MONETARY POLICY AND THE STATE OF THE ECONOMY

HEARING

BEFORE THE

COMMITTEE ON FINANCIAL SERVICES

U.S. HOUSE OF REPRESENTATIVES

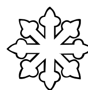
ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

FEBRUARY 11, 2020

Printed for the use of the Committee on Financial Services

Serial No. 116–85



U.S. GOVERNMENT PUBLISHING OFFICE

42–819 PDF WASHINGTON : 2021

HOUSE COMMITTEE ON FINANCIAL SERVICES

MAXINE WATERS, California, *Chairwoman*

CAROLYN B. MALONEY, New York
NYDIA M. VELÁZQUEZ, New York
BRAD SHERMAN, California
GREGORY W. MEEKS, New York
WM. LACY CLAY, Missouri
DAVID SCOTT, Georgia
AL GREEN, Texas
EMANUEL CLEAVER, Missouri
ED PERLMUTTER, Colorado
JIM A. HIMES, Connecticut
BILL FOSTER, Illinois
JOYCE BEATTY, Ohio
DENNY HECK, Washington
JUAN VARGAS, California
JOSH GOTTHEIMER, New Jersey
VICENTE GONZALEZ, Texas
AL LAWSON, Florida
MICHAEL SAN NICOLAS, Guam
RASHIDA TLAIB, Michigan
KATIE PORTER, California
CINDY AXNE, Iowa
SEAN CASTEN, Illinois
AYANNA PRESSLEY, Massachusetts
BEN MCADAMS, Utah
ALEXANDRIA OCASIO-CORTEZ, New York
JENNIFER WEXTON, Virginia
STEPHEN F. LYNCH, Massachusetts
TULSI GABBARD, Hawaii
ALMA ADAMS, North Carolina
MADELEINE DEAN, Pennsylvania
JESÚS "CHUY" GARCIA, Illinois
SYLVIA GARCIA, Texas
DEAN PHILLIPS, Minnesota

PATRICK MCHENRY, North Carolina, *Ranking Member*
ANN WAGNER, Missouri
FRANK D. LUCAS, Oklahoma
BILL POSEY, Florida
BLAINE LUETKEMEYER, Missouri
BILL HUIZENGA, Michigan
STEVE STIVERS, Ohio
ANDY BARR, Kentucky
SCOTT TIPTON, Colorado
ROGER WILLIAMS, Texas
FRENCH HILL, Arkansas
TOM EMMER, Minnesota
LEE M. ZELDIN, New York
BARRY LOUDERMILK, Georgia
ALEXANDER X. MOONEY, West Virginia
WARREN DAVIDSON, Ohio
TED BUDD, North Carolina
DAVID KUSTOFF, Tennessee
TREY HOLLINGSWORTH, Indiana
ANTHONY GONZALEZ, Ohio
JOHN ROSE, Tennessee
BRYAN STEIL, Wisconsin
LANCE GOODEN, Texas
DENVER RIGGLEMAN, Virginia
WILLIAM TIMMONS, South Carolina
VAN TAYLOR, Texas

CHARLA OUERTATANI, *Staff Director*

CONTENTS

Page

Hearing held on:
February 11, 2020 1
Appendix:
February 11, 2020 57

WITNESSES

TUESDAY, FEBRUARY 11, 2020

Powell, Hon. Jerome H., Chairman, Board of Governors of the Federal Reserve System 5

APPENDIX

Prepared statements:
Powell, Hon. Jerome H. 58

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Powell, Hon. Jerome H.:
Written responses to questions for the record from Chairwoman Waters ... 63
Written responses to questions for the record from Representative Beatty 81
Written responses to questions for the record from Representative Budd .. 82
Written responses to questions for the record from Representative Cleaver 83
Written responses to questions for the record from Representative Green . 95
Written responses to questions for the record from Representative Heck .. 96
Written responses to questions for the record from Representative Hill 99
Written responses to questions for the record from Representative Sherman 104
Written responses to questions for the record from Representative Tlaib .. 107

MONETARY POLICY AND THE STATE OF THE ECONOMY

Tuesday, February 11, 2020

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON FINANCIAL SERVICES,
Washington, D.C.

The committee met, pursuant to notice, at 10:10 a.m., in room 2128, Rayburn House Office Building, Hon. Maxine Waters [chairwoman of the committee] presiding.

Members present: Representatives Waters, Velazquez, Sherman, Meeks, Clay, Scott, Green, Cleaver, Perlmutter, Himes, Foster, Beatty, Heck, Vargas, Gottheimer, Gonzalez of Texas, Lawson, Tlaib, Porter, Axne, Casten, Pressley, McAdams, Wexton, Lynch, Adams, Dean, Garcia of Illinois, Garcia of Texas, Phillips; McHenry, Wagner, Lucas, Posey, Luetkemeyer, Huizenga, Stivers, Barr, Tipton, Williams, Hill, Zeldin, Loudermilk, Mooney, Davidson, Kustoff, Hollingsworth, Gonzalez of Ohio, Rose, Steil, Gooden, Riggleman, Timmons, and Taylor.

Chairwoman WATERS. The Financial Services Committee will come to order. Without objection, the Chair is authorized to declare a recess of the committee at any time.

Today's hearing is entitled, "Monetary Policy and the State of the Economy."

I now recognize myself for 4 minutes for an opening statement.

I would like to welcome back Chairman Powell. As I discussed earlier, at our last hearing with you, I remain very concerned about the President's efforts to interfere with the Federal Reserve's (Fed's) independent monetary policy. A recent news story noted that Trump has tweeted over 100 times about the Fed since your nomination. Many of those tweets appear to be attempting to exert pressure on the Fed.

Chairman Powell, you and the Federal Reserve Board of Governors must not be swayed by these aggressive tactics. In upholding the Fed's independence, you should also be mindful of public perception. Of course, Trump continues to try to claim credit for economic growth that was put in motion by the policies of President Obama, Congressional Democrats, and the Federal Reserve. His irresponsible trade war and the GOP tax scam have blown up the national debt, slowed our economic growth, and harmed hardworking American families. Trump continues to squander this inherited economy.

Let me note that I am, however, disappointed in the Fed's efforts to deregulate megabanks, most recently by proposing to further roll back the Volcker Rule. The Dodd-Frank Act made our financial sys-

tem safer, but it depends on agencies like the Fed to prudentially use the tools available to monitor and mitigate threats to our economy.

The committee is carefully monitoring the developments in the repo market and the Fed's response. The Fed should not arbitrarily reduce liquidity requirements in response to the repo market disruption, as some on Wall Street have asked for. Instead, the Fed should make appropriate adjustments to promote a well-functioning repo market, while ensuring we have strong capital rules that can't be gamed through window dressing, a practice where banks alter their balance sheet to appear less risky and reduce their capital levels.

In addition, the riskiness of various financial assets is increasing as climate change poses a more serious risk to our economy. The Fed and other regulators should utilize financial stability tools under the Dodd-Frank Act, such as incorporating climate-related losses into supervisory stress tests of big banks to address this growing risk.

I would also like to discuss recent developments with Community Reinvestment Act (CRA). We have had a series of hearings on this issue, and I am very concerned about OCC Comptroller Otting's harmful proposal to turn CRA into the Community Disinvestment Act and allow banks to escape their obligation to make responsible investments in the communities where they are chartered. I urge the Fed to take a careful, deliberate approach to any changes to the implementation of the CRA and to not join Comptroller Otting's misguided efforts.

Fed Governor Brainard's statement that, "It is more important to get the reforms done right than to do them quickly," is absolutely correct. The OCC and the FDIC should heed that advice as well and extend the public comment period as community banks, State regulators, community and civil rights groups, and committee Democrats have called for so that all stakeholders have an opportunity to voice their concerns.

I also encourage the Fed to keep a watchful eye on Facebook's efforts to launch a cryptocurrency and a digital wallet, which, as we discussed at our last hearing, could have profound implications for monetary policy and compete with our own U.S. dollar. In light of the many risks Facebook plans to create, I, along with other Democrats, have called on Facebook to halt their plans until Congress can examine the issues associated with a big tech company developing these digital products and take action.

I look forward to your testimony today, Chairman Powell, and to discussing these matters.

I now recognize the ranking member of the committee, the gentleman from North Carolina, Mr. McHenry, for 4 minutes for an opening statement.

Mr. MCHENRY. Thank you, Chairman Powell, for appearing before us once again.

Under the Trump Administration, we have the best economy that we have had in decades. The numbers are irrefutable. We added 225,000 new jobs in January, and the unemployment rate is essentially at its lowest level in half a century. This prosperity is being

shared by all Americans, including African Americans and Hispanics, whose unemployment rate reached record lows last year.

The prime-age labor force participation has reached 2.2 million people who were previously out of the workforce, and not surprisingly, consumer confidence has increased dramatically since the month before the President's election. Every Member of Congress should celebrate these remarkable outcomes which have resulted from Republican leadership on pro-growth policies like tax reform and regulatory rightsizing.

But sustaining our economic prosperity also hinges on the Federal Reserve having good policy. The central bank is currently undertaking a review of its monetary policy framework to determine the tools it may need in the future.

Chairman Powell, I raise the concern that we have regulatory policy that is impinging upon your capacity to make proper monetary policy, and that is why I think it is important that you have a regulatory review of the limitations that those regulations can put on your broader monetary policy decisions. That includes systemic risk concerns that I have raised, as well as open market operations, well, especially the open market operations, and the repo market.

I thank you for your prompt response to my questions about the repo market operations, but I am not sure there has been a satisfactory answer as to what caused the market spike in the first place, and that is troubling.

