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P R O C E E D I N G S

MR. WESSEL: Good afternoon. I'm David Wessel, director of The Hutchins Center on Fiscal and Monetary Policy at the Brookings Institution on behalf of The Hutchins Center in the Initiative on Global Markets at the Chicago Booth School of Business. I'd like to welcome you to this event. We're presenting the report of a task force on financial stability that began work in October of 2019 before the pandemic and worked through the pandemic quite efficiently virtually to look at what's our issues remaining that expose us to financial vulnerabilities beyond those that were repaired after the global financial crisis.

Before we get to our program, I want to thank the members of the task force, Laurie Goodman, Kate Judge and Anil Kashyap, Ralph Kajun (phonetic), Lee Masters, Sadie O'Connor and Cara Stein as well as the cochairs, Glenn Hubbard and Don Kohn who we will hear from in a minute.

I also want to thank a couple of people on the Brookings staff, Stephanie Cencula and Haowen Chen who helped keep this thing going.

Our plan this afternoon is that for the first half hour, Glenn Hubbard and Don Kohn will summarize the report. And then we've convened a panel with some members of the task force and a couple of other distinguished scholars, Randall Kroszner from Chicago and Jeremy Stein from Harvard and we'll discuss that.

If you have questions, you can ask them through your mouth, but you can ask them through your fingertips on sli.do, S-L-I, dot, D-O, a hashtag #FinancialStability or on Twitter and we'll try and get to those if we can. Copies of the report are available on our website. And now, I'll like to turn the program over to Don and Glenn. Thank you.

MR. HUBBARD: Thanks, David. Let me echo your thank-yous and add a couple one to you for your outstanding work in this. The one who knew all the many experts who came to talk with us from academia, from regulation and from markets.

To start out, we did some simple definitions. Why are we here? The idea of financial stability is really to focus on a financial system supplying reliable credit discussion and other financial services at a rate where the economy would grow at a sustainable pace.

We focused a lot on instability, the flip side of that arising from externalities. From excessive leverage, from either maturity or equity mismatches, interconnection, correlated exposures and so on. As David said, we really try to identify gaps post-global financial crisis and in the U.S. post-Dodd Frank regulatory architecture that really stand in the way of resilience towards this definition of financial stability that I mentioned.

In some sense the efforts in the global financial crisis and just after were quite focused on banks and did, in fact, shore up banks. So, our attention has really been focused on non-bank financial intermediation and on markets. And indeed, I think it's fair to say if not obvious that in March of 2020 as the pandemic was taking root, the system failed a wide stress test.

An analogy that Don and I have used a lot in talking with the group relates to fire prevention. And fire prevention is more than just putting out a fire when you see it, which is sort of the classic regulation steps in expose. It's about two other things.

One, it's hopefully preventing the buildup of combustible materials in the first place. If I'm not torturing the analogy too much. Think of that as policy. But it's also learning how to smell smoke and that is going to be process.

So, we're going to talk about in the report today both policy recommendations and process recommendations that get at financial stability. We didn't tackle everything. There is some very important topics that we left out for reasons of time or expertise, but we do believe we can come back to this at the end that were the approaches we suggested to have been used, 2020 might have gone a little bit differently.

In terms of the topics, you'll hear about at a high level and can read about in the report. You see first in the pie charts there the huge increase in a roll of non-bank finance, which is why we're focusing there. So, we're going to talk first about treasury market liquidity that was the dysfunction in March. But it actually happened before March of 2020 as well. The most important market in the world.

Open end mutual funds, which have to do with money market funds and bond funds, housing finance, which was a key player obviously in the previous crisis. Derivatives clearing houses or CCPs, insurance companies and then segueing from policy to how you address all this. We take a pretty significant stab at regulatory structure and process with suggestions on how to do it better.

So that's a quick guided report. For those of you who want to go back and read the report, you'll find our principal diagnoses and recommendations all listed out at the beginning and at the end of each chapter. So now, I'll pass the baton to my colleague, Don Kohn, to begin the discussion on the treasury market.

MR. KOHN: Thank you, Glenn. So, the treasury market is the key global market. It's used as a base. The U.S. treasury market, it's used as a base to price other securities. U.S. treasuries, especially in the U.S., constitute most of the pool of high liquid assets that banks and others hold to meet unexpected withdrawals and other demands for funding liquidity.

When the treasury market is disrupted, the financial markets are disrupted and credit to households and businesses is adversely affected not only the government borrowing. And it was badly disrupted back in March.

And you can see from this chart, we were in the middle of a shutdown for the pandemic. There was a huge amount of uncertainty, equity markets were dropping and that's a situation in which people flee to the most safe and liquid asset. And yet -- and yet, treasury yields started to rise in the middle of all that.

It was an extreme event. The treasury market was not performing its functions. In the end the federal reserve had to intervene with massive purchases to restore market functioning and through restoring treasury market functioning, helped to restore functioning in the rest of the market.

So, we have a number of recommendations to help treasury market functioning going forward. I should say that that what happened last March was extreme and difficult, but there were hints of problems before that. So, the treasury markets were on our radar before last March.

Here are our recommendations. And here, again, I think we don't have any one recommendation that's going to fix the problem. We think that it needs to be approached from multiple different perspectives at the same time.

So, we looked at both the demand and supply of market liquidity in treasury markets. We have some recommendations to reduce the demand for market liquidity, which we'll get to with our discussion of open-end funds and margining its central clearing counterparties.

On the supply side of treasury market liquidity, we have a number of recommendations to increase the private sector's capacity to make markets and also the public sector. On the private side, we want to look at regulatory requirements on banks and bank holding companies. On their dealer subsidiaries to see whether they can be adjusted to free up market making capacity without reducing the resilience of the banking sector build up since the global financial crisis.

We give some examples. The leverage ratio, G-SIB surcharges, but we also ask the regulator to take a broader review of the regulations including of overlapping liquidity requirements to see whether their adverse effect on the treasury market is serious and requires adjustment.

We also asked to look at ask the regulators to look at central clearing of treasuries and treasury repo that would enable netting and free up capital in the dealers so they can make markets.

And finally, we've asked to set up a federal reserve backstop for this most systemic market. A repo facility at a penalty rate just in the Badger playbook, open to highly regulated bank dealers and nonbank dealers, but also open to other less regulated entities like principal trading firms, hedge funds. But those less regulated entities would be charged an upfront fee, a small upfront fee, to mitigate the moral hazards. Think of it as an insurance fee.

Firms who's trading was so large as to be systemic would be required by the insurance. Others could join on a voluntary basis. And I'll pass it back to Glenn for the open end on mutual funds.

MR. HUBBARD: Thanks, Don. The open-end mutual funds is an example, going back to what I said at the beginning, of issues raised in liquidity and maturity transformation that can create externalities.

So, we focused on the following problem that money market funds and some bond funds are offering daily redemption but are holding in some cases a longer-term securities that couldn't be sold particularly in a crisis without significant price concessions.

