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THE POWELL YEARS AT THE FED: A RETROSPECTIVE

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WELCOME

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PANEL 2: THE FINANCIAL STABILITY TRACK RECORD

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CLOSING REMARKS

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HUTCHINS: Good morning. I'm Glenn Hutchins. Sorry, a little travel delay this morning. It's my pleasure to welcome everybody here today. We have a terrific symposium in store for you, orchestrated by David Wessel and engaging an all-star team from inside and outside of Brookings. It's precisely, by the way, David, what you and I envisioned when we started this center. Was it more than a decade ago, wasn't it? Yeah. Hello, Louise.

First, you'll hear from Christie and David Romer on the paper we've commissioned that draws lessons from the Powell years of the Federal Reserve. Then David will moderate a panel on monetary policy with Ben Bernanke—you might have heard of him—David Ivascyn from PIMCO, Alan Blinder—hello Alan—from Princeton and Kristin Forbes from MIT.

Following a break, we'll turn to financial stability. Don Kohn will moderate a panel with former Fed governors Dan Tarullo and Randy Quarles, plus Andrew Metrick from Yale. And finally, Janet Yellen will provide closing remarks.

Now, before I start before we start, I'd like to offer my own views on today's topic from three vantage points. First my perspective as someone who spent a career engaged in the financial markets. Markets are unsentimental judges of character. They punish hesitation, expose bluffing, and above all else, reward decisiveness. By that standard, Jay Powell has been among the most effective leaders the Federal Reserve has ever had. When the pandemic struck in March of 2020 and the plumbing of the global financial system seized up, something I saw very up close and personal, he acted with speed and force that almost certainly prevented disaster. Commercial paper money markets, corporate credit, municipal finance, you name it, he addressed the whole ecosystem within days. That was not luck. That was judgment and resolve under extraordinary pressure.

Second, I had the privilege to work closely with Jay during my ten years on the board of the Federal Reserve Bank of New York. I collaborated with him when he chaired the Bank Affairs Committee at the Board of Governors. What struck me then was what the public sees now. He is a listener before he's a talker. He is someone who masters detail without losing the thread of the larger purpose. Similarly, as chair, he skillfully built consensus on a committee of strong personalities and competing views, and rare inside the Beltway did it with very little ego. He treated the institution not as a platform for himself, but as a public trust to be stewarded, defended, and invigorated.

Third, as co-chairman of Brookings and founder of, together with David, of the Hutchins Center, I care deeply about the quality of economic policymaking and the health of the institutions that produce it. As we all know, central banking independence is vitally important

and is under more pressure today than any other time in our lives. Jay has defended it not with slogans, but with conduct, by being scrupulously nonpartisan, by explaining his reasoning to the public, and by absorbing political attacks without flinching or deviating from what the data required.

Before I close, let me address the key criticism head-on. The charge is that, that he was slow to address the surge in inflation that followed the pandemic, that transitory was a mistake. Here, in my view, is what fairness compels us to remember. In 2021, Jay was navigating a genuinely unprecedented situation: a supply-side shock layered on top of massive fiscal stimulus, snarled global supply chains, and labor market conditions not before seen. The economic profession and, and the markets largely shared his read that raising rates early carried its own grave risk, choking off a recovery that had not yet reached millions of Americans still out of work.

But when the evidence turned, he did not stubbornly defend his prior view. He pivoted and executed the most aggressive tightening campaign in, I believe, forty years, adroitly bringing inflation down when the deep, when, without the deep recession many predicted. Confounding the consensus of the professors and the pundits, the Powell Fed engineered a soft landing.

The mark of the most consequential public servants is not that they are flawless. After all, none of us are. Instead, the best leaders are clear-eyed and honest. They correct course with courage and clarity. They persevere and, in the end, guide us to collective success. By that measure, Jay Powell served our country with true distinction and will, I am confident, be remembered that way. Thank you for joining us.

WESSEL: Thank you, Glenn. And I want to invite Christie and then David Romer, who are gonna present their paper before we'll have the panel.

CHRISTINA ROMER: Well, thank you. It is an honor and a pleasure for us to be here this morning and to have been asked to write this paper. I'm particularly delighted to be the first person to say a word that I anticipate you will hear a great deal this morning, which is hero. Fed Jay Powell has faced an incredibly difficult eight years. A worldwide pandemic that brought record high unemployment and roiled financial markets, supply disruptions and high inflation, and threats to Federal Reserve independence like we have never seen, not just in our lifetime, but in the 113 years of the Fed's existence. And he has handled all of these challenges with skill, integrity, and quiet resolve, and for that, he is indeed a hero, and the country and actually the entire world economy owes him an enormous debt of gratitude.

Now, but our job in this paper is not simply to celebrate Chair Powell. Rather, it's to begin the job of analyzing monetary policy in the Powell era from a scholarly perspective. What went well, what could have gone better, and most important, what can future policymakers learn from the past eight years?

All right. Well, studying the Powell era, we see six quite distinct policy episodes, and probably the easiest way to, to highlight those and to understand our breakdown is with a graph of the midpoint of the Fed's target for the federal funds rate. So the first 16 months of the Powell era were a period of policy normalization as the Fed continued to raise interest rates after nearly a decade at the zero lower bound following the global financial crisis.

Then there was a period of policy reversal when rates were cut again in the second half of 2019. Third, as Glenn mentioned, the aggressive monetary policy response to the pandemic in '20 and '21 when the funds rate was taken again smack down to zero. The fourth was a

period of inflation forbearance in 2021 when the Fed kept the funds rate at effectively zero despite inflation rising strongly above its 2% target.

The fifth is a period of rapidly rising rates in 2022 and 2023 to fight inflation. And finally, the sixth is a period of interest rate cuts starting in September of 2024, and this is also the period that incorporates the fiercest attacks on the Fed by the president.

Now, a number of these episodes were accompanied by concerted moves to either shrink or expand the Fed's balance sheet. And that's something that we discuss in detail in the paper, but for brevity, I'm going to skip over that this morning

All right. Well, we think of ourselves as doing two main things in the paper. The first is to analyze the motivation behind policy. Why did monetary policymakers do what they did? And to investigate this, we're gonna look at the narrative record. We're gonna read in particular the minutes of the FOMC, the speeches, press conferences, and testimony of Chair Powell.

The second thing that we're gonna ask is, were the policy choices reasonable? And we chose that word deliberately. We're asking whether, given what policymakers thought at the time about future economic conditions, risks to the outlook, and threats to financial stability, were their decisions reasonable or plausible?

And for this analysis, we're gonna make use of lots of forecasts of inflation and unemployment available at the time, both from within the Fed and from outside forecasters. And though our analysis of reasonableness is nuanced—you have 70 pages of nuance in the paper—one concrete thing that we do is to compare what the FOMC actually did with the predictions of a qualitative forward-looking Taylor rule.

So such an interest rate rule can, I think, best be thought of as just summarizing how monetary policy has behaved in successful periods in the past, and it also captures the implications of the most widely accepted models of what monetary policy can actually accomplish. And what a simple forward-looking Taylor rule suggests is that if inflation is forecast...Oops, sorry. If inflation is forecast to be above target or unemployment is forecast to be below the natural rate, policy should -- policymakers should move the funds rate above the neutral rate. And if inflation is forecast to be below target or unemployment is forecast to be above the natural rate, they should move the funds rate below neutral.

And we find the following scatter plot very useful. So on the vertical axis, we're gonna measure the FOMC's target for the funds rate relative to the neutral rate, and we're gonna get the neutral rate as it was estimated by the members of the FOMC and their long run value of the summary of economic projections.

And then on the horizontal axis, we're gonna provide a summary statistic for the forecast for the state of the economy in the quarter, four quarters ahead, relative to target or normal. Right. So it's gonna be the sum of the forecast for inflation minus the Fed's 2% target and the natural rate of unemployment, that's \bar{U} , minus the forecast of unemployment.

And so for the way that we've defined this summary statistic, if inflation is forecast to be above target and or the unemployment rate is forecast to be below the natural rate, the measure is positive, right? That's a positive value of this summary statistic of the forecast corresponds to a strong forecast.

Okay, so here's what the scatter plot for interest rate decisions and forecasts relative to a target looks like for the Powell era. So just to orient yourself, there's one dot per FOMC

meeting and they're denominated by the two digits of the year and then what meeting, what number of meeting in the year is it. And then we've connected the dots with a line to kinda help you see the sequence. And so just to orient yourself above the zero horizontal line, the funds rate target is above the neutral rate. Below that zero horizontal line, the funds rate is below the neutral rate. And then to the right of that zero vertical line, the economic forecast is strong, and to the left of that line, the forecast is weak.

Okay, so let me turn now to a summary of what our analysis of different episodes shows. So 2018 to 2019, right? So that's that first policy, that first period, the policy normalization. And that green oval highlights the observations in the scatter plot for this period. And what you can see is that the summary statistic for the forecast is strongly positive in this period because inflation was forecast to be basically at target and unemployment was forecast to be about a percentage point below its long-run value.

But at that, the starting point, the funds rate target was in fact about 150 basis points below neutral. So in that situation, a sensible interest rate rule says raise the funds rate target, and that's just what the Powell Fed was doing. Now one could quibble about whether they were getting back to neutral fast enough, but we conclude that what the Fed was doing during Powell's first 16 months looks highly reasonable. The second episode is the policy reversal starting in July of 2019, and the observations corresponding to that period are highlighted in that pink oval.

And that downward movement that you see corresponds to their cutting the funds rate relative to neutral. And these moves look to us somewhat less reasonable. Notice that when this is all going on, the summary measure of the forecast is still positive. The Fed was cutting interest rates despite forecasts that unemployment would be noticeably below the natural rate, and inflation was just slightly below the Fed's 2% target.

Now, the motivation given in the sources involved a mix of factors. There've been a few -- there had certainly been a few very low inflation readings that had sparked concern, and Chair Powell spoke of cuts as risk management. We also see a number of references to the Fed Listens events that were conducted in the run-up to the 2020 framework review that suggested growing interest in the possible benefits of a very strong labor market.

In addition, some very extreme interest rate volatility had led the FOMC to rethink the amount of reserves that it needed for the financial system to function efficiently. Twenty -- the third policy episode involves the pandemic, right? Almost as soon as COVID arrived in the U.S., the FOMC cut the funds rate target to the effective lower bound.

It also returned to quantitative easing on a massive scale and reactivated a number of special credit facilities. And one motivation was definitely concern about financial stability, right? I think it is sometimes easy to remember or e-easy to forget just how frightening March of 2020 was and how financial markets began to buckle under the strain. But because of aggressive action, the volatility was quickly quieted. And for that reason alone, the actions were extremely reasonable and valuable.

From a Taylor rule perspective, the actions also appear reasonable, right? So the observations in purple are for correspond to really the first year of the pandemic. And what you can see is that summary measure of forecast moves strongly into negative territory as forecasts of inflation fell and forecasts of unemployment skyrocketed. And in that situation, conventional models suggest reducing rates aggressively is desirable. Now, I'll admit we have some concerns about stimulating aggregate demand when there's a virus around that thrives on economic activity.

But overall, given the financial stability concerns and the value of keeping credit flowing to households and businesses in a period of tremendous strain, the pandemic response, we think, was indeed one of the high points of the Powell era.

Now, the second year of the pandemic corresponds to the episode that we call inflation forbearance. And this is the period where we have the most qualms about FOMC behavior. And I think the scatter plot captures our concerns very well. That aqua-colored oval corresponds to the observations from the third FOMC meeting of 2021 until the Fed finally started raising rates in early 2022.

Notice that our summary measure of forecast very quite quickly crossed into positive territory. Now, importantly, that was based only very slightly on increasing forecasts of inflation. As is well known, the members of the FOMC and private sector forecasters were not predicting the large amount of inflation that actually occurred.

Rather, the strengthening of our forecast measure resulted from the forecasts of the unemployment rate being very low, more than a half a percentage point below the natural rate. In this situation a sensible forward-looking Taylor rule calls for the funds rate to be moving toward and probably somewhat above neutral.

But the FOMC left it two hundred and fifty basis points below neutral for almost another entire year. So why did policymakers stick with aggressive expansion for so long after the inflation started to rise strongly? Well, one reason was that they had issued extremely aggressive forward guidance that the funds rate would stay at the effective lower bound until average inflation was firmly back at two percent and un- and employment was at its maximum level.

More fundamentally, we believe that evolving ideas about how the economy worked and what monetary policy could accomplish played an important role. These beliefs were reflected in that 2020 framework review. Policymakers believed that the Phillips curve was very flat and were concerned that perennially low inflation could still return, right? As you can see, the, in the minutes, there are references among participants to a persistent downward bias in inflation. It's also the case that policymakers greatly elevated the maximum employment side of the dual mandate and expressed a belief that a hot labor market had important social benefits. For example, in a speech, Powell said, "A strong labor market that is sustained for an extended period can deliver substantial economic and social benefits."

