CHAPTER FIFTEEN

When the Data Aren't Enough: Facing a Challenge of Policy Implementation

Raphael Bostic

Good afternoon, everyone. It's good to be here. I want to thank the organizers for inviting me to be part of this panel with two great colleagues. This is something of a homecoming for me, as I got my PhD just across the way at Stanford's Economics Department. It's been nice to walk around campus and see so many familiar sights. But in a very obvious sense, I'm a newbie here at this conference. So I may be the one person who didn't know what I was in for when I came.

As the newest member of the Fed on this panel, I agreed to defer to my colleagues and allow them to speak before me. With my time, I thought I might first respond to what Presidents George and Kaplan said and then talk about policy from an implementation perspective.

First, I totally agree with President George's comment that we should be thinking about our strategic framework. She mentioned price-level targeting. President Kaplan mentioned nominal GDP targeting. We at the Atlanta Fed have also jumped into this conversation. We have a four-part series on our economics blog that tries to talk to the public about why we might think about changing the strategic framework. We use price-level targeting as an example. The whole point of this, I think, is that you're going to hear consistent voices from just about all of us that periodically there's value in reexamining strategy to make sure that it's delivering the goods that we hope. And this is a time that I think is particularly ripe for that.

A second thing I would say is that, to me, the two things in the regulatory environment established by the Dodd-Frank Act that are most important are the increases in required capital and the introduction of stress tests. The capital is critical, because we learned very quickly that there wasn't enough capital in the system to withstand the turmoil. The stress test is quite important because it addresses a culture of risk management that was absent at many of our institutions. Having the stress test in place is a signal that banking institutions need to be thinking about the possibility of very adverse events, in advance and continuously. My hope is that these institutions don't just use scenarios that we come up with, but rather run through a whole host of other scenarios, so they are prepared and are as resilient as they possibly can be. That philosophy is an important one and needs to prevail throughout the industry.

I want to also say that for me, the most important aspect of our ability as the Federal Reserve to conduct our policy is the preservation of independence. Anything that might risk that independence needs to be considered seriously. I talk with our folks, including Presidents George, Kaplan, and Williams, about this all the time. Further, Governor Quarles has commented about what things we can do to make sure we are not giving any perceptions that we are moving beyond our mandate or our authorities, because it is those scenarios or situations that I think pose the greatest risk to our independence. We should be having conversations on this in a serious and urgent way, because Washington, when it moves, moves fast. We need to make sure we understand the implications of every one of our actions as we take them.

And then I wanted to talk a little bit about the economy, just briefly, in the sense that President Kaplan talked about the medium term as where there's uncertainty. His projections show growth less than 2 percent. My projections for the medium term show basically the same. I'm exactly where he is, largely because of the four things he highlighted.

But I would also say that part of the issue that we face in this economy—not just in the United States, but worldwide—is that disruption is happening. I believe it's happening at an accelerated pace, and it's happening in a broader scope of industries or sectors than we have seen before. The scale of the problem, and our response to disruption, is something that has real implications for how productive the economy can be moving forward. And it's my view that we don't have the institutions in place to help facilitate a seamless and low-cost response to that disruption. In fact, we have not really talked to our workforce about what skills they're going to need to be successful in tomorrow's economy. Without that conversation, it's hard for me to imagine how we get to a higher trajectory in terms of economic performance.

And so we're focusing on this. The Atlanta Fed recently launched the Center for Workforce and Economic Opportunity to establish a forum for engaging with the many stakeholders who are critical for making progress here. We recognize that success will require participation from institutions far beyond the Federal Reserve, as we do not have tools to really affect these issues directly. But these issues do have direct implications for our mandate, and so I think that it's important we talk about them.

Let me now turn to the issue of policy implementation. I'll try to be brief. When I was working at the Department of Housing and Urban Development, it was during the housing crisis. We designed many programs that we thought were addressing very specific issues that were underlying some of the distress that was happening in the economy. To be completely honest, some of them didn't work. But in many instances, the failures had less to do with the design of the program and more to do with the implementation of the program: making sure that institutions that were charged with delivering policy actually had the capability, the capacity, the resources, and the authority to do those policies. In that crisis time, that wasn't the case for a number of programs. I came out of that experience with a new commitment to pay attention to implementation issues. I think that implementation issues are underappreciated as challenges for the execution of policy, and I think that's something that all of us would do well to think about more in terms of the integration of policy design.