If nothing else happened that creates a kind of first mover advantage wherein stress some investors will run to the head of the line to be the first to withdraw funds, which can lead the mutual funds to dump their treasuries first feeding on a problem Don had identified first. Those being their most liquid assets, and then after that potential fire sales of their less liquid assets. Both the spill over to the treasury market and in the other asset markets can cause disruptions.

Now, is this a problem? Yes, we've seen as the figure shows quite significant in flows in the past few years in open and bond funds. And we certainly saw a huge outflow at the onset of the pandemic.

So what do we recommend? Really a couple of things. First, for prime money market funds to adopt swing pricing and/or redemption fees. So, the idea in swing pricing is not to have those who are rushing to the first in the line but impose a negative price effect on remaining investors. So, it would require the pricing to net out that benefit and reduce the first mover advantage.

And we argue in the report, this reduces if not eliminates the first mover advantage problem. And we also recommend eliminating that connection between liquidity buffers and gates that had been a problem. But other open-end funds, we think that opening bond funds here, we would -- and we spell this out in the report -- requires swing pricing where it's sensible.

In some cases, we might need to create a new category of funds that had more limited equity than the standard opening daily redemption feature and migrates a mass of classes to that.

The idea in all of this is not to tell people what they should invest in, but to simply remind people what's liquid and what's not. And what's the true cost of liquidity. The reason to force that internalization are the externalities that come from the lack of its internalization during a crisis. So, we think these reforms are important. We think they are doable, and we spell out some mechanics in the report.

The next category we go to. I'll pick this up. Is on housing finance. Housing, of course, was the major player in the global financial crisis for these A major player. Here, we're looking at major problems that are not all dissimilar from what we've faced before.

One is an aggregate demand spillover of households that are over their skies in debt. A second that is more concentrated here given post-global financial crisis reforms. A disruption potentially to credit supply of nonbank servicers fail. Servicing moved out of bank solution to nonbank solution after the global financial crisis and a new fragility was suggested.

And, of course, there's spillovers to other asset classes if there's a disruption in the mortgage securities market. And you can see just in the chart we present there of Ginnie Mae servicing a share owned by nonbank servicers has risen dramatically highlighting the potential concern.

So, what do we recommend? Sort of mapping into the problems that I just identified on the borrower side, we would look to residual income caps for owner occupied properties and by residual income cap just mean questions about the borrower covering debt after taking into account living expenses out of incomes. So, this is different from the standard debt to income measure. And also, loan devalue caps on investor properties and cash out refinancing.

The second relates to prices issues. We want to have a toolkit ready and, on the books, to streamline refinancing and forbearance during national emergencies. We groped towards this a bit during the global financial crisis. Of course, we did it again during the pandemic.

We argue for a more systemic approach related to a point Don made about the treasury market in a Badger style backstop facility. We would also propose the creation of a central liquidity facility for government backed mortgage securities also at a penalty rate as with treasury.

Now, for the nonbank servicers that have become so important. We did a lot of analysis on the existence of or lack thereof more to the point of Prudential regulations. We would make the FHFA, the Prudential regulator for the nonbank servicers and require it to account for systemic risk when it's overseeing Benny and Freddie and the federal home loan banks. And then we would allow nonbank -- I should say, servicers to be federal home loan bank members.

We feel this packet of recommendations addresses the over leveraged spillover from the borrower's side and also the credit disruption from the systemic nonbank services. Don, I'll pass it back to you.

MR. KOHN: Insurance companies are critical element in the financial system. They facilitate risk sharing and mitigation for their customers and they are a major source of finance for businesses.

Insurance companies that might face problems could reduce lending to businesses, offerings of insurance products to the public and that would spill over to the economy. Now, we saw that actually occur in the 2008, 2009 global financial crisis. And a lot of improvements have been made in regulation and the operation of insurance companies since then, but there's still some potential vulnerabilities that we focused on.

In particular, insurance companies sell variable annuities, which have a guaranteed minimum rate of return and insurance companies have engaged in some reinsurance in shadow or captive reinsurance offshore. They established offshore affiliates where they park risks, but hold less capital than they would if those risks were kept in the United States.

And a real problem here is a lack of transparency. Just how much risk is there both in the variable annuities and in the offshore reinsurance? So, our recommendations were importantly to increase transparency. So, figure out whether there is a problem about the sensitivity of insurance companies to changes in financial conditions and about the capital relief provided by these captive reinsurance companies.

We want to have standardized stress tests of insurers and state guarantee funds so that we, the regulators, both the state regulators that have the primary authority here, but also the federal level. We can be more certain just how strong the insurance companies are and whether there are weaknesses there. And we would like to give the Federal Insurance Office in the Treasury Department additional authority to coordinate across states on transparency and the stress tests.

I think the next category is the clearing houses for derivatives. So, you can see in the central counterparty is illustrated in that chart on the right there. So, without a central counterparty, all these parties are trading with each other with the central counterparty. They are trading with that central counterparty.

And they perform a valuable role in the financial system that is making the CCP, the Central Counterparty for transactions allows netting by all those folks to save capital and facilitates transparency and it can help users manage risk. They can see what they've got better. And that's why Dodd Frank actually mandated increased use of central counterparties.

But they also concentrate risk. As you can see, everything is going through that central counterparty. Problems at a CCP can readily spread broadly through the markets because those problems cause those critical markets for risk management, the derivative markets or the securities markets to cease to function well or because the problems are pushed onto the clearing members, many of which themselves are critical to market functioning and are members of multiple CCPs.

So greatly increased margin calls from CCPs were one source of the demand for treasury liquidity in the March 2020 dash for cash that led to fire sales of treasuries and other assets.

Security CCPs tend to be member owned, but the most important derivative CCPs are for-profit and that can create and has created a misalignment of interest between the CCP and the members. For-profit CCPs are incentive to hold as little capital as possible at risk and to push the losses onto the members with potential types of consequences we discussed.

So, we have a number of recommendations for dealing with the financial stability risk of CCPs. I think the first one is to bring the Fed into a more active role and oversight so we can take advantage of the Fed's systemic risk perspective and its macro and markets expertise.

The Fed has some role in the oversight of CCPs or market utilities that were designated as systemically important. But we would like to ramp up that oversight and the activity of the Fed to get its perspective.

We want to adopt more through the cycle margining so the bouts of volatility don't build on themselves by provoking huge margin calls as they did in March which then are met by sales that increase the volatility and that was an amplification process. So, we'd like to get the margins up in peacetime so they don't have to rise so far when problems show.

We'd like to strengthen -- the Feds should work with the CFTC and the CCPs to strength and regularize stress testing standards and transparency. And the resilience of the CCPs should be strengthened and the interest of the members in the CCPs better align by increasing CCP skin in the game. That is the capital that they put up, the owners put up themselves and clarifying and limiting the amount and techniques for passing losses back to members in troubled times. I'll pass it back to you, Glenn.

MR. HUBBARD: Thanks. So, to regulatory structure and process. And if you think of a continuum of policy on the one hand and the age-old adage that personnel is policy on the other.