I have also voiced my concerns with the transition from the London Inter-Bank Offered Rate (LIBOR) reference rate. Nine months later, I am still concerned consumers will be impacted by the transition. We still have contracts written to the LIBOR reference rate, and given the recent volatility in the repo markets, I am concerned about the subsequent volatility in consumer-facing products, including mortgages, auto loans, business loans, and other consumer loans as this new reference rate is derived from secured overnight financing.

At previous hearings, I have spoken about the cyber threats posed to our financial institutions and your institution, and China in particular. Yesterday's news about the Equifax data breach is deeply troubling and is a wake-up call to every single policymaker that we need to take the threat of China and the Chinese communist regime quite seriously. If we are not taking them seriously, have no fear, they are taking us very seriously. And now, they have basically all of our data, too.

So, the spillover effects of this question of Chinese policy is significant, not just for cybersecurity, but with what we are seeing with the coronavirus and the destabilizing effects it has on global health. I know you are not a global health expert but you can give us some sense of your measurement techniques in response to these economic changes that are being driven out of the coronovirus challenge in China, and the spillover effects it has on its neighbors and the supply chain as well, that is derived through China.

The nature of the Chinese regime may not fit neatly into the Fed's risk assessments. The Fed has acknowledged, in its Financial Stability Report, that cyber risks don't fit neatly either. But the

risks are real. Even though our data is limited coming out of China, and the limited data we have, we question still, we should reflect appropriately upon what we know and how we respond as an American Government and to the Western world in response to these threats, both cyber and health risks, and the spillover effect it has on our economy.

Again, Chairman Powell, thank you for being here. Thank you for your openness. Thank you for your approach as Chair of the Federal Reserve, to be in the language of the people rather than simply the language of the PhDs.

With that, I yield back.

Chairwoman WATERS. I now recognize the Chair of our Subcommittee on National Security, International Development and Monetary Policy, Mr. Cleaver, for one minute.

Mr. CLEAVER. Thank you, Madam Chairwoman. Mr. Chairman, first of all, I appreciate very much your willingness to travel around the country to do 14 of those Fed Listens sessions. You held one of them in Kansas City at the Fed building, and I think it is a rare opportunity for most people to get a chance to sit down in a room and discuss economics with the Fed Chairman. So, thank you very much.

When you came to Kansas City, people were sitting around the table with you and giving you a picture of their struggles and strifes in trying to make it in the economy, and people were also concerned about inflation. They believe that it is like toothpaste; once it gets out, it is hard to get it back in. So, we are concerned about it, but also appreciative of your work, and I look forward to getting a little further into this as we proceed with the hearing.

Thank you, Madam Chairwoman.

Chairwoman WATERS. I now recognize the subcommittee ranking member, Mr. Hill, for one minute.

Mr. HILL. Thank you, Madam Chairwoman. Chair Powell, thank you for being here today. We appreciate your willingness to come and field our questions and provide your insights.

I want to take just a moment and echo the comments of the ranking member on the Community Reinvestment Act. I know this has received a lot of attention. I read Governor Brainard's very comprehensive view on the topic, and we had Comptroller Otting here recently to discuss the OCC's point of view.

As a former community banker, it is my view that we really should have ultimately one approach to CRA among the financial services regulatory agencies. I have had 40 years of dealing with inconsistency in delivery of regulatory proposals, so I do think ultimately, it would be productive for us to have one approach to that regulation and to modernize it for the digital world that we live in today.

I look forward to your presentation today, and, Madam Chairwoman, I yield back.

Chairwoman WATERS. Thank you. I want to welcome to the committee our distinguished witness, Jerome Powell, Chairman of the Board of Governors of the Federal Reserve System. He has served on the Board of Governors since 2012, and as its Chair since 2017. Mr. Powell has testified before the committee before, and I do not believe he needs any further introduction.

Without objection, your written testimony will be made a part of the record.

Mr. Powell, you are now recognized to present your oral testimony.

STATEMENT OF THE HONORABLE JEROME H. POWELL, CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Mr. POWELL. Thank you very much, Chairwoman Waters, Ranking Member McHenry, and members of the committee. I am pleased to present the Federal Reserve's semiannual Monetary Policy Report.

My colleagues and I strongly support the goals of maximum employment and price stability that Congress has set for monetary policy. Congress has given us an important degree of independence to pursue these goals based solely on data and objective analysis. This independence brings with it an obligation to explain clearly how we pursue our goals. Today, I will review the current economic situation before turning to monetary policy.

The economic expansion is well into its 11th year, and it is the longest on record. Over the second half of last year, economic activity increased at a moderate pace and the labor market strengthened further, as the economy appeared resilient to the global headwinds that had intensified last summer. Inflation has been low and stable but has continued to run below the Federal Open Market Committee's (FOMC's) symmetric 2 percent objective.

Job gains averaged 200,000 per month in the second half of last year, and an additional 225,000 jobs were added in January. The pace of job gains has remained above what is needed to provide jobs for new workers who entered the labor force, allowing the unemployment rate to move down further over the course of last year. The unemployment rate was 3.6 percent last month and has been near half-century lows for more than a year.

Job openings remain plentiful. Employers are increasingly willing to hire workers with fewer skills and train them. As a result, the benefits of a strong labor market have become more widely shared. People who live and work in low- and middle-income communities are finding new opportunities. Employment gains have been broad-based across all racial and ethnic groups and levels of education. Wages have been rising, particularly for lower-paying jobs.

Gross domestic product (GDP) rose at a moderate rate over the second half of last year. Growth in consumer spending moderated toward the end of the year following earlier strong increases, but the fundamentals supporting household spending remain solid. Residential investment turned up in the second half, but business investment and exports were weak, largely reflecting sluggish growth abroad and trade developments.

Those same factors weighed on activity at the nation's factories, whose output declined over the first half of 2019 and has been little changed, on net, since then. The February Monetary Policy Report discusses the recent weakness in manufacturing. Some of the uncertainties around trade have diminished recently, but risks to the outlook remain. In particular, we are closely monitoring the emer-

gence of the coronavirus, which could lead to disruptions in China that spill over to the rest of the global economy.

Inflation ran below the FOMC's symmetric 2 percent objective throughout 2019. Over the 12 months through December, overall inflation based on the price index for personal consumption expenditures was 1.6 percent. Core inflation, which excludes volatile food and energy prices, was also 1.6 percent. Over the next few months, we expect inflation to move up closer to 2 percent, as unusually low readings from early 2019 drop out of the 12-month calculation.

The nation faces important longer-run challenges. Labor force participation by individuals in their prime working years is at its highest rate in more than a decade. However, it remains lower than in most other advanced economies, and there are troubling labor market disparities across racial and ethnic groups and across regions of the country. In addition, although it is encouraging that productivity growth, the main engine for raising wages and living standards over the longer term, has moved up recently, productivity gains have been subpar throughout this long economic expansion. Finding ways to boost labor force participation and productivity growth would benefit Americans and should remain a national priority.

I will turn now to monetary policy. Over the second half of 2019, the FOMC shifted to a more accommodative stance of monetary policy to cushion the economy from weaker global growth and trade developments and to promote a faster return of inflation to our symmetric 2 percent objective. We lowered the Federal funds target range at our July, September, and October meetings, bringing the current target range to 1½ to 1¾ percent. At our subsequent meetings, with some uncertainties surrounding trade having diminished and amid some signs that global growth may be stabilizing, the Committee left the policy rate unchanged.

The FOMC believes that the current stance of monetary policy will support continued economic growth, a strong labor market, and inflation returning to the Committee's symmetric 2 percent objective. As long as incoming information about the economy remains broadly consistent with this outlook, the current stance of monetary policy will likely remain appropriate. Of course, policy is not on a preset course. If developments emerge that cause a material reassessment of our outlook, we would respond accordingly.

Taking a longer view, there has been a decline over the past quarter-century in the level of interest rates consistent with stable prices and the economy operating at its full potential. This low interest rate environment may limit the ability of central banks to reduce policy interest rates enough to support the economy during a downturn.

With this concern in mind, we have been conducting a review of our monetary policy strategy, tools, and communication practices. Public engagement is at the heart of this effort. Through our Fed Listens events, we have been hearing from representatives of consumer, labor, business, community, and other groups. The February Monetary Policy Report shares some of what we have learned. The insights we have gained from these events have informed our framework discussions, as reported in the minutes of

our meetings. We will share our conclusions when we finish the review, likely around the middle of the year.

The current low-interest-rate environment also means that it would be important for fiscal policy to help support the economy if it weakens. Putting the Federal budget on a sustainable path when the economy is strong would help ensure that policymakers have the space to use fiscal policy to assist in stabilizing the economy during a downturn. A more sustainable Federal budget could also support the economy's growth over the long term.

Finally, I will briefly review our planned technical operations to implement monetary policy. The February Monetary Policy Report provides details of our operations to date. Last October, the FOMC announced a plan to purchase Treasury bills and conduct repo operations. These actions have been successful in providing an ample supply of reserves to the banking system and effective control of the Federal funds rate.

As our bill purchases continue to build reserves toward levels that maintain ample conditions, we intend to gradually transition away from the active use of repo operations. Also, as reserves reach durably ample levels, we intend to slow our purchases to a pace that will allow our balance sheet to grow in line with trend demand for our liabilities. All of these technical measures support the efficient and effective implementation of monetary policy. They are not intended to represent a change in the stance of monetary policy. As always, we stand ready to adjust the details of our technical operations as conditions warrant.

Thank you. I look forward to the discussion.

[The prepared statement of Chairman Powell can be found on page 58 of the appendix.]

Chairwoman WATERS. Thank you. I now recognize myself for 5 minutes for questions.

