Transcript of "Perspectives on Monetary Policy" Panel at the Thomas Laubach Research Conference

TREVOR REEVE. Thank you all for being here. Of course, it is a true honor today to have Chair Jay Powell and former Chair and Nobel laureate Ben Bernanke with us today. Thank you very much for being here. I've very much been looking forward to this conversation. I'm sure our audience has, too, so let's just get to it.

This conference, as everyone knows, is dedicated to the memory of Thomas Laubach. And earlier this morning, we heard some personal reflections on working with Thomas from Secretary Janet Yellen, also former Chair of the Fed, and from President John Williams. And both of you worked closely with Thomas as well. So I'd like to give you both an opportunity to share your own thoughts about Thomas's contributions as an economist, as a central banker, as a colleague. Ben, maybe we can start with you.

FORMER CHAIR BEN BERNANKE. Sure. And it's great to be here. I was Thomas's thesis adviser, and he worked with me on a book on inflation targeting when he was still a graduate student. And that was a long time ago, and he was not yet in his exalted position at the Fed when I was doing Jay's job, so I don't have any short little anecdotes to give. But I do want to say that I think there are sort of two kinds of accomplishments a person can have. They can have curriculum vitae accomplishments, and they can have what I call "eulogy accomplishments." Curriculum vitae accomplishments are things like published papers and promotions and awards and recognition. Eulogy accomplishments are the things your family remembers—your kindness, your support, helping other people, and so on.

Thomas was one of the few people who scored high on both dimensions. On the CV side, beginning with his work with me, he had a tremendous input into the Federal Reserve's framework, working on inflation targeting, working on the more recent Fed framework. I'm sure John Williams talked about his work with Thomas on the natural rate. He worked on the effects of deficits on interest rates—again, another contribution. So, a person who made a lot of intellectual contributions and important points. But as a person, he was just a very warm, kind, friendly, helpful person, and he was just a joy to work with. And I'm glad to be here to say this about him.

TREVOR REEVE. Thank you. Jay?

CHAIR POWELL. Thank you, Trevor. So, first of all, let me say, this conference is a very fitting tribute to Thomas, and I'm really delighted and honored to be part of it. And let me add my thanks to those of us who made all of this happen here today.

So I first met Thomas when I joined the Board as a Governor in May 2012, almost exactly 11 years ago. And in preparing to join the Board, and then in my early years at the Board, I was very focused on developing a deeper background in macroeconomics and monetary policy. Many people here at the Board supported me in that process, too many to name here, but I will say, Thomas really stood out. And it was during the process of reading the literature and discussing it that I really started to get to know him. He had this great ability to communicate complicated ideas. He obviously loved talking about economics, and his great enthusiasm and willingness to engage with me, a new Governor, was immediately evident. He was very gracious to me, and we had a lot of informative discussions. So rather than being his teacher, I was really his student in those early years.

As you noted, Trevor, by the time I became Chair in 2018, Thomas was the head of the Division of Monetary Affairs. In that role, he was a trusted adviser to me and to the FOMC. His leadership was particularly important as the FOMC conducted our first-ever public monetary policy review. He played a major role in organizing that, identifying key topics and organizing the staff all through the Federal Reserve System. He also played an absolutely essential role during the critical period of the pandemic at the very beginning, when we were marshalling our forces and our tools to stabilize the financial system and protect the economy from even more dire consequences. And through it all, he did come through as—not just for his dedication, his great intellect, and his mastery of monetary economics, but also just for his kindness as a human being and just as being a terrific, great colleague and a great person.

TREVOR REEVE. Thank you. And I think there's a lot of agreement for the sentiments that both of you've expressed. Appreciate that.

Before we get to some questions on some current issues, I did want to ask you both about any formative experiences that you may have had that have shaped your views, particularly about your thinking about monetary policy. Paul Volcker, in his oral history interview, tells the story of his mother, who was adamant that he received the same dollar value monthly allowance when he was in college that his older sisters did 10 years prior. And, of course, he was not too happy about that, because inflation in the interim had obviously eroded the real purchasing power of that allowance. So, as the story goes, that was the beginning of his personal commitment to price stability. So, Jay, do you have any such stories to tell?

CHAIR POWELL. Maybe not quite that on point. But so I graduated from college in 1975 during what we now call the Great Inflation—and same college year as Ben. And I started working as a lawyer in the financial sector in the late 1970s. I recall from that time a growing sense that high inflation was essentially a permanent part of the landscape, just something that we all had to accept and deal with, and that the costs of getting rid of it were too high. So you just were getting used to it. Of course, ultimately, the Fed did step up and restore price stability.

