would restrict their access to many or all product features. It's take it or leave it. Similarly, fulfilling a request to delete data may result in the closure of a consumer's account or their inability to continue using the product. Finally, regardless of how these companies use the data they have collected today, their regulations do not appear to commit to meaningful limitations on future efforts to monetize the data, including fueling artificial intelligence and other use cases. Their policies are not static and evolve over time. Each new version affords these entities opportunity to change their position on what data is collected or how it's used. It also impacts how they share those data with other parts of their corporate conglomerates, including commercial businesses that they operate. And as I mentioned earlier, U.S. banks are subject to certain restrictions when it comes to cross-ownership and affiliation with commercial firms. The payment platforms I've just mentioned are not banks and are indeed parts of big conglomerates touching so many areas of digital commerce.

So what's the problem? The traditional lines we drew within the financial sector have become much fuzzier recently. Big tech companies are now taking advantage of that blurring as they move into finance, threatening the fundamental separation between banking, money, and payments on one side, and our real economy on the other. They can engage in bank-like activities either on their own or through complex arrangements with banks without facing many of the same limitations or obligations. And naturally, these firms will have a strong incentive to surveil all aspects of a consumer's transactions, matching it up with geolocation, browsing history, and so much more. Since this data can advantage the rest of their businesses, for example, the firms can use detailed payments data to develop personalized pricing algorithms for eCommerce or increase engagement with their behavioral advertising businesses. And of course, corporate surveillance activities around the world also raise questions about espionage, tracking, and censorship. Indeed, there has been concern both in the U.S. and abroad about the relationship between Chinese tech giants and governmental entities, including with respect to the sharing of sensitive user data and censorship.

Given the massive scale that payments firms and tech giants can amass, this can also raise alarm bells regarding private financial censorship as well. Since each of these firms controls the regulations of its payment systems, the CFPB has been studying how these firms decide which users get to play on the platform and who gets de-platformed and why. For example, last October, PayPal updated its regulations to give itself the power to levy fines and take punitive actions against users engaged in conduct that would not otherwise violate federal or state law. PayPal withdrew the regulation. merchants selling goods and accepting payments through these platforms also report being censored and muzzled.

Many of these issues are top of mind for regulators and legislators when it comes to private digital dollars and privatized payment systems. In November of 2021, the Treasury Department and other federal regulators produced a report on private digital dollars. The CFPB found their report to be interesting, especially when it comes to concerns outside of the consumer household and retail context. For example, the report described risks to the financial system and to market competition, particularly if these private currencies became broadly adopted. And from a consumer regulator's perspective, it's important to safeguard against the risks of private currencies, such as the potential for destabilizing runs, intrusive data surveillance, private financial censorship, private regulations that favor the issuer's commercial interests, challenges with error resolution, and consumer fraud. Of course, the specifications, particularly the technology specifications, and the business model of the currency creator and payment platform operator may service more risks or mitigate many others.

The November 2021 report made some helpful suggestions that would address some of these risks. For example, the report suggested that agencies explore the applicability of Section 21 (a)(2) 0f the Glass-Steagall Act. This prohibits non-banks from engaging in certain types of deposit-taking activities. The report also described the benefits of limiting commercial affiliations with private currency issuers and limiting the use and misuse of transaction data. And to ensure that private currencies and payment systems in the household and retail context do not harm consumers, we think a number of steps are warranted. First, the CFPB will be issuing supplemental orders to certain large technology firms to acquire more information that will help us better ascertain their specific business practices and plans, especially with respect to the use of personal data and any issuance of private currency. Second, to reduce the harms of errors, hacks, and authorized transfers, the CFPB is exploring providing additional guidance to market participants to answer their questions regarding the applicability of the Electronic Fund Transfer Act with respect to private digital dollars and other virtual currencies. Third, the CFPB is going to look at appropriate authorities to conduct supervisory examinations of non-banks offering consumer payment platforms. We have a number of authorities to do so, such as when these firms serve as service providers to large depository institutions.

Another one of these authorities includes defining larger participants in this market by rule, which would subject banks meeting a particular size threshold to CFPB supervision. Fourth, as suggested in the November 2021 report, the Financial Stability Oversight Council should consider exercising its authority under Title VIII of the Dodd-Frank Act, to designate this activity as, or as likely to become, a systemically important payment clearing or settlement activity. This could provide, for example, other agencies with critical oversight and tools to ensure that a stablecoin is actually stable. Finally, it's critically important for American consumers to have stronger protections against excessive surveillance and misuse of our data. Later this month, I will authorize the publication of a proposed rule regarding personal financial data rights. This is pursuant to Section 1033 of the Consumer Financial Protection Act. The rule will seek to accelerate America's shift to open, competitive, and decentralized banking, while also seeking to safeguard against abuse of our personal data. In addition, I think all policymakers, legislators, and regulators must continue to identify additional financial privacy protections that go beyond the existing Gramm-Leach-Bliley protections. They have totally proven to be insufficient. I'm hopeful that federal legislation can provide us with more tools to deter abuses.

In conclusion, I fear that the U.S. is lurching toward a consolidated market structure, like the one that has emerged in China, that blurs the lines between payments and commerce and creates the incentives for excessive surveillance and even financial censorship. A quarter century ago, the U.S. Mint within the Treasury Department began to chart out its thinking on minting coins in the digital era. Today, we have many more questions to answer and challenges to overcome. And as we seek to configure a payment architecture that can provide safe and secure electronic cash, we should make sure that the deployment of private sector technologies and services are aligned with our values for fair competition, consumer protection, and our national security. Thank you very much.

KLEIN: So, it was really hard for me to stay seated cause there were so many times I wanted to jump out of my seat at what you were saying. Often to agree, but that would be kind of boring up here. So let's, let's talk about a couple of the things where I want to probe a little deeper as to what you were saying. Director, you, you went into a good amount talking about the separation of banking and commerce, which is fundamental in the U.S., but isn't it the case-- you put payments on the banking side, but a different way to read the law is banking is the taking of deposits in the making of loans. Payments is on the commercial side of the ledger, at least somewhere in the neutral zone. And so, why do you-- banks have dominated payments because they're better at it. They have a lot of comparative advantages. But why is it legal-- why in your legal mind did you put it there?

CHOPRA: So I think if you really look at our history, the way in which a lot of money has moved has been heavily influenced by public utility approaches. So if you look at how the Fed created even standards for check clearing, how they created standards for wire services, even FedNow, it has a fundamental public infrastructure component, partially because these are network businesses. In some ways, they are natural oligopolies or monopolies. There cannot be 10 million payment systems. Now there could be if there was interoperability, other aspects. But it has a function, Aaron, that is very much about public infrastructure. So if you look through many moments in our history, we have decided that we want to be different than Europe in many ways. We don't want to have national champions. We want to create a structure that provides a lot of innovation and progress on top of these networks. And I think it's a place where there's a lot of room for a huge amount of private sector participation. But once it comes down to a Chinese-style system where you really have two players trafficking lots of the retail payments, I think that introduces some very, very real problems.

KLEIN: So I love the the view of China. I went deep on Chinese payments years ago when I came back from, from an experience over there. And, you know, the takeaway I had was in the most centrally planned government on earth, the consumers refused to adopt cards because of the merchant fees. They had a cash-based economy. The banks were doing nothing. And the PBOC, the Chinese central banks, said "Eh. You tech firms figure it out," and the tech firms crushed it. Ali and WeChat are light years ahead of our technology in providing better, faster, cheaper services. Now there are a bunch of problems in terms of state surveillance, government control, all the things you flag, but man, their system smokes the American system in terms of better, cheaper, faster, more secure for merchants, for customers, etc. I think you're right to drop-- to draw that analogy in terms of Libra and all of these things, but I kind of question you like, wouldn't it be much better if we had that system than a system that crushes people on overdraft, that a check I deposit today, which could be available instant to me, is going to sit in my bank account till Tuesday because that's the next business day?

CHOPRA: But we should ask ourselves why that's the case. So one of the reasons that's the case is that — I mentioned some of the private sector rails that exist, for which they are very many of them here and have a lot of reach — what's the incumbency bias to protect the rents and fees that they draw from that? So, I want us to be careful because I do think we have a very different model about how major enterprises are connected to the state here. I think in China we can all agree is a little bit different. So the question then becomes, is what is the right regulatory architecture that still supports all of that but that doesn't actually create some of the harms, especially when it comes to consumer fraud, you mentioned costs, you mentioned speed — those are benefits, not harms, but there's all this other stuff — that what happens when this network business uses that to advantage the rest of their conglomerate? And I think that has some very, very real modern-day applicability today.

KLEIN: I think you're examining-- you look-- keeping stuff within the Alipay ecosystem then influences your site search in Taobao, and you think about an Amazon doing the same thing, I think those are really important areas that we need to be on guard. And you're right, in the 21st century in that way, that that's a new way to tie banking and commerce with your flag on data. On the other hand, you know, the speed is a benefit, the delay is a harm. And we have a system that is deeply delayed. I want to pick up on a point you stuck in at the very end about the Mint and digital coins. America is unique in that the Mint is a liability of the Treasury and paper money is a liability of the Federal Reserve. I think it's like us and Kenya or Argentina that are the only countries on earth do that, but it also explains why we don't have dollar coins in America. The Fed doesn't make money on that. I see Tim Assad and others-- he had a really interesting paper about the Treasury playing more of a role in this than the Mint. And you talked about a digital coin as opposed to a digital dollar. So I wanted to ask you about the Federal Reserve and CBDC or central bank digital currency. We have commercial bank digital currency. We have CBDC in America and we have for a long time. Where, you know, did you-- do you see a place for the Treasury to explore as opposed to the central bank? I mean, why does it have to be a central bank digital currency versus a Treasury or government-backed digital currency?

CHOPRA: Yeah, I, I actually find the entire CBDC conversation very, very confusing because it doesn't divide out the key design elements. So, what part is issuing it? What is the technological specifications when it comes to privacy and tracking? If you think about a coin, a physical coin, probably the most private way, there's no serial number on it, there's many things we could think about. But at the same time, I would, I would argue, Aaron, that there's all sorts of reasons to pursue, not to pursue, I think those are heavily related to wholesale, commercial, larger national competitiveness issues. If we care a lot about retail payments, let's figure out what are the indicia of things that are most important to us. I would argue-- we've already mentioned safety, speed, funds, availability. We actually have lots of tools to address those both in the current system and in the beyond. So for example, there is a law called the Electronic Funds Availability Act. It's implemented through regulation CC. It's a place that the Federal Reserve Board and the CFPB have some authority. I think it's take-- worth taking a look at how we make funds availability and what the right level of speed is on that. I think when it comes to fraud, you know, there is lots of places where we can align the incentives better, and in many cases, I've seen how the private sector and financial institutions are starting to move to address those. So I don't want to not answer your CBDC question, but it's mushing together.