In the middle is what's the structure and process by which regulation takes place? We think there's a lot to do here. Basically, if you step back, our goal was to say, how can regulation be a bit more dynamic? How can it look at changes that have barely happened in a market or set of institutions say over the past two or three years and anticipate what might happen in the event of a crisis?

We felt that there were a number of issues standing in the way having to do with attention and organization and accountability. The picture there is of the EPSRC Annual Report which I'll come back to. But we identified really three major problems.

One is an inconsistent attention to financial stability across members of the EPSRC. Many members, each of whom is trying to do the job Congress gave it. We felt are not always paying attention to financial stability, which is not just a comment in a crisis. But to this issue of what's changing? What should we be looking for?

A second area of concern that we identified is actually just too little accountability for an agency or agency head in identifying these financial stability risks in advance and recommending action.

And then a third very important piece is insufficiently comprehensive financial data. This ability to see around the corners, to look at what's happened in the past obviously requires data and we think this is a big issue. So, what we recommend, we would start with something very explicit. Simple to say but perhaps challenging and politically economy to do.

To give each agency a very explicit financial stability mandate. So, each agency would have an internal financial stability office. A mandate would be required to be accountable to Congress and the public for its views on what's happening in its purview on issues of financial stability.

We would further focus accountability by taking the EPSRC report whose picture we showed on the previous slide and making the secretary of treasury the sole author of the report. So, she, Janet Yellen, the current secretary would be accountable for that. Each agency though would have appendices and commentary with its own comments with interactions among the agencies and the EPSRC chair, the secretary of treasury.

As we recommended for the other agencies under the secretary of the treasury would be a new undersecretary of treasury for financial stability with the staff. The treasury secretary, whoever he or she is, is very busy with lots of issues. This would concentrate this responsibility and help manage day-to-day issues in EPSRC.

We feel that existing treasury undersecretaries already have a full plate and that this new position is important not only in stress times but importantly in nonstress times to identify the potential for issues.

I mentioned data before. We would make modifications to the Office of Financial Research which was created after the global financial crisis. Our purpose here is not to be critical of what OFR does, but to try to empower it or a successor to it to do more. We would modify the structure of OFR to a Comptroller for Data and Resilience. The important there. The name comptroller is obviously trying to pull in and draw to mind the stature and importance of the Comptroller of the currency and data and resilience are trying to get at stability. And we would have this Comptroller for Data and Resilience be a voting member of EPSRC along with the agency constituencies.

Now, in terms of putting reforms into practice so you could really say to test, it's a fair question to ask. Okay. You folks spend all this time since October 2019. What if we did the counterfactual and said, we had some or all of these changes in place when we went through the stress test the world gave us in the pandemic. What might we have seen coming if these proposals had been adopted?

Now, of course, there aren't silver bullets as Don began in the treasury. We've said repeatedly, but we do believe in the treasury market dysfunction, we would have caught the issues underlying challenges in liquidity. Don referred to a number of supply and demand considerations that were there not just in the pandemic. We know there was an episode the Fall before. The characteristics were structural, and the policy actions could have been suggested.

In mutual funds, the process would have picked up big changes in open end bond funds and asked the questions about the liquidity transformation and maturity transformation happening there. More with an eye towards saying, you shouldn't have it, but with an eye towards saying, is that liquidity transformation and maturity transformation being fairly priced?

And on CCPs had there been a financial stability mandate there would have been more discussion of issues about incentives in CCPs and the potential for fire sales. So, we view all of this as important.

I do want to mention things that we talked about briefly in the report, but we did not give them the attention they rightly deserve. Issues of emerging risks such as climate change and cyber security risks. These are both first order for obvious reasons.

We did not tackle them for two reasons. One was to focus on financial stability in a timely way to help the administration and Congress. The others we felt as a group, we didn't have the domain expertise to have a lot to say really on climate change and cyber security, but we do acknowledge them as risks.

So, I will conclude there and really going back to where I began. The framing is about financial stability and instability. The framing is about how do you see this coming? So, what are the areas you need to look at? What are the policies to consider? What are the process changes that help consider it? And that was our work on the task force for financial stability.

MR. WESSEL: Thank you very much, Don and Glenn. That was an excellent summary of a report that's 125 pages and goes into great detail on each of those topics. I think it's sometimes hard for novices to understand any particular issue, but we wanted to give people an overview.

Now, to discuss this I'm joined by a number of people with particular expertise. First, there are members of the task force, Blythe Masters from Motive Partners who has a distinguished career in finance and a collection of motorcycles in the background.

Anil Kashyap from the University of Chicago and Kate Judge from Columbia Law School. And I'm also joined by two people we recruited to help comment on the report, Jeremy Stein from Harvard and Randy Kroszner from the University of Chicago. Randy and Jeremy have done substantial academic work in this area. They both also have served on the Federal Reserve Board.

Now, I should mention that we picked the members of the task force because of their expertise and several of them have conflicts of interest which we have disclosed in the report. One thing to mention in particular that Anil is currently a member of the Financial Policy Committee of the Bank of England, but in this conversation, he is not speaking for the Bank of England or Boris Johnson or anybody else. He's speaking only for himself.

My experience is that when Anil speaks for himself, it's usually pretty interesting so I'm not worried about him tempering his comments.

I want to start with Jeremy and Randy. And I'm interested in your reaction to this report. Let me start with you Jeremy. And particularly, I think the task force felt that the nonbank financial system sometimes known as the shadow banking system is a huge financial stability risk. It's one that has been identified by some people in the past and the task force is trying to call attention to it. And I wonder whether you share that alarm and what you think of their recommendations?

MR. STEIN: Okay. Well, thanks, David and thanks for including me. Yeah, I do. I should say this is a terrific and very wide-ranging report and I agree with a lot of the recommendations. And I also very much appreciate the sort of careful effort to link the recommendations to well identified externalities which was really well done.

So, there's an awful lot. As you said, it's a big, big report. There's an awful lot. Let me just pick and choose and I'll focus on two of the chapters, open-end bond funds and the treasury market.

So, David, to your question. I was particularly happy to see you all take on open-end bond funds. And that's to say all bond funds, not just money market funds. As you said, this has been a pretty worrying source of vulnerability and I know that, you know, some observers and particularly folks on this task force have been expressing worries for some time.

And I think March 2020 really validated some of these concerns. Though, unfortunately, for empirical science the Fed kind of ruined the experiment by stepping in and basically saving the bond market with the, you know, primary and the secondary corporate credit facilities. I mean, obviously, you know, unfortunately for science. Fortunately, for the real economy because this would have gotten really extremely ugly through sort of this liquidation mechanism and credit disruption.

I mean the one concern, I guess I have is because the full ugliness didn't play out some of the policy urgency maybe somewhat tempered and in fact if you're an industry advocate, you might just be tempted to say, well, look it, you know, it wasn't really all that bad.

Yeah, it really wasn't all that bad, A, because the Feds saved you. And, B, we should worry that they were able to do that really because this was an alien invasion. And they had much more political support in the forms of a CARES Act and many other sorts of things that allowed them to intervene in the corporate bond market in a way that they can't in normal times. It's very different than the treasury market where the Fed can basically always step in. So, I think this is just an incredibly important area. I think it's great that you all flagged it.