And one lesson from that era is that price stability is really the foundation of a strong economy and that the economy doesn't work for anyone without price stability. Another is that high inflation is—when we have high inflation, it is the responsibility and the obligation of the central bank to restore and sustain price stability.

So today, while inflation isn't as high as it was when I was in college, it's nonetheless far above our 2 percent objective. And many people are currently experiencing high inflation for the first time in their lives. It's not a headline to say that they really don't like it. So we are very aware that high inflation imposes significant hardship, as it reduces purchasing power, especially for those who are at the margins of the economy and living paycheck to paycheck and need to use all of their incoming income to pay for food, housing, and transportation and other essentials.

And that's why the Committee is so strongly committed to returning to our 2 percent goal. We think that failure to get inflation down would not only prolong the pain, but also increase, ultimately, the social cost of getting back to price stability, causing even greater harm to families and businesses. And we aim to avoid that by remaining steadfast in pursuit of our goals.

TREVOR REEVE. Thank you. Ben.

FORMER CHAIR BEN BERNANKE. Well, I had mentors—Dale Jorgenson at Harvard and Stanley Fischer at MIT, in particular—but I'm going to tell you about something that happened to me when I was six years old. I used to visit my grandparents in Charlotte, North Carolina, during the summer, and I would sit on the front porch of their house and listen to my grandmother tell stories about her life. And she told about how she raised her family in Connecticut in the 1930s during the Great Depression. And it was a town that was specializing in shoe manufacture, and during the Depression, a lot of the factories were shut down.

And she told me that it was a very hard time. A lot of the kids went to school in tattered shoes or maybe no shoes at all. And I said, "Grandma, why would they do that?" And she said, "Well, because their fathers lost their jobs." "Why did they lose their jobs?" "Because the shoe factory shut down." Now, I was only six years old, but I could see the problem with that argument. I said, "Well, why didn't they just open the shoe factories and make shoes for the children?" And she said, "It doesn't work that way."

But I think it really was a puzzle to me that you had the same productive capacity in 1933 that you had in 1928. And in 1928, people were dancing the Charleston; in 1933, they were in breadlines. And that impressed on me that economics can make a really big difference in people's lives. And monetary policy is like that. I mean, as Jay, of course, and all of you well know, the decisions made in this building have a very broad and real effect on people's lives. And for that reason, besides its intellectual fascination, it's worth studying and understanding.

TREVOR REEVE. Thank you. I know that's certainly a key motivation for many people in this room to be working so hard.

Okay. Let's now turn to some topics of more current interest, and I'd like to start with the nexus between the financial system and the macroeconomy. Both of you, during your tenures as Chair, have faced very significant historic financial crises. Ben, obviously, you confronted the Global Financial Crisis, and Jay, the global pandemic. Those episodes were clearly acute, very vivid examples of the connections between the macroeconomy and the financial system, as well as, I think, a good illustration of the role of central banks in such episodes. But, Ben, your research, importantly, and the research that you have inspired has really demonstrated that understanding the connections between the financial sector, credit markets, and banks, and the real economy, is critical for even understanding traditional business cycles.

So with that as background, we have just experienced a period of stress in certain parts of the banking system here in the United States. So I want to get your take on those developments—how you think they match up compared to some previous episodes and what they might mean for the economy.

FORMER CHAIR BEN BERNANKE. Well, in some dimension, the recent crisis has followed the standard sequence. I don't know anything about Silicon Valley Bank other than what I read in the paper, so please don't misinterpret this. But it was a classic situation where they had assets that were subject to risk. In particular, as interest rates rose, the value of their long-term assets fell, and their capital fell. They had hoped to hedge that by their deposit franchise, where, as interest rates rose—and interest rates move more slowly on deposits—that would partially compensate. But they were dealing with customers who were very social media savvy, and that didn't really work.

So after the decline in capital, you had the second stage, which is runs, people taking out their money, which ultimately led to the collapse of the bank—despite, I may add, the good efforts of the Fed and the FDIC to provide liquidity and provide support for depositors.

The third stage of a banking crisis is contagion. And people looked at other banks and said, "Oh, they look sort of vaguely like Silicon Valley Bank—got the same number of letters in their name," and all kinds of things like that. And that caused people to begin to remove deposits elsewhere.