In December of 2019, when the OCC and the FDIC issued a notice of proposed rulemaking on Comptroller Otting's proposal, the Federal Reserve did not join this proposal. FDIC Board Member Martin Gruenberg voted against Comptroller Otting's proposal, describing it as, "a deeply misconceived proposal that would fundamentally undermine and weaken the Community Reinvestment Act."

And in remarks last month, Federal Reserve Board Governor Brainard said that, "Given that reforms to the CRA regulations are likely to set expectations for a few decades, it is more important to get the reforms done right than to do them quickly. That requires giving external stakeholders sufficient time and analysis to provide meaningful feedback on a range of options for modernizing the regulations."

Chair Powell, Governor Brainard also suggested, in a speech last month, that the Federal Reserve created a database of 6,000 public CRA evaluations, looking at how various CRA investments support low- and moderate-income communities. Has the Fed used this database to evaluate how bank activities would be assessed under the OCC's and the FDIC's proposal for CRA?

Mr. POWELL. If I understood your question, it was whether we have used our database to evaluate their proposal?

Chairwoman WATERS. That is correct.

Mr. POWELL. I am not totally sure we have. Maybe I can provide a little context, if that is appropriate, if I may, which is just that we do agree that this is a good time to update CRA in light of changing technology and demographics, and we agree on the goals. We have put a lot of work into this. We tried hard to get on the same page and weren't able to do that. We have some different ideas.

Chairwoman WATERS. Does the Fed intend to do this assessment?

Mr. POWELL. Excuse me?

Chairwoman WATERS. Do you intend to do the assessment that I referenced regarding the database to evaluate bank activities and how they would be assessed under the OCC's and FDIC's proposal for the CRA?

Mr. POWELL. The real point of that database was for us to create our own set of metrics. We want to be very, very sure that what comes out of this is a proposal that, from us, will leave all major participants in CRA better off. And so, we think it is important that each metric, each change that we make is grounded in data, and that was the purpose, to help us develop our thinking and our proposals, and that is essentially what we have been using it for.

Chairwoman WATERS. Given the magnitude of reform in CRA regulations, do you think the comment period should be extended to allow the public to weigh in on such an important undertaking?

Mr. POWELL. That is really a decision for the OCC and the FDIC.

Chairwoman WATERS. I know it is their decision, Mr. Powell, but what do you think?

Mr. POWELL. I think it is not our role to comment on their proposal. We have our own work and our own ideas that we would be happy to share. But it is really up to them to make that decision.

Chairwoman WATERS. Are you completing your assessment? Are you continuing to look until you come to a final decision?

Mr. POWELL. We are.

Chairwoman WATERS. Don't you think the public should have an opportunity to have more time to do that also?

Mr. POWELL. And they will, when the time comes. I think for the time being, what we are doing is we are looking forward to reading the comments on the proposal. I think we will all learn quite a lot from those comments, and we will be able to incorporate that thinking and whatever changes are made to the proposal. There may be substantial changes to the existing proposal coming out of the comments. Our view is that we want something that will leave everybody better off and will have broad support, and that is what we are going to be working on.

Chairwoman WATERS. As you may be aware, all of the Democrats on this committee urge regulators to provide a public comment period of at least 120 days on any major CRA reform, instead of the 60 days that the OCC and the FDIC have provided. Community banks, state regulators, and community groups have called on these agencies to extend the comment period.

And even though you said it is not your place to comment on whether or not this should be extended, I wish you would think about this. As you have said, it is important for the public to be able to comment, review what you are thinking, and if you change

your mind, let us know, about commenting on whether or not we should extend the comment period.

You don't have to respond to that. Thank you very much.

The gentleman from North Carolina, Ranking Member McHenry, is recognized for 5 minutes.

Mr. MCHENRY. It always is rich, right? When somebody else has a negative comment about the Federal Reserve, that is bad, but when I, as a policymaker on the Hill, have a negative comment about the Fed, it is good, right? So it is all about the eye of the beholder when it comes to the political debate here in Washington.

Congress made a decision over 100 years ago to outsource monetary policy to the Federal Reserve. You are a construct of law, you are given independent operations, and you have a set term of office. And so, the independence of the Fed for monetary policy is appropriate and is longstanding.

Every President in the last 100 years has had some private criticism, and we have found out at some point about that criticism, either through press reports at the time, or later, in some biographer's work about the President.

But here on the Hill, we can make negative comments about the Fed and attack the President for having negative comments about the Fed. Right? All of this stuff is just rich politics. Let's get down to the essence of this.

You are the biggest regulator in town when it comes to the financial world. I have concerns that I want to address that are regulatory in nature, that I think impinge upon monetary policy, the repo market, for instance. You said these operations are temporary in nature. Is that still true?

Mr. POWELL. Yes. Our expectation is that we will continue our bill purchases at least into the second quarter, and continue repo operations at least into April.

Mr. MCHENRY. Into April.

Mr. POWELL. The sense of that is, though, that we are building up a level of reserves to a level that will mean that we don't have to be involved in open market operations on an ongoing basis, and that is going to take that period of time. And as the underlying level of reserves rises due to our bill purchases, the need for repo will decline, and sometime around the middle of the year we will reach that level of ample reserves, and from that point forward the balance sheet will grow at trend demand for our liabilities, and will continue to expand with the economy.

Mr. MCHENRY. Are you doing a review on your capital requirements for financial institutions that should be participating in the repo market?

Mr. POWELL. I think we have reviewed supervisory and regulatory practices that may be affecting the flow of liquidity. Our main focus, of course, is the Federal funds market, and our ability to transmit our policy decisions smoothly into the money markets through the Federal funds rate. What happened last September, in early September, was that there was unusual tightness and volatility, and we attribute that to the fact that what appeared to be ample levels of liquidity didn't flow where they might have.

And so, we are really doing 2 things. One, we are raising the underlying level of liquidity, by raising reserves to a level that is

higher than we had thought we needed, and that process, as I mentioned, will take until the middle of the year—

Mr. MCHENRY. So, part of that is a supervisory assessment as well, to make sure that the policy is being driven in terms of the institutions?

Mr. POWELL. That is right.

Mr. MCHENRY. Okay.

Mr. POWELL. We have been doing that since September.

Mr. MCHENRY. I raised this in my opening statement, about China. You have spoken publicly about your assessment, your thinking as you see what is happening with China's response to the coronavirus. We wish them well. We have high hopes that they are going to be able to tackle this crisis, this public health crisis they are facing.

But walk me through your thinking in assessing the situation in China now, in terms of the economics, and that potential spillover effect.

Mr. POWELL. I will just quickly start by saying again that we find the U.S. economy to be in a very good place, performing well. We see signs of global growth bottoming out. We see reduced trade policy uncertainty. Overall, in the background, we see strong job creation. All of this happens in the context of a good, strong U.S. economy.

And into that picture comes the coronavirus, and so the question is, what do we think about that? Of course, first, we observe the human tragedy, which is terrible to watch. But the question for us really is, what will be the effects on the U.S. economy? Will they be persistent? Will they be material? That is really the question.

I think we know there will be effects on China, through some part of the first half of the year, and China's close neighbors and major trading partners in Europe as well as Asia, and we know that there will likely be some effects on the United States. I think it is just too early to say. We have to resist the temptation to speculate on this. And so, we will be watching that carefully, again, and the question we will be asking is, will these be persistent effects that could lead to a material reassessment of the outlook?

Mr. MCHENRY. So, a question of length, length of time, and whether or not this is a temporary disruption?

Mr. POWELL. Yes.

Mr. MCHENRY. Thank you.

Chairwoman WATERS. The gentlewoman from New York, Ms. Velazquez, is recognized for 5 minutes.

Ms. VELAZQUEZ. Thank you, Madam Chairwoman. Chairman Powell, I would like to follow up on Chairwoman Waters' question on CRA. What aspects of the proposed changes to the CRA do you find most troubling?

Mr. POWELL. Again, what I would like to do, if I may, is not so much comment directly on the other proposal but talk about how we are looking at this. And I will mention the areas in which we have differences.

Ms. VELAZQUEZ. Okay. I hear that. I hear you and I respect it. But I would just like to ask you, if the Fed is unable to reach an agreement with the OCC and the FDIC on a joint rule, do you expect the Fed to issue its own proposal?

Mr. POWELL. We haven't made a decision on that yet. Right now, our focus has been on trying to get on the same page. We haven't been able to do that. Now, our focus is going to be on learning from the process, and I think we will learn a lot.

Ms. VELAZQUEZ. Are you meeting regularly with the OCC and the FDIC on this issue?

Mr. POWELL. We did for a long time. We are not currently meeting with them on this—

Ms. VELAZQUEZ. Would you agree with Governor Brainard's comment that it is more important to get the rule right than to do it quickly?

Mr. POWELL. Yes. I think that has been our approach and will continue to be.

Ms. VELAZQUEZ. Thank you. Chairman Powell, as you know, Representative Porter and I have been concerned by banks' growing reliance on cloud-based service providers for data storage needs. Does the Fed have all the access authority it needs, or are there any contractual or legal limitations restricting the Fed's ability to obtain the data held by third parties that it needs to properly understand and manage this growing reliance?

Mr. POWELL. I think we do have the legal authority that we need. We are able to look into third-party service providers, and we are doing that more and more because of, as you mentioned, the prominence and size of the growing importance of these cloud service providers.

Ms. VELAZQUEZ. Thank you. I yield back.

Chairwoman WATERS. The gentlewoman from Missouri, Mrs. Wagner, is recognized for 5 minutes.