And I want to say that I agree with basically the general spirit here, which I say was very important. The point that swing pricing while it can be helpful for dealing with first mover advantages is unlikely to be a panacea and you may need to consider things that are a little bit more structural and a little bit more aggressive.

So just to be very clear on kind of the economic mechanisms. If you thought that the only market failure was a first mover advantage that some people can get out better at a better price. Now, I think you would be inclined to like sort of well-designed swing pricing because if you get the swing pricing right, it sort of internalizes. It makes the first mover internalize their advantage relative to those that stay behind.

But I think the thing to know is that while the first mover advantage is no doubt one factor that contributes to instability here, it's unlikely to be the only one. And basically, any kind of positive feedback mechanism, whether it's people who extrapolate from past returns. Whether it's stop/loss, margin calls, flat out panic. All of those can interact with the open-end structure in a way that can kind of create a spiral that goes from outflows to price declines to further outflows.

One clue that it's not all just about first mover comes from exchange traded funds from ETFs. In other words, if you thought that the only problem in the world was first mover, you'd love ETFs because basically they have an endogenous form of swing pricing whereby the price of the ETF can decline under stress well below forcing people to eat their own price pressure.

So, if you thought that was the only problem, you'd say, I love ETFs. Now, interestingly ETFs also have very large outflows during the same stress period, which again suggests that the only problem to be addressed is not just first mover but it's something more inherent to kind of this just maturity mismatch sense. So, I think that's sort of very important on the part of the report.

As to the specific recommendation of creating a new class of funds that are not quite open and not quite closed. I think there’s a lot of details still to be filled in here. We’d probably need some kind of legislation. I'm not quite sure how you decide who goes in which bucket. And so, you know, I have a hard time kind of commenting on the specifics because they're yet to be developed.

But again, I think the important thing that the report does is flag that we may need to think in this sort of more ambitious and structural way. And again, I very much agree with that.

On to treasuries. First thing to say, and Don kind of touch on this. March 2020 is sort of the motivation for the, you know, maybe the most compelling motivation. I don't think we're going to solve with any of the things we're talking about, you know, for account factual world where March 2020 would have gone smoothly.

It was just an enormous, you know, six sigma, eight sigma particular thing, enormous event. And, you know, this huge dash for cash is basically just a very dramatic shift in the preference for reserves relative to bonds. And until the Fed massively expands its supply in reserves, you're going to have to get a pretty dramatic price. And so, some of that any market structure is going to have that.

So, it’s not to say that there are not a lot of things that can’t be improved, but I don't think you want to tell yourself that these improvements would have made March 2020 go smoothly.

On the specifics, totally agree with the recommendation on defanging effectively the binding nature of the leverage ratio which is really -- I mean, I think it was anticipatable, but it’s been made worse by the dramatic increase in reserves. It’s really problematic for market making in particular so I agree with that. And I also agree with the proviso that you don't want to just sort of dial back the leverage ratio without making a compensating adjustment, presumably the risk base capital so as to keep the overall dollars of capital in the banking system the same. So, I total agree with there.

I also agree on the usefulness of a standing repo facility. I also sort of strongly supportive of that. I think here I differ somewhat. Actually, maybe sharply with the design. I favor a broad access standing repo facility. And in particular, I don't like the feature that you all seem to want to charge an upfront fee for the standing repo facility. I'd like to make it as broad access as feasible with no fee. With an appropriate haircut so the Fed is well protected, but with no fee.

I think the fee sort of runs into an externality which is we like the standing repo facility in part because if people access the facility and can borrow against their treasuries, they don't have this fire sale. And you want to cut off the fire sale. And so, the concern is that if you charge people, they may be less inclined to public good in some sense to avoid the fire sale. So, you don't want to have this fee that discourages it.

And I have to say that no, the moral hazard problem that we're sort of trying to solve for with this fee, I'd never seen it. I don't see a well-designed and well collateralized this is for treasury. This would not be for other things.

But if you're pledging treasuries with an adequate haircut, A, the Fed doesn't lose money. And the idea that hedge funds are going to like somehow make out like bandits. I think, think about a hedge fund that's doing the treasury's future basis trade. If they may behaviorally change, they may leverable. What's going to happen? The spreads will collapse.

They will drive the spread, you know, towards zero. That is to say, they will push up the price and drive down the yield on treasuries to the benefit of the taxpayer. It's not to the benefit of corporate issuer in this case. It's to the benefit -- the taxpayers in some sense getting their fee by the fact that treasuries are seen to a feature of treasuries that they are intraday monetizable.

You pay for that upfront. The government benefits. The Fed doesn't lose again if it's well collateralized. So, I think that's basically a win/win and I don't see the moral hazard in the way I would with a facility where you are pledging, say, corporate securities.

If you're determined to address a moral hazard here maybe you would want to investigate some system of having minimum haircuts on treasuries ex ante. But I think the Fed would need to get the legal authority to do that.

The last thing I'll say is sort of just a nagging feeling. I think there are a lot of good ideas here and they are well worth doing. I don't know how much they will solve problems in treasury market more generally. Even some of these other flash episodes.

I think the underlining fundamental economic problem is it is very efficient. PTF firms are an example of this. It is very efficient to run a capital like model 99 days out of 100. You don't use a lot of capital. You sort of force spreads to be narrow and that just works well. And that's going to win in almost any kind of market setting. That capital like model will just evolution -- you know, Darwinianly kind of tend to take over. And that model does well most of the time and it's just not good when there are sort of one in a hundred events.

So, without really kind of getting it back, and all of this other stuff is useful? But if this were adopted will we still have flash crashes and things like that? I think the answer might be yes. So, all good. I want to probably be a little humble about what, you know, what we can solve, but again terrific report.

MR. WESSEL: Thank you for that, Jeremy. I think on behalf of the task force, I don't think anybody in the task force thinks we're going to eliminate all crises. We're just hoping to minimize both the frequency and the severity of them by putting some measures in place that will increase the resiliency of the system.

Randy, I'm curious as to your reaction. And one of the things we've heard from some people is, oh, you guys want the Fed to take over everything. You know, the Fed is going to take care of CCPs, right? And the Feds are going to be running a giant refinancing facility for everything from mortgages to treasuries, to treasury repo and who knows what?

And I'm just sort of curious whether you share that anxiety and what your other reactions are to the report?

MR. KROSZNER: No, I think that's an important point. And thank you very much for bringing me in to comment on this excellent report.

I just want to say that I really like the approach that it has taken. Very clear objectives clarifying what people mean by financial stability and financial resilience. Those words are used a lot without any clarity.

As Jeremy said, the linkage between some sort of challenge in the market and a particular solution is very clear. That's also very rare because often there are solutions in search of problems and here, we actually try to identify, you know, in the report. We try to identify the problems clearly and then identify the solutions making it easy to decide whether you agree that it is solving the problem or not.

Thinking in terms of cost benefit not in the narrow terms of we're going to like calculate this is cost 42 cents and that cost 43 cents. And so, we do the one that costs 42 cents. We'll never get that kind of precision. But being honest about the tradeoffs and being clear about the tradeoffs.