And, finally, the reason this is important is that it ultimately affects credit conditions. And the Federal Reserve is, of course, looking at the effects of bank problems and other financial issues on the extension of credit and, therefore, on the real economy. So in that respect, I think it's very similar to other crises.

I think it's different from the Global Financial Crisis in many ways, including its scale and scope, of course. But I would mention a couple of things, a couple of important differences. One is that the impaired asset in this case was U.S. Treasuries, which are very different assets in kind from subprime mortgages in that U.S. Treasuries can always be valued accurately. And so there's not the uncertainty that was associated with subprime mortgages.

And, secondly, as the economy declines, if it does decline, U.S. Treasuries actually become more valuable rather than less valuable, and so there's this kind of a countercyclical effect. So that's one very important difference, I think.

And then the other worth mentioning—but very important—is that, relative to, say, the GFC or the Great Depression, overall, borrowers are in much better shape than they were in these previous episodes. And that makes a big difference both in terms of the stability of the banks and also in terms of the impact on consumer spending and the economy in general.

TREVOR REEVE. Well, I guess a major reason that situation didn't get worse and, I think, the contagion was very much contained was the forceful actions, Jay, that you and the Federal Reserve took through the use of your liquidity tools, including the creation of the Bank Term Funding Program. However, in deploying these liquidity tools, that has come against this backdrop where the preeminent monetary policy concern is high inflation. And that's, of course, a little different from some of the earlier episodes and has raised renewed discussions about the so-called separation principle, right? And so I wanted to ask you how you think about the use of financial stability tools and liquidity tools, as opposed to more traditional monetary policy tools, and how they fit together.

CHAIR POWELL. It's an interesting question. But I want to start by saying, though, that the overall—the banks and the banking system are strong and resilient and well positioned to deal with the challenges they may face now or in the future. So, as you pointed out, we do have separate tools—monetary policy to achieve our macroeconomic objectives, liquidity, supervisory, and regulatory tools to address financial stability issues. But I see an important distinction between separation—this is the separation principle—and independence. Our tools can have separate objectives, but their effects are often not entirely independent. So the tools are complementary almost all of the time, because financial and macroeconomic stability are so deeply intertwined. In fact, our consensus statement notes that sustainably achieving maximum employment and price stability depends on a stable financial system. So because they're so intertwined, to me, there is not likely to be an absolute and complete separation of the tools, nor is that possible or desirable.

And I think, as Ben's research and the Global Financial Crisis demonstrated, financial stability affects macroeconomic stability—and vice versa. We saw that clearly at the outset of the pandemic. As a result, the tools that we use to address concerns in either arena can and will affect both, especially during extreme circumstances.

That said, yes, the tools are separate. They have individual purposes. And most of the time, each can be used for its intended purpose without compromising the other. For example, as you pointed out, when banking stresses emerged in early March, we used our liquidity tools, discount window and the Bank Term Funding Program, to make liquidity available to banks that might need it. And that liquidity supported the stability of the financial system without restricting the use of our monetary policy tools to promote price stability. While the financial stability tools helped to calm conditions in the banking sector, developments there, on the other hand, are contributing to tighter credit conditions and are likely to weigh on economic growth, hiring, and inflation. So, as a result, our policy rate may not need to rise as much as it would have otherwise to achieve our goals. Of course, the extent of that is highly uncertain.

TREVOR REEVE. Thank you. And, of course—I think the effectiveness of those tools is reflected in the fact that the FOMC has actually raised interest rates twice since the emergence of the banking strains. Of course—and the purpose of that is to confront the inflation issue, which brings us to our next topic, which is, in fact, inflation.

You know, in the pandemic, in the aftermath, we've had many renewed discussions of the important and classic textbook distinction between supply shocks and demand shocks and, in particular, the particular challenges that a supply shock can present to a central bank. And that's also raised a lot of questions in academia and in policy circles as to whether or not the inflation process post-pandemic is going to look quite different than prior.

Jay, maybe we can start with you. A number of folks have argued that we are entering a new period where supply shocks will be more frequent. We'd love to hear your views on whether you think that's a possibility and what that might mean for central banks.

CHAIR POWELL. So it's a great question, and it's one I think we'll be dealing with for quite a long time. And I'd say it's certainly possible that we'll see continued supply shocks. I also think it's just very hard to forecast that with any confidence. As Yogi Berra is thought to have said—Ben, you're the baseball expert; you can confirm or deny this—but it is difficult to make predictions, especially about the future. So I think that the best we can do at this stage is probably to just identify the factors that we think can lead to further negative supply shocks.