In that regard, I wanted to highlight one implementation issue that hit me almost immediately once I arrived in Atlanta. And that was the question of how we should execute policy when the data aren't enough. There are two dimensions where the data might not be enough. One is that the signals the data provide can be ambiguous, and that's been happening pretty consistently the whole time I've been in my current role. This has actually been true for an extended period. How should we deal with that? A second way that data might not be enough is if the data we look at are not the data that are going to move the market tomorrow, or the next month, or the year after. With this, I think about the Great Recession and all the distress that was happening in terms of housing markets. A lot of stuff was going on there, including the extreme leverage that was being taken on by financial market players. Some of these things had not customarily been in our "box" of things to look at and study in determining what appropriate policy should look like. I'm worried about that. People tell me this, and I'm sure you've heard it too: "Regarding tomorrow's crisis, the one thing we know is it won't look like yesterday's crisis. It's going to look different."

So how do we get focused on that wide range of things? That's a question we've been thinking about at the Atlanta Fed. And I will say that for me, I got lucky, in that the Bank had already put in place a structure to make sure we get on-the-ground intelligence on a regular basis. We use this approach to inform our thinking about a host of questions we don't have answers for. Because ultimately, if the data are not enough, then we've got to find nontraditional sources of information and find ways to integrate that into our policy making.

The Atlanta Fed has something called a Regional Economic Information Network, or REIN. My district is divided into six subdistricts and we've deployed staff in each of the subdistricts and tasked them with talking to people—CEOs, leaders of community groups, and public officials. The approach is to ask questions. What are you seeing? What are the challenges you're facing? What are the opportunities you have? What things are you experiencing that you don't see in the newspaper? The goal is to gather a collection of information that allows us to get a sense of whether noteworthy or markedly different things are happening.

With these sorts of approaches, there's always a risk that what we hear is just ad hoc, that it's one person's story. How can we ensure our policy is not dependent or driven by anecdotal experiences that are really just one-offs? We try to respond to that in the context of scale. Because we have so many people out there, we can talk to dozens of leaders. And then we bring all that information back. So this last policy cycle, we talked to about one hundred leaders from across the region, across sectors in different parts of our district, to see if there are similarities that point to common themes.

I think this has been quite useful, and there are a number of benefits associated with this. First, it allows for a more organic flow of information, so that we're not predetermining what's interesting or useful, but rather are allowing our interactions to guide us. The second is it helps us to focus on what we need to know. If we hear stories that are coalescing, we can then find relevant data that can help us get a deeper insight into those spaces.

Third, I think it increases the likelihood of finding out something that's happening that hasn't yet shown up in the data. As you know, our policies don't operate instantaneously. This places a premium on timeliness. The more timely we can be in learning things, the more timely we can be in deploying our policy and have it hit in the right way.

Fourth, it guides our future strategy. Once we determine the conundrums we seek to better understand, we can send our REIN executives out armed with questions that can help us get useful answers. So, in addition to letting our contacts tell us about what they are seeing, we can guide our conversations with them to achieve a more fruitful interaction.

The last thing I would say on this is that it has changed how we approach information-gathering more broadly. My bank is now engaged with a number of partners to do surveys that can help us get insights into key questions. In fact, we're doing one about business activity with researchers here at Stanford and at the University of Chicago.

In this context, I would like to tell one story, because I think it's instructive. President Kaplan talked about how the productivity of our labor force is quite low. We see this in the data. But the thing that has always struck me is that whenever I talk to CEOs, CFOs, and other business leaders, they all tell me they're investing tremendously in technology. They're trying to increase the efficiency of their workforce and that should translate to more productivity. So, are they wrong? Are we just missing something? I don't think they're wrong. Another thing we also hear all the time from businesses is that they are spending a whole lot of money in a new area, which is cybersecurity. And the expenditures in that area have gone up tremendously. In many ways, cybersecurity is like hiring accountants or regulatory compliance officers. They are a cost that doesn't translate, necessarily, into any kind of additional output or productivity. So we're going to look into this and see if there are ways to measure, you might call it, a cyber-adjusted productivity rate for labor to see if these new line items are changing the reality of business. And maybe our current assessments of productivity in a historical context have turned into something of an apples-versus-oranges comparison. So, hope may not be lost—all lost, at least. And we may be seeing progress in this regard.

My point here is that these conversations can spark insights that lead to directions for research. I have found real value in the type of information that we get from our on-the-ground, nontraditional engagements.