Mrs. WAGNER. I thank the chairwoman, and thank you for being here, Chairman Powell. We are all very interested, since it just happened on January 29th, despite the repo spike. I know the ranking member mentioned it. I know you are in the middle of your review and such. I have a little more specific question: Could this repo market turmoil be symptomatic of deeper difficulties for the financial system?

Mr. POWELL. It doesn't appear to be at all. Since we took the measures we took in early September, repo markets and money markets have been functioning very smoothly. There hasn't been a return to the volatility. They are functioning very normal, really, including over year-end. So, we haven't had any return to that. It is pretty clear that the measures that we took directly addressed the problem. When the medicine is working, you can really see, and it seems to be working well here.

Mrs. WAGNER. And we had a confluence of things happening just, I know, at that time, with the quarterly Federal taxes due along with the Treasury auction of debt, of upwards of over, I think $78 billion, wasn't it?

Mr. POWELL. Yes.

Mrs. WAGNER. Do you think that was a function of perhaps this fluke, would you call it?

Mr. POWELL. We knew all that, though. The thing is, we knew that. And what we had done is, we had asked banks to tell us, what is your lowest comfortable level of reserves?

Mrs. WAGNER. Right.

Mr. POWELL. We got those numbers and we added them up and we put a buffer on top of it, and it still suggested that there was plenty of reserves in the system. And this happened, and I think that makes us think, because we knew about those big—

Mrs. WAGNER. Right. Those are definitely on the horizon. And when you are doing your review, I hope that you will find that there isn't anything symptomatic of some deeper difficulties, and we look forward to that.

Turning the page, Chairman Powell, in December of last year I asked Vice Chairman Quarles for an update on the status of updating the global systemically important bank (G–SIB) surcharge and plans for finalizing the stress capital buffer proposal, which I understand will require a reproposal with a comment period.

In January, Vice Chairman Quarles delivered a speech where he spoke about bringing, "reasonable transparency to several aspects of the Federal Reserve's supervisory and regulatory framework." Last week, the Fed released the CCAR stress test scenarios. To my knowledge, there has been no progress or update on the status of the stress capital buffer, apart from continued assertions by you and Vice Chair Quarles that aspects of the proposal will be incorporated in the 2020 CCARs.

Given the acknowledgement by principals at the Fed of the importance of transparency, I guess I am concerned about the lack of transparency in this process. When can we expect progress on this proposal that has been in process now, I think since April of 2018?

Mr. POWELL. We do continue to expect and intend that the core of the stress capital buffer will be incorporated into the framework in time for the 2020 stress test. So, we are moving along on that and we are on track to do that.

Mrs. WAGNER. You do feel on track to do that, then?

Mr. POWELL. Yes.

Mrs. WAGNER. Okay. Committee Republicans have underlined the importance of cyber threats as a potential systemic risk. We have recently seen malware attacks undermine government infrastructure, and according to research last month by economists at the New York Fed, a simulated cyber attack on just one major U.S. bank could have spillover effects impacting 38 percent of the wholesale payments ne2rk.

What can the U.S. do better, Chairman Powell, in order to prioritize this constant flow of cyber risks and strengthen the resilience of our financial sector?

Mr. POWELL. I think we can keep, and have to keep doing what we are doing, which is to make this really a top, if not the top supervisory priority, not just for the banks but for the Fed and for institutions across the American landscape. We have very high expectations, particularly of the largest banks, on their ability to fend off cyber attacks. We are constantly meeting inside the government to make sure that our system is resilient and redundant and strong against cyber attacks.

But there is never a feeling that you have gotten to a place of comfort on that. We just have to keep working, and it is staying in the minute, learning what the new attacks are, making sure that the banks are doing basic housekeeping, and all of that is very

much ingrained, and we will just have to keep at it, I think, for a long time.

Mrs. WAGNER. Thank you. My time has expired. Thank you so much for being here again, Chairman Powell, and I yield back.

Chairwoman WATERS. The gentleman from California, Mr. Sherman, who is also the Chair of our Subcommittee on Investor Protection, Entrepreneurship, and Capital Markets, is now recognized for 5 minutes.

Mr. SHERMAN. I have a couple of responses to what the ranking member had to say. Yes, the stock market is way up. Wages are up a bit more than 1 percent in real terms, after inflation. Wages at the bottom have risen, chiefly in those States where we raised the minimum wage. And when we have a Democratic Majority in both Houses, we will raise the minimum wage nationwide and deal effectively with those States that have not seen such an expansion of wages at the bottom.

I have grown, not quite old, but I have spent many decades in this room. I have seen your predecessors. And every time they come in, and the Republicans attack them for expansionary monetary policy, both traditional and newfangled. And now, we have a new President, and all of a sudden, they are pushing on the other side.

All I will say is that I have consistently, from the days of Mr. Greenspan, been pushing for somewhat lower interest rates and an expansionary policy, particularly quantitative easing, because you returned $55 billion to the Treasury last year, and that is, I know, not your purpose, but think of the kids who will get an education because we could fund aid to local education. Think of the medical research and the lives that will be saved because we were able to fund medical research. I don't think the $55 billion should be regarded as an irrelevancy or an embarrassment.

And finally, as to the jobs growth we have seen recently, I do need to point out the jobs grew much faster in the last 3 years of the Obama Administration than the first 3 years of the Trump Administration. It is as if Trump inherited a plane, as he inherited so much else, the plane was on automatic pilot, and it was going in the right direction, and he hasn't managed to completely screw it up.

We have an issue that I think ought to be completely bipartisan, and that is LIBOR. It is going to hit us in a couple of years. Chairman Powell, should Congress simply give the Fed the right to prescribe backup rates when the debt instruments do not do so, or should we adopt the Secured Overnight Financing Rate (SOFR), or what can we do, and hopefully do this year, and actually solve the problem 12 months in advance?

Mr. POWELL. On LIBOR, as you know, our process is ongoing and we are really committed to having the banks ready by the end of next year to switch over, away from LIBOR in case it is no longer published. That date is—

Mr. SHERMAN. They need to know legally what to switch over to and we want to avoid the multi-billion-dollar lawsuits when somebody can say, it should be this instead of that. They not only have to have the technology to make the switch, they have to know legally what they are supposed to do.

Mr. POWELL. If we need a Federal law change, we will let you know.

Mr. SHERMAN. You have less than 2 years. Have you figured out whether you need a Federal law change, or—

Mr. POWELL. I don't think that we think we need a Federal law change.

Mr. SHERMAN. If you could get us an answer, because there are people who want to wait around until 2 or 3 months before things blow up and then come to Congress and say, "Now, fix it." Two years is actually too short a time, because we are empowering the economy today because you and I are talking about this, and there is this slight risk out there of litigation and uncertainty with regard to legacy LIBOR, and we ought to take that off. That is one of the things we can do to help the economy. So, I hope that you will act within a month to let us know what you propose, rather than wait until next year.

Another area that we have talked about before is the wire transfer system. We have seen $150 million lost to scams, and those scams arise chiefly because when you wire money, you do so to a number but there is no payee identified. The British have gone to a confirmation of payee system. The International Standards Organization has prescribed changes that would require at least identification of payee. We don't. I know you have raised issues of State law. I have analyzed it. I can't see what would prevent the Fed from prescribing what the wire transfer system would be.

And it looks like I will have to ask you to get back promptly for the record on that question.

Chairwoman WATERS. The witness is requested to provide an answer in writing for the record.

The gentleman from Oklahoma, Mr. Lucas, is recognized for 5 minutes.

Mr. LUCAS. Thank you, Madam Chairwoman. Chairman Powell, during your testimony before the Joint Economic Committee last year, you were asked about what steps the Federal Reserve is taking to assess the impacts of climate change on our financial system. In your testimony, you made the distinction between the purely informative stress test for climate risk that the Bank of England does and what the U.S. stress testing regime under CCAR does, which is impact and inform capital requirements for capital distributions.

My understanding is the Bank of England is conducting research and asking financial institutions to think through their portfolios and how they could be impacted, but they are not currently integrating those measures in the capital requirements. Would you outline some of what the Fed is doing in terms of research and engagement on global climate risk?

Mr. POWELL. Sure. I should begin by saying that climate change is a very important issue that Congress has largely assigned to other agencies. It does play into our work, however, as it relates to the public's very reasonable expectation that we would make sure that the financial sector of the banks and the utilities that we supervise are resilient against the longer-term risks from climate change.

We are in the very early days of understanding what all that means. And there is work going on around the world at central

banks to try to figure that out. You talked about the Bank of England stress tests. Those are not intended to inform current capital requirements, but more to understand what might be the effects on banks from climate change.

Mr. LUCAS. Are you planning on joining the Ne2rk for Greening the Financial System?

Mr. POWELL. We haven't made a decision about that. We have always attended their meetings. I guess my theory is when you join an organization like that, you are not necessarily signing up for everything that everybody there believes. You can benefit from the work that is being done there, and we are kind of doing that now. We have not made a decision about membership.

Mr. LUCAS. Vice Chairman Quarles recently outlined changes that would increase supervision transparency and accountability, and I was encouraged by those comments and will be following this closely, of course. One change the Vice Chairman outlined is that the Federal Reserve should restore supervisory observations which will allow notice of a supervisory concern without it rising to the level of a matter requiring attention. Can you tell us what the timeline is that you see on those proposals to improve supervision?

Mr. POWELL. The timeline is hard to say. I would just say that what the Vice Chair did was he pointed to this tension that exists between very fundamental expectations and due process, transparency, and fairness around everything the government does, and should be associated with that, but also with supervision, which, by its nature, is private and somewhat discretionary, nonpublic, and confidential, really.

He pointed out that tension and the need to shed more light on that and to ask whether there are places where supervision needs to incorporate more of that due process. I think that is a very healthy thing to think about and it is something we will be working on.