I will say, though, that positive supply shocks, related to globalization largely, probably contributed significantly to the period of low inflation that either ended or was interrupted by the onset of the pandemic. And I'm thinking there of the vast increase in global labor supply, the development of efficient global supply chains, facilitated by technological advances and things like that, and I would say those positive supply shocks do not seem likely to be repeated.

At the same time, the drivers of the current inflationary surge certainly included a sequence of large negative supply shocks to the global supply chain for goods, which also experienced a large and persistent shift in demand from services to goods, and also the supply of workers. On top of that, Russia's war against Ukraine brought further shocks to global supply chains, particularly supplies of energy and non-energy commodities.

So we can't know how persistent those shocks will be or whether further negative supply shocks will come along. Will globalization be partially or fully halted or reversed? Will it resume again as the pandemic mercifully recedes into memory? We can't really know that now. But for policymakers, the bottom line is that central banks will continue to be responsible for providing price stability, and that will require us to navigate whatever additional supply shocks do occur. So, as Thomas and Ben and their coauthors wrote in the *Inflation Targeting* book, what a central bank can do is control inflation. And that is true over time even in the presence of supply shocks should they come.

TREVOR REEVE. Ben, we'd love to hear your views on this.

FORMER CHAIR BEN BERNANKE. So, unusual events which disrupt normal economic functioning often are followed by inflation. Examples are World War I, World War II, the Korean War, and now the pandemic. And the pandemic just makes it harder for policymakers to understand what's happening and to react appropriately. And, in particular, the pandemic scrambled the labor market, made it harder to judge the state of the labor market. The opening led to a very extended rise in commodity prices, which was difficult to deal with. We had supply chain issues, which were pretty much a new thing, which was also a contributor to inflation. So there are many features of the pandemic that made this an unusual episode and a difficult episode to address.

That being said, I think that—and I've done some research on this with Olivier Blanchard that we're presenting next week. The basic mechanisms, I think, are still the same. If you have a bunch of bad shocks, that's going to give you a problem. But the underlying mechanisms of supply shocks and tight labor markets and so on are really the same. So I don't think it's been a major change in the underlying process that generates inflation—only a series of shocks related to the pandemic that gave us this episode.

Going forward, I agree with Jay that we can't predict what new shocks will come. We've got new technologies out there that might make big changes in our economy. We've got green investment, things like that, that might affect the price and availability of fossil fuels. And so there are many, many things that we can't predict. But I think that, broadly speaking, the inflation process has not changed. And one aspect of that which is very good news is that the Federal Reserve's credibility has helped keep inflation expectations, particularly longer-term inflation expectations, reasonably well anchored, which is always sort of the first step in getting control of inflation.

TREVOR REEVE. You mentioned the role of the labor market tightness in the inflation process. I think it's quite striking that prior, right on the eve of the pandemic, the unemployment rate was around 3.5 percent, a five-decade low. Yet at the same time, inflation was kind of struggling to get up to 2 percent on a sustained basis. Here we are in 2023. The unemployment rate is roughly at the same level as it was prior to the pandemic, but, of course, inflation is far above 2 percent. So in that context, should we be thinking about the relationship between slack in the labor market and inflation differently? Do we not have the right measures of slack? Is it the problems with understanding what the natural rate of unemployment is, or is slack really not the key to understanding inflation in the first place? Ben, you want to take that one first?

FORMER CHAIR BEN BERNANKE. Well, as I was talking about before, I think that the pandemic, to some extent, scrambled the usual signals from the labor market. And the Federal Reserve, over time, has begun to put more weight on things like the vacancy-to-unemployment ratio, which seems to give a better signal in a period of change, when the labor market matching process is in change, than the unemployment rate. So there has been some scrambling of those signals.

That being said, it's simply not true that—even as people have understood since the '70s, there's not a simple inverse relationship between inflation and unemployment. In particular, what can break that relationship is supply shocks. And so during the '70s, we didn't particularly have tight labor markets most of the time. We had high inflation (a) because we had oil price shocks, which the Fed did not respond to adequately, (b) because inflation expectations were not well anchored, and there was a strong tendency for price increases to feed into wage increases, to feed into price increases. So because of the presence of supply shocks and inflation expectations dynamics, there's no reason why low unemployment and high inflation can't coexist. But the remedies might be, depending on the situation, somewhat different.