A lot of the discussions we have today come down to the question of whether our models really work, particularly in today's environment. This is a really important question and is one that we wrestle with, because sometimes they don't work so well. They're not matching up as much as we'd like. And we've got to figure out what to do with that. I don't know that I have an answer for this question, but I think this is another area where you guys can help us, and I think that can be quite useful.

Let me close by noting that I've really come to appreciate the power and the value of surveys of regular people and businesses. So, as you are wrestling with your questions, talk to the folks here at Hoover. See if they might fund or support a survey to try to get some new information that allows us to get a deeper insight as to what's really happening on the ground and a better understanding of some of the pressing challenges we're facing. What I've heard consistently at this conference is that there's a lot we still don't know. I think we're going to have to use some different approaches to get information that can help us make better policy.

GENERAL DISCUSSION

PAUL TUCKER: Two things, if I may. The first is that each of you, and John at lunchtime, talked about a clear desire to review the whole monetary framework that you have here, and you mentioned price-level targeting and some of the things that Ben Bernanke has talked about. But the question I have is this: if I think about the mainstream monetary policy frameworks over the past half century, the Fed was never the innovator, and in a sense that was good for the world, because you matter so much. Is there a real-world example of price-level targeting or nominal GDP targeting that you're looking at and saying, "Yeah, that has really kind of worked in a medium-size country, and we think we can adapt that to the US"?

The second thing is that a number of you, I think all of you actually, said—and I certainly completely agree with this—something along the lines of, "It's very important that we must not go beyond the boundaries of our powers." You also said that it's vitally important to preserve a resilient financial system. And yet through the whole day, almost nothing has been said about resolution policy. And if I may say so, this is absolutely typical of the Fed, because resolution policy belongs to the FDIC, and the Fed prefers always to talk about what you, the Fed, can do. I want to suggest to you that these two things are linked. The perception, fair or unfair, that you went beyond your powers during the crisis concerns, broadly speaking, lender-of-last-resort operations. If the resolution powers that the FDIC and others have got are as workable as others and I think they can be, that would in the future relieve the pressure on you to go beyond into the unknown with your lender-of-last-resort powers. Are you prepared to talk more about resolution policy in the future and to make it work in order to help build credibility that you will stay within the proper confines of LOLR policy?

ROBERT KAPLAN: I'll take a stab at both, and I guess I'll comment on both. The point is not whether we ultimately adopt nominal GDP targeting or price-level targeting. The point for me is that there should be a strategic review at the Fed on a regular basis. There have been governance recommendations about the Fed, we've talked about the balance sheet today, we've talked about our frameworks, we've talked about our inflation targeting. All these topics should be discussed in a regular strategic review. We, of course, do talk about all these things regularly. But I come from the business world, and I think having a strategic review every X period of time is a healthy thing. I think we should take views from outside. We should look at what's been done in other countries. I don't think we should make changes unless we have conviction. The point on this for me is more about process rather than about debating the pros or cons of any one thing.

Second, on your comment—I'll speak as a businessman on this issue of resolution authority—someone again who worked in the industry. And I hate to use this analogy, but I'll use it. The analogy is: you smoke, you drink, you're way overweight, and everybody said for years, "Wow, I can't believe he or she is still upright after all this." And then you have a terrible event happen, and then all the discussion is about what happened in the emergency room after the traumatic event. In the aftermath, you suffered some serious damage. I'm much more of a fan of preventative care. Experience has seared into my head that, yes, we should develop effective resolution authority and living wills and all these other post-trauma elements. But if those approaches are central to your ultimate defense, we're going to be in a lot of trouble. I think we are much better served talking about sound monetary policy, how we use our balance sheet, and all these other issues, because by the time you actually have to use resolution authority, serious damage has already been done. So, I don't think these resolution frameworks take the place of or take any pressure off us figuring out sound economic policies, including how to manage the balance sheet and how we might use it in a crisis or in order to avoid a crisis.

ESTHER GEORGE: I'm not sure we need to change the framework. I think what we need to do is be open to many of the calls that we hear about what's wrong with the framework: that you can't hit 2 percent inflation and what do you mean by a symmetric target? As it was framed earlier, being open to thinking about that is healthy for the institution and helps make us more accountable.