Mr. LUCAS. In light of the coronavirus, Chairman, I can't help but think about, as a young man, as a boy, I spent a lot of time around my grandparents, and my great-aunts and great-uncles. They were born just after the previous century, so their tales of first-hand experience in the pandemic of 1918 and 1919 were very graphic, as it rolled through rural western Oklahoma.

And the reason I bring this up is their description of that particular virus, at that particular time, in that particular rural society was literally—it brought everything to a stop for weeks in rural western Oklahoma. My mother's family and my father's family were very fortunate. No one died from what was called the Spanish flu, but it brought society to a stop.

The reason I ask that is, with 43,000 cases worldwide, and the critical impact in China, could you describe for a moment how China and its neighboring countries are responding to the economic impact of coronavirus, in general, and from the perspective of your fellow central bankers in those countries?

Mr. POWELL. I think they are really responding now to the outbreak and containing it, and the Chinese government has obviously taken very strong measures on that. You see businesses closing down in the affected areas. You see that sort of thing.

In terms of the economy, as you asked, the People's Bank of China has done a number of things to support economic activity, and I think you can expect the Chinese government to do lots of things to support economic activity, and they have said that they are open to cushioning the economic effects. We are not able yet to estimate the size of the economic effects. There are many estimates out there, but I think you will see governments acting in Asia, particularly in China, to offset those.

Mr. LUCAS. Thank you, Mr. Chairman. I yield back, Madam Chairwoman.

Chairwoman WATERS. The gentleman from New York, Mr. Meeks, who is also the Chair of our Subcommittee on Consumer Protection and Financial Institutions, is recognized for 5 minutes.

Mr. MEEKS. Thank you, Madam Chairwoman. Welcome, Mr. Chairman.

Let me touch quickly, initially, on asymmetrical growth. It has been discussed at length in my community and others that 40 percent of Americans don't have adequate savings for a $400 emergency, and similarly, one in five Americans skips essential health care or fails to pay important monthly bills due to the lack of funds. Finally, a large share of the population is also underbanked or unbanked, and we have talked about that a lot in the subcommittee which I Chair.

My first question to you is, why haven't circumstances improved for low- and moderate-income Americans more rapidly in the past few years, given the so-called state of the economy?

Mr. POWELL. The pattern was that at the beginning, it was more people who had just left the labor force, perhaps made it right back in. What we really have seen, though, in the last 2 or 3 years has been wages moving up the most at the bottom end of the wage scale. So, we do see, during this very long expansion, significant effects now in low- and moderate-income communities, and it is great to see. As I mentioned, with our Fed Listens events, we have been hearing quite a lot about that. So, that is very positive.

More to your point, though, waiting for the 9th, 10th, and 11th year of an expansion isn't really a strategy. We do see those things now because the labor market is strong. But really, we need other programs to address the longer-run needs of those communities other than just the business cycle and monetary policies.

Mr. MEEKS. During this period of time, would you say that—a number of us have been arguing, and finally we are moving toward a $15-an-hour minimum wage for individuals on the bottom. Would you think that has something to do with helping them also, the fact that many States have adopted a $15, or a higher minimum wage than what had been put in place?

Mr. POWELL. I will answer your question directly. Let me first say, though, that we, of course, don't take a position on the minimum wage. That is a classic tradeoff that legislatures have to—

Mr. MEEKS. I understand.

Mr. POWELL. The research on exactly what is driving up wages at the lower end does suggest that there is a role there for the minimum wage increases. States that have had minimum wage increases have seen—there is a noticeably higher increase. But really, it is much broader than that, and the bigger factor just is very

low unemployment and a strong labor market, high job creation. That is the main driver.

Mr. MEEKS. The other concern that I have, because it also seems as though, as unemployment goes lower, et cetera, it still, when you look at Black unemployment, it still remains nearly double that of white unemployment. And it seems to stay that way where the cycles are a down cycle or an up cycle. Are there any signs of how we close those gaps, because there are always these gaps that seem to happen between the African-American community and whites, where it is a good economy but the gap stays the same.

Mr. POWELL. There are persistent gaps and they are very troubling, and they are not, in the long run, something that monetary policy can address. It really is up to other policies, by governments, State and local governments, the Federal Government, and frankly businesses, to do what they can to close that gap. What we have is an interest rate tool, and what we can do is support the goals you have given us: maximum employment; and stable prices. We see positive effects from that. But over the longer run, broader policies of education and other things would help with that issue.

Mr. MEEKS. Thank you. Let me ask, I know Chairwoman Waters asked some questions on CRA. There were some questions that came up that maybe you can answer. The framework that was put forward by Governor Brainard not too long ago, is that the same framework of the Federal Reserve Board? There are some saying it is just her opinion and it is not that of the Board. Maybe you can clear it up. Does the Board see similarly as Governor Brainard?

Mr. POWELL. We actually haven't taken a proposal to the Board yet, but no, that represents the thinking—she has been working on this; I asked her to lead this effort for us. She has been the head of that committee for some time. I am very comfortable with the thinking that is in that speech, and I support that set of ideas and that approach. But it is not at a place where we can say, this is a proposal from the Fed, because we haven't taken it to the Board yet.

Mr. MEEKS. Thank you.

Chairwoman WATERS. The gentleman from Florida, Mr. Posey, is recognized for 5 minutes.

Mr. POSEY. Thank you, Madam Chairwoman. Mr. Chairman, the world is experiencing dramatic growth in the space economy, and many are marveling, actually, at the expansion of civilian space launches. I represent the Kennedy Space Center, and obviously we are really excited about all that. Several estimates put the current level of global space economy at well over $400 billion a year, with a growth rate of 8 percent from 2018 to 2019.

In December, the Bureau of Economic Analysis announced the creation of a Space Economy Satellite Account, a new collaborative effort to measure the relative importance of the space sector on the U.S. economy, with a special emphasis on the growing commercial space segment. This effort will use input from industry experts, and multiple government agencies, obviously. I recall, over the years, that the Atlanta Fed has applied its expertise to report on the economy of the space district.

First question, can you work with me to ensure that the Federal Reserve joins this multiagency effort with an eye to avoiding financial bottlenecks and keeping this important space industry on a path to a healthy growth rate?

Mr. POWELL. It is the first I am hearing about it, but I am happy to assure you that we will take a close look at that, and if it is something that would be productive, we would take part in it.

Mr. POSEY. Great. Over the years, we have developed a rather expansive policy of Federal Reserve independence, and I believe in ensuring the freedom of the Fed to act independently on a day-to-day basis to manage our economy and the critical payment system. I would not expect a Member of Congress or other officer of government to insert himself or herself into a decision by the Federal Reserve Chair, the Board, the Open Market Committee, or the Fed monetary policy entity. Congress does not direct day-to-day monetary policy, and Congress also does not direct generals on battlefields, nor should we.

However, the U.S. Government Accountability Office (GAO) routinely conducts policy audits of defense policy and strategy, yet the GAO is restricted from conducting policy audits on the Federal Reserve. I am challenged to understand how policy audits of critical national defense strategy is okay but policy audits of the Fed are off limits. The defense industry is at least as sensitive as monetary policy, and I would like your thoughts on that.

Mr. POWELL. Sure. GAO doesn't do policy audits on the Fed constantly, all over the place at the Fed, just with one exception, and that is our specific monetary policy function. Congress chose, long ago, to create one step of distance away from the GAO in order to underline our independence. I think that was a wise move. I think changing that would clearly be seen by the public as a diminution of our independence. We do look to this committee and to the equivalent committee on the Senate side for oversight on monetary policy in our system of government. Our road to oversight and transparency runs right through this committee and the Senate Banking Committee, as well. Anyway, that is what I would tell you about the GAO.

Mr. POSEY. What do you think makes the Fed more immune to review than Defense? What is the rationale behind that, do you think?

Mr. POWELL. Again, everything we do, on payments and financial regulation, every single thing we do is subject to GAO audit. These are policy audits. It is not like a financial audit. The public should understand that we are audited. Our business model is actually about as simple as that, as a very small, not complicated, and we are constantly audited.

What this exemption does is it prevents the GAO from coming in and looking at and assessing individual monetary policy decision, which Congress saw fit, you saw fit, your Congress saw fit to carve out of the law. And again, I think it was an appropriate thing to do, and I think it would be unwise to take a step back from that. I don't see any harm that it is doing.

Mr. POSEY. The former Chairpersons of the Fed have indicated they simply did not want to be second-guessed on their decisions,

that the public really doesn't have a right to know. I find that illogical, quite frankly, and that is why I asked you these questions.

Mr. POWELL. We are very transparent. We publish minutes. We publish transcripts.

Mr. POSEY. I know. "We publish everything."

Mr. POWELL. We are not hiding anything.

Mr. POSEY. We publish everything "but"—I think that the "but" exemption is overdue.

Chairwoman WATERS. The gentleman from Missouri, Mr. Clay, who is also the Chair of our Subcommittee on Housing, Community Development, and Insurance, is recognized for 5 minutes.

Mr. CLAY. Thank you, Madam Chairwoman, and thank you, Chairman Powell, for being here today.

For most of the constituents in my Congressional district, they are not focused on the dial maintained in the 30,000 level but simply trying to make ends meet. In fact, the St. Louis Fed, in an essay, as part of this Demographics of Wealth series, examined the connection between race or ethnicity and wealth accumulation over the past quarter century. It was the result of an analysis of data collected between 1989 and 2013. Through the Federal Reserve Survey of Consumer Finances, more than 40,000 heads of households were interviewed over those years.