TREVOR REEVE. Jay, how are you thinking about that?

CHAIR POWELL. So I'm very much in agreement with that. You know, it's certainly true that we had, both before and after the pandemic, unemployment very low, close to 3.5 percent, but that we only had high inflation after the pandemic. Does that mean that our understanding of the relationship between slack and inflation is badly wrong or that it has changed fundamentally after the pandemic? And my answer would be, tentatively, "no" to both of those questions. I think what really is different this time was the series of unexpected and persistent supply shocks that featured in the inflation process. I don't think labor market slack was a particularly important feature of inflation when it first spiked in spring of 2021.

By contrast, I do think that labor market slack is likely to be an increasingly important factor in inflation going forward. In particular, inflation in non-housing services is showing signs of real persistence. In this highly diverse sector, labor costs are a high proportion of total costs, and that sector happens to account for more than half of the core PCE index.

But the point is, all of this can be explained, I think, using our standard framework for understanding labor market slack. You could say it this way—that the natural rate of employment probably rose sharply as the pandemic severely disrupted the labor market. And the implication of that would be that an unemployment rate of, say, 4 percent indicated a much tighter labor market in 2021 than it did in 2018. And, as Ben mentioned, of course, after the pandemic, we began looking much more closely at alternative measures, particularly vacancies but also quits, which have been signaling even greater tightness than the unemployment rate alone might have thought to signal. I mean, to put some numbers on it, at the end of 2018 and the end of 2021, we had 4 percent, roughly, unemployment in both cases. In 2018, the vacancies-to-unemployment ratio was 1 to 1, essentially. In 2021, it was 2 to 1, and that was a much better indicator, obviously, at that time of the simple, standalone unemployment rate, although, as I mentioned, you could also think of it as the natural rate being highly elevated.

The other thing is, it may also be the case that the Phillips curve has steepened, meaning that inflation has returned, at least for now, to being more responsive to changes in the labor market slack. But the Phillips curve was once thought to be fairly steep after flattening.

Relationships in the economy, like the Phillips curve, evolve over time, so I would not characterize that as a problem for our understanding of inflation.

TREVOR REEVE. Very good. Thank you. Maybe we can pivot here to the topic of central bank communications. It's widely understood now that the better the public understands the conduct of monetary policy, the more effective it will be. But fostering that type of understanding really requires a lot of communications, and, of course, that can be hard. Both of you have been powerful advocates for advancing monetary policy communications—both with an eye toward making policy more effective, but also for the purposes of promoting transparency and accountability.

Ben, you've obviously played a critical role here advancing the FOMC's communications, including the introduction of press conferences after FOMC meetings, the introduction of the Summary of Economic Projections. So, what changes over this period since the communication, say, revolution began would you highlight as being some of the most effective, the most important, and where do some remaining challenges exist?

FORMER CHAIR BEN BERNANKE. Well, let me talk about communication, because I think you need to understand that it serves multiple purposes. I mean, one of its purposes, the narrow purpose, is to try to align market expectations with the Fed's own thinking. I think that goes back to Alan Greenspan. If you go back to 1994, the first FOMC statement—I mean, since then, the Fed has tried, at least, to give some indication of what it's thinking and what it sees as the risks to the economy.

But beyond that, you mentioned transparency and accountability. This is a powerful institution. It's very important that it be accountable to the Congress and to the public, and the best way to do that is explain what we think, what we're doing, and how we're going to go about that.

There are other reasons for communication. One I would talk about is feedback. We're having a conference here. If the Fed puts out the issues that it's concerned about, economists will write articles or tweet and respond to that. Or in the case of the *Fed Listens* program, maybe it would be more ordinary people who are explaining how monetary policy affects them.

One final thing I would mention is diversity of views. Because the Fed has a consensus culture and there are very few dissents normally, the outside perception is the Fed is subject to groupthink, which, of course, is possible. But with people talking about their own views and explaining why they see the economy as they do, it does, I think, at least to some extent, show that there is a range of opinion on the Committee.

In terms of tools, I guess I do feel proud about the press conferences, which I introduced four times a year, after the Summary of Economic Projections, and which Chair Powell has taken to an art form. And I think also just the inflation target, the forecast that we release. And there's a cultural change which some people don't like but I think, on net, is good, which is, it used to be, if you look back at speeches in the Greenspan era, the president of the Federal Reserve Bank of Minneapolis would talk about harvests or something—wouldn't talk very much about the global or national economy. Now you have a lot of people talking about the different aspects of the Federal Reserve's views. And, again, that contributes to both market transparency and also to accountability to the local constituency and to the national constituency.