KLEIN: So, so let me put a few of them because it's like red meat, and I'm rabid. The-- you could apply the extra-- the FDA on balances on on stablecoin, CBDC, and Fedwire as a potential fraud issue. You could use the Expedited Funds Availability Act, the Federal Reserve could, right, in consultation with you, to make people's payments available faster. By law, you already get the first hundred dollars of a check. The fact that the Fed has not-- the law says shall, the law doesn't say may.

CHOPRA: It does say shall.

KLEIN: It does say it, right? Right. We've heard the law, right? The law also said the Fed shall promulgate regulations on subprime mortgages written in 1994. Anyone want to guess when the Fed got around to that important topic... 2007. What happened in subprime mortgages between 1994 and 2007 tanked the global economy while the Fed refused to follow the law and promulgate the regulations. We're at the same point that we have been in the Expedited Funds Availability Act. It hasn't taken the global economy, but it's taken hundreds of billions of dollars from working poor people and put it in the hands of payday lenders, check cashers, and bank executives with boats named overdraft. When is the Fed going to use its legal authority and follow the law? Or for a comment earlier from Professor Hill, what happens when they ignore the law?

CHOPRA: Oh, boy. So let me just say that the central bank has many functions. And as you mentioned, many of them were stripped from the Fed after the passage of Dodd-Frank, but they also got some new ones as well. So, as you think-- and I think sometimes we, we need to think more analytically about the linkages between monetary policy, bank supervision, regulation, and payments, as well as household financial stability and consumer protection as part of all that. So, I do think we are overdue for refreshing the payments architecture. There may, in fact, be a role for the Treasury, many people have argued this. Not only in terms of Treasury securities that are issued — there is already something, a one-day non-interest bearing security, the certificate of indebtedness, the Mint, you mentioned, does have authority and the senior edge from there is-- is, you're right, accounted for differently — I hope we start-- rather than focusing on phrases, focus on surveillance, censorship, fraud, all those lists, and we can just take them all off I hope. Some of it is going to require, I think, some new laws, though.

KLEIN: Yeah, no. I think--.

CHOPRA: Especially when it comes to privacy, we need more help.

KLEIN: I think there's maybe a role for new laws, but also a role for enforcing the law that we have that has some authority, you know, you mentioned fraud, and you could do some things on Fedwire, which is usually where bigger wire transfers happen as opposed to, you know, Zelle or something like that. We have time for one more question, then I want to turn to that to the audience. We'll start, Tim, with with you. But the panel before, there was a lot of conversation about frequent flier miles and credit card points, and you talk about the private creation of money. And last night, I'm booking tickets to go to see the twins in the playoffs, and I'm moving money from my credit card rewards to my frequent flier to pay for my daughter's ticket. This is not money somehow. But when I buy my ticket with cash, it is money. And we saw that news from Delta Airlines, you know, do we have airlines, or do we have financial credit card payment structures that run planes in order to drive people into their card? Where do you see the financialization of society in this payment mechanism?

CHOPRA: I will tell you--.

KLEIN: And where's the role of the bureau?

CHOPRA: It's not just airlines. I think you could even say if you look at the securities filings even of certain retailers, you see how much of their business relates to credit cards and financial activities. So look, I think there is certainly a lot that has happened in the past few years, especially around rewards. So, rewards, we might think of that in the past as some sort of very specific kind of gift card type arrangement, but really, if you look at the broad range of activities happening in points and rewards, especially online gaming, there's lots of sectors we see this/ We do get a lot of questions about how does this interact? Are these funds? That is part of, I think, what I mentioned in my remarks. We may need to provide some additional guidance on--.

KLEIN: I mean, the banking industry seems to be making the argument that your reward points directly come from their fees: late fees, overdraft fees, merchant fees. So, I mean, it seems to me they're making the linkage even more clear. Tim, you raise your hand for a question. Where's the mic? We'll, we'll get there because I do think these are, these-- I'm glad to hear it because this is what real people are talking about.

CHOPRA: And actually, there's a lot of concerns about misrepresentations, about how those points could be used, how those rewards could be used, and, you know, we, we are thinking a lot about, is there bait and switch happening? So, sorry. Go ahead, Tim.

AUDIENCE MEMBER: Thank you. Tim Massad. Thank you for your comments, Rohit. You mentioned that FSOC should consider exercising its Title VIII authority to view stablecoin activity as likely to become systemic. I hope I got that right. I just wanted to clarify if you were referring just to stablecoin activity or something broader, number one. And number two, can you talk about what kind of reception you expect to get from Secretary Yellen and other members of the FSOC? Have you discussed this with them? Where do you think this is going?

CHOPRA: So some of you may know that as part of the financial reforms, it gave the authority to Treasury and the regulators to create certain prudential and enhanced standards for certain non-banks. I won't go into all the details, but it can be institution by institution, it can be for certain financial market utilities, you know, for for a whole host, and there's been many designations around that. One area that hasn't used is the Title VIII authority around payment clearing and settlement. So, I think that there's actually a number of issues there around non-bank issuance of currency and coins. It would be highly inappropriate, as you know, to comment on the deliberations that we have on that. But it is explicitly referenced in the 2021 report. The 2021 report, which is now approaching two years old, essentially says absent legislation, the council should look at exercising that authority because at a minimum it would provide some additional tools on liquidity, on standards to make sure that some of the risks about coins being runnable, about creating destabilization, it could be addressed.

KLEIN: Isn't it ironic that the closest stablecoin came to crashing was because the bank they had their money in failed?

CHOPRA: So, I think actually, if you-- there are others, I just don't want to say the only one, but if you're referring to Silvergate--.

KLEIN: Circle and FEB. Circle is three billion dollars that got bailed out by FDIC.

CHOPRA: I actually-- there's there's many more, there's many more examples of how we might think of the linkages between a non-bank issuer and the bank's deposits. But I think the question becomes --what we've obviously, many people come to ask questions about Tether, other ones. The point is--.

KLEIN: How the hell is Tether still standing?

CHOPRA: It's. it's important for us to see where these things can become very large. You know, what are the tools that we have to make sure that it's actually stable?

KLEIN: All right. We've got time for one more question because I know you have a hard stop.

AUDIENCE MEMBER: Thanks. Yaya Fanusie, Crypto Council for Innovation and the Center for a New American Security. I'll try to be quick. Data privacy rights, I think we understand it well, very important. Can you point us towards either a document or sort of a vision, a vision document for how we in the U.S. should see digital financial privacy? And I mean more a vision as opposed to just specific rights or standards. Thinking about China, China has a-- is very clear on its vision for the digital future. If we're going to make laws or change laws, what reference do we have that sort of updates the Fourth Amendment or applies the Fourth Amendment to our original-- to our digital future?

CHOPRA: It's a great question. I mean, I think when you-- it's not easy to compare with China when it comes to financial privacy because I don't know if they have a vision for privacy. So, I think that the-- where I would, where I would say is this, we have-- I think there's very broad consensus now that the notice and consent framework that is really imbued in the Gramm-Leach-Bliley Act, and frankly, many others — there's elements of it and HIPA, there's elements of it in other state and federal privacy laws — I think people have accepted that that doesn't work. You can't meaningfully opt-out. It's often take it or leave it.

So, I think what you're seeing across sectors, not just in financial services, is really in some ways a little bit more like the Fair Credit Reporting Act in some ways, which is permissible purpose restrictions and use limitations. It is a real challenge because these are hard to enforce. In many ways when someone-- you can't-- it's very hard to verify when something is deleted or not being used for some other purposes. So, I think that is something that you already see happening throughout the U.S., across states of very different, you know, ideological stripes in some ways. But I think the concept of purpose limitation, and if I'm offering you and asking for your data to originate an auto loan to you, M, is it reasonable that I'm also going to sell that information to-- because I know that you're in the business, you're in the, in the market for a lawnmower. And I think that is sort of where the lines, I think, have to be drawn. We will be proposing some rules that will accelerate open banking. And I think part of that is going to be some use restrictions on the data that is consumers are positioning to financial firms.

KLEIN: Well, that is very exciting to look forward to. Join me in thanking the director for his time and thoughts. And if we could stay seated for one second. I know you have to get, to get out of here and go. Please, take-- you can, you can head out. They stay seated while you get, while you get out because I know you have to make a run. And realize I appreciate-- GLBs privacies were a giant win for the post office, lawyers, and paper companies. I think paper was the only one still fighting to get those things in the mail when Congress got rid of them. And I mean, HIPAA's insane, right? I, I had to pick up a CD-ROM of my shoulder, MRI, because they couldn't email the picture between doctors. And so I hope--.

CHOPRA: [Inaudible] doctor's office when you--.

KLEIN: Oh, yeah. And when I brought the CD-ROM, they were like, "I don't have a CD-ROM reader. You know, what is this, you know, 2006?" And so build a better system, man. Thank you very much, director. Do we have do we go straight to the second panel? A short break. Five-minute short break. You guys enjoy a cup of coffee and then we'll be back for more fireworks.

* * * * *

AWREY: If everybody wouldn't mind taking their seats. We're gonna get started in a moment. Ladies and gentlemen, if everybody would take a seat, we're going to get started. If everybody just wants to grab a chair, unlike the U.S. payment system, we like to run on time here. When the-- I'm gonna have to do this the Bob Barker way, rest in peace. When the Founding Fathers sat down to write the U.S. Constitution in the summer of 1887, they had been scarred not only by war but by a series of failed monetary experiments, experiments with paper money issued by the states in the Continental Congress. The scars of those battles are written on the pages of the Constitution itself, which has a very narrow view of what money is. This is gonna get ugly quickly. That view basically saw legal tender as gold and silver coins. At that moment in history, there were only three banks in the entire United States. None of them played a particularly prominent role in the money supply. Gold and silver coins, no banks, think of how far we've come in 200 years. There's a lesson here about the durability of money in payments that I think is important in understanding the context for this next panel.

In the first panel, we talked about the challenges that we face in using technology that exists today in order to improve the system of money and payments that we offer Americans. But we also need to have conversations about what money is going to look like tomorrow. It took us upwards of 100 years to figure out on the basis of the U.S. Constitution, what a monetary system that actually involved banks would look like. We're currently less than a decade into the 21st-century analog of that question, which is, what does money payments look like in a digital world, in a decentralized world, in a world where not only gold and silver coins, but paper money have long since gone the way of the dodo. To help walk us through this conversation and be our guide, we have none other than Professor Chris Brummer at Georgetown Law. Chris is one of the people that, for this room, needs absolutely no introduction. Some of you know Chris from his scholarship. Some of you know Chris from the incredible ball of energy that created the Fintech Beat podcast in D.C. Fintech-- Fintech Week. And some of you know him as one of the most creative and constructive policy advocates in financial law and technology. So please join me in welcoming to the stage Chris Brummer.