So, I just wanted to say that I think that's extremely valuable and very rare in this kind of analysis and extraordinarily welcomed.

On the Fed's reach. It's always very easy to say, why doesn't just the Fed do it? I mean they seem like a bunch of smart people and they've got a lot of resources and kind of that's where the money is? And also, in times of crisis, it does seem like the Fed is the one that reacts boldly and reacts quickly.

It's actually kind of interesting that many people thought that with the passage of Dodd Frank and the reduction of some who have called it the Emergency Power Section 13(3), the Fed had to kind of do things just with the super majority of the board, with five votes or more of the board. That was going to be slowed down because now you have to go to treasury.

Truly, March of 2020, shows that that's not necessarily the case. The Fed was able to stand up all the programs that we had pioneered when Renetky (phonetic), myself and others were there plus a whole lot more.

The interesting part, and this relates to your question, David. Is that what Congress did is actually appropriate money for additional activities. Main Street lending program, a whole variety of other things.

But, of course, that was just crisis time and such. But it’s sort of interesting that it was the Congress giving money to the treasury to tell the Fed what to do that had not really happened before. Now, that’s not directly telling the Fed what to do about monetary policy, but it’s starting to get closer to align. And this is the thing that I worry about that if you think that, well, no one else really can do it, the Fed can always do it.

It takes when you have less clear objective or when you have multiple objectives, it becomes more difficult for accountability and it becomes more difficult, I think to be successful in your core mission.

It’s not to say that financial stability isn’t a very important part of what the Feds should do, but I’m a little bit worried about just saying, let the Fed do it because they're sort of better than others at doing it. Which actually gets at one of the broad points that I want to make. I’ll come to a couple of specifics, but in the broad regulatory reforms and steps going forward and how we can do things better.

I was hoping for a little more boldness. One of the challenges that is really clearly outlined in the report, and we’ve seen whether it was most recently or a decade ago in the global financial crisis. Is there are a lot of fragile interconnections between different markets, different types of institutions. And that’s sort of -- it’s in those cracks where there are a lot of problems that come in.

And part of the reason that there are those cracks there is because the way we set our institutions up, we’ve got insurance regulators that are at the state level. We’ve got bank regulators. We’ve got regulators of other pieces of the system. And much like the report focuses on, the so-called shadow banking system or the nonbank system, which I think is important fragmented.

It’s a challenge because we have different authorities with particular focus and then part of the solution as proposed by the task force is to say, well, everyone should have their financial stability group and then there should be a treasury financial stability group. Not that I think there is anything wrong with that, but I'm not quite sure that that really helps to get at the fundamental issue which is sort of seeing those interconnections.

If you have an organization to regulate banking or to regulate insurance or to regulate broker/dealers, they're going to regulate those things primarily. Certainly, they’ll be worried about the big picture risks, but the mandate that the Congress has given them is to look at, you know, one particular type of institution. I think that is where some of the problems come in and where some of the challenges are.

And what’s interesting is the task force, I think quite wisely, has found a lot of those fragile interconnections. Just as Jeremy and Don and Glenn were talking about. Treasuries are incredibly important. I mean basically they are the base of the entire financial system and if that base wobbles, if there’s not complete equity there or confidence that’s there’s liquidity there, everything else fails.

People just want to get rid of everything. If you can’t get rid of treasuries then you just run from everything else that has enormous consequences for every asset class, for every institution in the system. So, it seemed that being bolder and sort of thinking across the -- so in some sense the column that you have on the credit disruption problems, those problems. Those should be kind of the motivations for the regulatory approaches rather than the other pieces of breaking it down by insurance, by banking, by the particular institution.

And really saying that what we want is an organization not necessarily I think well-coordinated with the Fed but not necessarily just the Fed to be looking at these kinds of issues. I'm not sure that just sort of coordinating amongst the different pieces is really going to get at that.

So, I think looking at the class of problems of sort of, you know, the dash for cash, the liquidity problems in a number of places. There are issues raised about what I sometimes call toxic contracts. A contract that are very like let's say use CCP as an example.

There are a lot of contracts around CCPs that are extremely good and extremely robust for dealing with a failure of a particular institution, but the unattended consequence of that is it can cause system wide problems when everyone has to pony up resources at the same time. And so, I think thinking about it from that perspective rather than from a CCP perspective, but think about it as what are the stresses that are going to be when a shock comes on liquidity? On, you know, coming from CCPs, from others? And approaching it in that way would be important.

Now, I know that Glenn mentioned that it didn’t focus on cyber. And I understand that you can’t focus on everything. But I do think that that is an element that really does cut across all of these pieces and shows that what is very important is not just banking and financial regulation but also coordination with national security agencies.

This is, I think of stability and resilience as very much a part of that because there could be foreign actors who try to do something that could be problematic to the system. You know, just think about a cyber attack that makes a large financial institution just a little bit uncertain about what is in everyone’s account. That’s going to be really problematic. And that becomes not just a financial stability issue, but I think a broader issue.

So, thinking about it in those sort of very broad terms going even more boldly forward than has gone before, I think would be valuable. And thinking in particular about these so-called toxic contracts. The things that are very good for dealing with a particular institution or one particular problem but having the unattended consequence of it causing a market wide problem. I think would be very valuable.

MR. WESSEL: Thanks. Well, thank you for teeing up two things that I wanted to talk about. Let me start with Blythe, but let me say one thing first.

You implied that the task force was not bold. In one respect, the task force is not bold deliberately which is the task force decided in its first meeting not to propose consolidating financial regulators like merging the FTC and the FCC. None of the people on the task force would design a system the way it is now, but we felt that another group proposing something that seems unlikely to happen wasn't constructive.

One of the questions I got online is somebody said, great presentation. Many recommendations, not novel. I take that as a compliment. And then the questioner asked, but is some of this is a politically realistic? And I think what the task force did is a mix of things, some of which can be done by regulators in the current proper regulators is pretty much disposed to do things.

Some things would have to be done by Congress and that obviously is the bigger lead. But it seemed essential to at least put them on the table.

Blythe, Randy referred to the clearing houses for derivatives and that's a subject about which you know quite a bit, but I think most people don't. And I wondered if you could talk about why you think that is something that poses a financial stability risk? And I refer to a question we got online where somebody said, oh, come on. The CCPs did fine during the crisis and maybe people had to post more margin but that can't have accounted for a lot of the dash for cash. So, what's the problem here? And why do you think it should be addressed?

MS. MASTERS: So, as we know the CCPs have performed a valuable role in the implementation of the much-needed performance in the aftermath of the great financial crisis. And the mandate to centrally clear derivatives has addressed many of the issues that led to contagion risk during that crisis. In that there's less open, unsecured exposure bilaterally in the system and less linkage that's opaque and hard to predict the consequences in the way that there was before the central clearing mandate.

The issue though is that by imposing a central clearing mandate, we have centralized a huge amount of activity and introduced a single or a series of single counterparties upon whom essentially everybody in the system is now dependent. And it's absolutely true that the CCPs fared well during the 2020 March crisis, but that doesn't mean that the systemic risk doesn't reside there.