The fifth policy episode in the Powell chairship is the period of fighting inflation that began in March of 2022. And the FOMC in -- did indeed change direction dramatically. It ultimately raised the funds rate target by five and a quarter percentage points and engaged in extensive balance sheet reduction. In the scatterplot diagram, the move appears, again, highly reasonable, right? That peach-colored oval pointing up and to the left highlights the observations for this episode.

Higher forecasts of inflation and estimates of unemployment, again, well below the natural or long-run level for, put our summary measure of the forecast strongly in positive territory. In that situation, sensible monetary policy calls for moving the funds rate target firmly up and above the neutral rate.

And we view this as another of the most impressive periods of Powell's tenure. It took guts to admit that they had fallen behind the curve and to move so forcefully to contain the inflation that had developed. And inflation came down quickly with remarkably little increase in unemployment. Now, it's impossible to prove, but we strongly suspect that the dramatic

actions and the effective communication around them played a role in that successful outcome.

The final episode in our chronology covers the interest rate cuts starting in September of 2024. From a Taylor rule perspective, they look largely sensible, right? The observations from this period are highlighted in gray-blue. And what you can see is that the forecasts of inflation and unemployment put our summary measure at roughly zero, implying that inflation was predicted to be heading firmly back to target and unemployment to the natural rate.

At that point, there's no need to have the funds rate three percentage points above neutral. From a somewhat broader perspective, makes us a little less sure that the moves were reasonable. As is well-known, inflation has remained stubbornly above 2% since 2024. So the funds rate is that, or the inflation is that red line, and I've drone in drawn in the 2% target for you.

Now, one can name a number of one-off factors, such as the war in Iran, that have pushed up inflation. But given the Fed's and the FOMC's strong pledge in 2022 to truly get inflation down to 2%, it might have been prudent for the Fed to move a little more slowly in bringing rates down. All right, well, that's a rapid-fire summary of the findings of our paper.

I'm gonna turn it over to David to discuss what are some of the lessons that we think monetary policymakers should learn from this analysis in the Powell era?

DAVID ROMER: All right. So, we see six lessons from the Powell era about monetary policy. The first is arguably the most important, which is that monetary policymakers need to have a realistic model of how the economy operates and what monetary policy can accomplish. So if you think about times like 2021, maybe 2019, when monetary policy was being driven in part by a belief in an extremely flat Phillips curve, a hope that monetary policy could produce kind of a sustained hot labor market and so help address a range of pressing social ills, those have been the times over the past eight years when monetary policy, in our view, has been least successful.

In contrast, if you think about times like 2022, 2018, when monetary policy was driven by more conventional-- a more conventional framework that stressed a more limited view of what monetary policy can accomplish, policy has been more successful. So in short, monetary policy should aim to accomplish what it can accomplish and not try to do more than that.

More broadly, monetary policymakers should learn from history broadly, not just most recent episodes. They should be constantly reevaluating the evidence about how the economy works, and they should be willing to modify, but not to throw overboard their previous views.

Lesson two. So the next two are about monetary policy strategy. The first is the Fed should move quickly and aggressively when conditions warrant. So it makes complete sense that the norm in monetary policy is to be cautious and careful and slow. The stakes are high, decisions are complicated. But one thing that the Powell era has made very clear is that it's sometimes good to depart from that norm.

And I think we've discussed my three examples. I'll run through them quickly. The start of the pandemic, moving quickly and aggressively to hold the financial system together was clearly the right call. 2022, when inflation had gotten high, it wasn't going away. The Fed had been slow to respond.

The Fed was very aggressive, very bold. That was clearly the right thing to do. And then the third example, a case where the Fed followed the cautious approach and it wasn't the right thing to do, was in that lead up to responding to inflation. So it was very much step-by-step, give warnings of the first step, and that was to be the indicator of the next step and so on, and that contributed to the slow response.

The second monetary policy strategy lesson is inflation's harmful even if inflation expectations don't become unanchored. So there's this almost obsessive concern in our view, about the possibility of unanchoring. I think if you're a financial journalist and writing about the Fed, you're required to put in the sentence about the big fear is that dot. That is a big fear. That's right to be concerned about, but it risks overlooking the more fundamental fact that inflation is bad.

And there's important evidence about that from the Powell era, in particular about two harms. One is people hate it. So if you look at systematic survey evidence that's been done recently by Stefanie Stantcheva and colleagues, if you look at opinion polls done during the pandemic, if you look around and talk to people, it stresses people out. It makes them miserable. It makes them feel awful about the state of the world. It's just a bad thing. Maybe the other harm may be more important, which is it leads to anger and loss of trust in institutions and elected leaders. And again, that comes through in Stantcheva's work, and again, it comes through from keeping your eyes open.

So what's the policy implication of that? It's not that the Fed should respond to every little bump and wiggle in inflation or a very temporary one-off move in the price level. It can't do that. But it does mean that if the effect of a shock isn't expected to be permanent, but it's threatening to be fairly long-lasting, then even if inflation expectations look anchored, policymakers should be contemplating the possibility of responding to it rather than just expect -- waiting for it to go away on its own.

The combination of our first and third lessons makes us nervous about the current situation. Inflation's been above target for five years. Unemployment's very low by historical standards. We keep getting adverse supply shocks, hoping that inflation's just gonna quickly go away go away, go back to target on its own seems like a risky way to proceed.

All right. Next two lessons are about the operational side of policy. Forward guide should be carefully crafted and the bar for using it should be high. Again, evidence about both of those things from the Powell era. Carefully crafted, as Christina described, the forward guidance that was set out in 2020 was really just tailored to a particular episode, which is the post-global financial crisis economy. It didn't seem to contemplate the possibility of inflation rising super high or of a big trade-off, possible, you know, conflict between the two sides of the dual mandate. And in retrospect, as Powell himself has said, it's just a mistake to not consider a broader range of possibilities.

On the bar for using it should be high, so one reason, not the biggest one, that the Fed was so slow to start raising rates was that they'd issued the forward guidance. They'd had an escape clause, but they were clearly very reluctant to depart from that guidance. So we're not saying never use it, we're saying exactly what it says on the slide, craft it carefully and only use it, set a high bar for using it.

I think I'll basically skip this one. The Fed balance sheet should remain large. We can go into that if people like, but that's not our main focus.

And then the last one is the other candidate for the most important lesson. Fed independence is vital but tenuous. And we have a lot of things with two clauses, and we've learned about both from the Powell era.

On the vital side, we have new evidence from the past eight years, particularly the past year and a half, about just how large the effects of loss of independence might be. In the case of monetary policy, which is our focus, I'd just point out that the president has called not just for sort of marginal tweaks to monetary policy, but for dramatic cuts in interest rates.

He's also said explicitly that fiscal policy consideration should be driving monetary policy. Then if you think more broadly than monetary policy, you think about regulation, you think about the Fed's invaluable staff and the effects the loss of independence could have on that. And then tenuous independence as had seemed very well entrenched, it's clear it's more at risk than almost anyone had thought possible.

Now, we think the main defense of Fed independence needs to come from outside the Fed, Congress, courts, outside experts, economists and others, anyone concerned about these things. But monetary policymakers can also help. First, they can conduct policy well and so, so show the value of an independent Fed, and then they can stand up for independence when things become extreme.

And I will end where Christina started, which is in that regard Chair Powell has been truly heroic. Thank you.

WESSEL: I'll invite the panel up.

Well, thank you, Christie, David. That was exceptionally clear. And this is a bit of inside joke, but I hope you appreciated a screen without all those lines that we used to have. Which is, David and I have discussed for the last fourteen years. We have a, I have a panel with extraordinary experience and not an extraordinary amount of time, so I'm gonna be brief in the introductions.

Kristin Forbes is the Jerome and Dorothy Lemelson professor of management and global economics at MIT's School of Management. And from 2014 to 2017, she was an external member of the Monetary Policy Committee of the Bank of England.

Dan Ivascyn, to her left, is the group chief investment officer at PIMCO. He leads their work he, lead portfolio manager for their income credit, hedge fund, and mortgage strategies, which is a lot of money. And he's been at PIMCO since 1998. Alan Blinder's been on the Princeton faculty since 1971 but he took time off to come to Washington, including a stint at the member of President Clinton's Council of Economic Advisers and then vice chair of the Fed's Board of Governors.

And Ben Bernanke, who's now with us at Brookings, was a Fed governor from 2005, or sorry, 2002 to 2005, and chaired the Fed, of course, from 2006 to 2014. So I've asked each of them to speak briefly about what lessons they draw from the Powell years. Kristin, do you wanna start?

FORBES: Oh, sure. Okay. I thought I was playing cleanup, but I'm gonna start.

WESSEL: We didn't, we didn't actually come up with a plan.

FORBES: Okay. So first let me just compliment the Romers on an excellent paper. I think it was very useful to just have a succinct summary of what happened, even those of us who lived through it, to have it all in one place. And congratulate you on, even though it was seventy pages, I looked at Friedman Schwartz's book on just the Great Depression was over three hundred pages, and that was only four years. So you were quite succinct in comparison. But also, it was nice to have a comparison where you looked at what people knew at the time instead of what happened, which is really how we have to do these evaluations. So, well done.

So in terms of my lessons learned, I have one broad lesson that comes at it from a different perspective, but I actually settle on some of the same conclusions. But then one area I have some different conclusions, so I'll do two if you don't mind. So my broad summary of the biggest lesson learned, and here I'm going to massacre Don Rumsfeld's famous 2002 quote. Think of this as the early ChatGPT version of a quote where they get it half right and half wrong. .Prepare for the known unknowns and think creatively about potential unknown unknowns So that's what I think the biggest lesson to take from this experience.

Now, what do I mean by that? What I mean is looking back on Powell's tenure, his eight years as chair, his, the, his actions were dominated by a series of very low probability events, of events that were very different than the domestic demand shocks that have dominated the era of inflation targeting, at least up until 2008.

So more specifically, let's just look back at what happened during his era. He had inflation spike to a level that you hadn't seen in about forty years, since the early 1980s. He had pressure on Fed independence to the degree we hadn't seen in the roughly fifty years since the Nixon-Burns issues back in the 1970s. He had tariffs increase to levels we hadn't seen in about ninety years since the 1930s. And then he had a pandemic, the likes of which we hadn't seen in about a hundred years, where roughly the Spanish flu is roughly the closest comparison. So think about that. In an eight-year term, he had one one-in-a-forty-year event, one one-in-a-fifty-year event, one one-in-a-ninety-year event, and one one-in-a-hundred-year event.

Let's say those were all independent. What are the odds you get all of those in an eight-year term? If my math is right, the odds that you would have all of those things occur over eight years are .018% or roughly one in 5500.

So, so what do you make from this? So one interpretation is Chair Powell was just really unlucky, in which case, maybe we probably shouldn't be too critical. He did have to respond to a lot of very low probability events. So they were slow in some occasions, so the reactions weren't perfect. You know, these were events that were not in their baseline forecast. So I think we do have to keep that in mind. This was a very tough period to set monetary policy.

But I think that interpretation is too simplistic. Yes, he was unlucky. I agree with that part, but I think there's more we can take from this. What we should instead take from this is that the global environment has changed. The environment for central banking has changed. What has been called the NICE era by Mervyn King, Non-Inflationary Consistent Expansion era from before 2008, that era is over. Central banks are no longer going to focus mainly on domestic demand shocks where the response is pretty clear. Instead, we are living in a world where central banks are going to increasingly be forced to handle major low probability events, often which are not economic or that emerge from abroad that have to do with geopolitics or politics.

There's a lot of nice academic work on this now that shows that the incidence of global shocks has grown, is much more in effect on monetary policy, that global shocks are

different than domestic shocks. There's a larger supply component. They tend to be bigger. They tend to be longer lasting. They tend to be more correlated with increases in inflation and tighter rates rather than lower rates and so on.

But I think the evidence is there. The world facing central banks is different. So yes, the exact incidents that happened during Powell's event may hopefully not happen again. But that type of environment of large external shocks outside of any control of central banks that they have to respond to and that are very hard to predict is just the new world.

So what does that mean for central banks? I think there's a couple lessons to learn from that if you accept this conclusion that just the environment is different. One conclusion is that central bankers need to maintain flexibility. They have to be able to pivot very quickly. So there, the conclusion does overlap with some of your conclusions, that this means that forward guidance should only be used very carefully and with opt-out clauses that are easy to enact.

Usually, forward guidance has some clauses that let you change course, but it can be hard to do it. I think central banks need to be much more careful about using guidance, about locking their hands in being able to pivot very quickly. And that also applies to asset purchase programs. The Fed did unconditional asset purchases with no end date.

It made it hard to end. They had to talk about talking about, you know, ending, and then talk about talking about ending. It was very hard to stop those asset purchases when the situation changed. So instead, that may-- I would suggest that means central banks should be more careful when they do asset purchase programs, have easier ways to end the program.

Maybe just announce limited quantities that have an automatic end date built in. You can extend the program if needed, but then at least an end is built in. It would be easier to end the programs than having it go on for infinity and then having trouble messaging an end to asset programs. So bottom line, think carefully about being able to pivot and change position quickly without worrying about big market disruptions a second lesson I take from all of this, if you think the world has changed for central banks, is to, instead of focusing as much on the median scenario or the mean scenario, focus more on doing scenario analysis.