BRUMMER: So some of you know him as the guy not knowing whether to sit down or not [inaudible] Are you okay? All right, everyone can hear me. All right. For the next trick, I will bring the panelists to the stage. The one and only Brian Brooks. I [inaudible] maybe in order. The one and only Brian Brooks, someone who truly needs no introduction. As-- with the service over at the Office of the Comptroller of the Currency, he is an intellectual, he is a policy advocate, he has a huge brain, and is over at O'Melveny and Myers. We have Raj [inaudible] and Yesha Yadav also coming to the stage. I am going to introduce you in the order of being seated. Yesha Yadav, who is helping to organize both this panel, this conference, a very good friend. I've known her forever, since the World B-- for really forever, from the World Bank to Vanderbilt, and is one of my intellectual partners in crime. Raj Date, the managing director of Fenway Summer, also with extensive experience in consumer protection, really at the front lines of both government service as well as the private sector. And then finally, my good friend Christina Skinner from the Wharton School, also one of the leading professors and scholars and thinkers on financial regulation and policy.

It really is a panel full of people I both adore and look up to, respect, and I'm really excited to to really learn from you in this conversation. Okay. So as Dan had mentioned, the last panel really was bringing together a number of themes, really going to the heart of the health of the economy and the critical nature of the financial system. And I think that what we can certainly say is that today's payment system is really a mix of the old and the new. I have likened it before to JFK Airport, you know, it's at least before its, I guess, current renovations, you would go there and it would be a little bit old, a little, little smelly, a little slow, slightly embarrassing, but yet the heart of global commerce. And there was a certain kind of similarities between JFK and our-- in our modern payment system. But let's jump right into the conversation about what exactly are both the options on the table, what exactly can be said about the direction in which our payments system is evolving. So I'm going to start off with with Yesha, and maybe you can kick us, kicks off with a professorial explainer of stablecoins and CBDCs since that is really where the policy conversation is, is centering. You can Schoolhouse Rock us with sort of the basics and then to maybe jump into some of the that the critical points of emphasis for the policy conversation.

YADAV: If you want me to be a professorial, Chris, and a law professorial at that, we could be here the whole hour.

BRUMMER: I said in Schoolhouse Rock, I'm just a CBDC.

YADAV: So, you know, so we can just keep going--.

BRUMMER: On Capitol Hill.

BRUMMER: Or maybe not.

YADAV: Maybe not.

BROOKS: [Inaudible] either too old or too young to know what you're talking about.

BRUMMER: I, I know.

YADAV: So, to get professorial, let's just take a step back, students. Let's just take a step back. No Socratic calling today. But I want to go back to what Aaron said in the last panel, which was to raise the notion of public money. And so I think it's worthwhile starting with this definition and just clarifying the sort of difference between public money and private money. We all kind of know it, but I think it's worth just, you know, being really clear about it, which is public money that is backed by the full faith and credit of our government, and that is issued obviously by the Fed, in the case of the-- in the case of paper money, the Treasury as Aaron was alluding to in the case of notes and coins, that's public money. It's completely and utterly risk-free. It's wonderful. It's gorgeous. It's, it's fabulous. Then, of course, we have money with a little bit of credit risk, and that is private money. These are the claims that we're using all the time in the context of our banks, non-banks, and others. We talked about money remitters. We talked about-- we had this whole conversation in the, in the morning panel about sort of private money that is very prevalent across all across our payment system. That is the basic dichotomy here.

When we're thinking about CBDC, that is a way to digitize public money. For us, the public money that we are all interacting with as people are basically notes and coins and physical cash. Now, as we talked about at the very start of the whole thing, most people today are moving towards a more cashless universe. And so the question for policymakers is, do we need to digitize public money to put it into the form of a CBDC that can come with some other potential sophisticated cool things, “Schoolhouse Rockin'” it, which is potential for programmability, for example, to think about ways in which that money can be very directly programmed to do certain things. For example, be distributed in the context of stimulus payments or maybe to your kids so they can only spend it on certain things. So there's that programmability element, as well as being a full, kind of, full backed by, backed by the government, potentially programable, and also therefore potentially very cheaply distributable to maybe reach those who are financially excluded and would benefit from very cheaper access to formal financial services. So that's the CBDC.

And now we're in the world of private money and looking at stablecoins. So these are, these are tokens sort of referencing, we talked about earlier, sort of hard assets, claims that are now transacting on payment rails, settling on payment rails that are global, that are verifying transactions in sort of very rapid moments in time, and they're able to move in sets of money super, super cheaply. And so what they're offering is a vision of payments potentially that's a little bit more international, that's moving money super fast, that is referencing money at the back end supported by a thick buffer of assets, but potentially able to move money much more cheaply and faster than traditional banking system has been able to do. So those are the functionalities that stablecoins and CBDCs are looking to offer in the big picture. Now there's a whole conversation that we're going to have about how to think about regulating and talking through them, but those are the two basic dichotomies here: public money, private money, CBDCs, stablecoins that are coming into play today.

BRUMMER: That was, that was excellent. You know, sort of, you know, and really thinking about, you know, the definition of money and about how the definition of money is changing from just, you know, a unit of account to means of storage instrument for for really moving value, and then introducing questions like programmability. Brian, you have a really unique vantage point and really firsthand experience from your time in government and also as someone who's really been working on digital assets for, for really quite some time. You know, the points of emphasis from Yesha were stablecoins and CBDCs, right? And we're certainly seeing that conversation continue, particularly with Circle, PayPal, and then the CBDC conversation, but where are the banks in that conversation? I mean, you don't, you don't really hear too much about the specific role that major banks can play in leveraging digital assets to improve payments. What should we be interpreting from that? Is that a good or a bad thing? And then where do banks sort of fit in this larger cocktail of both policy and technology-- technological solutions?

BROOKS: Well, cocktail is a good metaphor, I think, for this conversation. Although, I was going to pick up on all these airline metaphors this morning in terms of like, are airlines a financial services company that happens to fly planes, are they planes that offer financial services? Based on my flight experience this morning, they're only financial services companies. But anyway, so, so let me, let me address the question this way. I'll try to be super provocative because that's always my role on the panel. I think you could make an argument that one of the reasons for the increased demand for stablecoins over the last, let's call it five years when stablecoins went from a market cap of about three billion dollars to a market cap of about 100 billion dollars today. So if you go from like beginning of 2020 to today, that's roughly the growth trajectory. One of the reasons for that increase in demand is not because stablecoins themselves are so super awesome, it is because the United States is the only country in the, in the developed world anyway, that doesn't have an open banking system. And so what it means is you have banks that have privileged access to the Federal Reserve payment services and then you have everybody else in the universe, okay? What that means is that in the United States, the cost of operating the payment system is roughly four-x the cost of operating the payment system in, say, Britain or the EU. And that's because in those countries there is a licensing status that allows access to the settlement rails without being a bank.

In other words, you don't have to be a depository to access the Bank of England's settlement services, but you do have to be a depository to do that in the United States. And so that creates this enormous incentive for some non-bank instant settlement solution because the traditional payment processors have to use banks and it's that extra layer that makes everything so, so expensive. So I'm gonna argue that there is a market need for instant settlement and it doesn't have to be outside of the banking system theoretically. But the reason it is outside the banking system is because we have not allowed anybody other than depositories to connect to the Federal Reserve. So that's that's why there are some great things about stablecoins separate from that, like for example, the fact that they allow people to hold dollar equivalents without having to hold them in a bank account. That's not particularly relevant in this country, but as I argued in a recent Wall Street Journal op-ed, it's highly relevant in other countries.

So one of the big trends going on in the world — and Chris, I'll just make this last point and then shut up, but I think it's kind of relevant to the discussion — is we live in a world where there is strong geopolitical pressure in various parts of the world to de-dollarize. That's sometimes for purely ideological reasons, and sometimes it's because of legitimate fear about the way the dollar has been handled by our policymakers in the recent past. So, for example, when the United States froze Russian dollar assets because of the Ukraine war, it's like, on the one hand, you know, Russia did invade a sovereign nation and that is definitely not okay, but on the other hand, money is money and it's their money. So when suddenly you can do that, it causes other holders of dollars to think, "There but for the grace of God, go I, maybe it's time for me to hold a basket of other currencies." Stablecoins become relevant to this discussion because even when governments want to de-dollarize, the truth is virtually every person in the world would prefer to hold their wages in dollars than any other currency.

And so if you live in a country like, you know, I've been spending a lot of time in lately, like Brazil or Argentina, the day you earn your wage, inflation starts to eat away at that. And depending on whether it's Brazil or Argentina or Venezuela, it starts to eat it too quickly or very quickly. And if you could hold dollars instead of holding Argentine pesos or reais in Brazil, that would be a much better strategy for you. Except the problem is the banking system doesn't support retail dollar deposit accounts down there. So you can't go get a dollar bank account, you know, at Itaú in Sao Paulo. What do you do? What you do is you open your crypto wallet, you hold USDC tokens. That's a super easy way for people around the world to store their wages in dollars, which then creates upward pressure for stablecoin demand because it's like a Eurodollar account. It's something that's super valuable. So I'm really making two points. One is there is artificial pressure to have instant settlement outside the banking system because we don't have open banking. We could solve that, but we won't. And then there is demand from below, globally, for stablecoins as an artificial dollar savings account. Those two things are secular, they're long term and they're probably here to stay.

BRUMMER: You know, it's really interesting, you know, really thinking about the domestic demand and then the international or the global demand, and how the two aren't necessarily the same, and that there are different kinds of use cases and value propositions for these particular assets. Let's sort of continue along those lines. Raj, you've-- you're a venture investor, you've obviously been, you know, at the forefront of a number of consumer protection issues as the deputy director of the CFPB. When you think about that, that consumer interface with these, these instruments, what do you, what do you, number one, see, when it comes to the question of use case? And then, and then secondly, from a consumer protection standpoint, what are you seeing from the technology? What are you seeing from the transactions themselves that would sort of lead you to sort of kick the tires as to, you know, anything from safety and soundness to disclosure issues?

DATE: Well, let me start with the question of, of use cases, which, you know, candidly I think has been sort of a frustration over the course of the last ten-plus years, because the reality is that most of the use cases associated with, for example, stablecoins today, have a faintly self-referential quality to them. They kind of have to do with the crypto business, and once you exited the perimeter of crypto, the use cases are quite a bit harder to find.