On the resolution policy, I will just say I'm probably the skeptic here. We certainly have yet to prove that these resolution regimes will work in practice as well as they do in theory. It's why I tend to lean more heavily on the things we do know. We do know strong leverage ratios work. We do know strong capital and liquidity are going to be key, based on experience and the research that has been done. And I still get a very strong sense that the market believes banks are too big to fail. So, when I look at the size—this is just in the US—of an $11 trillion industry, we should keep working on resolution for sure, but I'm not sure that we're there yet.

RAPHAEL BOSTIC: Totally agree with them. I would just say that prevention is a big focus for me. I think about this from a basic health perspective. If you wait until you get to a crisis situation, the disruption, the pain, is a lot worse, and it costs a lot of money. So, if we can avoid that, I think that's in our interest. And I think we should try to make sure that when you get to the crisis, the transaction happens smoothly, and as many assets are preserved, as much value is preserved as possible. But I don't think it substitutes for making sure that we minimize the likelihood that we actually get there.

And one takeaway that I hope you have is that—you guys should know—we're pretty thoughtful. And I say this because I've gotten a sense that you guys think we're locked in on things, that there's a preordained policy that we all come to, and I have to pledge fealty to, before I get my position. And that's not the case. One of the nice things with my colleagues is that we argue all the time. We're open to discussions, and conferences like this are actually quite helpful for us in terms of getting a better sense of what things we need to think harder about or know more about, because we are in uncharted territory and the transition path is not one that people have experienced before. So it's going to require thought, and we all are open to doing that.

CHARLES PLOSSER: Thank you. I'm going to use the chair's prerogative here to intervene and at least to make a comment, because Paul's suggestion and John's comments earlier today raise the issue of choosing a strategic framework for monetary policy. I think that's fine to consider, but I think, being a veteran of this war for eight or nine years when I was at the Fed, one of the things that the Fed and we often miss in that discussion is, yes, having a strategic framework is important. But where the debate ends up occurring is often not about the goals. It usually ends up a debate about how you get there, the tactics. You have lots of debates in the FOMC about rules versus discretion, strategies to adopt, about how to achieve the best goals, and so I would urge my former colleagues and the new ones in the Fed, that if you go down this road of considering a new framework, whether it be price-level targeting, nominal GDP targeting, or other such approaches, be sure you think through the implications of that for how you will conduct monetary policy. How would you conduct monetary policy in a credible—to John's point—systematic way to achieve those goals? Because, without that discussion, this is just kind of pie in the sky, and without an articulation of how that will happen or what you have to commit to do to deliver, it is all just wishful thinking.

ROBERT KAPLAN: And if it makes you feel better, Charlie, I doubt there's anyone around the table that would disagree with what you just said. I think the people around the table aren't going to be willing to be supportive of a change in framework unless they understand all the issues you just raised.

CHARLES PLOSSER: And Raphael's point about implementation becomes critical . . .

RAPHAEL BOSTIC: No, I agree. I do want to say, though, that policy is path-dependent. And we got here through a set of circumstances that I think if it were our druthers wouldn't have happened. We wouldn't be here. So, I think it's difficult to just talk about this policy as a point in time/space, without acknowledging that we came through a whole host of challenges. A lot of the policy articulation of strategy was designed to provide certainty and some stability in a space where there wasn't very much of that. Once you become identified as having that kind of stability, it becomes very dangerous to start tinkering with that, because that could have serious adverse impacts, beyond the policy itself. Actually, I haven't heard enough about the role of uncertainty today in terms of economic performance. And I know for me, in terms of the things that I spend time on, I focus a lot on how our policies will be perceived relative to the path that has been charted. I'm not a Fed guy but I have become very aware of the Fed watchers out there. They really watch us. Like, every word, every step we take, so deviations from the path we have charted can have outsize implications for the response the market will have to our policy. And that's a component that I think we've got to make sure everyone is sensitive to. You know, people watch you very closely.

MICKEY LEVY: I'd like to ask this question in the form of a hypothetical. At some point in the future, say, early next year, inflation is 2.3 percent or thereabouts, above 2 percent. And you and the median FOMC member forecast sustained healthy real economic growth, say 2.5 percent to 2.75 percent, which is way above your estimate of potential growth. And your forecast of the unemployment rate is unchanged from the current low rate, significantly below the estimate of the natural rate of unemployment. What is your inflation forecast going to be? If it's higher, which is what the Fed's macro models would forecast, you may jar inflationary expectations. If, on the other hand, you forecast that inflation is going to go back to your 2 percent target, what are you going to do with your forecast of the appropriate path of the federal funds rate (the so-called "dots")?