TREVOR REEVE. Jay, you, of course, have continued to push forward on the communications and transparency fronts. Welcome your thoughts.

CHAIR POWELL. You know, I think the broader setting is that transparency is especially important today. Polling data show that many important public and private institutions globally have struggled to retain the public's trust and support in recent years. Now, we're an institution that serves a critical public mission, but to be here and work here is to know that the particulars of what we do and how we do it are not generally top of mind for most people. And on top of that, we have a critical and a rare grant of independence. And all of that, to me, means that we have a special obligation to explain ourselves clearly—what we do, why we do it—to provide transparency to the public and their elected representatives in Congress so that we can earn and deserve their trust and support. And that's a critical task if we are going to sustain our democratic legitimacy through this interesting period.

My colleagues and I really take that as a primary and affirmative, proactive obligation, and not something we see as a burden or of second-order importance. So, in that spirit, to your point, we have followed the example of Chairman Greenspan, beginning in 1994 with the first post meeting statement, through Ben's innovations and Janet as well, in looking to foster greater transparency and accountability. And a couple of examples: We now do a press conference after every meeting, not just every other one. We have greatly expanded our congressional outreach to be certain that we hear directly from lawmakers on an ongoing basis and also so that they have the information that they need to conduct appropriate oversight. As I mentioned, in 2019 and '20, we conducted a public review of our monetary policy framework, seeking input from a broad range of people and groups all around the country. We've also significantly expanded transparency beyond monetary policy. For example, we now publish semiannual financial stability, and supervision and regulation reports.

Of course, there are always communication challenges, especially, I find, about communicating the uncertainty that attends our assessments of economic conditions and the outlook. And the good example of this is, despite our persistent efforts to explain otherwise, the policy paths from the SEP seem regularly to be taken as a firm plan or a Committee decision rather than what they are, which is a compilation of individual participants' best assessments on a particular day of appropriate policy, under the assumption that conditions evolve in line with their baseline forecasts. So that's just a challenge that we constantly face in the context of great uncertainty. Despite that, I would say, though, that the Summary of Economic Projections has actually been very useful during this tightening cycle as markets have looked ahead and priced in future rate hikes long before they're actually implemented.

TREVOR REEVE. Your last point really brings up the idea of communications as being an effective policy tool. And I guess the key element of that is the use of forward guidance.

Jay, in one school of thought, forward guidance is a tool that should really only be deployed when interest rates are at the effective lower bound. And so you can no longer provide accommodation by lowering rates further, and so you do so through communicating about the policy path in the future. But in another school of thought, forward guidance should be just a regular part of communicating with the public to convey the Committee's policy intentions, even far away from the effective lower bound. Where do you come out in that debate?

CHAIR POWELL. Well, I do think it depends on circumstances. I do think that forward guidance can be useful when policymakers have a materially different or clearer view of the likely path of policy than does the interested public. I would agree—at the effective lower bound, when we need to provide more stimulus by indicating an intent to keep policy accommodative longer than the public expects, there's a use case there. I also would say, though, that communication comes with a cost of misinterpretation, and it also may limit flexibility. So I think we should use forward guidance sparingly when the course of policy is either reasonably well understood or, on the contrary, is so dependent on uncertain future developments that little, really, can be said constructively about the future.

And a good example of that was the March 2020 FOMC meeting. The pandemic shutdowns were just beginning. The level of certainty was almost unimaginable, and we chose not to issue an SEP at that point. Really, our view was that releasing a forecast at that time might have been more of an obstacle to clear communication than a help.

In contrast, as I mentioned a minute ago, forward guidance has really been a useful and effective tool during the current tightening cycle, as financial conditions have tightened well in advance of actual rate increases. You know, the two-year tightened between the September '21 meeting and liftoff in March of '20. It tightened by 200 basis points before we ever actually lifted rates, and that's significantly because of our communication. So in the current context, until recently, it's been relatively clear that further policy firming would be warranted, and our forward guidance has said so.