That said, there are a few things that I'm quite optimistic about. So one kind of ties to this notion of of ubiquitous dollar payments. It just so happens that our commercial banking system ties together a number of structural advantages for banks that are not necessarily logically compelled to be together. And it creates some real problems for underserved people within the U.S. It's it's a global phenomenon that we focus just on the U.S. Those privileged-- privileges of banks are, for example, access to the payment system, access to choice of law, rate preemption, for example, national-- national bank preemption, and privileged access to liabilities. Obviously, banks are able to lever in a way that non-banks simply are not by virtue of insured deposits. And what that results in, because the commercial banking business is, I would argue, principally a liability economic profit engine, it makes it just kind of hard to serve households that don't have much money. And because banks also have privileged access to payments, it means that people without a lot of money actually find it very hard to make payments in an efficient way. And by de-- I mean, essentially, stablecoins to me are a means of delinking the access to leverage and the access to payment system, and that has the impact of giving a real benefit, I think, to, you know, the 50% of the households in the country that pound for pound are just not especially great economic profit drivers for liability centric banks.

BRUMMER: Yeah. I mean, one way of saying that is is is simply, you know, the small deposit customers over at banks aren't necessarily the most profitable. And so the question is, to what degree are they incented, if I'm hearing you correctly, to what degree are they properly incented, incented to create, you know, efficient payment services? Which has been a really, you know, a longstanding question, I think, in the space is, is what are the incentives to to serve, you know, the little guys? You know, CBDCs are introduced as one potential solution, right? Because you have the government stepping behind, both helping to create and standing behind a value system. There have been plenty of people to sort of quite literally wave the flag thinking about CBDCs as a means of exporting not only U.S. foreign policy influence, as a means of not ope-- not only helping to achieve more, more effective financial inclusion, but, but also as sort of exporting U.S. values. Christina, I know you haven't always, you know, been-- you are waving the flag, but maybe not not necessarily for for CBDCs. Maybe you can sort of lay out, like what are the kinds of trade-offs and the, and the kinds of things that come to mind when you, when you think about the the policy conversation.

SKINNER: Sure, sure. So, yes, maybe waving a white flag so to speak, to put down the [inaudible or at least a little bit slower. It would help if I turn my mic on. Okay. So, yes, absolutely. I mean, I've been thinking about CBDCs, particularly in the context of the global questions, the domestic context. And I think there are a lot of trade-offs that haven't really been sufficiently wrestled with, especially because in these early phases we've been mostly thinking about CBDCs from a technological feasibility standpoint, from sort of an economic standpoint. And I started to really think about CBDCs in a more sort of political economy lens and thinking about the implications domestically for the separation of powers, and just thinking about how the interaction of CBDCs would really shift power in the state and society. And I've been pretty skeptical of CBDCs domestically, and I want to qualify that. I'm really going to speak for the next couple of minutes about retail CBDCs, and maybe later we'll have a chance to disentangle that from wholesale CBDCs.

And I think, you know, the reason that I've been quite guarded in my viewpoint on CBDCs is sort of threefold. So, first, there is this entire sort of set of questions around financial market structure. So we pretty much know, or we can anticipate with a reasonable degree of certainty, that CBDCs, the introduction of a retail CBDC is going to disintermediate the banking sector, which is to say that people are likely to, you know, swap their bank deposits for a CBDC to the extent that they're making some substitution. We know that Americans still value cash for privacy-related reasons, for convenience-related reasons. We know that central banks are saying, you know, "We're not going to get rid of your cash." We also know that the way that central banks, you know. and the Fed a little bit less so than other central banks around the world, are sort of selling the project as saying, "You know, CBDC would be safer for you, right, because it doesn't come with that credit risk attached to a bank deposit." Some jurisdictions around the world, right, might remunerate the CBDC to incentivize uptake. right? So the point here is that we can expect that some proportion of the population is going to substitute bank deposits for CBDC. We also know that bank deposits are an important source of funding for banks, right? So the bigger question here is what will be the knock-on effects of that? What will the unintended consequences in financial market structure will this make? You know, loans for SMEs more expensive, the cost of credit, and so on and so forth? You know, I think CBDCs in some quarters have been touted as sort of financial stability enhancing, to the extent that folks are worried about stablecoins being sort of financial stability risks, and perhaps CBDC might be an answer to that. But I think the jury is very much still out on that, right? Because if we've got sort of a, a flight to CBDC quality in a crisis, right, that's going to be further destabilizing of banks. So there's this whole sort of ambiguity around financial market structure.

The second thing that I've looked at sort of in my own scholarship is this question around individual economic rights and really what-- how money is a really important part of the relationship between people and the state. So first, there's this question of, well, who gets to issue money, right? And you can go back, you know, I always love when conversations start with the, with the founding, right. You can go back to the founding and see this very deeply rooted tradition, and what's referred to as popular monetary sovereignty, right? Yes, the state has a role in creating some kind of asset-referenced money that can be used internationally. But the private sector also plays a really important role in issuing money, in particular,1 to sort of check the aggrandizement of the state's power, right? Because we know that European monarchs like to inflate the currency and do all kinds of things that are not really good for the people. And so it's always been an important part of our tradition to have a vibrant private sector issuance. So the question is how the issuance of a CBDC is going to shift that balance of power from the tradition that we have that really encourages private sector issuance of money to sort of a more state-heavy model. You can think about property rights, right? I mean, we tend to hold on to this tradition that money is a form of inalienable property, right? But CBDC is not that. It's a programable policy tool like we were talking about before. And so that's a completely different kind of monetary instrument. And the same sorts of things that you might worry about the private sector, in terms of capturing the value behind payments transactions, right? Well, the state can certainly do that as well and use the information behind CBDC to fine tune policy programs, which might be really intellectually interesting for policymakers, but it does implicate something really weighty for individual economic rights. And of course, privacy is always top of mind, I think, when we're talking about retail CBDC. And right now at least, it seems like the technology is just too immature to create a cash-like privacy instrument and something that's identity verified and consistent with Bank Secrecy Act and so on and so forth. And the last thing I'll say here is, you know, central bank independence if you create a retail CBDC, that is a liability on the balance sheet of the central bank, that has to then be matched with more assets, right? And so as soon as we tell the Fed to go out and buy more assets, you open the door to primary pressure from the Treasury to buy more debt, erode fiscal discipline, pressure to buy corporate bonds and pick winners and losers. And so I do sort of see retail CBDC as a big picture Pandora's box.

BRUMMER: Well, that was depressing.

SKINNER: Sorry.

BRUMMER: So, just as a as a question, just, just to make sure that I understand a little bit more, is it that, is it your hunch that the problem with the retail CBDC is that many of the problems that you've identified are not easily remedied even through sort of fine-tuned policy implementation? Or like, in other words, is it, is it really just an overall macro problem that it's kind of hard to get yourself out of? Or is it something that you think if you get, you get enough Wharton professors together in a room they could, they could figure it out?

SKINNER: So I'll try to be quicker in my answer here. I think with the retail CBDC, at least right now, the problems are intractable because there are too many trade-offs that one can't reconcile while still protecting the appropriate balance of power between people and the state and between the separation of powers between Congress and the executive branch. And so, I have a lot more optimism, and I think it's a a lot more sensible, given the potential consequences of introducing a retail CBDC, to address the policy problems that were identified on the first panel and in the beginning of our conversation with private sector solutions and more low-hanging fruit, right? Tackling the overgrowth and the sort of incongruity in AML and counterterrorism financing law, right? Making efficiencies there can translate into at least some further efficiencies in cross-border payments. And thinking about the wholesale CBDC, which maybe we'll talk about later.

BRUMMER: Okay. So let me-- so, you know, as a quick kind of wrap up of of our, our panel here, seems-- it seem to indicate a number of things. Okay, so we have certainly CBDCs and stablecoins, as you know, the primary emphasis, the primary question, obviously, that people are thinking about when it comes to upgrading our payments system. Nonetheless, banks tend to be a little bit sidelined, perhaps, from this, in part potentially because of internal incentives to serve low deposit customers, potentially in part because of, you know, thinking through what does it mean in terms of the bank relationship with master accounts and the Federal Reserve? Could be another kind of a question or an issue that also impacts the larger innovation questions. And ultimately, CBDCs are intractably problematic. So that would probably seem to suggest that stablecoins and/or wholesale CBDCs are maybe the best direction. We haven't really talked about, and we can always think about, you know, the newest iteration of the debate with tokenized deposits, but I think we'll get there in a kind of gradually there.

Okay, Yesha, we are going to return back, back to you. So CBDCs, according to Christina, are, you know, just the problem that-- they're the best kind of problem in the world for lawyers because they can never be solved. You know, stablecoins are potentially a problem that can be addressed, potentially so, or have issues that can be addressed. So what do you think are the top three priorities that regulators and/or policymakers should be thinking about if they are going to sort of position these instruments in a way that can really serve to constitute the arteries of our payment's architecture?

YADAV: Yeah. Thanks so much, Chris. And so I just want to kind of think about what Christina has been saying about the political economies, sort of talk a little bit more about the trade-offs. And you know, I'm a little bit more, you know, bullish about these trade-offs in the sense that, you know, there are a number of use cases, for example, emerging in the context of CBCDs, that speak to the issue of financial stability. In other words, that, for example, if you look at Sweden and the e-krona pilot, what the Swedes have been worried about and why they've been pushing really hard in the e-krona, for example, is this imbalance between having a huge amount of cash looseness and just, you know, an overwhelming level of private money claims in their economy relative to the public money claims. No one is using physical cash in Sweden. They have Swish, their sort of instant payment scheme, that's what everyone's using. And you know, it's become an economy that is hugely dominated by private money claims. And so, that is the, that is the impetus for them taking the CBDC really hard.

So on the financial stability standpoint, there's this other, there's this sort of other balance the other way, which is this public sector being crowded out of money creation. And that is another thing to sort of think about when the money creation is focused very heavily in the banking sector, that at least looking at Swedish history, has been liable to collapse on a number of occasions. So there's that trade-off. On the inclusion side of it, one has to think about, you know, some of the the trade-offs are emerging in favor of giving folks that are unbanked, that really have no access to any kind of sort of private infrastructure, the ability to go ahead and get some amount of, you know, access to the formal system. So in that context, the Bermuda sand dollar, for example, has been giving like 500 dollars' worth of an account that's not going to kind of destabilize the banking system, but allowing folks into the formal economy.