The issue is the consequence of a failure of the CCP, particularly a derivative CCP is actually almost unfathomably difficult to describe. The issue being derivatives as distinct from securities. The derivatives have tenor. They are long lived instruments unlike a security's transaction where cash exchanges hands after typically two days and that's essentially the end of the interdependency between a counterparty and the clearing house.

In the case of derivatives counterparties have long time exposure. And if a clearing house were to fail due to perhaps to the correlated failure of several of its clearing members or customers, the result of that would be essentially an immediate freezing of and catastrophic ceasing of functioning of what would quickly become all markets.

Derivative markets are intimately linked with cash markets. They are what people use to hedge their cash exposures and vice versa. And a failure of a central counterparty would leave instantly the clearing members of that central counterparty with new risks on their books that arise suddenly because of the loss of the protection afforded them by the CCP.

Those risks are open. They have duration. In some cases, they have complexity as well and second and third order effects. We like to police so they have risks that can be very hard to predict. And the ability to close out those risks would be severely impaired because of the very fact that the market that the CPPs seek to serve is the market you would have to enter to lay off those same risks. So, there is certainly a significant systemic risk potentially of that.

The issues that the report raises, there's a lot of information in the CCP chapter. It talks about lack of sufficiency of skin in the game from privately owned or commercially owned CCPs that aren't mutualized. It talks about the fact that those entities have the right to call on the resources of their members in the event of a default in order to replenish their term. They also have the right to force unwind or haircuts.

And all of these things can amount in a situation where those misaligned interest between the CCP and their customers can amount to situations where the members essentially have risk and/or financial loss or both imposed on them at a time when market functionality is compromised.

We have never seen a failure of a major derivative CCP in the post-Dodd Frank era. And I hope very much that we never will do. And just because it hasn't yet occurred doesn't mean that the risk does not exist. There is widespread commentary both from the industry itself, the users of CCPs, the mandate to users of CCPs, a number of academics, a number of current and former regulators about these issues.

And it's time that we strengthen at least one entity in the constellation of fragmented regulators that we have in the U.S. with taking responsibility for the systemic risk consequences of all of this and that means not just regulation of an individual CCP, which of course already occurs. But thinking about the interconnectedness between them.

Thinking about the cross-border interconnectedness between them. Thinking about the shared customers between them and what a failure of one or more entities that are the biggest customers, not just of one CCP but of many CCPs simultaneously could bring about. Thinking about how to ensure alignment of interest sufficiency of skin in the game. Ensuring that the consequences from a systemic risk point of view as Randy referred to it of a toxic contract that serve the CCP commercially well in managing its own risk but has a potential to create contagion elsewhere.

That needs to be thought about not from the resiliency point of view, not from the point of view of the CCP's commercial/private interest but the externalities that that imposes or could impose upon the rest of the system.

Pretty much all of the issues that we identified with the exception of the procyclicality of margins apply principally or to a greater degree with respect to derivative CCPs that may deal with security CCPs. Again, because of the inherent difference in nature of the underlying instruments.

But procyclicality of margin is something that there's a lot of noise around back in March last year and is something that is just as relevant in the security CCP space. So important to point out that there we did talk about consideration being given through the cycle margining practices that are more stable inherently. But also, a particular recommendation that's very deep but I want to lift up because I think it's important, which is giving consideration to shortening the second rinse cycle in securities as CCPs. It's not really so relevant or helpful in the case of derivatives but yet may have long lives.

But to shorten the settlement cycle from T plus two down to T plus one or potentially even less. The technologies exist, by the way, today to facilitate that you would materially risk, reduce the risk inherent, the systemic risk inherent in the system and at the same time reduce the quantum of need for capital calls and the exacerbation that that can have in a situation where there's a dash for cash like the one that we otherwise described.

One last comment, if I may take advantage of having the mike for a minute. I just wanted to mention something in response to Jeremy's good comments. But this issue of the moral hazards and the breath of establishing a Fed repo facility. I want to point out that the moral hazard that you felt that you haven't yet seen.

I like to consider whether actually it exists in the form of the sheer extraordinary scale of the growth of open-ended mutual funds which are offering products as alternatives to cash which are widely used both by retail and increasingly institutional scale investors which have grown since the financial crisis. Not a coincidence that they grow during the same period that the bank balance sheets have been increasingly constrained because of the SLR G6 computations and other things. These alternatives which are to use your great terminology, capital light vehicles are providing liquidity promises that vastly exceed that capacity in the absence of a helpful Fed to deliver in a dash for cash situation.

So, they hold liquidity buffers in the form of treasuries. They expect to be able to convert those to cash when they need to. That drove very much a big part of what was going on in March of 2020. There’s a clear moral hazard issue there and the reason for imposing a fee and a mandate on those entities for participation is to start to try to contain that dimension in the moral hazard risk. So, I just wanted to get that one in even though I wasn’t asked.

MR. WESSEL: Let me just define two things as you said for people who may not be familiar. When you talk about procyclical margining, what you mean is that when the markets go down suddenly everybody, all the clearing houses, want their customers to put out more margin and that just tends to make things worse.

And your reference to the settlement issue is that now when I sell a share of stock, the deal doesn’t close for three days and in the interim there’s a lot of money that needs to be financed.

Kate, I’m going to turn to the financial stability oversight council. I mean, as Randy implied the idea was, okay, if we're stuck with all these financial regulators, we did Dodd Frank and we got rid of one, the Office of Thrift Supervision. And we created another one in the Consumer Financial Protection Bureau so no change.

And the idea was that the EPSRC was going to be this great coordinating power. At least in the Trump administration, it seemed to be relatively impudent. I know that the treasury secretary, Janet Yellen, seems determined to flex its muscles, but she’s learned it doesn’t have very many muscles.

So, I’m curious how you think that -- what recommendations does the task force make to strengthen the EPSRC? And what makes you think that this institution can be safe?

MS. JUDGE: It’s a great question to ask. And it does nicely follow because I do think Randy raised a number of important issues.

Going back to many of the chapters, I think the best way to understand the recommendations with respect to the EPSRC is that the hope is you make a bunch of small changes that add up to being more the sum of their parts.

Again, one of the key challenges here is there is so much power that currently lies at the primary regulators. And so, can we realistically promote resilience and stability? Unless we get buy in, staff, support and understanding at the level of those regulators. And we're skeptical of that. So, we completely agree with you that the creaks and the interconnections need to be at the center of efforts to identify potential threats.

And that is key to the idea of creating not just the undersecretary for financial stability within treasury, but really creating a very significant staff there so they are crafting the report. The report is not coming a group of regulators, it’s coming from them. And they are saying, here’s what has changed in the last three years. We’ve looked at the financial system. Like here, you know, here are the things that we're seeing just the trends. Here’s what we think potentially poses threats. Really making recommendations.