This is something I know Ben has talked quite a bit about and probably will talk about today. But I think it's very useful now to spend more time thinking about the back to the known unknowns and even the unknown unknowns. What could be very different in the forecast than we have in our baseline forecast?

So for example, today, don't just model thinking the Strait of Hormuz opens in a month or so. You should do models where it opens today. Let's be optimistic. And all the supply chain disruptions are, end pretty quickly. Or also do some scenarios where the Strait of Hormuz is closed for one, two, three years. What's that mean? Look at how you're setting policy based on these different alternate scenarios. And by alternate scenarios, again, not just inflation is one percent higher, one percent lower. Look at some very different scenarios, very creative scenarios, and then think about if the decisions you're making today are right in those different scenarios.

It doesn't mean you should set rates for these low-probability scenarios, but think carefully about the cost. If those scenarios happen, say, let's say the Strait of Hormuz is closed for a year or two, how, what is the cost of not adjusting rates today? Should think about the cost of getting it wrong in these alternate scenarios more rather than just focusing on a baseline.

So I think that would be useful in this world where you are gonna get more of these extreme events.

A third conclusion from this, it comes down similar to one of the conclusions from the Romers, was central banking is gonna be very challenging going forward. It's no longer about just deciding how much to raise or lower rates in response to domestic demand shots.

You're gonna be facing more difficult trade-offs, such as today, balancing inflation and the employment goals. It's gonna be harder to explain, especially if you want to think about scenario analysis and different paths for the future, not just a baseline forecast. So monetary policy is going to get harder, not easier. So in that case, you should keep it simple. Back to the KISS principle: keep it simple, stupid. That means central banks should not worry about broader goals like broad-based employment, inclusive, inclusivity, climate goals. All worthy goals. I don't mean to dismiss them, but the central bank is going to be burdened enough with just the simple mandates.

So, so those are the main conclusions I draw in terms of my big takeaway. Just very quickly, I'll mention the one that I, okay, I wish, I wish you had more time to talk about, and maybe you need another paper, is conclusions for the balance sheet. Right. I think there were actually some really useful lessons learned about managing the balance sheet over this period.

Not just whether you should or shouldn't do QE, but how you should do it how you should structure it, what you should buy and also the size of the balance sheet at the end. I think we did learn you can shrink the balance sheet and do it without much pain in financial markets. But I would end a little bit differently than the Romers and say shrinking the balance sheet further should still be a priority. Not quickly. I fully agree with your arguments. We need the right institutions in place. You don't want to disrupt financial markets. But given this underlying theme of the importance of the independence of central banks, I don't think we should shift to a world where when things go badly, central banks buy in, buy a lot of Treasury bills, their balance sheet grows, and then they just keep all the Treasuries they, they buy.

I think the independence of the Fed rests on it being independent of fiscal policy. And if the Fed often steps in, does large asset purchases, and doesn't unwind most of them, and that is no longer a goal, then it does really muddy this independence of the Fed and the independence of monetary and fiscal policy.

Right. So that's where I would come down a little bit differently, is to put more weight on getting the institutions in place so you could keep continuing to shrink the balance sheet. Not where it was in, you know, 2007, for sure. But at least that should still be on the list of things to do going forward.

WESSEL: Thank you. Alan Blinder?

BLINDER: Well, I came here to praise Jay Powell, not to bury him. I think he's been a fantastic Fed chair for many of the reasons that have already been mentioned. I'd like to align myself sentence by sentence to what Glenn said at the opening. Absolutely, I would say that my guess is that fifty years from now, what he will be known for mainly, there are a lot of things, but mainly will be the way he stood up to the president of the United States, who was attacking the Federal Reserve in ways that no president ever had before.

And I mean that in the large and also in the small. Obviously, in the large, he was defending the Fed. He still is. He's still on the board of governors, largely for that purpose. But in the small, he had just the right tone, which was mostly keeping quiet and not engaging in tit for tat with the president of the United States as he got these verbal assaults month after month, year after year. And finally, when the indictment, the crazy indictment, if you don't mind me saying so, came he opened up more, much more than he had before under much deeper provocation. It's hard for me to imagine a superior performance than that, and I think that's what he will be remembered for.

Let me now say more about monetary policy. But I want, I wanted to say that first. He's-- I don't think he's gonna be remembered for his fabulous monetary policy. Somewhat, he will, but he's gonna be remembered for that forever, basically.

I have a kind of a strange criticism of the Romer and Romer paper. It's a strange criticism in that most of what-- most everything they said in the small, I agreed with. There's a tone in the large that I'd like to disagree with respectfully. I don't think they'll disagree very much with what I say, but maybe they will. There was a, there was an emphasis in many cases, including up on the screen—I don't know what's on the screen now. No, it's not there now. About, I'll call it paying close attention to the model, in particular, where we are relative to the neutral interest rate and where we are relative to the neutral unemployment rate.

I don't disagree with that in principle. But in practice, if you've just come through an episode or you're still in an episode where there are five and six standard deviation events hitting you in the face, to me, that shakes confidence in the model very greatly. And if I was sitting on the Federal Reserve Board at, in one of those junctures, I don't know what I would have thought the natural rate was for a while. Presumably, we were gonna eventually get over this, and I don't know what I would have thought the neutral interest rate was, again, for a while. And, when that happens, adherence to, quote, the model, has its own dangers when you're dealing with unprecedented circumstances that may or may not ever happen again, and certainly are not in the history with which econometricians have emphasized the neutral rate of interest and the natural rate of unemployment. So I wanted to make that point.

The other thing I wanted to make, which is not a criticism, is I'd like to add a lesson to their list of lessons, which is: Don't use the word transitory. I was a member of Team Transitory. I did not coin the phrase. I wanna be absolutely clear that I did not coin the phrase, but I signed on to Team Transitory. And here's the ironic thing. Team Transitory basically got it right, except for the word transitory. It took a long time. The notion of Team Transitory was that there was these supply constrictions, by the way, coming back to my previous point, unprecedented, that we had never seen anything like this before. And those were-- those drove inflation up rapidly, and then as they dissipated, pulled inflation rate down rapidly.

I actually think, having said what I said at the outset, the Fed gets a little too much credit for bringing inflation down. Nothing we know about the Phillips curve, or we think we know about the Phillips curve, says that what the Fed did, which did not include much slack in the economy, was gonna yank the inflation rate down. The inflation rate by the PCE basically went from, quickly from two and a half to over five, and then back to below three pretty quickly. And nothing, I think, that any of us teach our students about monetary policy would suggest magnitudes like that from conventional monetary policy.

On the other hand, when you get hit with a barrage of supply shock -- I don't want, I've done it again. I don't want to use the word supply shocks. Supply shocks were things that were relatively familiar: oil, food, et cetera. These were supply constrictions. This was a snarling of the fina-- of the supply system that we had never seen before. And it came, and Team

Transitory said, "It'll go away." And it did go away, but much too slowly to merit the word transitory. So I wanted to make that point.

Third, and I'm -- am I running out of time?

WESSEL: You're close, but-

BLINDER: Yeah, close. Okay, keep it short. Third will be the last then, and I'll make this pretty short. The big mistake of the Powell era, as every, as the Romers said and as everybody has said, and by the way, as Jay Powell has said, was waiting too long to raise interest rates.

He has said that himself on many many occasions. I consider, that was -- so that was an error, and I think I agree that was an error. To me, it was a forgivable error. And the reason I say forgivable error is partly what I said before about the unprecedented events that were hitting the the economy. But as evidence for that, and David or Christie mentioned this, basically every other forecaster was where the Fed was, making the same error. And that to me is a forgivable error. If they're out there and the consensus is here, and they're wrong, that's a big error, maybe not a forgivable error, but if they're making the same mistake,

And I wrote a little paper on this for the organization across the street—are we allowed to name Peterson here? We are.—a year and a half ago.

WESSEL: But you don't get lunch.

BLINDER: And documented a number of other sources that made similar forecasting errors that -- to the Fed's forecasting error. And that to me makes it a forgivable error.

WESSEL: Thank you. Ben Bernanke?

BERNANKE: Let me first thank Brookings, the Hutchins Center, David Wessel for organizing this, very timely. And I wanna thank David and Christie for a really interesting paper. It's hard to do a paper at, you know, at this stage, and I think they did a wonderful job.

And of course, I wanna echo what everyone has said about Jay's -- I had the opportunity to talk to him during this period, and got a little sense of how hard this was for him personally, and he did a, he's done a terrific job in defending the Federal Reserve through a very difficult time for him personally as well as for the institution.

And I think part of this is his interest and commitment to communication. People have talked about his wearing out the carpets and talking to, to legislators, which of course he did. And I think he envisioned this not only as developing political capital, which it did, but also in terms of letting the people, the legislators understand what the Fed was doing, which is part of the job at which he did extremely well.

He also, on the communication side, I was very proud of the fact that I introduced the press conferences, which I think was an important innovation. But he took that from four a year to eight a year, and he made them, I think, less wonky and more democratic and made them, you know, more effective. And that was a very important contribution. And then the Fed Listens. I think broadly speaking, he made the Federal Reserve a more accessible and better communicator just generally.

Now, on the inflation episode, which is everybody's main interest, I wanna make a couple of comments about lessons, and then I want, like a number of people have, I wanna defend a little bit 2021.

On lessons, two things. As Kristin suggested, I kind of come around to the idea that there are times, particularly in times of high uncertainty, when scenarios can be very helpful. Transitory was a mistake, just like subprime mortgages are not dangerous was a mistake. And when there's a period of high uncertainty, it might be better to say, you know, we think that some of the factors affecting inflation may be temporary, but if they're not, here's what we're gonna do.

And that kind of language, you know, could have conveyed more or less the same information, but would have not been quite as easy to mischaracterize, I think. And it would-- And of course and people may know, and certainly anyone who reads the old teal books would know, the staff regularly does alternative scenarios for the discussions within the committee, and as part of the discussion and part of the decision process, and it could be used more in communication, and that's, I think, a simple suggestion.

The other thing has to do with forward guidance, and I call this the Boolean logic of forward guidance. So some of the forward guidance in 2021 was of the form, we're keeping rates low until we've hit maximum employment and inflation hits two percent, and inflation is on track to moderately exceed two percent for some time.

And so if—unless all of those conditions are met, we're not gonna raise rates. So even if inflation goes to 20 percent, if unemployment is still not at full employment, we're not gonna raise rates. Now, of course, that doesn't make sense. Now, in 2013, we had an or in there, basically. So what I'm saying is, of course, that you have to be careful to wargame these possibilities and make sure the Boolean logic is not creating traps.

And of course, the reason this all happened, and Christie, David worked through this carefully, it had to do with the way that the language interacted with the the new, the new, the new framework that they put together. So those were, I think, a couple of the issues that arose.

Although I wanna make one point that to react to Kristin's thing about forward guidance. If you put too many opt-outs in your forward guidance, it loses the commitment value. I mean, there are times forward guide -- there are two kinds of forward guidance. There's the kind that simply says, "Here's what we think is gonna happen, but it's only a forecast. We don't know for sure. We could change any time." And then there's the kind which is a commitment, and that has additional value if people think that you're really committed to that particular path. That's, you know, that's the kind of stuff we, we know about. But so you need to distinguish between those two and the latter, the commitment value that's really something you use very rarely, obviously. But there are times when you wanna do that.

Okay, defenses of 2021 and the late, the late takeoff. Defense number one, and Alan already talked about this, was the inflation forecastable? Well, it is absolutely true that not only did professional forecasters not make this forecast, there's a nice—besides Alan's paper—there's a Chicago Fed paper which compares the SEP, the Survey of Economic Projections, Summary of Economic Projections, with the professional forecasters, the blue chip, the dealers. They all were actually more optimistic about inflation than the Fed FOMC forecast. The financial markets were as optimistic as the Fed was. The IMF did a retrospective survey afterwards and said that, you know, inflation swaps, break evens, all those things, nothing suggested that inflation was gonna be -- do what it did.

Interestingly, the only survey that did a little bit more expectation of inflation was consumer surveys. But of course, consumers are always very sensitive to inflation, but maybe that's tells us something for the next time. Now, there were a few individuals, and I won't name names, but who said, "Oh, we're, we're-- we better watch out for inflation in 2021." But it is interesting that when you look at those individuals, you need to think about what their rationale was. So the two leading rationales for predictions of inflation in 2021 were, number one, that the fiscal package was too big, and we were gonna have too much aggregate demand. But the implication of that forecast was that bringing down inflation was gonna involve a lot of unemployment. So there was something wrong with that prediction, clearly. And I agree with Alan, and I'd done work with Olivier Blanchard, which suggests that the supply side was very important and that the unwinding of the supply side constrictions was part of the reason inflation came down relatively painlessly. So that prediction was right in a sense, but it was sort of for the wrong reasons.