And sort of more widely than that, there's this, you know, ability to, you know, to harness the private sector in CBDC issuance. In other words, this is money backed by the state, distribution can occur through private banks, non-banks, that are then able to offer add-on services that can enable those with no financial access, or limited financial access, or who are just wanting services attached to a state-backed claim, to be able to get those services. So I think there are a number of different trade-offs. And certainly, you know, I appreciate absolutely what Christina's saying here. But, you know, there is this, there's this ability potentially to look at regulated solutions as well. They can think about ways in which to, to lever some of the financial stability risks, for example, by introducing limits on how much a CBDC account can have, and so forth. So, so thinking about that and sort of looking at the, the stablecoin side of things, I think there's been a really cool conversation this morning on what are some of the regulatory steps that we need to enable both digital private money and digital public money creation within our payment system.

And so like the top three, Chris, is what you asked for. I think, you know, first and foremost, coming to the discussion that we were having in the first panel as well as in Director Chopra's, which is, you know, just being able to ensure that stablecoin issuers have the assets that they promised that they're gonna have. And these, these assets are high-quality assets that are backing the stablecoins, that we can absolutely guarantee that you have the tokenized deposit there that is backed by real,

real verifiable assets, in that, in that context. Now obviously, there is complexity to that. Adam raised it earlier. Where are these assets going to be held? Now in the case of-- in the case of what we have today, many of these assets are being held in banks, which means that banks are doing fractional reserve banking, these stablecoin funds are being lent out. And we saw what happened with Circle and SVB in that in that context. So the risks migrated from the context of the private banking system into the stablecoin system. And you know, that-- is that was-- so, you know, so one big regulation question here is how will stablecoin assets be held? Should there be access to the master account; the question that we decided, you know, we're discussing today. What kind of licensing regime would enable that potentially to happen so that we can absolutely guarantee that these assets are exactly where they are supposed to be and are exactly in the quantity they're supposed to be at. and there's verifiability, and transparency, and vetting available to ensure that's the case?

The other thing that we also need to think about, at least in our context, is this, you know, federalist-- federalism that we're dealing with. State versus federal. What is the balance of regulatory authority that's going to exist here in terms of licensing the stablecoins, federal supervision potentially at the systemic stability side? What is the balance that we're that we're going to aim for? And what we're seeing today is a lot of activity in the state realm with respect to stablecoin regulation. New York, Wyoming, and others have done a lot to try and create a framework for stablecoin issuance. So that's, you know, another big issue here. So, thinking through one, obviously the assets, making sure they're backed and verified. Thinking through two, how these assets are likely to be held, and that implicates master account access for stablecoin users. And three, I'm thinking through our supervisory structure here that is going to make sure that we're going to have a very effective regime to balance, you know, the normal payment system regulation that we've had so far between state and federal. What's the balance that we're going to have to reach with respect to stablecoins, and the balance between payment functionality and systemic stability that is implied there?

BRUMMER: Okay, so, so a little bit of a different take. You know, a little bit more scalpel, I guess, argument than, than hammer. Brian-- speaking of hammers, Brian, you know, you can go at this here, you know. And really, you know, I'm a little bit curious, you know, what's your thoughts here, not just on this sort of larger stablecoin and CBDC debate, and really your thoughts on, you know, what optimal systems should look like. But, you know, as we sort of pivot from the conversation of how do you address systemic risk, you know, embedded in that conversation is also just how the industry itself on the private side should really make itself safer, you know, and particularly for the for the general public. But I'm just going to like sort of gather your, your general impression of the, of the conversation thus far to really get your perspective on how to make the system safer.

BROOKS: Well, first of all, I'm still back on Christina's comment, which I agreed with. But I heard something I never heard before, which is that one of the risks of CBDCs is that they might erode our fiscal discipline. This is the United States in 2023 after all. We haven't had fiscal discipline in 30 years. So it seems to me, of all the arguments, that anyway--.

SKINNER: [Inaudible].

BROOKS: Right, exactly. Whatever is left, and that may not be much. So, so I, you know, I have a number of thoughts about, about how to make all of this stuff safer. And obviously, they're very heterodox because they all got rejected on January 21st of 2021. So, so, you know, my basic belief system is that we have a fairly well-established system of financial regulation in this country that exists to manage an activity that is inherently risky. So financial services is inherently risky. The extension of credit, right, implies a rate of default. That's obviously why we're charging interest rate. There's a time value of money, there's an interest rate risk, there's a duration risk, there's a a whole set of risks that exist any time we're involved — excuse me — any time we're involved in credit operations. The payment system also involves risks. There's intraday liquidity issues and all kinds of-- there's technology issues and all kinds of other things. And so for that reason, we created this funny thing called a bank charter. And the bank charter exists to bring those risks inside of a system that has a set of rules to it, capital rules, liquidity rules, supervisory oversight, and a set of other kinds of things. And we do that not so that safe stuff can happen inside of banks, but so the risky things that an economy needs to grow can occur more safely.

Oddly, there does seem to be a view that certain kinds of risks, however, must occur in the unsupervised system, right? So things like stablecoins, one one viewpoint has it, shouldn't be inside of the banking system because that would make banks risky. I think this has it backward. I think this is the world turned on its head. I think that the whole point of our overarching financial architecture is to provide supervision, liquidity, capital, and operational risk management, a whole set of other things to take financial intermediation, which is inherently risky, and make it somewhat less risky. And so when I was leading the OCC, we did a series of things designed to do just this. We said, for example, that banks have the authority to custody reserve assets of stablecoin projects. We also said that banks have the ability to serve as validator nodes on blockchains, which after all, are the underlying networks on which stablecoins travel. We said that banks have the authority to custody crypto assets, not just stablecoins, but bitcoin and other kinds of things. And we did that not because we were blind to the risks of crypto or stablecoins, we did so precisely because those activities are highly risky and ought to be supervised, you would think.

And if there was anything that underscored the need to do that, it would be the explosion of FTX. You know, the trial's going on as we speak up in New York. And, you know, the conversation I have with people who are in that industry every day is, "Wow. If there had just been market structure rules for crypto, the same as there are for equities if the custody function had to be separated from the broker function, Sam could never have stolen all those people's bitcoin, and we wouldn't be in this situation." And yet somehow people took the opposite lesson, which is "Look how risky crypto is. We need to keep it away from the system." I think we've got this backward. I think we know how to, not perfectly, but reasonably manage financial risk in a way that doesn't blow up the system.

And as new forms of payments or lending or deposit-taking occur — and we're talking about stablecoins here so those are at least deposit-taking and payments, right? Stablecoins are both of those two things — It makes sense to deal with them the way that we've dealt with other kinds of things in the past. One thing I do want to say, however, is the idea that stablecoins are somehow unique because they're, you know, non-bank issued forms of money or whatever isn't all that unknown in our system. I mean, there was a time when American Express didn't have a bank, but they did issue traveler's checks. And if somebody can explain to me how American Express traveler's checks, pre–Centurion Bank, are any different from stablecoins, you know, I'll buy you lunch. I mean, we've seen this movie before. We used to have a different view of these things. And somehow we've just decided that because blockchain's involved, it's a special case. I don't think it's ever a special case. You know, innovation occurs, but the human needs being served by innovation are the same human needs over time. We need payments, we need lending, we need deposit-taking. Those three activities at the core of the financial system. We've always known how to regulate them. Keeping the stuff outside the system is crazy.

BRUMMER: I think that that's such a powerful and useful sort of meta point, right? Which is when you have financial risk, oddly enough, it's a question of should, should that risk be regulated and how exactly do we contain that, that risk? Just, you know, for the panel in general, I think it's worth taking a step back because that same question is asked in a number of parallel sectors, often tied to blockchain, and I'd be curious to get anyone's perspective or if they have any any kind of response. And I'll start maybe with you, Christina.

SKINNER: So…what?

BRUMMER: So, in terms of how we draw the regulatory perimeter for things like stablecoins. You know, it's pretty clear about what the-- what your view is on CBDCs, but, but certainly, there are risks associated with stablecoins and other financial assets that are blockchain-based. Do you have a sense that these kinds of things should be brought into a bank or is this something that should be left outside of the banking system altogether?

SKINNER: Yeah, well I'm completely with Brian on this one. Oh, the mic. Sorry, guys. I'm totally with Brian on this one, right? We should, we should encourage this innovation in monetary instrument creation, but it should be within the regulatory perimeter. And it's going to be, I think, very hard to increase the legitimacy surrounding things like stablecoins so that they can be sort of mainstream form of payments, which they're not right now unless sort of everyday people feel like the prudential and the consumer protection pieces are there, right? I mean, I think it's always a mistake to say, you know, just regulate it like a bank. Of course, it's not going to be like a bank. The risk profile is going to be different. But we do sort of have playbooks, right? We sort of know how narrow banking works. It is possible to think about bringing in payment services providers that are not deposit takers and having sort of a prudential lens over that, and just sort of expanding competition and innovation in the payment space without having to go to retail CBDC.

BRUMMER: Raj?

DATE: I just want to reiterate something that Christina said earlier because it has the stench of truth about it on the retail CBDC front, which is, if they are not-- if there were such a thing and it weren't irrelevant, it would be an intentional movement of liabilities from the commercial bank sector to the central bank. Which means that unless you're just going to say goodbye to the commercial bank credit corridor, you've got to replace that somehow. And given examples of sovereign decision-making on credit, take, for example, our entire education finance industry, I'm not super optimistic that that can possibly be done in a in a democracy. It's just-- it would be a disaster. So there.

With respect to the question of stablecoin regulation, obviously there should be standards and supervision with respect to assets and liquidity standards. By contrast, you shouldn't have bank-like capital requirements on a stablecoin business. I mean, if it's not going to be leveraged, it's not obvious to me that you can have a, you know, like a tier-one leverage ratio over the top. It would render the entire thing sort of like affirmatively value-destroying for everyone involved. So-- but I think, frankly, the bill that came out of committee in the House goes a long way in all those directions.

BRUMMER: Yesha?

YADAV: Yeah. I mean, I, you know, echo what's been said here. We need strong rules. We need to have standards. We need to make sure that those standards are appropriate to the business that's being conducted. This is not a banking business. There's no fractional reserve banking that's happening here. And so that kind of, you know, usual set of protections that we apply in that context, we have to tailor and calibrate to deal with the actual functions of stablecoins and the and the use cases that they're being put to. You know, coming back to what Dan said in the earlier panel, this, you know, this is about who does the job best, non-banks, banks? This is a competition. It's a competitive economy. Folks should be allowed to compete on the networks that they bring in and how they do it and be given access to infrastructure to enable them to do it as best as possible and as safely as possible, provided that they are regulated, you know, in a, in a cohesive and robust way. And that seems to be, you know, something that we aspire to in theory is as a, as an economy. And that's something that I think we're, you know, where we should be able to get as a sophisticated regulatory marketplace that is able to calibrate regulatory requirements and tailor them to the actual functions and the, and the tools that companies are using to do that.