Now, however, we've come a long way in policy tightening, and the stance of policy is restrictive. And we face uncertainty about the lagged effects of our tightening so far and about the extent of credit tightening from recent banking stresses. So today, our guidance is limited to identifying the factors we'll be monitoring as we assess the extent to which additional policy firming may be appropriate to return inflation at 2 percent over time. As I noted at the last press conference, that assessment will be an ongoing one as we move ahead meeting by meeting. Having come this far, we can afford to look at the data and the evolving outlook and make careful assessments.

TREVOR REEVE. Thank you. Jay, you mentioned the guidance can be useful at times when the public may expect a very different policy path than policymakers. How do you think about those sorts of situations?

CHAIR POWELL. You're right. So, recently, it has sometimes been the case that markets appear to be pricing at a different rate path than the Committee expects will be appropriate. But I would say that that disconnect does not seem to reflect a misunderstanding of our reaction function or a lack of belief that we'll do what's necessary to bring inflation down. Rather, it appears to reflect simply a different forecast, one in which inflation comes down much more quickly than the Committee participants think is most likely, perhaps due to a significant downturn.

I would say also, so far, the data have continued to support the Committee's view that bringing inflation down will take some time. Moreover, something we often don't remember to think about is that market prices always reflect both expectations and compensation for risk. And what market participants say in surveys of their expectations is actually closer to the views in the SEP than what is reflected in market pricing.

So, ultimately, my colleagues and I have our forecasts, and market participants have theirs. Our role is not to advocate for our forecast. What we can do is be clear about our expectations for growth, unemployment, and inflation and the likely implications for policy. As well, we want the public to understand how policy would react if the path of the economy were to differ materially from our expectations. And, of course, we do lay out our individual forecasts quarterly.

TREVOR REEVE. Ben, what would your takeaways be for the past couple of decades' use of forward guidance as a policy tool?

FORMER CHAIR BEN BERNANKE. Well, Charlie Evans and coauthors have made a useful distinction between what they call Odyssean and Delphic forward guidance. Odyssean forward guidance is a commitment forward guidance—which is rarely used but typically at the lower bound—where the central bank promises to do something, its credibility on the line, that it will follow a certain path going forward. And that's a way of getting more stimulus. And that goes back, again, to Alan Greenspan, I think—to indicate that a certain path was very likely—and that actually helps achieve the objectives. Delphic forward guidance is basically just a forecast: "Here's what we think. Tomorrow we might think something different, but we're just trying to, as part of our transparency, give you a sense of where the economy is going and how we think policy will react."

Now, as Jay points out, there are some problems in practice. One is, people don't understand the difference all the time between a commitment and a forecast. That's something that Jay has emphasized, and I think that should be emphasized. Another is, people underestimate the amount of uncertainty involved, which is enormous. So I don't think you can do without some form of forward guidance, because the idea of transparency says, "Here's what we see, and here's how—why we're thinking." And so the idea that there's no guidance at all, most of the time—I mean, I take March 2020 as a counterexample. But most of the time, you do want to give at least a sense of where you think the economy and, accordingly, policy are heading.

I think, just if I might editorialize one more minute, one of the issues is that the FOMC is so large and geographically dispersed that it's been difficult to come up with a collective Committee forecast. We tried to do that when I was Chair. The "dot plot" is a compromise, which is not ideal. Other central banks do other things. Sometimes they have collective committee forecasts that are voted on, or they use market rates, or they publish the staff forecasts. So there are different ways to go about this. But, again, I think that forward guidance is both an instrumental tool—but, again, letting people know sort of how the central bank sees the evolving situation even if there's lots of uncertainty, which, you can say, normally is part of transparency.

TREVOR REEVE. So you highlighted uncertainty as being a key factor in dealing with some of these issues. Obviously, uncertainty is a pervasive feature of monetary policymaking and often invokes the so-called risk-management approach to making monetary policy.

Maybe we can start, Jay, with you on this topic. The FOMC raised the federal funds rate by 5 percentage points in a little more than a year. That's a very rapid pace by historical standards, as we all know. How do you view those actions in the context of the uncertainties that you and the Committee faced about the economic outlook? And how did risk-management considerations factor into your decisions?

CHAIR POWELL. So I'll start by remembering that Alan Greenspan famously said that pervasive uncertainty was the defining characteristic of the policy landscape. It's worth remembering that he made that comment during what we now think of as the Great Moderation. So that statement has never been more apt than it is today. If you look back, the pandemic, the global shutdown, the historically forceful response, and the reopening—all of that had no modern precedent. So it has been a time of historically elevated uncertainty and of unexpected outcomes. No advanced economy had ever faced a shutdown and a reopening, and now all of them would face it at the same time. So no matter what happened, the outcome was going to be unprecedented.