The other forecast, other explanation for why inflation was gonna go high, higher, was the fiscal theory of the price level explanation of all this debt issuance was gonna cause inflation to go up 'cause people expected much higher debt in the long run. Which is logical but it has an interesting implication, which I'll come back to in a moment, that raising interest rates doesn't help. So in that case you would say, well, they were maybe right about predicting inflation, but it doesn't imply that the Fed should do anything. Okay, so that's question one, was inflation forecastable, and what did that imply for monetary policy?

Second question was the tightening significantly delayed beyond a point where it would be helpful? I would just note that, you know, that there was forward guidance. There was -- in particular, Jay was on my committee when we had the taper tantrum in 2013, and he was very sensitive to that issue. I think he really was worried about tapering too quickly. And so it was all a lot of talking about, as Christina was saying. But of course, they did talk about it, and the markets knew that. And if you look at, for example, the five-year Treasury rate, it moved up 200, 250 basis points well in advance of any move in the federal funds rate. So the markets were already tightening for the Fed in advance, months in advance of actual increases in the Fed funds rate. So there was some tightening going on relating to communication and to movements in the balance sheet.

And then finally, and I think this is something which the critics have not done, which is to ask the question: If the Fed had tightened three months earlier, four months earlier, would it have made much difference? And I don't think it's obvious. If you, for one thing, if you look at other countries, there were a few countries that tightened somewhat earlier, and there was no palpable difference in their outcomes. And there have been some model analysis. There's one recently by Antolfato and Martin, who take a FTPL, financial, fiscal theory of the price level approach, and they find that outcomes are actually worse because with the fiscal theory, higher interest rates are bad. But I don't know of any sort of standard New Keynesian model. But it may be if someone has it, please let me know. But I don't know of any standard New Keynesian model, for example, that finds that raising the funds rate four months earlier would have made substantial difference.

So anyway, so I think these are really interesting and open questions. But, you know, I think those questions need to be addressed more before we can really come down to a final conclusion about, about this. Again, I think this was a really interesting paper. I think this is, and I agree with Kristin, this is, there was a lot of very unusual shocks. And then, of course, unexpected things happen. You can expect the unexpected pretty much all the time. Thank you.

WESSEL: Thank you, Ben. So Dan, we invited you because we have three economists who've opined, and we wanted to hear from somebody who manages a lot of money about how this looks from the market perspective.

IVASCYN: Well, first, we got it wrong, too, the inflation call. So, so let me let me confess there first.

A few quick comments, and Glenn and I didn't rehearse, but I had, you know, two points I really wanted to make up front. I guess we have in reverse. But one is independence. You know, Fed does a lot of things. Perhaps it makes sense, you know, for the Fed, you know, given the increasing level of difficulty to narrow their focus. But in the area of, you know, rate policy and balance sheet policy, independence is absolutely critical. And this Fed's done an exceptional job resisting the temptation to give up that independence so critically important from a market's perspective probably the most confident thing I could say here on the stage today.

The second, and again, Ben, you deserve a lot of credit. Back during the GFC, you know, you and others created the plumbing that Powell was able to use to address the COVID shock early on. But the shock was far greater than I think people appreciated. It was hard to take risk, the private sector didn't really have the ability to take risk, and it wasn't so much about '90 and uncertainty, it was about just the practical fact that we didn't know how to settle anything we bought or sold. The risk manager that used to sit next to us ended up at home, you know, on a laptop, not necessarily an institutional-quality tool to traded markets. And that quick response was essential. We could have been in a far worse situation if we didn't respond as quickly as the Powell Fed did, again, in coordination with the Treasury.

And the markets are fine with coordinating with other government officials. It's undue influence that we're concerned with. But that level of coordination's likely going to have to go up over time given the type of debt levels we're dealing with. The fiscal piece is gonna make monetary policy, you know, much more challenging as well.

In terms of level of difficulty, I think that's been covered. An exceptionally high level of difficulty, and maybe I'll just comment on our perspective of 2021 and also explain why although it's probably true that the Powell Fed responded too slowly to the inflation concerns there was another big factor that was going on throughout 2021, and that was, you know, increasing levels of strains or increasing mutations of the COVID virus itself. That was mentioned in the minutes. It was mentioned in the speeches in the '21 Jackson Hole event. I believe Powell mentioned it as well. Perhaps it was viewed at more as a footnote, but it was the constant reminder throughout that period that the COVID situation hadn't stabilized. And although these were likely very low probability events they could have been quite impactful in terms of the economy and in terms of financial stability.

A lot of the crisis level programs had run off and we know when you look at the Delta situation there was a significant spike, and I know there's been some research looking at a way to quantify that with certain segments of, you know, the equity market and equity market volatility. But those risks remain quite elevated. In fact, the Friday after Thanksgiving in 2021 we had a meaningful market sell-off on concerns about this potential additional growth shock.

So, you know, to Ben's point, although, you know, the Fed was probably late, even in the base case it's not obvious how meaningful the impact would have been on inflation. And it certainly would have increased tail risks if they went too quickly given the uncertainty in terms of the overall virus.

I think another point that, you know, the panel has made this idea that on an ongoing basis central banks are gonna have to think more probabilistically, I think certainly the case. The degrees of uncertainty are quite amplified, and that's likely to continue over the secular horizon. And, you know, we think markets are okay with that as long as communication is

reasonably clear. And I think that the Fed can when they're late in certain areas and perhaps late because they're waiting for some clarity and to help them make decisions to be able to course-correct.

Ben, you mentioned the point that although it took some time for markets to appreciate the inflationary risks when the Fed did begin to pivot late in '21, the markets did respond. The markets responded more aggressively than the pace of actual policy. And if the market had responded too aggressively the central bank had additional forms of communication where they could adjust market expectations.

So that calibration mechanism sometimes I think is underappreciated and why even if you're late from a, you know, change in fund -- Fed funds rate perspective, there are multiple tools at a central bank's disposal to guide the economy to the area where they want the economy to be at any given, you know, point in time. Again, financial conditions are tough to manage. I know there's a lot of work out there suggesting, well, maybe that's what should be targeted. In theory, sure. In practice, quite difficult. We know from prior, you know, cycles that sometimes markets misinterpret what the Fed's saying. So I think, you know, there's pros and cons to that underlying approach.

And then the final point I just wanted to make was that in, in thinking about the market response to some of the the views that the Romers had you definitely see that particularly in the Powell cuts during the '24, '25 period. That was a situation where although the central bank brought short-term rates lower, there was a opposite reaction to longer interest rates with a significant sell-off in the tenure rate. I think consistent with your thinking that from a forward-thinking perspective, it may have been reasonable, but there was market skepticism.

And again, I think those market signals help provide central banks with a little bit of guidance in terms of how the markets are thinking about their policy, and it gives another opportunity to to course-correct. But, you know, in conclusion I think the Fed's in Powell in particular, has done an exceptional job given the incredibly high level of difficulty.

Fairly forgiving in our thinking regarding the twenty twenty-one error. I think it's complicated, but if you think probabilistically, you think about, you know, concerns around the virus and what some of those scenarios could have looked like. If it turned out that these were far more significant from a health perspective there could have been a cost to moving too early.

And then again, on the independent side, remarkable to be able to make the decisions that this Fed made under the pressure that they've dealt with. And it's ironic because as the Romers pointed out, they've been more dovishly inclined and more willing to think about ways to expand employment and to look through inflation, which in some sense is what politicians or at least this administration seems to prefer.

WESSEL: Yeah, we've kind of worn out the irony on this. But Dan, I wanna understand, do you think it would have made any difference if they had raised rates sooner in 2021?

IVASCYN: Well, it's, yeah, so it's difficult again because you need to anticipate the market's response over that period. You know, probably on the margin you would've had a more gradual tightening process. Perhaps you would've reduced some of the volatility we saw across the banking sector.

I think the other point, you know, in terms of looking at the market's view towards rates is that in retrospect, a lot of the lending that occurred during the '21 period was aggressive. A lot of this additional liquidity found its way into financial assets. Bad vintage for private equity

bad vintage for private credit commercial real estate where a lot of these assets were acquired with floating rate debt without hedging, you know, interest rates. So, perhaps.

WESSEL: I see. More on the financial side than the inflation side?

IVASCYN: Correct. And but not obvious. And again, I think there'll be a lot more work done in this area. Again, we also know that you had a meaningful shift in terms of the fiscal impulse at around the same time that inflation was coming down as well. So, perhaps but not definitive, not obvious.

WESSEL: Kristin or Alan, do you think that moving --

BLINDER: Can I just say, I just want to add one fact to this. I forgot to mention it. The data that came in the first half of 2022 was negative GDP in the first two quarters of 2022. I looked the other day to see if they've been revised away. One of them is still negative, the other is a tiny positive. But that was germane also to this weighting.

WESSEL: Kristin?

FORBES: Yeah, so still, if you look at the standard DSG models that people were using at the time, raising rates now or say once a quarter for three quarters or waiting three months and then raising 75 basis points doesn't lead to that different an outcome, say, two years from now. So you can see why they thought there wasn't much cost to waiting. But I think back to lessons learned, one lesson we've learned is those models aren't great. They don't capture nonlinear dynamics. They assumed a flat Phillips curve. They don't capture second-round effects. If inflation gets to a level, firms start to adjust prices faster. The economy does change, and we don't capture that very well in the models.

So actually, I, what I worry is one lesson that should not be taken from this experience is that it's okay to wait. If it's uncertain, wait, and then make up for it with a very fast rate hikes later on if you're slow. I call it the tortoise and hare approach. You can be a tortoise and raise 25 a quarter or wait and do the hare.

WESSEL: Right, but at as Dan points out, there's financial stability implications.

FORBES: Right, right. So that's what I say. I think the lessons are some of the -- if people do that conclusion that the hare strategy works, do it again, then you worry about financial stability implications, especially now when we're starting with rates closer to three instead of zero.

You raise rates 500 and we're already looking at a frothy market. Housing market's not as strong. Financial stability risks are much more worrisome. I also worry if you follow that strategy today, we've already had about a very high inflation recently. So even if inflation expectations are still roughly anchored, they're not as well anchored as they were 2021.

So I think you'd have to be very careful on counting on people to expect inflation to come right back down. People have, companies have learned how to raise prices very quickly. Consumers are much more aware and much more sensitive. So you can't count on that anchoring as much.

And then the third reason to worry is there has been the Fed's independence is under a lot more threat today. So if they have another period of being slow, prices getting very high,

even if inflation comes back, the jump in the price level is what people care about, and that will lose some political support for the Fed. So, so I hope we don't draw the lesson that the hare strategy is better than the tortoise strategy.

WESSEL: And Christie and David said they didn't discuss it much in their presentation, the balance sheet should remain large. Kristin makes the argument that, no, we should be thinking of ways to shrink it. How big an issue is the balance sheet? Is it too big, and what difference does it make anyways?

BERNANKE: Well, on good economics, it's irrelevant. I mean, it's relevant. It should be big. Again, on good economics because it's a very good way to manage the short-term interest rate and assure that banks have enough reserves, and that's a good thing for financial stability. It's a good thing; Milton Friedman would like it because it keeps the cost of transactions low. You know, money should have a zero, you know, opportunity cost and all those things. Kristin's reason is the, and this thing about having a large footprint that you often hear, that's a meaningless statement, really, because the, what, is there not enough Treasuries in the market? Is that the problem? I'm not sure I understand that. So I think from an economic point of view that the balance sheet is pretty much okay where it is.

Now, Kristin's point is that it's got bad optics, that the Fed is too involved somehow in fiscal policy by holding all this debt. Again, it doesn't -- it, you could -- the only real effect of holding the balance, a large balance sheet is that it, is that it potentially exposes the, the public to fiscal gains and losses, all right? Which, that would go away if the Fed mimicked the Treasury's, you know, Treasury's maturity structure or just held Treasury bills or something like, or coordinated with the Treasury on that, which what Kevin says he wants to do. So, so, then the question is... So, so that would eliminate that problem.

So, so again, it's just really a question of optics. I can't -- I don't know how to quantify that particular issue. So anyway, so, if you ask me as an economist, I think that incurring the significant costs and risks involved in trying to shrink this beyond the point where you know, banks don't have enough reserves is of questionable value. But again, I'm not -- don't know how to judge the purely optical aspects of it.

BLINDER: This is it. I think part of the nub of the issue is getting rid of the MBS.

BERNANKE: That's what I find.

WESSEL: For exact securities.

BERNANKE: That's fine.

BLINDER: Which everybody sort of thinks, "Oh, boy, we should get rid of that."

BERNANKE: Everybody wants to do that. The FOMC wants to do that. That's right.

WESSEL: Right. All right. We don't have much time. I'm gonna take a few questions and let the panel answer, and then I wanna save a few minutes in case Christie and David wanna say something. So I'm gonna change what I said. So there's two questions in the back there.

Andrew, Nick, and the guy on the, why don't you give the guy on the aisle? So stand up, tell us who you are, ask a question, and sit down.

AUDIENCE QUESTION: Thank you. I'm Goro Oue from TV Tokyo, Japanese broadcasting company. Thank you for this opportunity, and I would like to ask Mr. Bernanke. So you once said that monetary policy is 98 percent talk and two percent action.