BRUMMER: You know, when you think about Stablecoins and CBDCs, ultimately getting back to our original conversation on money, I always tell my students, you know, money is the one thing that everybody understands, whether or not you have it or you don't have it. You know, money is something that, that everybody gets. It's it's the ultimate consumer-facing product, right? And so when you think about, like what this sort of ultimate consumer-facing product should look like, and sort of where the demand comes from, and sort of who gets a say in terms of what that product looks like. I mean, Christina's already sort of been a little bit-- has expressed some, some questions really about the degree to which consumers getting a voi-- are getting a voice in terms of how new kinds of products are created, and how folks and consumers are able to voice their, their interest. Raj, I want to go back to you on that particular point because you picked up on that from Christina. I mean, is there a way — particularly putting on your, your VC hat and also your your regulatory hat — you know, is there a way for-- do you think it's up to really, I guess entrepreneurs and service providers to to speak up for consumers? Or are there ways in which consumers themselves can can kind of influence how that tech is, is constructed and, and regulated?

DATE: I think the former not the latter. Like realistically at scale, consumer businesses are not sort of generated, you know, at the grassroots level and magically coalesced into scalable infrastructure that makes it real. There are known things that we could do that would enable more innovation with respect to particularly, you know, kind of low balance transaction accounts. Like it's-- people don't ignore these segments of customers because they're dumb or they're mean. It's because, you know, fraud costs a bunch of money. It's because identity theft is real. It's because customer service costs are pretty high. It's because the amount of transaction monitoring expense associated with small dollar accounts is a huge fraction of the overall economic profit available. If we were to ease those constraints, I think we would be a lot closer to having a better and more inclusive financial system.

BRUMMER: Is there-- you know, when you compare, again, some of the challenges with-- Christina, with CBDCs and stablecoins, and again, also thinking about what that ultimate design of the product should look like from a regulatory standpoint, what do you think are some of the first principles, given the problems with CBDCs, you know, where do you start when you start to think through what the regulatory toolbox should look like for for stablecoins?

SKINNER: So, you know, things that have been mentioned before in terms of standards and supervision for, you know, the assets backing the coin, I think are a starting point. I think, you know, in terms of who should issue stablecoin license, I agree that the bill that came out of the House set out a pretty comprehensive regime, gave the Fed quite a bit of sort of override authority, which seems like it might be contentious on the state-level, but could ultimately be something that works pretty well. Seemed to parse out the differences between what a stablecoin is and what a bank is. So I, so I would agree that that's a pretty good starting point for regulatory first principles in terms of who can issue the stablecoin, what's backing the coin, what are the redemption rights of the holder to go to the consumer protection piece.

And then sort of just try to round it out with the, I guess, the corollary to your question in the CBDC space, I do think that there is productive — you know, so to counter my pessimism with a little optimism — I do think there's productive potential public private innovation in the cross-border wholesale space, which has suffered the misbranding almost in a way of wholesale CBDC because ultimately, why-- what we're talking about is an improved settlement system and a way of sort of tokenizing reserves to be sort of, you know, reserves 2.0, that can settle faster with atomic settlement and reduce settlement risk, then that seems like a project worth pursuing. Although, I've yet to sort of see proof that that would actually speed up cross-border payments once you layer in AML and CFT, so I think the jury's still out on that. So I think wholesale CBDC has some promise, and the stablecoin bill seems to offer some good first principles.

BRUMMER: Are you differentiating like the tokenized deposits in, in making that from, from wholesale CBDCs?

SKINNER: So I think the idea with wholesale CBDC is that tokenized deposits could and, in fact, would be running on wholesale CBDC rails, right? So, the idea is that the central bank would be issuing a kind of reserve, right? Because wholesale CBDC is going to just be running between financial institutions essentially and sort of fit into the existing forex infrastructure that we more or less pretty much have. And so, you know, the essential idea is that you're still bringing in the commercial banks into the system, you're just providing a kind of settlement asset that can work on some kind of blockchain technology and importantly be interoperable with bridges between different jurisdictions, right? Because ultimately, that's what we have to figure out in the cross-border payments space is how you make all of this interoperable, both technologically and legally.

BRUMMER: All right. So we only have two minutes and 22 seconds left, so I'll split that between both Josh and Brian, and Brian, first. I mean, so first principles, if you're going to name one or two for stablecoins, and if you happen to have a thought or two on tokenized deposits, now's, now's the time.

BROOKS: Or I could just say whatever I want.

BRUMMER: Or that.

BROOKS: So, so if, if you're giving me 59 of those seconds, I'll just start by saying, you know, on Raj's point about financial inclusivity, I would actually argue that one of the reasons that stablecoins have not become more widely adopted outside of crypto in this country is because our system, clunky as it is, works pretty well, you know. You see mass adoption of stablecoins in other parts of the world, you really do. If you went to Argentina and saw what the fintech startup environment looks like around stablecoin U.S. dollar savings accounts, they're growing 100X. They're, they're a gigantic business, and I've heard nine or ten pitches from startups on that space in the last six months alone. So I would just begin by saying, however bad our system is, it's good enough that you don't have mass demand, whereas you do in systems that are truly broken. I would start with that.

In terms of first principles of stablecoins, if you're not a fan of stablecoins, then you have to solve the open banking problem. What you can't have is a big bank monopoly on the payment system that creates this giant payment tax. You know, it is crazy that Stripe, a — depending on who you ask — 50 or hundred-billion-dollar payment company, isn't able to process payments. They have to use Wells Fargo to process their payments. That, that's insane. So if you don't like stablecoins, you have to be for open banking. And if you're not like an open bank, if you don't like open banking, you have to accept the inevitability of stablecoins. And stablecoins require that you like blockchains. So I would just posit it that way.

YADAV: What he said.

BRUMMER: Okay, well, then that would mean... Seriously?

YADAV: Okay.

BRUMMER: I mean, we have 25 seconds. Go.

YADAV: Twenty-five seconds? So, look... I mean, I think I want to, you know, reiterate that we are living in a bubble here. We need to travel. We need to see what's going on abroad. We need to see what's going on in other jurisdictions. Go to Asia, see how much choice is being encapsulated in the different payment choices that folks have to include, not just real-time payments, to include, you know, stablecoins to, you know, to look at a payments world in which is becoming far, far more inclusive than we can ever imagine. I was in India over the summer. You know, folks living on the street are using UPI. Folks are, you know, very open to new kind of payment environments. There was a CBDC pilot underway where people were paying for their gas using CBDC accounts. So, you know, we are, we are in a bubble here and we need to look outside to see what's available to us so that we are helping ourselves to have a better payment system. Our payment system frankly sucks for the country that we are, for the economy that we're aiming, you know, aiming to get, and the financial system that we deserve to have for everyone. And so we need to do a hell of a lot better and bring all of these D.C. brains together to do-- to get that done.

BROOKS: What she said.

BRUMMER: Sold. Thank you so much for a great panel.

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KLEIN: If folks can take their seats. We're on a tight time schedule. It's high noon. Today-- this [inaudible]. Today, so far, the conversation has been on fire and we're going to we're going to keep this fuego rolling. We're going to have Federal Reserve Governor Christopher Waller join us right now. Governor Waller was confirmed in 2020 and has a wonderful ten years on his 14-year term. So the entire decade of the twenties is going to be the decade of Governor Waller. Prior to his confirmation appointment as a Federal Reserve Board governor, he was-- ran research and was executive vice president of the St. Louis Federal Reserve. Prior to that, he was a distinguished economics professor at Notre Dame, University of Kentucky, and University of Indiana. So with an extensive and illustrious academic pedigree with experience within the St. Louis Federal Reserve, he's now taken that view to Washington and come up with some pretty interesting and strong views in Washington. And Governor, I want to start with a comment you made in a speech entitled, "CBDC: A Solution in Search of a Problem? " And in that speech, you said, quote, "There is no reason to think that the Federal Reserve can develop cheaper, cheaper technology than private firms." And, quote, "I often state that America already runs on a CBDC, commercial bank digital currency." Do you see a benefit to society to swapping out the first C from commercial to central?

WALLER: Right. Well, I gave that speech back in August of 2021 in response to a lot of momentum that was building around talking about central bank digital currency. And the basic question I asked was what a typical economist would ask, which is what is the major market failure in the payment system that requires a CBDC and only a CBDC to solve? I posed that question two years ago. I've not heard one satisfactory answer to that question yet, so it makes me think that CBDC is something you could do, but there's nothing that makes you need it. The general point is, as you were alluding to, commercial banking system works well. People are happy with their bank accounts for the most part, and pretty general access to everything. So it's not really clear what you're gonna gain by having a central bank digital currency over the current payment system.

KLEIN: So if the benefits aren't there, why is there so much activity at the Fed and elsewhere about this?

WALLER: Well, we always have to be prepared for the fact that if Congress were to in fact tell us, "Do this," we have to be able to have the technology and the know-how of how to do it. So that's most of what we do is just explore how would we do this, how we manage it, how'd we do the record keeping. So it's just kind of trying to understand the technology such that if one day Congress said, "You need to do it," we can do it. So that's really what it is.

KLEIN: So, so in that, in that world, a lot of other countries have gone down this road a bit. China, which was really kind of something that both that Director Chopra started and ended with, thinking about the Chinese evolution in their payments system. The Bahamas went deep into CBDC. They've gone deep into crypto and sent us one of their crypto residents, although he was sent in handcuffs and by extradition order, I might add. The U.K. and the Europe Central Bank are moving at CBDC countries that have long had successful real-time payment operations. Why are other countries going in this direction?

WALLER: Got to ask them. I mean, I've laid out the challenge for everybody around the globe to answer, and nobody's answered it so. And first, China, I mean, I've tried to make this point multiple times that what, what every central bank is talking about is an account based CBDC. They are not talking about constructing or distributing a semi-anonymous, bare instrument like Bitcoin. That is not what they're doing. If you want to pay your electric bill, you can open an account at the PBOC, and they'll process the payment. That's it. That's all it is. That's where all this confusion about it being some big deep technological thing, it's just a checking account at the PBOC. Why does that threaten the reserve currency, the status of the dollar? I have no idea. I'd like somebody to answer that one too. So the reason other countries want to do it — they've come up with them. I've looked at it. Didn't seem very, you know, convincing to me. But they can do whatever they want with their payment systems.