And then again for the individual regulators, it’s not just adding to their mandate, but the building up of the required staff. So, there is the idea, you’ll have an office that focuses on financial stability and resilience but then each of the different EPSRC members that that office is going to report directly to the chair. That they are also going to coordinate with each other across the different agencies and then you institutionalize this as well into the process.

So, one of the things we’ve learned over the past decade is we made a lot of very helpful changes I think by regulation, but they had collateral consequences on liquidity and market functioning. We also have regulators that have traditionally been market regulators having to touch, you know, engage in what might look like efforts to address systemic threats, but without necessarily having the capacity or the internal background and frame for trying to understand how they should be thinking about those issues. And where they should prioritize issues like capital information and investor protection relative to financial stability.

So, we’ve been providing a much clearer mandate because as you said, the mandates are going to control what they do. I think David applies the whole agency creating the staff and then creating these annual mechanisms as well as others to promote the coordination and communication along with, again, the more robust comptroller, data and resilience because a lot of the challenges are just understanding what's flowing and where?

We're at least taking a very meaningful step forward, so I don't know if it's a solution. It's not meant to be a solution, but I do think hopefully it gets us to the point where we have more continued attention on resilience.

And actually, let me tie that really quickly to a point that made by Jeremy but also came up in the question given to Blythe.

One of the core challenges we face is right now nobody is all that interested in financial stability. You know, there is this overall sense of, you know, that was the problem of a decade ago. We're in a new era. We have different issues. We just managed to get through a pandemic. We didn't see anything explode in a major way therefore we really don't have to worry about these issues.

But I think as Jeremy rightly noted, not only do we have the Feds step in, in a major way, but we had Congress step in, in a very significant way. Neither of those can be taken for granted in the face of a future potential threat to stability. And so, I think the need for ongoing diligence and the need to be thinking about it now precisely when nobody thinks we need to be thinking about it is part of what we need to institutionalize when we're trying to institutionalize through the reforms.

So, I think there is certainly other ways we can go about it, but part of it is that understanding precisely when you're not paying attention to these issues that potentially we most need to be.

MR. WESSEL: Thank you. And, Anil, you are in many respects the father of this report. You proposed a study like this at a Fed conference a couple of years ago that we took up the challenge.

So, I'm curious just if you could step back. What is it in the report that we haven't discussed that you think is worthy of note? And what do you think about separately

Jeremy's point that we shouldn't charge an upfront fee for the treasury liquidity facility?

MR. KASHYAP: Well, let me take the second one first. I think Blythe pointed out part of the thing.

So, we would insist that the principle trading firms have to pay this access fee partly to tax them. So, they would be capital-like, but they would be mandated if they're going to be in there during the normal times to have to pay something so that when they do step back at least they don't completely escape all of this. They may or may not use it.

You know, I think we try to say that there have to be enough people mandated to touch the facility that you'd be sure to set a floor under the price of the treasuries, which in the end is the single most important thing that we don't have a fire sale. So, I think this is, you know, a complicated calculation and the task force debated it quite a bit actually.

But I think the key idea is that there would be a floor on the price of treasuries, and everybody would understand that and that we wouldn't see anything like what we saw for those two weeks in March before the Feds stepped in.

I mean, I wonder how many people even watching this call realized that the first and second quarters of last year the Fed bought more than it did in the sum of QE1 and QE2 and QE3. It's a huge intervention that I don't think most people appreciate and I don't think we want to have to count on that again.

Stepping back, I mean I think what Kate was just talking about is incredibly important because we watched the EPSRC kind of flop around from the point where when the administration changed, as Glenn was saying, you know, people or policy that they dropped a lawsuit that the two previous chairs of the EPSRC wrote and had to say, why are you doing this? So that shows you how little institutional commitment there was to something that I think was in plain sight.

And a lot of the topics we're taking up in this report are ones that have been festering for six to eight years, and the system clearly isn't self-correcting. So, I think part of the way the EPSRC is going to evolve if we were a dictator and got to impose all of this would make it a much more organic and dynamic organization that would be forced to kind of keep up. Kate didn't mention that in stress that every agency would still have an annex to the report that it would be talking about.

So, it would impossible were something to go wrong in our setup where it wouldn't be clear who went down the system because there would have been somebody responsible for each part of it. Either it would have been the treasury secretary that gave something a pass or the agencies that failed to spot it or the over bar that failed to get the data. And so, I think that would be a first order improvement.

Something that we didn't talk about is just how risky insurance has become. The insurance industry has transformed itself over the last half dozen years in a way that before I started working on this I didn't appreciate. During the first three or four weeks of the pandemic, the insurance companies were down more than the airlines.

You're going to say, how can that happen? Well, because the insurance industry is now a variable annuity industry and when it looked like interest rates were going to stay low for a very long time, people stepped back and calculated the value of the insurance companies and said, my God. These guys are in real trouble.

And so, that happened. It got very little commentary. There's nothing in the current system that's going to fix it and it's a ticking timebomb that's just sitting there. And it's wrong if we're going to have no real way to address it. I think if our reforms went through that would be an example of something that's visible but not headed towards correction and where we're going to have remorse if something goes badly.

And so, I like the institutional reform that would clear up, you know, everything that we can see now and also have a more of a horizon scanning nature to it where somebody would be responsible for looking out there and saying, what's growing fast? You know, what's exploded in the last couple of years? Let's go try to figure out why and what would happen if it went wrong?

And let me stop there because we're running out of time for questions.

MR. WESSEL: To my surprise, there seem to be more questions about the clearing houses than anything else. So, Blythe, you're on.

One, how would you align the interests of the members of the privately held CCPs and their members? Two, how would you address recovery and resolution? And who would do these stress tests? And would you give the CCPs access to the Fed standing repo facility?

MS. MASTERS: So, you know, the alignment of interest starts with insisting on greater skin in the game. That means increasing the amount of capital deployed by the operator of the CCP so that its interests and those of the members who all would then in a more aligned fashion stand to lose in the event of a failure more closely aligned.

MR. WESSEL: That was something that a regulator would have to require presumably.

MS. MASTERS: Presumably.

MR. WESSEL: Yeah.

MS. MASTERS: Yeah. So, I think the next -- the other point, by the way, so it should come early enough in the waterfall of who absorbs losses and in what sequence to matter?

So, it should be at the top of the waterfall because these are the operators of the CCP. And, you know, presently that's not always the case that that capital is at the top of the waterfall. So, of member capital is what gets depend on the default fund is what gets dependent on first. Again, lack of alignment there.

Tell me the second question again.

MR. WESSEL: How would you address recovery and resolution? Would you give them access to the repo facility at the Fed?

MS. MASTERS: Yeah. So, I mean we talked about in the chapter on this which goes into a lot of, you know, detail but not enough detail to answer everything by any means all questions on this subject.

We talked about broadening the role of the Feds in CCP, in overseeing CCP resilience vis-à-vis systemic issues as well as involvement in recovery and resolution. Presently, the FDIC has the unenviable task of dealing with CCP resolution and absolutely no offense intended to the FDIC, but again as I described it that is an unfathomably bad eventuality. And I think having a regulator with a mandate that is broader, you know, across the entire system thinking about that with a view to systemic instability is important. I think practically the only viable choice in that context would be the Fed so that's what we recommended is broadening their role in respect to that.