So our new chair, Mr. Warsh, has suggested that Fed may be communicating too much through tools such as press conference and dot plot. Do you have any concerns the Fed could end up providing too little guidance or communication going forward?

WESSEL: Thank you. Can you pass it to your right?

AUDIENCE QUESTION: Hi, Nick Timiraos of the Wall Street Journal. I have a follow-up question on that same topic.

Forward guidance strikes me as a continuum. You have the specific path commitments like lower for longer, but you also have a forecast conditional reaction function you could be communicating, and it feels like calls to get rid of the former are easy in the current circumstance where the economy's doing fine and you're not at the zero bound.

My question is about the latter. If a governor or Reserve Bank president gives a speech and she says she sees a growing problem with inflation that's going to require you know, urgent action if the current trend persists, it tells us how she sees the rate conditional or the forecast conditional rate path.

So Kristin, when people say do less guidance, do they mean pulling back from the state contingent reaction function, or is it the you know, what do we do in a pandemic or a financial crisis situation? Because it seems like there's a pretty significant difference between the two. And Chairman Bernanke, since I'm sure you miss press conferences, I'd be interested to get your thoughts as well. Thanks.

WESSEL: Great. There's one to the right of you.

AUDIENCE QUESTION: Hi. Samim Gamomi from the New York State Insurance Fund. Thank you for a great panel discussion. That's a question for former Fed Chair Bernanke. On your remarks on fiscal theory of price level I think one can forecast inflation with that theory, and inflation would have been high in the inflation episode.

The question is in that scenario would the theory says that raising rates would be bad for the economy? I think what the theory says is aggressive form of Taylor principle would be bad for the economy, not just raising rates merely. Thank you.

WESSEL: Thank you. All right, so there, Let's take the communications questions.

Dan, maybe you can start. Too much talk from the Fed, not enough talk from the Fed, or it depends?

IVASCYN: Well, I, like from a market's perspective, there's probably too much, but I don't know that it's all that harmful. I think you could narrow the scope of communication and still have the ability to guide markets in a way that maintains sufficient flexibility. So, we don't get too worked up over reduction in communication going forward because-

WESSEL: From my experience, the people in the markets want to be able to predict with a hundred percent certainty what the Fed's gonna do at the next FOMC meeting. And if they don't get that, they think the communication sucks. Is that unfair?

IVASCYN: Yeah, I think yeah, I think the -- I'm glad I'm not a Fed chair. They tend to focus a little bit more on outcomes with me. But no, I think there's there's obviously a lot of noise because there's individual views, there's the chair view, and then there's the committee view. And I think that, you know, again, from a strict market's perspective, you could narrow communication and still have enough information. You know, arguably too much and too much information that is in conflict could create more uncertainty. I don't think this is a major issue. I think the independence piece is of critical importance.

The communication side is --

WESSEL: So, Kristin, Nick asked you to distinguish between forward guidance, which is we're gonna keep rates low, and talking about the outlook. Are -- do you make that?

FORBES: So I, I'd like to not use the word guidance. I think talking about the outlook, here's how I see things, here's where I think monetary policy should go given what I know today, is fine. That's information that's useful, back to communication. But it is a fine line. I've seen some people who give that speech say, given the state of the economy today, hint they'll raise or lower rates, whatever they'll do at the last meeting. Then when the situation changes, it can be hard for them to then adjust.

So it, it's still okay to give guidance, but I'd like to see a little more caveating given what I know today, so that then even in this looser type of, not guidance, but looser sort of evaluation of the situation, individuals don't feel locked in. There's a couple examples, even with the Fed. It felt like enough individual speakers suggested this is what we'll probably do at the next meeting given what we know now, and then they get some different data in, and it can be hard, and then markets can say, "You led us one way."

And, and we ran into this at the Bank of England too. We'd sort of signal what we'll do the next meeting, and then when the environment changed, it was hard to back out even though we did have those clauses in there.

IVASCYN: Yeah. It's a natural tension. I mean, I mean, we talked earlier about the need to think probabilistically, but communicating in that way is quite challenging. So, you know, asking someone's forecast for where rates will be two, three years forward, you know, error bands are already wide, and then they widen.

WESSEL: Yeah.

IVASCYN: You know, asking what your existing probability distribution is and how you expect it to evolve is practically impossible.

WESSEL: Yeah.

IVASCYN: Perhaps with AI and some other tools, you know, we'll get there. But,

WESSEL: Well, then we won't need central bankers.

IVASCYN: No.

WESSEL: It'll just be all AI.

Alan, you've written about Fed communications. Do you think the Fed communicates too much or too little or not in the right way?

BLINDER: Slightly not in the right way, although getting it exactly right is probably a counsel of perfection that we'll never achieve.

What I mean by that is, what you'd like to get, what you'd like to—I almost said get rid of—what you'd like to minimize is the multiplicity of voices that aren't all the same. So when I came off the Fed a million years ago and talked to market people, I kept saying, "Listen to the chairman, don't listen to anybody else."

It didn't stick. I said it I don't know how many times. It didn't stick. But I still think that's the thing to do. Listen to the chairman, and to the extent that the chair can get the, get some message discipline on the rest of the committee, it's fine for them to talk also. But I'm --

WESSEL: I can't remember, you weren't all that happy in being disciplined when you were vice chair

BLINDER: I was the only, other than Greenspan, I was the only one that talked in those days. I mean, it's very different now. Now everybody talks.

WESSEL: Ben, so you have some perspective here.

BERNANKE: Yeah, and there's no -- the questioner was about whether this was inconsistent with my 98% comment, and it's not. I mean, I think what Chair Warsh is concerned is that with too many people talking, that the signal is you know, garbled rather than being clear. And that's, so the issue is how do you make the signal as clear as possible? And that involves either message discipline or maybe fewer people talking, you know, and that's, so that's a concern.

And the other issue, I think, which I mentioned in my remarks, has to do with communicating appropriately the degree of uncertainty, which is always enormous. And I've, you know, I think that, I always thought that you should talk about the uncertainty, but I've, you know, again, come to the conclusion that you should talk a little bit more about the range of outcomes not simply the central outcome. I gave a talk in the spring about possible alternatives to the dot plot in the summary of economic projections, which was created at the time when we had the zero lower bound issue and we were trying to convey when rates might go up from zero. But now there's more uncertainty on both sides. And I suggested in my paper in communications that we should look at alternative scenarios which, where, which could involve either cuts or increases in the funds rate.

WESSEL: So, Christie or David, do you wanna respond to anything?

CHRISTINA ROMER: Sure. Let me first just thank the panel because this was fantastic, and so really really appreciate it. There, the few things I wanna say, one is just I think it is important to remember we can we can have an intellectual discussion about an issue and still think Jay Powell is an incredible hero. So I think that is a really important point. And the

other thing I'd say is just think of how boring this morning would be if we weren't talking about 2021.

At least one episode of some excitement. I think that there are just a couple of things I wanted to mention. One is that, you know, it's really important that the bad forecasts of inflation are not, I think, the biggest problem in this period. I -- what our analysis was showing is even conditional on the forecast that they had. We think they were slow in moving precisely because their unemployment forecast was also very low. And so that, that I -- and that I think that was an important point to make.

The other thing I just want to mention, I worry sometimes when people say, "Well, it wouldn't have mattered if they'd moved a few months," whatever. Of course not, right? That, that there's you know, a month here or there doesn't matter. But I don't think we want to miss the more fundamental thing, which is monetary policy does matter, right? What history tells us, what Friedman and Schwartz taught us was that monetary policy actions do have big impacts. And when you think about what the world was like in 2022, the labor market was super hot, and one of the things that did happen is the unemployment rate didn't go up a lot. It went up about a point. It took some of the, I think, some of the heat out of the labor market, which might have been helpful.

So I want to leave with the idea that these decisions do matter just simply because what the Fed does is incredibly important, and that's something we've learned particularly from the last eight years.

WESSEL: Great. Well, please join me in thanking Christie, David, and the panel.

So we're gonna, we're gonna take a nine-minute break. So it's 11:00 o'clock and I want you all back here at 11:09. We're gonna start whether you're in your seats or not.

**** break ****

WESSEL: We're gonna get started shortly, so can I ask people to move back to take their seats?

We're now going to turn to one of the Fed's other responsibilities: financial stability and dealing with financial tensions, which of course there were a few of those in the Powell era. My colleague Don Kohn is gonna moderate the discussion. We have Dan Tarullo, who was in, was responsible for bank supervision at the Federal Reserve, and then he was succeeded by Randal Quarles, who's joining us remotely from London. And then Andrew Metrick from Yale is gonna tell them all what they got wrong. So, Don

KOHN: Thank you, David. In 1913, the Federal Reserve was founded largely to preserve financial stability. There wasn't much monetary policy in the gold standard, right? But the preview, the first sentence of the Federal Reserve Act includes, "to afford. . ." And they were given two tools, the discount window and bank supervision. So the thing says, "To afford means of rediscounting commercial paper, to establish a more effective supervision of banks in the United States." So financial stability has been a key responsibility of the Federal Reserve since it was founded.

This panel, as David said, will examine the Powell years, the last eight years, and how the Fed has carried that out, how it's met various crises, and and evaluate where we are on that. So I won't -- David's already introduced the three panelists. I'll save time by not re-introducing them. We have agreed a set of questions. Each panelist will lead the

conversation in one area and then the other panelists will be asked to comment on whatever they say.

So we're gonna lead off with Randy. Randy, you were inside the Federal Reserve when COVID hit. I hope you went home quickly, but you were a decision maker in the Federal Reserve when COVID hit. And as we've already heard, the Fed did a lot of things to try and manage that situation from a financial stability perspective. They had massive open, open market operations, repo purchases of treasuries, MBS, a plethora of non-bank lending facilities the stuff that Ben set up in 2008 and '09, plus a lot more in addition.

So thinking back on that episode how do you assess the design and effectiveness of the response? What about adverse side effects, moral hazard, et cetera? And what should the Fed be, what should the worst Fed be thinking about of keeping on the, in, in the pantry for using if, God forbid, there should be another crisis? So your thoughts on the COVID response.

QUARLES: Super. Thanks, Don. Let me, let me just start by noting that to rephrase Kristin's mathematical calculations in the language of we Westerners. Jay Powell drew the money bull. For you Easterners, in rodeo, you can't get a great score in bull riding unless you are randomly assigned a truly life-threatening animal to ride. Jay certainly did that and rode it in a way that will absolutely put him down in the history books. And the COVID response was a key piece of that, and the fact that I'm gonna express some reservations about how we handled certain parts of that doesn't in any way detract from, from that thought.

So, there were three elements of the response. You mentioned them. There were array of liquidity and credit facilities a variety of market interventions, large scale purchases of treasury and asset-backed securities, about a hundred and twenty billion dollars a month and a series of banking system interventions. We suspended share repurchases in the banking system. We suspended surplus leverage requirements as an emergency regulatory matter. It was supervisory engagement to encourage continued lending.

How'd we do? I think overall even though I'm partly grading myself, the Fed gets an A, maybe even an A plus for acting with a creativity and speed that was commensurate with the potential consequences. In mid-March of 2020, as all of this program was being rolled out over the course of roughly two weeks the world was facing a global administrative shutdown that probably hadn't been put in place since the Black Death of the 1300s in Europe. It was much more restrictive than the measures that were taken during the more devastating Spanish flu in the early twentieth century.

The scale of the global fiscal response was unknown but given the parsimony of the response to the GFC, there was good reason to think it would be inadequate. Markets were collapsing with the speed and to a degree that was also unprecedented, especially the U.S. Treasury market which quite literally had only sellers, no buyers at all.

And again, the creativity and speed with which the Fed responded is really down to Jay's leadership. During ordinary times, the role of the Fed chair, as many of us have been emphasizing over the last year, is to patiently make arguments and to catalyze a bottom-up consensus among a diverse and fairly strong-willed group.

But a crisis requires, and in a crisis, the system will respond to in a way that it won't in peacetime, a take charge position. Jay very much succeeded there despite the fact that he was facing folks like me on the board who were deeply skeptical of widespread government intervention. But it turns out that there are no atheists or libertarians in a foxhole.

On the specific elements of the response, I think the grades are more varied. So let's start with the banking interventions. There, I think the Powell Fed gets another straight A. Europe and UK responded by completely shutting down all distributions to shareholders from the banking system. In Europe in the European system, in the UK system, those are mostly dividends. There are returns on what they call 81 securities that fill a role somewhat similar to share repurchases in the U.S., although it's much smaller relatively, which they also shut down. We closed off share repurchases, but allowed dividends to continue while conducting intensive and recurring stress tests during 2020.

There were seven stress tests in all that year. In a just world, there would be a statue of the Fed stress testing staff in every public park in Washington to ensure that the system could remain resilient while making those dividends. And the consequence is that the cost of capital for the U.S. banking system remains durably lower than that of Europe.