KLEIN: Well, I'll try to answer it in the sense that — I wrote a piece on the Chinese payment system where I think people misunderstood. They think the digital yuan is a threat to the U.S. dollar. The digital yuan, in my opinion, is a reaction to Jack Ma's Alipay and WeChat Pay being a threat to the Chinese government and banking system controlling money and money going to different companies. And I think part of the problem is that America and Europe, we think of things. When we invent-- when, when Europeans invented gunpowder and steel, they built ships and colonized the world, right? We're all sitting here speaking English. China had steel and gunpowder before Europe. They didn't go. We're not speaking Chinese, right? Different countries have different perspectives. The second we develop magnetic stripe technology with our little cards, plastic cards, we colonize the world with plastic cards. China may not be doing that. They actually kept their system. It was hard for non-Chinese people to access their system. So I think you're right to kind of pose this question that different countries have different perspectives, and I think that's one of the reasons why we've misread that in the U.S. Let me take a question. We-- future payments, you see this, we offer questions online and they came in and one came through. John Ebbert from Blockchain Tipsheet asked, "Can a U.S. CBDC and private stablecoin co-exist within a U.S. regulatory framework." I love when people take two things that don't exist, say if they both exist, could they coexist.

WALLER: That's a great point. I mean, I see-- like I said, the way a CBDC would work if it was going to happen in the U.S., you would have an account actually with a bank. It's an account based CBDC but it's not an account directly with the Federal Reserve. That would be a direct account access, and that's not what we're proposing. So you would go into your bank app, open it up, there's an account with your commercial bank digital currency, and then there's another account that says, right below that, CBDC. And all that happens is the bank is holding a stock of CBDC, which if you want to make a payment, they would simply say to the central bank, "Transfer one unit of my CBDC to this other bank." That's it. That's all. That's all it is. So there's nothing revolutionary in the way this is going to work anything different than a standard bank account, which is why I don't think there's any real value to it.

A stablecoin is kind of like a commercial bank deposit in the sense that it's a claim to a dollar, and as long as that claim is honored, it just would circulate like money. The main thing with stablecoins is: what is the business model that supports it? What are you trying to do with it? How are you going to make money with it? There are different models, but in order for it to be successful, you got to tell me why you do it. Every large bank I've talked to, they said they have absolutely no interest. They don't see the value proposition in issuing a stablecoin. So-- but at the end of the day, if you did issue one, it would just circulate like any other payment instrument that trades at par with the U.S. dollar. So there's just nothing [inaudible].

KLEIN: I've commercial bank digital currency that trades at par with with the dollar. You made a comment about CBDC, what it is. Now, a Federal Reserve account has been proposed. There's some leading scholars at Vanderbilt Law and other places that have come out with the idea of a Fed account that would require a law change. The House Financial Services Committee recently passed legislation expressly prohibiting the Fed from enacting a retail CBDC seat or having Treasury to do it under existing law. It isn't clear to me whether existing law would allow for that or not. In fact, President Biden, in executive order, asked for the Department of Justice to clarify that topic. And so I wanted to ask you whether the Fed has legal authority under existing law. You said something-- Congress would need to direct it. But then, you know, so varies -- do they have current authority? Would it require a new law? And who makes that determination of whether it has current authority? Is that the Fed, the Department of Justice, the president, the courts?

WALLER: Well, if you were talking about a direct retail CBDC account, you would have to have a master account at the Fed. Right now, the law is only banks and their master accounts. It isn't you or me or whoever. You'd better be a bank, or you don't get a master account. So you'd have to change the law to say something other than banks going to have a master account. You know, or the U.S. government, we are the fiscal aids of the government. They have an account too. So it's really just that. The accounts are held by financial institutions to do all the payments. As I've said, the view of the Fed since we were founded is our job is to ensure that the payment system functions efficiently, and things get done. We'll do the stuff in the back end of the house, but the front end is the banking system. They're the ones that engage directly with the consumer. And then we sit with the banks in the background to make sure everything gets cleared and settled. That's worked for well over 100 years. I wanted to know why we need to step out front and now be front facing with retail customers. Again, there's nobody that gives me any decent answer to this stuff. So on a mast-- to have any retail account, you'd have to have a master account. As far as I understand it, that would require a change in the Federal Reserve Act to allow that to non-banks.

KLEIN: So, it's interesting because I would agree and disagree with you on a couple of those points. I think the system works really well for the 50% of Americans that always have a couple thousand bucks in their bank account and really poorly for the other half. And what's happened structurally is that other half has grown so much smaller, and fiscal instability hitting the zero lower bound, and a set of new charges have come in alternative payments. I think in response to maybe that phenomenon, maybe other global phenomenon, you can say why, but the Federal Reserve has released a new payment system, FedNow, which has been launched. Before we turn into FedNow, and I want to get deep into the facts of it, there's been a weird thing I've noticed, and an an explosion in social media of just lies about FedNow. That it's a precursor to a CBDC, that it's come-- that it's going to allow the Federal Reserve to steal your money and take things up. And at first, you know, when you deal with this kind of fake news, you're, you're partially tempted to ignore it. But then when you see it's, you know, the number one, two, three trending thing on Facebook, and you're getting 17 fact checker calls in English and Spanish on this, I just want to give you an opportunity, you know, are these narratives true? Is FedNow a precursor to a CBDC that will allow the Federal Reserve to take your money and stop you from buying guns or have access to medical procedures like abortion or anything like that? Is this part of some nefarious master plan?

WALLER: Well, FedNow is just a payments product. Currently, now, you say you authorize a payment to be made, it gets transferred. There's some time between when the transaction is initiated, and it's cleared and settled, and the money is done. That could be two days. That could be done in two days, one day. That can be done in 2 hours, or it could be done in 2 seconds. That's, that's the only thing you're arguing about on a payment system is how fast do the payments clear and settle. FedNow, like RTP, would be done by the Clearing House. It's-- that's a chance to have all that clearing, and settlement and transaction done in 2 seconds. That's it. It's just you're changing simply the amount of time in which the transaction is cleared and settled. That's it. There's nothing else knew about it. We do that now with the ACH and other forms of payment. We're just shrinking the time. So that's it. There's no more information being changed. We don't see anything-- I mean, right now with a transaction ACH, the banks tell us process 1,000 dollars and send it to this bank. We say, okay. We don't know why. We don't ask why. We don't know what the transaction was for on the back end. The banks have all that information. So that's all FedNow is gonna do is basically the same thing. Now, there's more sophisticated messaging in the new ISO messaging, but that's up to the banks decide if they want to send that information or not. So really, there's nothing fundamentally changing the amount of information we would get from FedNow from any other payment service we do. All that's happening is it's going to be done faster.

KLEIN: Well, good. Faster is better, in my opinion. And switching to FedNow, the launch came out, and you know, it's, I'd say, been a little slow. Earlier panel has talked about there aren't that many institutions, and many of that that have signed up have signed up in receive only Kyle Campbell from the American Banker asks, "Are banks and processors adopting FedNow as quickly as you anticipated? What is your pitch to banks considering connecting to the new payment system?"

WALLER: Yeah. So the whole launch of FedNow was intended to be, you know, a smaller exercise. Create a minimum — what they say, an agile project management thing — you want to create a minimal viable product. So it's like, let's get the thing out, make sure it works, see how people use it. And then from there, you build it out in terms of the network, and in capabilities that you give to people on that. That's all FedNow was. We launched it. We had roughly 30 to 60 banks that initially signed up for it, but we have a pipeline of banks that are going to join. So the banks have to set up their infrastructure, processors have to set up their infrastructure, they have to make the investment in the technology to use it. And so this will grow over time. We never expected we would launch it and there'd be 4,000 banks joining it. That was never an expectation or a reality. So over time, we're-- right now, we're over 100. So we just-- since launch in July, we've gone up from 30 to 50 to 60 to well over 100.

KLEIN: So, there are over 100 today.

WALLER: Yep. And then we've got more in the pipeline, and there are various estimates that could range from 250 to 350 by the end of the year, and then it'll just continue to grow as banks do it. But the banks have to see some value proposition in it to make the investment to join and want to do it. And that depends on what the customers want. So with any banking service, the customers, if they want it--.

KLEIN: So-- but let me, let me push you on that a little bit, right? I don't want an overdraft. One out of every 12 Americans pays 350 dollars a year or more in overdraft. No consumer today can walk into their bank and ask to FedNow money. So, I mean, in terms-- every other country that's done this has required the banks, at some level, to either use the system or move the money faster. And they've had massive adoption, and no one has gone backwards. I'm unaware of any country that did real time payments and then went back. The banks and credit unions have huge incentive to maintain the status quo because some of them milk their entire business model on overdraft. I've identified banks and credit unions all over this country that make 50 to 300 percent of their profit on overdraft fees. So there's a strong incentive for the bank not to move money faster because that would reduce their profit, and no ability on the consumer to ask the bank to use it. So how is that-- how is this market mechanism going to actually create this adoption?

WALLER: So first, the bank has to join the system. And then presumably, like anything else, if customers demand it, their bank will make the investment and do it. And if you're unhappy with your bank and whatever fees, go get another one. That's the way things work in the U.S. You don't have to force everybody to do what you want. We allow banks to do what they want. It's competition. You want to do things to your customers that aren't good, tell your customers to go get another account with another bank.

KLEIN: So, so we have 9,000 banks and credit unions in the U.S.

WALLER: Sounds like a lot of competition you could go to.

KLEIN: It does, but the cost of switching is really high. We only want to-- say we only have three, four, five, six, seven cell phone carriers, but I can port my number. If you couldn't port your number, the cost of switching cell phones would be super high. You can't port your number in banking, right?

WALLER: Just open another account. What are you talking about? I have like four different bank accounts.

KLEIN: I do too because--.

WALLER: Then what's so hard about it?

KLEIN: Because we have a bunch of money. We each can put in five--.

WALLER: What's that have to do with opening an account?

KLEIN: Try to open an account with 100 bucks.

WALLER: Fine. I mean--.

KLEIN: I mean, let's, let's go do it. It'll be fun because, like, you'll see all the account minimum fees--.

WALLER: I don't know what that has to do with FedNow. Where are you going with this?

KLEIN: So where I'm trying to go is, the idea of competition driving the solution is predicated on this idea that consumers are moving, are gonna compete, and push the industry to do it. And where I'm skeptical is that element of it.

WALLER: That's fine. I mean, it's same thing with restaurants or anything else that people are going to be skeptical that the firms are going to respond with their customers' wants. And this is just the way markets work. You're saying the market's not going to work. We'll see. I think it works on a lot of things. So, you know, it's a step.