ESTHER GEORGE: In your hypothetical scenario here, Mickey, as you know, there are always questions about what other factors may be at play too. The committee has not committed to a path today, and notwithstanding the dot plot and the attention it gets, I'm reminded at every meeting how we are constantly recalibrating where we sit today relative to the forecast that we've set out there. So, if what you're suggesting is, we can see that there's going to be persistence in this inflation rate, that we're growing above trend, the scenario looks like the economy is overheating, then you have to revisit what your path is, and think about whether the number of rate increases that you've thought about are going to have to be steeper. And this is always the challenge. This is a challenge that we've known since the day we did liftoff, which is: Do we wait and go slow? Will we have to go faster at some point? I think we're all mindful of that. So, I get your point, and we are where we are.

ROBERT KAPLAN: I'll say one thing. The most important thing I've learned in this job—and I used to be a leader in business, and I taught leadership for a living—if I had to give one piece of advice to a leader, on what's the most important leadership quality? You must be open to learning. Don't be rigid or predetermined, and certainly don't rigidly rely only on models or on any one approach to doing your analysis. And I think I try to bring that philosophy to the FOMC table. But I've been extremely impressed as a member of the FOMC—I've only been here two years—by the prevalence of that way of thinking. We pay attention to the results of the models, and we do all the work. But I think as important as all that is a whole series of other approaches. Raphael talked about some of them. And I think this group is open to learning. It doesn't mean we won't make mistakes, but we've got an attitude where we're humble, willing to say, "I don't know," "I've changed my mind," "We've made mistakes." And I have a lot of confidence that this group has those qualities.

MICHAEL BORDO: I just want to amplify what Paul Tucker said. I think he's right. The Fed hasn't generally been the leading innovator in central bank technology and ideas, with one key exception, and that's Paul Volcker's disinflation in 1979. But to get to my question, what will be the effects of the large and rising fiscal deficits and debt-to-GDP ratio in the US on Fed policy thinking?

ROBERT KAPLAN: I may have talked more about this subject than just about anybody else around the FOMC table. My concern is that through most of our lives, we've increased debt-to-GDP in order to stimulate GDP growth. We're getting very possibly to the stage, now, where the path of government debt, especially because if you take into account the demographic trends in the United States—the path of debt growth may well be unsustainable. We actually haven't been through a period in my life—I've been through it with companies, but I don't think we've been through it in this country—where we either have to moderate debt growth or actually deleverage. Deleveraging could likely create a headwind for economic growth. And these are considerations we have to take into account. And so, when I say things are good in the short term, I'm very mindful of the fact we've just had a very large fiscal stimulus. But the underlying drivers of economic growth have not dramatically changed. I hope they do. I hope we make investments and policy decisions to address them. But I think recent fiscal policy decisions may increase the likelihood that out-year growth is going to be sluggish or disappointing.

ESTHER GEORGE: One of the things I think about, Michael, is the experience we had in '90 and '91 and the political pressure that the Fed came under. As I look at the increasing willingness of Congress to reach in, for example, to the reserve banks for funding, obviously, it doesn't affect our ability to operate. But those optics, those practices begin to chip away at issues around independence. So, coming into a time of rising rates, when you see these debt levels, I think you have to keep that in the back of your mind—that those dynamics could come into play again.

WILLIAM NELSON: I have a question for President Kaplan, President George. So, you mentioned the leverage ratio proposal. But there was, of course, also recently the proposal to change the day-to-day capital requirements to include the stress capital buffer, which, in effect, is basically just adding the GSIB surcharges to the post-stress hurdle rates. So, there's been very much a recalibration away from a leverage ratio, risk-blind measure for the largest banks to an even more robust set of requirements for the largest banks. And simultaneously, the stress tests that are going on right now include increases in the unemployment rate and declines in house prices, commercial real estate prices, and stock prices, as well as widenings in the Triple-B spread that are greater . . . all of which was worse than what was seen in the crisis. So, I just wanted to ask, it seems to me that those changes meet the criteria you just described of applying tougher standards as things continue to improve and of maintaining very strict requirements on the largest banks—and, I think, in quite a desirable way, moving away from a binding leverage requirement. I just wanted your perspectives on those two things.