So this level of uncertainty posed real challenges for policy and policy communications. On the one hand, we wanted to be—we had to be nimble to be able to respond to the evolving situation. On the other hand, we wanted to be as clear as possible about what we were doing, lest we add to uncertainty. So I would say, policy certainly has been nimble. Consistent with what was in our expectations, the data did actually show declining inflation through September of 2021 but then turned decisively against that expectation thereafter. And we, in response, accelerated our policy firming—ultimately, as you noted, raising rates by 500 basis points in just over a year. Over this period, we communicated that the object was to reach a stance of policy that is sufficiently restrictive to return inflation to 2 percent over time. But we also communicated that the level of rates that would ultimately be required was highly uncertain.

Now, until very recently, it's been clear that further policy firming would be required. As policy has become more restrictive, the risks of doing too much versus doing too little are becoming more balanced, and our policy has adjusted to reflect that fact. So we haven't made any decisions about the extent to which additional policy firming will be appropriate. But given how far we've come, as I noted, we can afford to look at the data and the evolving outlook and make careful assessments.

TREVOR REEVE. Ben, when you became a policymaker, you were well versed in sort of the academic literature on decision making under uncertainty.

FORMER CHAIR BEN BERNANKE. Yeah, I moved from that side to this side. Yeah.

TREVOR REEVE. How is it working in practice?

FORMER CHAIR BEN BERNANKE. I say, uncertainty, when you're an academic, is trying to decide whether your error term is Gaussian or not. In actual policymaking, you don't even know what the current-quarter GDP is, because it's going to get revised several times down the road. I remember when I was sitting on the—just as a member of the Board, and Greenspan was in the Chair, and we had responded to some inflation data. And a little bit later, it turned out that that inflation change had been revised away. And I asked the Chair, "Do you think we can revise our interest rate policy?" It is very difficult. I mean, this—I got a laugh with that.

But just trying to make policy—it involves not just uncertainty about the data, about the model, about all the things that can happen, about the social and economic and political environment. So it's very difficult, and, unfortunately or fortunately, given that monetary policy works with a lag, given that there are risks on both sides of the model forecast. There's not much choice but just to accept that uncertainty and try and do the best you can, being ready to adjust as new information arrives.

TREVOR REEVE. Very good. Thank you. We are getting close to the end of our allotted time. Maybe we could wrap up with just a question looking ahead.

Jay, maybe we can start with you. What would you point to as some of the key issues that will be most relevant to the research community as well as to the policymaking community?

CHAIR POWELL. So I guess I would start with the labor market and what we talked about earlier of vacancies, in particular, and the Beveridge curve and the whole discussion over whether the extraordinarily high level of surplus demand in the labor market can be lessened through the vacancies channel without a significant increase in unemployment. That would be more akin to what has happened in all prior cycles or most prior cycles. So that's going to be a question that we will resolve empirically, but I think we're learning new things about the workings of the labor market, at least in this one situation.

I think on monetary policy, it's going to be interesting to look back and try to understand how inflation spread from what was very, at the beginning, very focused on the goods sector due to the rotation of demand from services to goods and the tremendous amount of support that goods purchases got from fiscal and monetary stimulus. How did it spread then through—really into the service sector, where it now significantly resides? I think we're seeing much progress on goods, and we have progress in the pipeline on housing services, but where we see persistent inflation is now in the service sector. So, what is the mechanism by which that happens, and what are the implications?

TREVOR REEVE. Ben, you have the last word.

FORMER CHAIR BEN BERNANKE. Well, I think one of the things that I would urge researchers to look at is the relationship between monetary policy and financial stability—very, very difficult relationship. If you read the papers, you see that everybody has a very strong opinion about this subject, but they don't necessarily correlate. As Mark Twain once said, the things you don't know can hurt you as much as the things that you know for sure but ain't so.

So I think that we really do not understand, to the extent that we need to, the relationship between different aspects of monetary policy, risk-taking, balance sheet behavior, et cetera. And it's just something—a lot of good work being done, don't get me wrong. But I think we need to understand much better what the channels are and to quantify the relationships so that we can think about what extent we need to take that into account in monetary policy.

TREVOR REEVE. Very good. Well, let me thank both of you tremendously for sharing your perspectives with us today. It's been a highlight of our conference honoring Thomas Laubach, and so thank you very much. A round of applause. [Applause]