KLEIN: I wish banks failed as frequently as restaurants. It bothers me when we have a year where no banks fail.

WALLER: I don't think you really want that.

KLEIN: That's a good question. We'll-- all right, we could go on this back and forth and have a lot of fun, you know, because I don't think you want a bank where no-- I don't think you want a world where no bank fails year after year because that's not a competitive market either. But you guys in the audience, if we haven't inspired you to get in on this, what are you doing here on a Friday? Who's got a question? In the back.

AUDIENCE MEMBER: Governor Waller, thanks for joining us this morning. I'm Chris Land. I have a question about, you said the Fed was working on a CBDC in case Congress were to require an issuance of a retail or wholesale CBDC. Doesn't the same logic apply to stablecoins and other crypto assets? Shouldn't the Fed be working as hard on potentially integrating other crypto assets into the banking system if Congress were to require that? I think if you look at the custodial denial order, it's very clear there are a lot of challenges at the Fed with respect to understanding the risks and opportunities of crypto assets. Thanks.

WALLER: Yeah, those are separate statements. The idea of operating or running a stablecoin, we're never going to operate and run a stablecoin so there's no point in us wasting time on the technology. What we have to do is assess whether banks that are going to be involved in this pose safety and soundness risk to the system by giving them a master account. And that's where issues have come off in the past with this. So you've got money laundering, you've got, you know, all-- know your customer, all these other things that have to be done to have access through us. And that's really, that's really on the bank's side to make sure that stuff gets done. So I don't need the technology for how you're going to do your business model. We're not going to issue a stablecoin, so I don't have to worry about how you do it.

KLEIN: Tim?

AUDIENCE MEMBER: Governor Waller, thank you for being here. Tim Massad. Let me follow up on the stablecoin issue but in a different way. One of the issues that was important in the House financial services discussion was, how do we implement what we have in banking, the dual chartering structure, in stablecoins, meaning would we have federal chartering as well as state chartering? Leaving aside the master account issue, because that's kind of a separate one just in terms of that federal and state issue. How do you think about that? What do you think is the proper sort of way to resolve that debate? The the bill came out. It got a few Democrat-- Democratic supporters, but not as many as some of the Republicans hoped because they thought the Fed has to have a stronger role here. The Fed has to be able to set more minimal standards, so we don't have the states racing to the bottom. How do you think about that?

WALLER: Well, like I said, as a stablecoin, if we're just talking about stablecoins, it's a very simple idea. I'm going to issue a token. It has par value. And then the question is how do we ensure there's par value backing it up? That's it. That's the fundamental question. Why you'd want to issue one. How are you going to make money? There's potentially different ways. The typical thing people have in mind, you're going to issue a zero-interest liability and take the proceeds and buy a positive interest-bearing asset. And that's your, that's your spread. If you're safe enough with very short-term liquid assets, that may not be a lot of money to make it worth your while. Now, Facebook, now known as Meta, they were looking at having a diem as a stablecoin, and their idea there was they simply wanted to get your data, your transaction data. So they would've happily taken every dollar they got from me to get a diem and put it right in a Fed master account and do nothing else with it. So that's fine. But they wanted you to pay in a different way. They want to earn money a different way.

AUDIENCE MEMBER: So if I can follow up, is that to say that you're comfortable with a situation where states license stablecoin issuers as long as they require full reserves invested in safe assets?

WALLER: I mean, what we do is-- I mean, this is, this is an issue where it's back to, is this a money transfer scheme? If it's purely a payment design, then we already have all that. That's all in the money transfer. Get your license in your 50 states. Maybe we should need one national license, make things a lot more efficient. That makes a lot of sense. But there's a separate issue between if it's just going to be a payment instrument versus it's going to be some kind of other type of instrument.

KLEIN: So, so that's-- Professor Awrey, earlier on pointed out that I think — what'd you say — 27 countries, we're the-- only 26 of them have federal money transmission situation. Question-- two questions in that row. Start on the aisle, maybe we'll take them both together now.

AUDIENCE MEMBER: Governor Waller, good to see you again. Samuel Kim from the Bank of Korea.

WALLER: Hey.

AUDIENCE MEMBER: Hi. So going back to wholesale CBDCs, there are a lot of use cases, I think, for cross-border transactions, and a lot of central banks are actually working on projects. Is the Fed in any way involved in doing projects [inaudible] central banks, to study cross-border transactions?

WALLER: Yeah. So wholesale CBDCs are a slightly different animal than a retail one. You're just-- so we already have a CBDC. It's called bank reserves. It's a digital liability on our balance sheet of the banks. What you want to think about with a wholesale CBDC is how could we take-- allow banks to use their reserves in a different or more efficient way to settle payments internationally? I mean, I have no problems with that. So you may have different platforms in the current system — so I know it's going to sound stupid — but the joke I always like to say is, you go to a casino, you take your dollar, you'll go get a poker chip. The poker chip is the token that moves around the system and does all the transactions. And at the end of the day, it can be transferred back out. That's what I think of oftentimes is that's just the platform, the technology for how do you move some digital object around in settling, making payments. That I, like I said, that's just technology. If you can come up with a technology that makes it faster and easier for banks to tokenize their reserves and do global payments, I'm all for it. I don't have any problems with that.

AUDIENCE MEMBER: Hi, my name's Manmohan Singh from the IMF. My question is more to do with central bank balance sheets. So given past decade with QE, etc., and now some QT, if you really look at the advanced economies, the Fed, the Bank of England, ECB, Japan, balance sheets are not unwinding. Some of us have been stuck in the flow system, etc., etc. Now my question is on non-bank stablecoins. Despite a very bad winter last year 2022 with FDX, the top three or four stablecoins stayed on 130 billion to 150 billion and the footprint was in trillions. I could envisage, given the demand and what I've been hearing this morning, this could double, quadruple, become a trillion. So my question is, given the central bank balance sheets are not unwinding, that means there's a lot of assets with very good collateral siloed and the non-bank stablecoins also siloing dollars or CDs, you know, good quality, do you envisage rustiness of [inaudible] given that there'd be a lot of good collateral being siloed? My question is not about banking stablecoins because that is another topic where banks, banks will not do stablecoin because they lose float. But that's a different topic.

WALLER: You know, if there's going to be a lot of non-bank stablecoins and they want to follow the, basically, the mutual fund, you know, money market fund model of issuing zero interest liability and collect positive interest, that's one model as long as they're safe. I guess what you're addressing is, is the supply of short-term safe liquid government assets out there. That's not under my control because they're not they're not buying my claims. They're buying claims of governments around the world or other safe collateral. So there is financial stability, potential risk with this. This is one concern people have. I mean, you can have a run on that setup and that is of concern for financial stability. But that's, that's the concern that people have. It's more that, that there would be a run on these things, and they can't sell these assets quick enough to satisfy the demands, and then some chaos would ensue after that.

KLEIN: So wait. Speaking of my dream world, the money market mutual funds, when they break the buck the investor loses the money. And the government and the Treasury Department doesn't bail them out, because I think we've created a bit of a problem where there's an expectation that that a money market mutual fund can't lose money, which legally it can. Staci, I think we have time for one more question. You raise your hand?

KLEIN: Actually, I was making-- I was going to make a similar point, which is, not for nothing, stablecoins could be good for U.S. Treasury liquidity markets as well.

KLEIN: Sure. So I think we have time for one more question.

AUDIENCE MEMBER: Andrew Samuel at Coinbase, I just wanted to ask if, if the banking system is so competitive and it's so easy for people to switch banks, why don't banks pay interest on deposits?

WALLER: I get a lot of interest on my deposits. I don't know where you are. I've missed something. I think I just missed the question. I don't get paid interest on my deposits. Is that-- was that the question?

AUDIENCE MEMBER: I think, I think, why are deposit rates so low on demand deposit accounts?

WALLER: Well, demand deposits, right? You can have savings accounts. You can have demand. Demand deposits are transactional accounts. Typically, they turn over fast. You're not putting the money in. There is an interest investment vehicle. That's not what the demand deposits typically towards a transaction account. You're getting different services in lieu of interest.

KLEIN: Well, you know, I think it's it's important to appreciate, Governor Waller, that you come out in this perspective of this entire conversation with a question first asking, what is the problem government is trying to solve?

WALLER: Well, that's what economists do.

KLEIN: Well, I, I wish there was more of that because I feel like your voice is so powerful in a world where there's a little bit too much of the of Will Ferrell from the more cowbell skit where it's a feeling of like, "Wow, you know, the central bank is so powerful, there's a problem. We can solve it." And I think it's such a refreshing and important voice. And I'm so pleased that this decade is going to feature you on the board because it's important for everybody before they ask the question of, “There's new technology and there's a powerful entity, what can they do?" To ask the threshold question of, "What is the problem we're trying to solve and why should we be the ones to solve it?" And if everybody could join me in thanking Governor Waller for sharing your views. Thank you very much. And I know, Dan, you're going to you're going to close. Come on up. Governor.

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AWREY: Every economy that has ever existed has been a combination of competition and coordination between vibrant experiments and trying to extract the maximum social benefits from successful experiments. Today's conversations have reflected the tensions of competition and coordination between private sector innovation and the role of the states in extracting the most from that innovation. It remains to be seen whether these conversations are going to turn into action at any point in the near future. But one of the things that we really-- that motivated us, and I really hope that people come away with today, is that there are benefits to action but there are also a lot of costs to inaction and action done poorly and without sufficient thought to what lies ahead. So thank you very much for being here today. I'd like to thank a few people in particular. First of all, Brookings, Vanderbilt Law School, and Columbia Law School for financially supporting this event. And especially to Megan and the other folks at

YADAV: No, Cornell.

AWREY: What did I call it?

YADAV: Columbia. That's your institution.

AWREY: Shoutout to professors [inaudible] everybody back at Columbia. I miss you guys. They did not financially support this event, but I think spiritually we can all agree that they're a part of today's festivities. I want to thank the moderators and each of the panelists for their amazing, insightful, sometimes bombastic comments and responses to some very hard but important questions. I wanted to thank Director Chopra and Governor Waller for their candid remarks. And lastly, and really not least, I want to thank Aaron for his incredib--.

YADAV: And Megan.

AWREY: I already thanked Megan, Yesha. You're not even paying attention anymore. I'll thank Megan twice. I want to thank Aaron-- oh now that Megan's back in the room, I'll thank her again. Thanks to Megan and the team at Brookings and thanks to the big man himself at Brookings, Aarin, for what I thought were his incredibly insightful sort of questions, thought-provoking, and really sort of insightful into the folks who are making the decisions about the future of our payment system, what's important to them, and how they think about the challenges that lie ahead. So thank you again.