On market intervention, I think we get an A for the first few months and a C for the period from about September of 2020 through September of '21. In, in March of 2020, the treasury market had completely closed. Everyone knows that. It was both necessary and appropriate for the Fed to intervene at scale. And the asset-backed market interventions were, if less absolutely necessary, certainly appropriate in the moment during the fog of war. The Fed left those purchases on autopilot for too long, however. This wasn't super consequential in my view during that 12-month period but it turned out to create obstacles, which the previous panel discussed, to a swift response to the post-COVID inflation as the Fed believed that it had to taper those purchases gradually before it could start raising interest rates. And if it had shut them off earlier, which it could have and would have. It could have and would have responded to the inflation surge much earlier.

On the liquidity and credit facilities, I think the grade is, again, mixed. It's important to distinguish between again, what I've called the liquidity facilities and the credit facilities. Liquidity are the traditional facilities designed to provide temporary funding to wholesale participants in the financial system. The credit facilities, at least in this terminology that I'm using, were the new mechanisms developed to provide credit to the real economy, the corporate bond facilities, the municipal bond facility, maybe you put the PPP facility in there.

The liquidity facilities, again, get a straight A. Not only did the Fed roll them out with unprecedented speed you know, that was thanks to their having been developed in the Bernanke Fed and existing in the toolkit, but still they were rolled out fast. But on top of that, the Fed modified the post GFC toolkit by not employing the TAF. That was the discount window replacement facility. And instead pressed use of the discount window itself as a way of using the crisis to seek to reduce the stigma of that instrument, to show the banking system that they could use it without undergoing stigma. The use of the discount window was successful, although there's a lot more work to do there.

The credit facilities, I give a B minus, maybe a C plus. Not so much because they turned out not to be used very much because it would've been unwise to count on the scale of the fiscal response that ended up making them largely superfluous. And I also think that the scale of the fiscal response itself turned out to be excessive and the fundamental cause of the subsequent inflation. So maybe they should have been more useful. But because the way that we implemented them established a dangerous precedent.

For example, for almost 90 years since the passage of Section 13-3 in 1932 the Fed had maintained that the powers it was given in the Great Depression did not allow it to lend to municipalities. Not that it was reluctant, not that it shouldn't, but that it couldn't. That was not true, as was demonstrated with the municipal, with the municipal facility in the COVID event. And in general, these new facilities demonstrated the truth that Section 13-3 allows the Fed

to lend any amount to anybody for anything, provided only that the Treasury Secretary declares an emergency.

And it doesn't take a great leap of the imagination to imagine a future Treasury secretary declaring any number of things to be a national emergency. We've had a number of national emergencies over the course of the last year. Jay was very supportive internally of a proposal that the Fed and the administration publicly press the Congress to create a vehicle subject to democratic governance and congressional appropriation to take over these credit facilities, as I'm calling them, similar to the Reconstruction Finance Corporation in the Great Depression.

The Treasury secretary nixed this approach on the grounds that the facilities would be getting shut down by the end of the year, and if we created a congressionally funded entity, it might never get shut down. A very sensible concern, and he turned out to be right, although it's worth remembering that it was a very close-run thing that the Congress did not require the continued extension of those programs. And the -- but the result is that the precedent is out there without the countervailing precedent of a congressional governance structure for the actions that risk the most political entanglement of the Fed.

So that's what I think we did. That's what I think the pros and cons of, of what we did were. I'll look forward to hearing what Dan and Andrew think.

KOHN: Thank you, Randy. So Andrew, do you have some reactions as well?

METRICK: Sure. Absolutely some reactions. First, I wanna say I agree with the characterization that Christie began her speech with, that we have a hero who has just retired from position. I have been really fortunate in my life, and I'm getting to be old now, to have only outstanding Fed chairs several of which I would label heroes. So, so it's, it is a hard act to follow.

With regards to the response to COVID, to that first crisis the first financial crisis, potential financial crisis of its time, I wanna remark that it was not a financial crisis. We don't talk about it now as having been a financial crisis. That's kinda crazy, right? We don't talk, we, every time something bad happens, we talk really long time about all the mistakes that were made leading up to that bad thing. This is a dog that didn't bark, and I would have expected it to bark.

Okay, so we had the world shutting down, globally, hundreds of interventions that look exactly like financial crisis interventions. In our database that we maintain, we have 2000 interventions since the beginning of time up until COVID, and then hundreds of interventions during COVID. Not a financial crisis. Okay, so this is a treatment that kept somebody out of the hospital. We should be studying that treatment and giving a lot more credit for it.

And while I agree with Alan that certainly Chair Powell will go down in history for his defense of the independence of the Fed, even without that, I would hope that this very aggressive response, and perhaps, as Randy says, in retrospect, too aggressive, but only in the path of history we saw, where the, where we got a vaccine kinda pretty fast and the world came back. If we remember how scared we were, erring on the side of too much didn't seem like a bad idea.

But I wanna add one additional about another dog that didn't bark in talking about the crisis Randy didn't discuss 'cause he wasn't there at the time, I think of 2023, the regional banking crisis that we had, where I think that the liquidity facilities that came out, once again, really

aggressive, creative. I give them an A. But there's one dog that didn't bark there, which we might then be talking about a mistake that was made, but we don't have to. And that is the forecasts going into around that time, given that the Fed had just raised interest rates by 5% in the last sixteen months prior, was two-thirds of the economic forecasters thought we were gonna have a recession.

That was what the Fed wanted to do. They wanted to slow down and pull back on aggregate demand, and a recession was likely at that time. We had, because interest rates had gone up by 5%, the banking system, to a first approximation, on a mark-to-market basis, had lost about half of its capital, just from bond math, right? They lend long and borrow short. Had we had a recession, the banking system would have been insolvent or close to insolvent. It was a very dangerous time. And yet, two weeks after the failure of SVB, the Fed raised interest rates. So if we remember, and Ben Bernanke famously promised Milton Friedman that the lesson has been learned, and we will not do this again, from the Depression.

And it was -- now, the way history has played out, so don't get mad at me, inflation was the big problem, and it's a good thing we didn't. But a pause of six weeks at that moment in time to say, "Let's see what happened"? Might have been prudent. So history, the way history has gone, no one's gonna say that was a mistake. But it was dangerous. It was during a blackout period when all this happened, so I couldn't yell at anybody who was at the Fed to try to say that I was scared. And I'm still glad. You know, we were quite lucky that then following in that summer, we didn't have a recession.

So it worked out that we never had to say we we made a mistake. But again, that's a dog that didn't bark, not one that, that did, and not the main thing that that we've been talking about here. I won't go deeply into monetary policy except to say once again, we had a reaction here that was, as Alan mentioned, worried a lot about the weakness in the economy at that particular time. And I don't think it was so bad to be overly worried about that, that we didn't end up going down that path. But to some extent, part of the reason that we were seen more aggressive in retrospect was it was quite uncertain

KOHN: So I have two comments on your comment. One is, I think the real question is how did the, how did this dog get so, exposed to interest rate risk? I think that's something to look back on.

And then the second point is to recall from history that Paul Volcker raised interest rates shortly after Continental Illinois went down. And I thought at the time, and in retrospect, that was a hugely courageous thing, and it helped to cement the progress that had already been made against inflation in difficult times. So there's some precedent for what the Fed did.

Dan, any comments?

TARULLO: Just a couple. One is to reinforce what Randy and Andrew have said, and I think Christie alluded to it as well, is just Jay's instinct for response in COVID was absolutely the right one. You, in my view, you always go big when there are, I guess Kristin was the one who referred to as the unknown unknowns. Even when it may be going big in a situation in which you think, "Oh, well, I'm creating some moral hazard," you worry about the moral hazard later. But certainly in COVID, where moral hazard was just not really a consideration at all, it was absolutely the right thing for Jay to insist on going as big as the Fed could possibly go.

Just a little nit off of that. On the QE, I, and this gets back to the first panel, but I do think that it does seem as though what they said they were doing QE for morphed during the course of

the year. It began as a liquidity measure, almost helping the markets to function. By the middle of the year, there was some ambiguity as to whether it was monetary policy, and by the end of the year, it was monetary policy.

And whatever one thinks about the size of the balance sheet, and I'm kind of instinctively with Ben on this, but whatever one thinks of the size of it, more clarity on what you actually do why you're actually increasing the balance sheet, I think is sort of, an easy one for the Fed to get.

And then finally, Don, I'd just say some of the things Randy alluded to, the credit facilities and who's in control and all the rest, the Fed is in a, was put in a very tough position, right. Because A, it had to respond. B, Congress was telling it, "We want you to set up these particular kinds of facilities," and those were the credit facilities for which there was not a playbook from 2007, 8, and 9 to pull off the shelf. They had to kind of create them on the fly with the Treasury Department looking over their shoulder and occasionally saying, "Yeah, we don't like that so much. You know, we would like it to be slightly more restrictive than that." And I think it just puts the Fed in the position of being the face of these facilities without really totally having control of them.

So while Randy is concerned that and with good reason, this Treasury might say, "Gee, you should create some of these things," I'm also concerned that the Treasury with its very appropriate legal veto under the revised 13-3 can stop some things from happening, but the world thinks it's the Fed that made that decision.

KOHN: Thank you. Andrew we've already, Randy raised the issue of discount window stigma. We've talked about Silicon Valley Bank a little bit, that, that crisis. One thing we learned in that crisis was the discount window really didn't work. They couldn't even get to the weekend using the discount window.

The Powell Fed has taken a lot of steps to try and make the discount window a more effective tool to protect financial stability. Do you have any thoughts about what they've done? What more might be done? How can we, how can we resuscitate the Federal Reserve Act and the and the discount window?

METRICK: Well, Don, you're right. Your history lesson at the beginning is a really important one. So the Fed was set up -- what we think of today as monetary policy wasn't a thing back then. We were on the gold standard, and when people said money was tight, what they needed was discount window lending. And the discount window was set up to provide the elastic currency for that situation, and it actually worked incredibly well for the first ten years of the Fed's existence.

So the recession we had in 1920 was the first recession that we could measure go, kinda at least going back to the Civil War, where we did not have a financial crisis associated with the recession.

And that was because the discount window was very effective. In the 1920s, the Fed got nervous about the discount window use and the way it was being used for the stock market and started to, to, to give pressure not to use it, and that pressure was successful and has continued to be effective to 2026. But we have started to push back on that. And when I say we, the Federal Reserve has started to push back on that. And the the Powell Fed, steps that they've taken, including what Randy described during COVID, have been effective little bit.

We have two issues. We have to get the Fed needs to really believe they should be lending, and the banks have to believe that they're not horribly stigmatized. And we need, that's mostly gonna be the Fed, and mostly they need to do it with carrots, I think, and not sticks. One way to do that is to just acknowledge, which we are starting to see intellectually, and we need to take some further steps to acknowledge that indeed, in extremis, the Federal Reserve owns that tail liquidity risk and is ready to provide it and give credit to banks for pre-positioning collateral at the discount window, credit either through the types of liquidity stress tests that we do, and this is being discussed, has been discussed through the the time of the Powell Fed with some formal proposals and to give credit perhaps also towards liquidity coverage ratios and things like that. And there are ways to do that will get the banks to want to go and use facilities. They wanted to go and use the BTFP. If you make facilities of a certain, of a certain type and you give credit --

KOHN: That was the liquidity facility put in place after Silicon Valley Bank failed, and it took the collateral at par rather than market value.

METRICK: And it was such a wonderful deal. The banks could tell their boards "We'd be stupid not to do this." And if you give them credit for pre-positioning collateral in a way they can tell their boards, and for using that sometimes, then they'll do that as well. So I think this process has started, the steps taken by the Powell Fed, and I think where Chair Powell has talked about this, all of the things that he said have helped to move this intellectually so that people get that we have to do this and we just need to continue. So hopefully soon we will do that.

KOHN: All right. Randy, do you have any comments on this or any other suggestions about how to make the discount window more useful?

QUARLES: Well, I, let me start by thanking Andrew for noting you know, that at the time of Silicon Valley Bank, I had been gone from the Fed for years. Not everyone knows that.

But the you know, I think that the principal lesson of the spring of 2023 is that the liquidity need of the banking system as a whole is much greater than it certainly than we realized and that it had been maybe since the creation of deposit insurance in 1935. You know, developments in technology, banking technology, communications technology have simply increased the scale and speed of bank runs. You know, I mean, the previous largest bank run that, and it remains the biggest bank failure in history, was WaMu, and it was losing one point eight billion dollars a day for ten days, which was viewed as so unsustainable that the bank had to be closed. And Silicon Valley Bank, you all know, it lost fifty billion dollars in an afternoon. There was another hundred billion dollars that was prepared to leave first thing in, on Friday morning. We'd never seen anything like that.

There's reason to believe that is at some level or another, a representative of a much higher ambient liquidity need in the system. You could address that by increasing the scale of deposit insurance, kind of the way the liquidity need was brought down in 1935 and over, you know, subsequent increases in deposit insurance over the decades. But a need that's great would require such a high level of deposit insurance, and there have been proposals for fifty million or unlimited amounts of deposit insurance.