Median Hispanic and Black wealth levels are about 90 percent lower than the median white wealth level, yet median income levels of Hispanics and Blacks are only 40 percent lower. The larger ratio wealth gap could be due to Hispanics and Blacks investing in low-return assets like housing, as well as borrowing at higher interest rates. Hispanics and Blacks could also feel less of a need to save for the future, because society's progressive old-age safety net programs will replace a relatively larger share of the normal incomes they earn during their working years.

Could you comment on why many communities continue to lag and how the Fed, via its monetary policy, might seek to address some of the underlying factors that have led to gross inequality?

Mr. POWELL. What we can do, and what we have been doing, is to take seriously your order to us to seek maximum employment, and that is what we are doing. And I think we just learned, because we have been watching what has been happening, that unemployment can be lower than many had expected, without raising inflationary or other concerns. So, that is what we can do, and we will continue to do, and I think that is showing up in communities everywhere. I think other governmental and other tools are necessary to address longer-run problems, though.

Mr. CLAY. Such as, how do we address the pay inequity? How do we impress upon corporate America that it does this country no good to have a persistent pay inequity among its workers, especially when you look at the disparities in the races and the pay inequity?

Mr. POWELL. I will say that I think it is important that those issues be addressed. It is really not for the Fed to prescribe the measures to address them. We need to stay in our lane. We do have this grant of independence, including the GAO exemption, and I think to keep that, we need to stay within what you have

given us to do, which is maximum limits, stable prices, supervise the banks, look after the financial space.

Mr. CLAY. On another subject, will the Federal Reserve release its own proposal on the Community Reinvestment Act, one that takes into account the needs of low- and moderate-income communities?

Mr. POWELL. We haven't made a decision on that yet. I think our focus right now is on the ongoing process of the other agencies' proposal and the comments. I think we are going to learn a lot from those comments, and I suspect there will be changes to that proposal coming out of the comments. So, we have not made a decision about our own proposal.

Mr. CLAY. Traditional monetary policy works through a single economy-wide variable, a single interest rate, or perhaps the money supply of growth of credit. Credit policy, by contrast, aims at directing credit in specific forms towards specific groups of borrowers. Credit policy consists of a central bank operation targeting specific segments of the private debt and security market.

What is your view of shifting from traditional monetary theory to one that involves the use of more tools in order to enhance borrowing to segments of society?

Mr. POWELL. I think that has historically not been a function of the Fed and of central banks generally. We have, as you pointed out, one tool, which is our interest rate policy. When you are talking about affecting different sectors of the business community or of the population, that really should be another agency or Congress itself in fiscal policy, rather than—

Chairwoman WATERS. The witness is requested to provide an answer in writing for the record.

Mr. CLAY. My time is up. I yield back. Thank you.

Chairwoman WATERS. The gentleman from Missouri, Mr. Luetkemeyer, is recognized for 5 minutes.

Mr. LUETKEMEYER. Thank you, Madam Chairwoman, and welcome, Chairman Powell. It is always good to see you, sir.

I am sure you saw the speech and probably read or heard the speech by Vice Chairman Quarles on the need to reform banking supervision. One area I think needs clarity in the supervision regime is the role of guidance. I pushed regulators to clarify the use of guidance, and in 2018 they came out with an interagency statement on guidance. However, Vice Chairman Quarles, in his speech, urged an additional step, doing a rulemaking of the role of guidance. This fits with the Trump Administration's recent actions out of the Office of Management and Budget (OMB).

My question is, do you believe we need an official rulemaking out of the Fed on the role of guidance?

Mr. POWELL. We have not made a decision on that. Like the other agencies, we are evaluating the OMB memo. As you know, guidance is not enforceable, and so we do understand that. Guidance is not a rule.

Mr. LUETKEMEYER. When Mr. Quarles was here recently, I think he made the comment that he intended to look at all the guidance and separate out what he believed needed to be under rule and the rest of it then be clarified as strictly guidance. I think that is a great approach, but the question is, do you anticipate a rule to be

able to do that and enforce that in the future? Are you looking at trying to do that?

Mr. POWELL. That is something we are looking at, and we are looking at our guidance and asking if some of it is more like a rule.

Mr. LUETKEMEYER. Okay. Mr. Quarles also discussed how regulations have a framework under the Administrative Procedure Act (APA), but there is no real framework for supervision, and he used the Large Institution Supervision Coordinating Committee (LISCC) as an example of supervision that was conducted without appropriate oversight and does not have specific guardrails. In fact, the GAO said this should have been conducted as a rulemaking. Do you believe we need to change LISCC, and what should we do to the firms that are already under this regime?

Mr. POWELL. I would agree that it is appropriate that we draw brighter lines around LISCC membership, and as Vice Chair Quarles mentioned in his speech recently, that is the path we are on.

Mr. LUETKEMEYER. Okay. Very good. Something that is kind of concerning to me is the fact that we have a lot of banks and nonbanks that are in the home mortgage lending space. Nonbanks, in general, were lending roughly $250 billion in 2016. This next year, it is anticipated to triple, to $750 billion. In 2019, nonbanks originated 85 percent of all loans sold into securitization guaranteed by Ginnie Mae, 53 percent of loans sold to Freddie Mac, and 60 percent of the loans sold to Fannie Mae. And nonbank mortgages make up 87 percent of the Federal Housing Administration's (FHA's) portfolio.

In the most recent Financial Stability Oversight Council (FSOC) report, nonbank mortgage originators were designated as a potential systemic risk. You are a member of FSOC. Can you explain that, or would you like to talk about that a little bit?

Mr. POWELL. Sure.

Mr. LUETKEMEYER. And do you have any concerns over that? Obviously, FSOC did.

Mr. POWELL. As you mentioned, we have looked at that at FSOC, and I believe it was part of the recent annual report, the thought being that these are now very, very important channels through which mortgages are originated. And in the case of a downturn, the banks have high capital, they have lots of regulation, lots of liquidity, and that is in a good place. But these institutions are sometimes funding themselves with credit lines, which might not be available. So, there is risk there, and we are in the process of assessing that and determining what to do about it.

Mr. LUETKEMEYER. Do you have a timetable on that?

Mr. POWELL. We have highlighted it as a risk, and we are doing work on it.

Mr. LUETKEMEYER. Do you have a timetable on when you might come out with a statement and say what you will or will not do, and if you want to do something, what it might be?

Mr. POWELL. I can get back to you on that. This is something that the Treasury has the lead on.

Mr. LUETKEMEYER. Okay. Very good. One of the things that concerns me a little bit also, with regards to home lending, is just the stack of forms you have to go through. We had a gentleman here

who represented, it was actually a credit union at the time, but the stack was literally "this tall." And I asked him how many pages were in there and he said, "Congressman, we don't measure by the page. We measure by the pound." And I said that this is how off the charts we have gotten, when you have a stack of papers "this tall" to do a home loan.

I have talked to the FDIC and the CFPB, and hopefully we can engage you in a way to kind of reduce that down to where it is manageable, but there are protections in there for the consumer when he or she signs for a loan, and there is enough information that allows the bank and the regulators to see it. But this has to change. This can't continue to grow. This is crazy. Do you have an opinion on that?

Mr. POWELL. A lot of that stuff is legally mandated by Federal or State law.

Mr. LUETKEMEYER. I realize that.

Mr. POWELL. To the extent it is not, then we do try to make assessments about what is necessary and what is not. But it is a big challenge, I would agree.

Mr. LUETKEMEYER. Thank you. I just want to note for the record that I did not ask a question about Current Expected Credit Losses (CECL) today. Thank you very much, Mr. Powell.

[laughter]

Chairwoman WATERS. The gentleman yields back. The gentleman from Georgia, Mr. Scott, is recognized for 5 minutes.

Mr. SCOTT. Welcome, Chairman Powell. It's good to have you here.

Chairman Powell, concerning LIBOR, the Alternative Reference Rates Committee (ARRC) is pursuing, in New York, legislation to address legacy contracts in New York State. Would the Fed support Federal action in that regard?

Mr. POWELL. Mr. Scott, actually, it is some members of the ARRC. The Alternative Reference Rates Committee itself is not seeking legislation, but some members have approached the New York Legislature.

In terms of the need for Federal legislation, we have not reached a point where we think it is going to be necessary. We have no plans to do that. If we do believe that Federal legislation is necessary, we will come tell you, and by the way, we understand that that is not something you can do in 24 hours. So, we know that the time for that is soon.

Mr. SCOTT. Very good. Let's move over to Great Britain for a moment. The UK regulators have been very direct with their financial institutions, and they recently established a goal for their institutions to cease LIBOR-based lending by the third quarter of 2020. Why has the Fed not been so direct, and do you have plans to set codes and guidelines for your regulated institutions?

Mr. POWELL. Yes. We will do that at some point. You may have seen that Fannie Mae and Freddie Mac have said that they won't accept LIBOR-referencing mortgages after some point later this year. So, that sort of thing will begin to happen now, I think well in advance of the deadline, which is the end of 2021.

Mr. SCOTT. Okay. And Chairman Powell, your Fed Board recently finalized its rule on tailoring the hopes of providing more

clear and well-defined risk indicators to determine the regulatory requirements that are placed on firms based on their size and risk. But the Board has never disclosed nor provided clear and quantitative criteria under which firms are placed under its enhanced supervisory regime, the Large Institution Supervision Coordinating Committee (LISCC). And even your Vice Chairman, Mr. Quarles, recently gave a speech where he said this. He said that he would like to align that portfolio with the tailoring categories and make the designation criteria transparent. And you even recently indicated you agreed on the need for brighter lines.

Could you outline what changes the Board is considering making in this supervisory framework?