The question of giving access. CCPs that are designated as SIFMUs, systemically important financial market utilities, I think that might stand for. Forgive me if I've got it wrong. Are in principle under certain circumstances given access to the discount window but it's more in an extremist case. I believe then with a view to thinking about an individually in extremist case rather than in connection with stemming a broader systemic event.

There is the issue that other CCPs that are not SIFMUs, for example, foreign CCPs that are very important to the U.S. financial system nonetheless are huge interlinkages there both with respect to overlapping products and overlapping members. There is a question as to whether they should be given such access.

But under all circumstances, you would have wanted to create skin the game, capital requirements, supervisory oversight and a clear mechanism for the Fed to conclude that there was sufficiency provision before you would ever contemplate giving access to the discount window, I believe.

And then I think I see now there was another question on stress tests. How can these be improved? Well, number one, transparency. A great transparency around the methodologies. Number two, I'm much more interested in cross market stress test than I am in individual institution stress tests.

You want to look at common holdings, common counterparties and run stress tests across the system including thinking about cross border implications not just individual scenarios. So, it would be typically today for a CCP to run a stress test that says, what if our largest single counterparty failed? What if our largest two single, counterparty failed? That doesn't get anywhere close until we have enough capital to cover that that is not even approaching a sufficient set of questions to answer, what are the systemic risk consequences system wide if something like that happening? Because by the way, if your top two counterparties in this exchange or CCP system failed, there are obviously implications elsewhere.

Reverse stress testing is something that both Anil and I also like. This is the concept of asking of the stressee, define the stress test that illustrates your worse, you know, imaginable outcome. You tell us what that would be rather than imposing that on them. So reverse stress testing for CCPs and groups of CCPs, I think would be extremely valuable. Extremely valuable.

There's lots of evidence to suggest that those correlations that occur in times of stress in terms of stress causes greater correlations of positions across counterparties, greater concentrations of positions and behavior in times of stress can be very different than in times of normality.

So, understanding if we're beginning to think about that. And I think reverse stress testing could be helpful in terms of thinking through some of the consequences of that. I could go on but --

MR. WESSEL: I know you can.

MS. MASTERS: But don't let me.

MR. WESSEL: No, no. I --

MR. STEIN: Can I just recommend an excellent paper by someone who unfortunately is no longer with us or one of the two authors. It's called "A CCP is a CCP is a CPP" by Robert Cox and Steigerwald.

And it gets at exactly this issue that Blythe is talking about. About how do you regulate these appropriately and how does the Fed do it? And what's interesting -- and it gets back to our discussion we had earlier is that although they're at the Chicago Fed, they are implicitly critical of the Fed taking an approach that treats the CCP as a bank rather than treats it as a different kind of institution.

But I think that's one of the institutional challenges that you have that even if you create these groups of resilience and stress organizations in each organization, they're still going to be looking at it from their particular point of view.

MR. WESSEL: Right. I think one of the virtues of this report is that it raises issues that seem arcane and not on the front pages until something blows up and suddenly, we'll be wondering like why weren't we more concerned about CCPs? Or what was this variability annuity business? So, I think that that's one of the values.

Kate, very briefly. There was one question that we discussed, and I thought you can answer it before I turn it back to Don and Glenn. Which is does it make sense to have the EPSRC in the treasury if the treasury is always changing from one administration to another?

MS. JUDGE: No. It's a key question. We went around it over and over and over again.

One of the things that is in the background but not dispositive. But we did have another Supreme Court decision just last week reiterating what they found earlier, which is that when you have a single head, they're going to have to be directly accountable to the President.

So, if what you're trying to avoid is presidential politics, there are -- you know, there's open issues. But there are certain reasons to be concerned in whether it's treasury or not.

That being said, there are also advantages. And I think going back to Anil's point about accountability. This creates accountability in a way that is meaningful and does tie to where you want it to be and where, as a practical matter, ex-post the treasury secretary is always running things when things go badly.

And so, I think one of the things that we like about having some treasury is if this is where the center of control, the locust of control is going to be during periods of distress, we want them to be part of the ongoing conversation and also of ongoing accountability to paying attention to these issues. So, they are shifting the hat rather than coming into a whole new territory during those periods.

So, there's more to say, but I do think it is a difficult call and some real advantages.

MR. WESSEL: Okay. I want to thank all five of the panelists. One of the disadvantages of having five panelists, all of whom are extremely experienced, is that you kind of wish you could have twice as much time with each one of them, but then there's the externality there with the other panelist.

Before we close though, I want to turn the mike back over to Don Kohn and Glenn Hubbard for some closing remarks. But thank you all for participating.

MR. KOHN: Thank you, David. So just a couple of brief remarks. First of all, thank you certainly to everybody on the task force. This was a great experience for me, and I think we produced a document that doesn't have all the answers for sure, but points to a lot of problems and a lot of places that need work. And I hope will be reference work for both the Congress and the regulators going forward. And thank you especially to Randy and Jeremy for those very thoughtful reactions.

Two points here. One is to emphasize a point that was made which is the task force was formed before March of 2020. We were formed in the Fall of 2019 as Glenn pointed out so that there are a lot of issues. There's a tendency I think today to focus on what went wrong in March of 2020. And to a considerable extent what went wrong in March of 2020 was indicative of some underlying problems, but those underlying problems were there already.

So even as March of 2020 fades into the rearview mirror for the reasons that have been expressed. It took the Fed and the Congress, but also there were problems there before we needed to look very carefully at nonbank finance and the vulnerabilities there and to reconfigure, rethink about how we were approaching them and how we could make the system safer so it could continue to operate in bad times as well as bad good.

And that brings me to my second point. Our focus was what happens in a stress situation? Does the financial system absorb that stress and continue to provide services to households, businesses and governments that they need to continue operating? Or does it amplify that stress?

And what we've discovered are there are certain aspects of the system that would tend to amplify it. Would tend to make it worse. Would tend to make it spillover to the economy. And it maybe and a lot of our -- some of our recommendations anyhow -- might be that you have to incur a little bit of cost in the good times to buy that insurance against the stress times.

And just because there's some extra cost in normal times doesn't mean you shouldn't be paying that insurance fee so that financial system works with the economy instead of against it in bad times. Glenn?

MR. HUBBARD: Yeah. I would just add a couple of things to what Don said. Firstly, thanks to Randy and Jeremy for joining us.

Our purpose in doing this was to join in and hopefully advance a conversation. Any serious long-term policy challenge, one writes for the file. Meaning you prepare things. You prepare ideas. You have a conversation with policymakers and meet the market test as we did in this panel today. And I think that's very, very important.

I very much appreciate the alternative explanations that Jeremy pointed us to. And also, the alternative organization, more of a matrix approach that Randy pointed us to. And I would urge anybody viewing the webinar now or in the future who has a point to make to reach out to us. This is going to be an important subject because these pennies always do turn, but we want to be ready and we're grateful to everybody for joining us today. Thank you.

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