I think that the moral hazard and the attendant pathologies that would be associated with that level of deposit insurance would be much greater than vigorously re-energizing the purpose of the Fed's creation you know, in, in its origin, which is to be the source of that liquidity. I would be, you know, I would be even more aggressive than the Fed has been so far, although, you know, Jay has been, you know, terrific in leading the efforts of the Fed to be more aggressive, but even more aggressive in its willingness to be that liquidity

provider. You know, certainly pivoting dramatically from what has been the attitude of the Fed for a long period of time, quite aggressively since the great financial crisis, to discourage banks from relying on Fed liquidity. The Fed is the only major central bank that won't give banks credit in its supervisory assessment of a bank's liquidity resilience for its ability to borrow from the Fed, which is one reason why banks like Silicon Valley Bank weren't prepared to borrow from the Fed. They didn't have any collateral there. They got no credit for it, and the Fed aggressively discouraged it. So you need to move that around.

And then on the discount window so much is dependent on the stigma that's associated with it, and so much of that stigma is now embedded in law because of changes in the great financial crisis that require disclosure fairly promptly of banks' access to the discount window. You know, I could be supportive of the creation of something, call it the Purple Panda Facility that, you know, that effectively duplicated the function of the discount window but just wasn't called the discount window and therefore wasn't subject to the disclosure requirements. And I think that may be what's necessary to respond as aggressively as I feel is needed for for what we've learned about the banking system since 2023.

KOHN: Andrew wants to say something.

METRICK: Yeah, just want to say one, one quick thing, I promise, so we can get to Dan, which is with regards to Randy's Purple Panda Facility, what I would say is we create one every time there's a crisis, right?

METRICK: So, we make one because people don't want to go to the discount window and then we get rid of it. There's, the thing that is still out there that is somewhat Purple Panda-like is the the FHLB system, which doesn't have the same power as the Federal Reserve but is in business to lend. And as long as we have that kind of still out there doing the things that it does, it's difficult to completely fix the discount window and completely destigmatize it.

KOHN: Dan, comments?

TARULLO: Yeah. So if you're gonna get more use of the discount window, and Andrew and Randy have already alluded to this, you've got to overcome the stigma, and the stigma derives from market perceptions as well as supervisory perceptions.

The, I think Secretary Bessent gave a speech a few weeks ago now in which there was one paragraph that was a little bit hidden, and press didn't really pick up on it, but it has a quite clever idea which is that, yes, give some credit for pre-positioning collateral for your liquidity coverage ratio and other regulatory liquidity requirements. But in order to take advantage of that, you actually have to regularly use the discount window. So you can't just pre-position a bunch of collateral and you say, "Ah, now I can get a fifteen percent reduction in-- or that counts for fifteen percent of my HQLA." You'd actually have to use it. What would that do?

Well, number one, it would mean that it was being regularly used, and no longer can analysts kind of look at the reports from the reserve banks and say, "Oops, somebody is using the discount window. Who might that be?" Secondly, it will force the supervisors at the Fed, the OCC, and the FDIC to understand, to get socialized to the idea that the discount window is used. So I think it's, you know, it's not developed yet, doesn't have -- it's not calibrated, but it's really quite promising because conceptually it responds to the issues that Andrew was just just alluding to.

The only other thing I'd add, and the audience would be disappointed if I didn't say this, if we are going to provide more liquidity from the central bank, which is an end to which I agree,

with which I agree, we need to make sure the institutions that are gonna get it are solvent and are well-capitalized. Liquidity and capital are related to each other, and if, as is entirely appropriate, one has the central bank playing a more liberal role in providing the liquidity, the other side of it is you've gotta make sure these banks are well-capitalized.

A big problem with Silicon Valley Bank is it had billions and billions of dollars of unrecognized losses on its balance sheet, and well, for one reason or another, nobody called them to account for that until an outside investor said, "We're not gonna, we're not gonna put any more money in."

KOHN: So I would say another source of stigma is political. So, there's a sense that some of the, some of the -- we worked very hard, and we, I was part of this effort, in the early 2000s to make the discount window less stigmatized, more used. And we felt like we were making a little bit of progress; not a lot, a little.

Then the crisis came. Congress characterized collateralized discount window loans as bailouts, and they called people in front of committees. They required the disclosure that Randy was talking about, and they called people in front of committees. And I've had more than one large bank fund manager say to me, "My boss told me that if we borrowed from the Fed and he or the CEO got called in front of a congressional committee, I was fired." So I think how to take care of that aspect of the stigma, I think is hard, maybe impossible, but I think we're at risk if we ignore it. It's one of the sources of stigma.

TARULLO: Fair point.

KOHN: Dan getting back to regulation here, it appears that the swings in the regulatory pendulum from one administration next have gotten more extreme since the global financial crisis. I think that's partly the reaction to the crisis, the polarized nature of our politics. Fed never was independent of other agencies in regulation. It never had the same independence. My perception, this is the old guy remembering the old days, was that we acted as a kind of a moderating influence on the pendulum swing. I think we're not doing that anymore, partly because of the way the vice chair for supervision has evolved.

Is this a bad thing? Do you agree that the pendulum's swinging further now? Is that a bad thing? How, if it is a bad thing, how can we deal with it? Any thoughts on how this is?

TARULLO: Yeah. This is a sad tale which, which may end up having a very sad ending to it, which I'll mention at the end of what I'm gonna say. As, Don, you're recalling a period in which most of the time major financial legis -- the major bank regulatory legislation passed by overwhelming majorities. Response to the SLL crisis. Gramm-Leach-Bliley in 1999, I think it was in single digits no votes in the Senate, so it was overwhelmingly bipartisan. May not have been the best legislation in the world, but it was overwhelmingly bipartisan. With the backdrop of increasing partisanship on everything, generally, in the twenty-first century, and specifically with a breakdown in the communication between cooperation among the parties in the drafting of Dodd-Frank, this changed, and it's changed in a secular fashion. It, it doesn't seem as though it's going back.

The creation of the vice chair for supervision—which I don't know if you just mentioned it now, but in, in your notes to us, you did—was well-intentioned and well-motivated, the idea being somebody at the Fed needs to be paying principal attention to this regulatory stuff, and there was, you know, pre-crisis, it wasn't at all clear that had been true. But I think it has had the, it has contributed to the increasing whipsawing of the policies, the regulatory policies. Having said that I'm not sure there's an escape here, right? Not sure there's an escape.

Jay's approach, to get back to Chair Powell, that Jay's approach, I think, even when he was a governor and certainly when he was chair, was basically to, to say he accepted the notion that an administration's general direction on regulation was one that he would more or less conform to. Not uncritically, not unthinkingly. You know, there were boundaries that he had. He wouldn't go along with everything, but he almost acknowledged, "Yeah, there's, I'm gonna move some here." I think that was the best one could do under the circumstances, and he was quite consistent in trying to do it, and again, an admirable trait on his part, but I don't know that it's sustainable.

I think the politics of bank regulation have begun to have for some time been infecting monetary policy independence that members of Congress who on their own might well say, "Yeah, you know, monetary policy independence is important. I don't agree with everything the Fed does, but I understand the argument for it," they get angry about regulation. You know, Republicans get angry that the Fed's regulating too much. Democrats get an-angry they're not regulating enough, and it seeps over into their attitudes towards monetary policy independence. That's a little hard to get your arms around. It's something that's intangible, but I've felt it out there for a number of years now.

We're now facing -- by the end of this Supreme Court term, we're facing something that in quite concrete fashion will change the ability of the Fed to be independent when it comes to regulatory policy with potential very negative spillovers on monetary policy independence. Many of you, probably most if not all of you, know that it is widely anticipated in the legal community that in the Slaughter case, which involves the dismissal by the president for policy differences of a member of the Federal Trade Commission, that the court will finally and quite explicitly say that what Congress has been doing for over a century in granting independence to regulatory agencies is unconstitutional.

Now, the, the court has already signaled that it thinks monetary policy is different. And so presumably it will say that monetary policy is different. But if it is basically saying, well, as regulator, as a bank regulator, the Fed is subject to presidential direction just as the OCC and the FDIC and the SEC and the CFTC are, then it's not at all clear that the legal status of Fed monetary policy independence is preserved.

That is, if the president can say, "Oh, governor, I would never encroach on your monetary policy prerogatives, but I disagree with your regulatory policy, therefore, I'm afraid I'm dismissing you just as I could dismiss the head of the OCC." That, that opportunity for dismissal on those grounds means that in realistic terms, the monetary policy of the independence of the Fed is potentially compromised, and members of the board are gonna be aware of that.

So when you put together the politics which have been building with this potential quite important legal change, it pushes me at least to the cusp of wondering whether the Board of Governors should continue to have a direct regulatory role. Coming from me, that obviously is not where you would've expected me to be. And by the way, I think there will be significant losses in the quality of regulation and supervision in doing it. But if it turns out to be necessary in these times in order to continue to preserve core monetary policy independence, I think it's something that we're gonna have to think seriously about.

KOHN: Yeah. Would be a, would be a big loss. Andrew, any thoughts on this?

METRICK: I agree with Dan

KOHN: Okay. Randy?

QUARLES: I don't.

KOHN: Good.

QUARLES: I'll try to make this concise. I'm not sure how much we've gone over time or exactly what our time is, so --

KOHN: We've got a few minutes.

QUARLES: -- this can become a bit of a dog and pony story.

I wish we didn't talk about the independence of the Fed because I do not believe that in our legal system there is such a thing as an independent governmental agency. I believe that's fundamentally what the Supreme Court is going to determine. They've indicated that they're going to somehow wave their hands and exempt the, the Board of Governors.

I don't think that's necessary. I think it would ultimately be unsustainable because it won't be legally convincing and some future court will decide otherwise. I think the -- what we want is to ensure that the monetary policy decisions of the system are resistant to short-term political control and direction, right. And I think we get that from the structure of the Fed which is 12 separate central banks that are private bodies that are owned by the private banks in their districts.

So we, you know, a couple of times over the course of today, we've referred back to the theory of the Fed at the time of its creation which was modified but not fundamentally changed at its second incarnation in 1935 to ensure that these decisions, that, you know, we haven't concentrated you know, financial power in any particular entity. It's why we created 12 banks. We created a board that is a governmental body. But when you send an email to any of the reserve banks, it ends in .org because they're not the government. The leaders are not chosen by the government. They're not chosen by the president.

So, I actually believe that the Board of Governors and we'd avoid a lot of some of the pathologies we've seen over the course of the last year, the Board of Governors, like every other governmental agency, the president should be able to dismiss its members. He can't control the decisions of the, of the Federal Open Market Committee unless he can somehow appoint at least six members to the board, get them through the Senate. We saw in Trump 1.0, that is not easy, even with a Senate of the same party. He tried again and again and again to put people on the board that you know, that the Senate just wouldn't wear. And until you can get through that process, that you have dismissed the members of the board that don't agree with you and you have appointed six others, you can't control the decisions of the body that's actually making these monetary policy decisions.

So, I think that resist -- and then at the end of the day, if there's that much of a democratic agreement that monetary policy needs to follow a different direction, that a majority of the Senate is agreeing with the president in a confirming six people to the board that will do this, I don't know that it's up to us to say that, "Oh, that shouldn't happen."

So, you know, so I think that resistance to short-term political direction is inherent in the Fed's structure as opposed to some magic exemption of monetary policy you know, of the Fed board from the upcoming overturning of Humphrey's executor.

TARULLO: Can I, well, Don, can I, just on legal grounds just -- So Randy, I really don't, I, it seems to, maybe I'm misunderstanding you, but it sounds to me as though what you're saying is the Reserve Bank presidents, they are insulated from removal. They're independent.

QUARLES: Yes.

TARULLO: I don't under -- How do you square that with Justice Alito's opinion in the Amtrak case, in which he basically said anybody that is in a position to vote in a way that creates an important public policy measure is a principal officer within the meaning of the Constitution of the United States, and therefore must be appointed by the president and confirmed by the Senate? I mean, that decision has been hanging out there for 10 year -- it's only opinion, it wasn't a majority decision. But it's very well reasoned, very persuasive, and it's from Justice Alito. And so I don't see how the independence, if the, how you create more independence for the president of the Federal Reserve Bank of Kansas City than you do for the chairman of the Fed?

I don't, It doesn't seem to me to hang together as a policy matter, but I don't see how it squares with constitutional with the Article 2 requirement that principal officers be appointed by the president and confirmed by the Senate either.

QUARLES: It depends on, yeah, there are all sorts of consequential decisions that are taken in the financial system that aren't governmental decisions. I think that you know, the fundamental theory of the Fed is that it is not entirely a governmental body and that monetary policy decisions are not entirely, maybe not even primarily governmental decisions. They have a governmental implication. They have a public policy implication, which is why you have the board, which is why you have the board's input into those decisions, but it is input. It can only be control if there's such a democratic agreement that you've got six people appointed by a president, in theory through different presidents, but if Humphrey's executor is overturned, then it could possibly be by the same president and approved by the Senate that could dominate that decision.

KOHN: I, I think this discussion could continue for a long time. But instead we'll turn to a couple questions from the audience. We're running out of time, but we have time for a few questions. Yes, Joe?