Mr. POWELL. We are just in the process of working out the specifics, but I would agree that we should provide more clarity around what is a LISCC firm, and that is really going to be the Category One firms—

Mr. SCOTT. Thank you. Now, you are a great man and a good friend. I respect you tremendously. But Chairman Powell, the Fed is the axle of our financial system. You are the most powerful regulator. And I want you to stand back up to Comptroller Otting on this business of him coming with this rulemaking change to the Community Reinvestment Act. Let him know that you not only have a mandate for inflationary monetary policy, you have a dual mandate which includes employment, jobs.

And here is the other thing: You need to remind Comptroller Otting that this piece of legislation, this law, the Community Reinvestment Act, is precious to the nation, but is precious to African Americans more than anybody. Because it wasn't the Civil Rights Act, it wasn't the Voting Rights Act, that dealt with the big issue facing African Americans: Financial stability. The 2 anchors for financial stability are owning a home, and having a job. And this bill was the bill that outlawed redlining, which kept African Americans out. He needs to back off of that. You need to assume your power in this, and let him know we are serious, and to back off this rule change.

Chairwoman WATERS. The gentleman from Ohio, Mr. Stivers, is recognized for 5 minutes.

Mr. STIVERS. Thank you, Madam Chairwoman. I appreciate you holding this hearing. Good morning, Mr. Chairman. How are you doing today?

Mr. POWELL. Great, thanks.

Mr. STIVERS. Great. Thanks for being here. I want to do some yes-or-no questions. You covered them in your testimony, but just to remind everybody, the labor participation rate is now 83.1 percent, which has increased in the last 3 years. Is that correct?

Mr. POWELL. I think that is prime age.

Mr. STIVERS. Sorry. Prime age. That is the prime-age adults. Sorry. Yes.

Has it increased or decreased in the last 3 years?

Mr. POWELL. I believe it has, yes.

Mr. STIVERS. And wage growth has outpaced inflation for workers in the last 3 years. Well, at least, it is currently outpacing inflation, correct?

Mr. POWELL. Yes, it is.

Mr. STIVERS. And wage growth has actually gone up by about 3 percent in the last few quarters, on an annualized rate. Is that correct?

Mr. POWELL. Over the last few years, if you look at a range of measures, then you would see wages moving up at about 3 percent.

Mr. STIVERS. And we have record low unemployment rates for African Americans and Hispanics. Is that correct?

Mr. POWELL. That is correct.

Mr. STIVERS. So, the fundamentals of the economy are in pretty good shape. Would you say that is correct?

Mr. POWELL. I would, and I did.

Mr. STIVERS. And you did. Thank you for that testimony.

Your colleague at the Atlanta Fed stated recently that, "an economic expansion does not die of old age." I think that is a great quote. Given that the fundamentals of the economy are strong, do you think many businesses and investors are trying to talk themselves into a recession?

Mr. POWELL. I don't think so, and I certainly hope not. There is no reason why the expansion can't continue. There is nothing about this expansion that is unstable or unsustainable.

Mr. STIVERS. Great. I think the fundamentals are strong, but I think a lot of people are worried, and I hope that they don't talk themselves into a recession. I agree with you on that.

Given that about two-thirds of all lending in capital formation occurs in the capital markets, I am curious to hear what the Federal Reserve is doing to actually coordinate with the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) as prudential regulators for the capital markets, to make sure that there is actual coordination on the capital markets.

Mr. POWELL. The SEC and the CFTC really have primary regulatory authority for those markets, and we have supervisory regulatory authority over the banks. Where we overlap really is in financial market utilities, where we regulate some, and the SEC regulates some, and the CFTC regulates some, and we collaborate on all that. So, we collaborate pretty closely on that.

Mr. STIVERS. I would urge you to increase that collaboration, because the lines between securities, banking, and capital markets are blurring more than ever before, and I would ask you and Vice Chairman Quarles to redouble your efforts for that coordination, because I do hear from some of the firms that are regulated that they feel like it is not coordinated. If you could redouble those efforts, I think that would pay dividends to the American investor and the American economy.

I have a couple of other quick questions. What do you think the most significant risk to the financial system is today?

Mr. POWELL. I have to start by saying that I think the financial system is strong and has been materially strengthened since the financial crisis, particularly the banks—high capital, high liquidity, and stress tests keep them on their toes, and they have real resolution plans. None of that was really in place before. So, I think the financial system is generally in a good place.

The thing that we worry about a lot is cyber attacks. I think we have a great game plan for traditional issues like bad loans and

things like that. Cyber attacks is really the frontier where you should worry. And we work very, very hard on that. All of the agencies do. We all work together. The institutions themselves work very hard. But that, I would say, is a major focus.

Mr. STIVERS. Thank you, and an interesting note, Mr. Chairman, you are in line with the CEOs of the biggest institutions. I asked them the same question, and the consensus, although not complete agreement, unanimous agreement, was that cyber attacks were the issue. I think Congress needs to focus on it, and I think our regulators need to focus on it.

Two quick things, because I am running out of time. I know you are focused on the transition between LIBOR and SOFR. Some people have asked that question. I hope you will pay particular attention to the impact on both small businesses and our community banks as we make that transition. They are particularly vulnerable. And with regard to the repo market, I hope you will continue to focus on the origins of the problem that caused it. Some are regulatory, and some are market-based. And I know you are focused on it. You and I have had private discussions about it. But I would like to see that solved in a way that you don't have to provide Federal Reserve capital at the end of every quarter, at the end of every year, so if you can stay focused on those things, that would be good.

I am out of time. Thank you, Mr. Chairman.

Mr. POWELL. Thank you.

Chairwoman WATERS. The gentleman from Texas, Mr. Green, who is also the Chair of our Subcommittee on Oversight and Investigations, is recognized for 5 minutes.

Mr. GREEN. Thank you, Madam Chairwoman. Thank you for appearing today, Mr. Powell.

Mr. Powell, this is an observation, not a criticism. You have indicated that the fundamentals are strong. However, you also indicated at the last FOMC press conference that you were a bit surprised that wages have failed to move up despite being well into an expanding economy, sustained levels of historically low unemployment, and increased labor force participation.

The fundamentals are strong, yet nearly half, 42.4 percent, of working Americans in 2019 made less than $15 an hour. The fundamentals are strong. A good many of the people in my Congressional district, Mr. Powell, are more concerned about the supermarket prices than the stock market. When they go to the supermarket, they are concerned about the price of Procter & Gamble products, not the stock market price of Procter & Gamble itself. The stock market means nothing to them. It is what they have to pay for products in the supermarket.

This brings me to my question. Has there been a study to give us some sense of what a $15-an-hour wage will do for the economy? Has the Fed done such a study?

Mr. POWELL. The Fed has not. That is not something we would do.

Mr. GREEN. Let me just address that, if I may. I don't mean to be rude, crude, and unrefined, but let me just call to your attention a study that I found quite interesting: The Carbon Disclosure Project, a good project. Based on thousands of disclosures, you have

concluded that the 500 largest companies, by market capitalization, are exposed to a trillion dollars in risk.

Now, someone could argue that that is probably not something that you ought to do, although I understand that climate change is something that is important to the Fed because it will have a global impact. But I think you can take a closer look at this. You are the ultimate authority on price stability, on wages. Let's have a study to determine what impact a $15-an-hour minimum wage will have on the economy, a wage disclosure project, if you will. Give me some thoughts, Mr. Powell. Can you help us, please?

Mr. POWELL. There is a great deal of research that has been done on minimum wages, and I don't know of a particular one, but there has to be somewhere research on what a Federal $15 wage increase—

Mr. GREEN. I agree with you. I agree. I have read a few. But they don't come from the Fed. They don't come from the entity that has the dual mandate of price stability and employment. It would mean something to working people if we could get such a study, notwithstanding what others have done. And these are observations, Mr. Powell, not criticisms. I have enjoyed visiting with you. Notwithstanding what others have done, this would be meaningful to working people.

By the way, I think $15-an-hour is not enough as a minimum wage. I think it ought to be at least $20 now, but I will still settle for $15 if we can get that.

So can we work with you, discuss with you the possibility of a wage project?

Mr. POWELL. Again, I will go back and talk to our labor people who know this issue very, very well, and many of them have published on these issues.

Mr. GREEN. I am going to thank you for that. I have 46 seconds left, and I am going to applaud you for it, personal applause.

Madam Chairwoman, with that, I will yield back the balance of my time.

Chairwoman WATERS. Thank you very much. Is the gentleman requesting to have an answer in writing for the record on this question to the Chairman?

Mr. GREEN. Yes, Madam Chairwoman. Thank you.

Chairwoman WATERS. The witness is requested to provide an answer in writing for the record. Thank you.

The gentleman from Kentucky, Mr. Barr, is recognized for 5 minutes.

Mr. BARR. Thank you, Madam Chairwoman. Chairman Powell, welcome back to our committee, and I want to first touch on your testimony about the importance of fiscal policy in supporting the economy. In general, what would you say is the lag time associated with a major change in fiscal policy?

Mr. POWELL. It can tend to be long, as you know. With monetary policy, we can go into a room and change interest rates, and we do. Obviously, fiscal policy tends to take a lot of work and some time.

Mr. BARR. Let me ask the question this way. Fiscal policy has changed profoundly in the past 3 years. Tax cuts, deregulation, a less-restrained energy sector, a pullback from the Dodd-Frank Act,

repeal of the individual mandate, new trade deals. Are any of these policy changes impacting current economic conditions?

Mr. POWELL. I am sure they are, but of course, we don't try to assess that. That is not really what we do when we look at the economy. But yes, they would affect it.