ESTHER GEORGE: First of all, your stress tests are only as good as what you're modeling, and so you're putting a great deal of faith in the calibration of your models. And I'm going to assume that those scenarios are as good as we can do, and I'm supportive of running those stress tests. But we know from our experience around risk-based capital and how we calibrate that that the leverage ratio is a stronger measure. I do not see evidence that it creates incentives for risk, particularly when you combine it with the CCAR exercise that we do. And given the experience of 2008 and '09, and my own experience going back to the eighties, that leverage ratio is not a constraint in terms of lending. In fact, you see that it becomes a source of funds. It becomes a source of strength, actually. And so, given the systemic risk posed and the amount of leverage in the banking system relative to any other corporate form, I think that ought to be our strong bias in terms of strengthening the system. I think what we've seen so far as that leverage ratio has raised is that we've become far more competitive worldwide. We have become really the strongest banking system, and I don't see any reason why we ought to deviate from that.

ROBERT KAPLAN: I wouldn't add anything to that. I think we can debate exactly how we do it, and I think those are good arguments as to the best way to do it. But I think directionally—you hear where I'm coming from, I think for the big banks—I don't think the country is being hurt at all. In fact, I think it's being helped by having tough capital requirements and stress testing. And whether it's a buffer or leverage, I'm open-minded to different ways to do this. But I think that we're well served by tough capital requirements and stress testing.

At the same time, I do think we need to be giving regulatory relief to small- and mid-size banks. I think that will help spur business growth.

ANDY FILARDO: Picking up on Mickey's question, I would like to ask about the current status of the Fed's dual mandate. A number of your FOMC colleagues have recently been talking about the issue of "overheating." A lot of people outside the United States are asking what the Fed means by this term and its implication for policy trade-offs. Is this term just a euphemism for "medium-term inflation risks"? Or does it also refer to employment, the second part of the Fed's mandate? In an environment in which the Phillips curve is sending decidedly mixed signals, one wonders whether noninflationary overheating of the labor markets would prompt the Fed to normalize at a quicker pace. Or is the pace of normalization, for all intents and purposes, largely tied to inflation behaviour?

RAPHAEL BOSTIC: For me, overheating means that economic performance, in terms of the GDP growth as well as pricing, starts to go well beyond what we think is sustainable in the short to medium term. Because if we move beyond sustainable, and this is something my colleagues and my staff have really impressed upon me, once it breaks down, it ends badly. And the Fed historically has not shown a real ability to prevent that negative momentum from leading to extra disruption. So to the extent that we can start to see some signs that the economy is getting close to an unsustainable level, and I think that unsustainability will contain both dimensions, that would be a signal for us that we then need to prevent a snapback that leads to excess disruption.

ROBERT KAPLAN: I agree with everything Raphael said. I'm very conscious of the fact that the structure of the economy has changed dramatically in the last number of years. We've always had forms of automation, but what I've seen going on—at least in my business career, and I've spent my career dealing with businesses—this is something different. I think it's probably the proliferation of cloud computing and other technologies that have challenged the pricing power of business much more than any time I've seen in my career. And the ability for businesses to be disrupted is accelerating. Artificial intelligence and other things that were unthinkable are accelerating. So, to Raphael's point, I'm mindful of the fact we could dramatically overshoot full employment. And even though in the near term we don't seem to be seeing as much inflation as we expected, I'm sensitive to the fact it may take a little longer for those pressures to build, because you've got this headwind. But that doesn't mean pressures are not building. And you've got to be aware even though the data don't show you as much inflation as you expected, that doesn't mean you're not going to see it. It just means it may take a little longer, you've got a greater lag, and you've got this structural headwind. I think the Fed has been well served by this balanced approach, where you take into account the degree of the overshoot in full employment as well as the degree of the undershoot in inflation, and you balance those two, understanding there may be more of a lag. I think there's more of a lag, and we're doing a lot of work on this, and having a conference, actually, in three weeks—which you're welcome to come to—in Dallas to talk about this: whether there isn't more of a lag because of the structural changes. And so I'm sensitive to the possibility of a structural change in the inflation process. We don't know the answer. We will in hindsight. But I'm sensitive to that.

ESTHER GEORGE: I was just going to end where you started, Charlie, and say I'm careful to think only about two variables, unemployment rate and inflation right now, when I think our mandate is broader. This idea of sustainable, productive growth in the economy is hard to define sometimes. We see the Phillips curve relationships make us raise questions. We see the unemployment rate dropping. I think there are a number of variables that have to come to play, and maybe using the word "overheating" is too ambiguous, so good of you to call it out.