AUDIENCE QUESTION: Joe Beaulieu from Brevin Howard. The link between how safely the Feds, how, the level of the balance sheet that the Fed can operate at and the, and the structure of regulatory, of regulations, liquidity and capital are kind of well known. How worried should I be that the desire to shrink the balance sheet is going to drive decisions on regulation?

And sort of the opposite question, how worried should I be that they're gonna shrink the balance sheet before those regulations are changed to allow it?

KOHN: Does anyone care to deal with that? The nexus between the balance sheet and the-

METRICK: I think you should be concerned.

TARULLO: But perhaps not panic.

QUARLES: I think it's almost, but I think it's almost an impossibility. In the absence of, you know, in the absence of changing those regulatory requirements, I mean, the Fed's balance sheet is, you know, you can't shrink the Fed's balance sheet without shrinking demand for currency, which is a little hard to affect. I suppose you could pass laws. But also -- and which, notwithstanding our increasingly digital world continues to grow at about a 45 degree angle constantly -- but principally banks' demand for reserves, which are much, much higher than they were in the pre-GFC era and are not principally a function these days of regulation or even supervision. And until you change that demand for reserves, and you'd have to change the operating methodology of implementing monetary policy of the Fed to really shrink the balance sheet, materially you can't do it until you've affected those things. They're necessary preconditions. So I don't think you have to worry about things getting out of step.

I also don't think you have to worry about this happening maybe at all but certainly not in any rapid fashion. This is, shrinking the balance sheet, which I don't necessarily object to at the margin, although I have come to agree with Ben that it's not the problem that I thought it was before I entered the marble walls of the Eccles building. But, you know, but I don't object to shrinking it. But it is a dive of a high degree of difficulty that will take a great deal of time to execute.

KOHN: Thank you. Krishna?

AUDIENCE QUESTION: Just with respect to the balance sheet would it be reasonable to consider an asset swap between the Fed and the Treasury in which the Fed might transfer to the Treasury, for instance, the two trillion MBS book in return for bills of equal value? Is there some merit to essentially taking a fresh look in short at where the different assets appropriately sit on the consolidated balance sheet?

KOHN: Does anybody want to comment on that?

TARULLO: You should start on that one, Don.

KOHN: So I think the Fed would love to get rid of these MBS. I don't know the, whether the Treasury has the legal means to do what you're suggesting. But it doesn't really deal with the size of the balance sheet issue. It deals with the composition. I think the focus has been more on -- I think everybody agrees it'd be great to get rid of the MBS. What's hard to do is shrink that balance sheet without creating other financial stability problems in the banking system.

METRICK: Well, they could do it in a sterile -- I mean, they could sell the MBS and buy treasuries.

KOHN: Right, right, right.

METRICK: They don't need the Treasury to be involved in that if they really wanted to do it that way.

QUARLES: Take that loss and, yeah, I think there are, I think there are interesting you know, sort of, you know, financial transactions that can be, you know, that could be implemented in order to change the composition of the balance sheet.

I I agree with Don. I don't think that Treasury has the legal capacity to be the counterparty. You could address that with with a law, but you don't need the Treasury to be a

counterparty. There are, you know, you can engage in private sector transactions that that could accelerate the that transformation of the composition.

KOHN: All right. So this has been a great discussion. We've run out of time. Let's -- join me in thanking the panel.

WESSEL: Thank you, Don.

KOHN: Thank you, Randy.

WESSEL: Randy, Alex, and Randy from London. So to give the closing benediction, we've invited Janet Yellen, who has the distinction of being one of the few people, I'm not -- I think the only person to have been both Fed chair and Treasury secretary. Did -- who else?

[off-mic]: G. William Miller.

WESSEL: Well, okay. We have a, G. William Miller, okay. But I'm not even gonna start to go that way. Janet Yellen.

YELLEN: Thank you, David. You've organized a genuinely illuminating conference. After an excellent paper from Christie and David Romer and two very interesting panels, I'll conclude with a few lessons I draw from Jay Powell's tenure, filtered through my own experience at the Fed and at Treasury.

I should confess that it's hard to, for me to be fully objective. I had the privilege of working with Jay for almost six years before he became chair, and of collaborating with him, always with respect for the separate roles of the Treasury and the Fed, during my four years at Treasury. Jay Powell is a person of exceptional integrity and competence. He has served the American people with distinction under circumstances none of us fully anticipated.

The continuing soundness of our financial system and the resilience of our economy owe no small debt to his leadership. His defense of Federal Reserve independence, as Christie and David said, has been heroic, and I'm grateful for his willingness to continue serving as a governor to help counter the threats that remain.

I consider Powell's performance as chair to have been extremely successful, and for that reason, an honest assessment of the lessons learned is all the more important. I'll offer three lessons concerning monetary policy, financial stability, and Fed independence.

First lesson: monetary policy cannot tame supply-driven inflation without exacting unacceptable unemployment costs. Looking through supply shocks should remain the default strategy unless inflation expectations are at genuine risk of becoming unanchored. The 2021, 2022 inflation episode has deservedly received considerable attention today. Economists widely agree that the Fed was late to raise rates. The FOMC waited until unemployment had declined well below all estimates of the natural rate, and labor markets were tighter still on alternative estimates, such as the ratio of vacancies to unemployment. A chronically overheated labor market could ultimately have generated a wage price spiral and unanchored inflation expectations.

When the Fed finally responded, it did so aggressively and skillfully. Labor market pressures eased, no recession ensued, the unemployment rate remained low, inflation expectations stayed anchored, and inflation fell sharply in 2023 as the supply shocks that mainly drove

the surge faded. How serious then were the consequences of the Fed's delay? Careful work by David Reifschneider, consistent with the findings of Bernanke and Blanchard, that supply shocks or constraints rather than wage pressures were the main cause of inflation. Reifschneider shows, shows that a quicker or larger Fed response based on a variety of Taylor-type rules would have raised unemployment meaningfully while reducing inflation by only a few tenths of a percentage point. The Fed did need to tighten, but loose monetary policy did not cause the inflation, and tighter policy could not have meaningfully alleviated it without imposing a heavy unemployment toll.

So what is the lesson concerning the appropriate Fed response to supply shocks? For decades, the Fed has typically looked through supply shocks expected to cause a one-time movement in the price level on the grounds that inflation expectations have been well anchored since the mid-1980s, and the unemployment cost of fully offsetting such a shock would be unjustifiably high. Some are now calling that strategy into question, but I would not. The moral I draw from this episode is that looking through supply shocks should remain the default strategy unless inflation expectations are at genuine risk of becoming unanchored, even when, as in 2021, '22, demand played some role in creating the shock by boosting prices in some supply-constrained sectors. The real income losses the public suffers from supply-driven inflation are painful, but they're largely unavoidable, and I believe a careful welfare analysis does not support a more activist monetary policy response when expectations remain anchored.

Second lesson, financial stability demands rapid, forceful responses to runs, but the deeper imperative is a supervisory culture willing to confront risks before they become crises. The Fed was created in response to the banking panic of 1907 to stem bank runs, and in recent years it's been called on to provide liquidity to systemic firms and markets on all too many occasions. The COVID shock of March 2020 produced one of the most severe liquidity crises in modern financial history, arguably more acute in its initial velocity than 2008. Money market funds broke the buck or came close, treasury markets became dysfunctional, corporate credit markets seized up, and the dollar funding system showed severe strain globally. Powell's response was fast, decisive, and institutionally creative. The Fed deployed an extraordinary range of emergency facilities in a matter of days, extending its lender of last resort function deep into non-bank markets.

The willingness to act preemptively before many of the facilities were even used was itself stabilizing. This was Powell at his best as a crisis manager. Powell responded with similar decisiveness to the collapse of Silicon Valley Bank in March 2023. In most respects, an old-fashioned bank run accelerated by modern technology and social media, with large uninsured deposits across the banking system and many banks carrying significant unrealized mark-to-market losses, the potential for contagion was enormous.

The Fed, in coordination with the FDIC and Treasury, rapidly invoked the systemic risk exception to provide full deposit insurance coverage. The Bank Term Funding Program, backed up by Treasury's Exchange Stabilization Fund, was an ingenious mechanism that allowed banks to borrow against securities at par rather than market value, directly addressing the specific vulnerability driving the panic. Contagion was contained and a broader banking system was averted. The lesson is that the Fed under Powell demonstrated an impressive capacity to act quickly and aggressively to stem financial crises, and it devised ingenious and innovative tools to do so.

But crisis management is not a substitute for prevention. Such episodes must become less frequent, and that requires strengthening both bank supervision and broader financial regulation to address the underlying vulnerabilities that cause runs in the first place. Sound supervision is mostly invisible. It is the crisis that does not happen, the institution that does

not fail, the vulnerability addressed before it becomes systemic. Those successes do not hold press conferences.

That makes the culture of supervision, the willingness to push back, to escalate, to act in a timely way, to accept this discomfort of being unpopular with the supervisors all the more important. The Fed's own postmortem on Silicon Valley Bank identified a supervisory culture in which the burden of proof for escalating concerns had drifted too high, in which examiners were reluctant to act against rapidly growing institutions, and in which formal findings did not reflect the actual risk being observed.

My predecessor and our colleagues identified the same issue in our postmortem of the 2008 crisis and took some steps to address it. During both Trump terms, the focus has instead been on financial deregulation and reduced supervisory intensity. The 2019 regulatory changes diminished liquidity stress testing and interest rate risk scrutiny facing a bank the size of SVB. I worry that the continuing deregulatory push may be further undermining a culture that is not sustainably improved. These problems predate Powell, and they remain serious.

Third lesson: Fed independence is critical to good economic performance, and preserving it requires ongoing effort by the Fed and a broader coalition. Jay Powell has borne relentless attacks for much of his tenure. They pertained first and foremost to interest rate decisions. Other chairs have also faced political pressure, albeit less publicly. But these attacks were broader. They were an attempt to redefine the Federal Reserve to treat it as an executive agency whose policy should reflect the preferences of the sitting administration rather than as an independent institution whose mandate is set by Congress and whose decisions are made on economic grounds.

This conflict has already affected the conduct of bank supervision and regulation within the Fed and could ultimately affect monetary policy as well. Resisting it required a kind of steadiness that good monetary policy judgment alone does not provide. And Jay Powell had that steadiness in abundance.

Powell's response was, in my judgment, close to exemplary. He absorbed the criticism. He declined to respond to provocation with provocation. He built relationships with Congress quietly, persistently, that created at least some political buffer. And critically, he did not allow political pressure to visibly distort the FOMC's decisions.

The temptation when a central bank is under attack is to demonstrate independence by tightening more than the data warranted, warrant or forgoing cuts that are appropriate as a signal of autonomy. That temptation should be resisted, and Powell resisted it. Genuine independence means doing what the data and dual mandate require regardless of political pressure in either direction. When the attacks crossed from criticism into direct institutional assault, the attempted firing of Governor Cook, the subpoenas, the threats of criminal investigation, he responded with precise, proportionate, and factually grounded pushback

The broader lesson is that central bank independence requires continuous investment in relations with Congress and clear public communication about why independence matters and above all, in conducting policy well enough that the institution's credibility is its own best protection. It also requires a broader coalition, courts willing to uphold the legal foundations, members of Congress willing to defend an institution whose decisions they sometimes dislike, and economists, former officials, and informed citizens willing to speak clearly about what is at stake when monetary policy is subordinated to political will.

The Fed cannot defend itself alone. What the past several years have demonstrated in ways I find both alarming and ultimately somewhat reassuring is that this broader coalition, imperfect and slow to mobilize as it is, exists and it can be rallied.

Well, let me close with a thought about what we're really doing when we hold conferences like this one. The lessons we draw from the Powell era will shape how the next chair approaches the genuinely difficult decisions ahead. Navigating an inflation not yet fully extinguished, a fiscal trajectory that raises fiscal dominance concerns, geopolitical disruptions that continue to generate supply shocks, and a political environment in which the Fed's independence remains at risk.

The best thing this conference can contribute to that future is exactly what it has done today: rigorous, honest, and good faith analysis of what worked, what did not, and why. Jay Powell deserves that kind of analysis. Powell has left the Fed sound. He has left it still independent. He has left the economy, despite everything, in better condition than the challenges he inherited might have led us to fear. And those three outcomes are not trivial. Together, they constitute a record worthy of this retrospective and of our deep and genuine gratitude. Thanks.

WESSEL: Well, thank you, Janet. I just wanna – what, when we, with Glenn's generosity, created the Hutchins Center, the mission is to improve the quality and efficacy of fiscal and monetary policy and public understanding of it. And this is exactly what we had in mind. And I have one final thought. Kevin Warsh should expect exactly the same scrutiny that we gave Jay Powell, and we promise to provide that.

So please join us in thanking our -- everybody. And I wanna thank our team, Stephanie Cencula, Meg Waring, and others who make these things work so seamlessly, our IT people. And one last favor, if there's a coffee cup at your feet, pick it up and put it in the wastebasket in the back. Thank you.