Mr. BARR. As you noted in your testimony, the U.S. economy is presently exceptionally strong. Since the 2016 election, 7 million new jobs have been created. The unemployment rate is at a 50-year low. More Americans are employed today than ever before. Wage growth is the highest in a decade, and the lowest-income workers have been seeing the fastest pay increase, growing at 16 percent since the 2016 election.

And just over the weekend, this was the headline of the Wall Street Journal, which I am sure you follow. And the reporting was that a tight U.S. labor market is drawing Americans off the sidelines at a record rate. Despite this, after last week's State of the Union speech, Speaker Pelosi said that it was "appalling" to hear the President, "try to take credit" for an economy he inherited.

Chairman Powell, I am not going to ask you to weigh in or arbitrate a domestic political dispute, but when the FOMC conducts monetary policy, given what you said about the lag time of fiscal policy, is it fair to say that this President's policies are impacting today's economic conditions?

Mr. POWELL. At a high level, of course they are.

Mr. BARR. Let me follow up on Representative Wagner's question about the G–SIB surcharge. In your response to our letter, you maintained that you aim to have the "key components" of the stress capital buffer finalized in time for the 2020 CCAR. Can you describe in more detail what the key components are and a more precise timeline, given that the Fed announced last week scenarios for the 2020 CCAR?

Mr. POWELL. I think the timeline is—we do intend, and we will put into effect, the core of the stress capital buffer in time for the 2020 CCAR cycle, so that is coming right up. I prefer to leave the exact details of that to—they are still being worked out. But it will happen in a timely way for the 2020 cycle.

Mr. BARR. I understand. Let me try to get just a little bit more detail. Is it still the Fed's view that the activation of the countercyclical capital buffer is a suitable replacement for the dividend add-on in light of the Board's Financial Stability Report from November, which stated that the vulnerabilities have not significantly changed?

Mr. POWELL. We haven't made a decision on that, on using the countercyclical capital buffer versus the other approach. We have not made a decision on that.

Mr. BARR. Okay. Thank you for that. We are looking forward to that decision.

Final question. The Business Roundtable, as you probably remember, announced last summer that it was redefining a corporate purpose to elevate so-called stakeholders ahead of shareholders. A large investment firm recently announced its intent to divest of fossil energy, effectively limiting investment options for clients to a subset of sectors that check the environmental social governance box.

I am concerned that firms which arbitrarily limit investment offerings based on social and political pressure may choke off capital to perfectly legal, productive, and profitable sectors of our economy and cause retail investors to miss out on returns that they need to fund their futures.

As a leading voice on the Financial Stability Oversight Council, will you commit to raising this issue with your colleagues at FSOC and urge that body to examine the extent to which a misallocation of resources away from shareholders to serve unrelated political errants might stifle capital formation, compromise investor returns, and ultimately undermine financial stability?

Mr. POWELL. I don't know that I totally understand your concern, but I will be happy to discuss it with you.

Mr. BARR. The concern is that if shareholders are not a prime concern of corporate boards of directors, if stakeholders who have no ownership interest in the company are the focus of a corporation, then I would submit that there is a tremendous risk of misallocation of resources away from maximum shareholder returns. And I would like FSOC to take a look at that.

Mr. POWELL. I will bring that to the authorities at the FSOC.

Mr. BARR. Thank you. I yield back.

Chairwoman WATERS. The gentlewoman from Ohio, Mrs. Beatty, who is also the Chair of our Subcommittee on Diversity and Inclusion, is recognized for 5 minutes.

Mrs. BEATTY. Thank you to the chairwoman and to the ranking member, and thank you, Chairman Powell, for being here today. Let me also acknowledge the advocates in their green T-shirts for being here today, and thank you for coming to my office yesterday and sharing what I thought was valuable information with my team. I appreciate you sitting through the hearing.

Chairman Powell, in the latest edition of the Federal Reserve Survey of Consumer Finances that was published in 2017, it gave the breakout between whites, Blacks, and Hispanics, as it related to their net worth. And we have heard the statistics. I think my colleague, Congressman Meeks, talked about it, and I am sure some others, so I will spare going through all of those details.

But what is very interesting to me is, while that data seems great for those who are researching the issue, is there any way your office could break it down by regions or cities? Because when we go back home, this is one of the number one things that I am hearing. People are coming into my office, once you get through health care, and this couples in with jobs and education, they are saying, we look at the wealth gap that is getting wider. It is not coming in. And while we are talking about unemployment rates being better, many people have to work 2 and 3 jobs just to try to survive. Someone talked about the minimum wage. Certainly, as we are advocating for a higher number, it is not enough. In my district, you would have to make somewhere between $18.70- and $20-an-hour to be able to have a livable wage.

The first question is, can this information be localized, to a region or to a city, to help us as Members of Congress when we go back home?

The second thing is, I just recently introduced a bill closing the racial wealth gap, which requires the Federal Reserve to further

break down the data. And this is something that I didn't realize until really studying the Federal Reserve, listening to some of the individuals like the folks here today. They have some really good ideas.

And my second question is, could you tell me if you would entertain having your folks look into wage as a measure? Because oftentimes, many folks don't work a full-time job, but they have a wage. Could we be a little more creative in looking at the data based on some of the things that I am hearing from the group who came in? And I am sure they have met with your folks and you know some of their issues.

I will start with, can it be localized? Can we entertain looking at some of the things that they think we should look at when we calculate or present all the good news, that is not the good news, for many of the individuals sitting here, or in my district?

Mr. POWELL. I think you are probably making some of our data people very happy back at the Board of Governors.

Mrs. BEATTY. Okay.

Mr. POWELL. They love to cut the data different ways, and we do learn. Every time we do that, we learn things. I don't actually know the precise answer to your question of whether we can do it regionally or in what dimensions we can, but we would be happy to look into that for you.

Mrs. BEATTY. And what about some of the individual ideas about looking at wages in your calculation?

Mr. POWELL. Yes. I think we can do that.

Mrs. BEATTY. So, your folks would be willing to work with them on some of the ideas, for a starting point of discussing it?

Mr. POWELL. Yes.

Mrs. BEATTY. Because now, we are marrying the people with the power, and what a good win-win that would be for all of us, since we are really talking about all of our lives, and especially those who have to work a little harder than some of the rest of us.

The next thing is, will your agency work with my office? I am so excited about this bill, and as I understand it, part of the reason for asking for the data is the Federal Reserve actually collects the data that sets the policies that then get married with the allocations that come back to the districts. I want to make sure I am on the right path when I go back home and I say, "I have a bill that is asking the Federal Reserve to collect data that can help us in the end." Is that in the ballpark?

Mr. POWELL. Yes. We should actually get the experts to talk directly to you and your staff and tell you what we do and how we do it and how that might be useful. I don't know that we need legislation at all, but we certainly have excellent sources of data and we do cut them different ways. Why don't we just follow up with you on that?

Mrs. BEATTY. Thank you.

Chairwoman WATERS. The gentleman from Colorado, Mr. Tipton, is recognized for 5 minutes.

Mr. TIPTON. Thank you, Madam Chairwoman, and Chairman Powell, thanks for taking the time to be here this morning. I want to follow up a bit on the CRA. We have had a fair amount of conversation on that, and I just wanted to be able to have the clarity

that the Fed has been involved with the CRA process, with the OCC and the FDIC. Is that correct?

Mr. POWELL. From the very beginning.

Mr. TIPTON. Great. And I also wanted to get some clarity. Were you comfortable not only with Governor Brainard making the speech but the content of her speech in regards to the CRA?

Mr. POWELL. Yes.

Mr. TIPTON. Okay. What extent has the Fed been—I know you are talking about doing some of the analysis of comments coming in—able to work on CRA modernization?

Mr. POWELL. From the very beginning of the process we said yes, that sounds like a great idea. It is a good time to update CRA. Let's try to make it more transparent, more objective. Let's try to make it more effective in serving the intended beneficiaries. And so, we too went around the country. I think we had 29 events around the country where we talked to different groups of people about CRA, their experience with CRA.

And it turned us in a particular direction. We had a bunch of ideas, and it is unfortunate that we weren't able to get on the same page. We weren't able to really agree completely with their approach, and they weren't able to completely agree with ours. But we continue to push, and we continue to learn. And I would agree with Mr. Hill's earlier comment that ideally, you would have one agreed-upon set of standards.

Mr. TIPTON. I would agree with that as well. I think that harmonization is something that we certainly ought to strive for.

I was really encouraged reading your comments in your statement that people who live and work in low- and moderate-income communities are finding new opportunities. Wages have been rising, particularly for lower-paying jobs. That is an area that I have a lot of concern on. In my State of Colorado, I represent the rural areas, and we oftentimes have 2 economies, where the metropolitan areas, resort areas have been doing well, but rural areas have continued to often struggle. We are now starting to actually see some of that real movement.

When we are looking at that CRA reinvestment back, talking about the community banks, I really would encourage you to look at the OCC and FDIC proposal. I believe they do reach farther into rural America.

And you talked about policy. Have you done any assessment in terms of the Opportunity Zones that were included in the Tax Cut and Jobs Act? We are certainly seeing some benefits and some investments coming into rural areas in my district. Are those some of the policies that we need to be looking at?

Mr. POWELL. I am not aware of any research that we have done on Opportunity Zones, but we probably have, truthfully. In the System, I would imagine we have done research on that, and we will be happy to share it with you.

Mr. TIPTON. Great. Thank you. And Fannie Mae and Freddie Mac just took some steps, talking now about SOFR, to be accepting SOFR-based mortgages. And I have noted that other agencies have been taking this step separately. Is there any kind of uniform effort at a high level to coordinate the adoption of SOFR?

Mr. POWELL. Yes, there is, very much so, and we are doing that. We are coordinating with the other agencies and with the market participants as well. And you will see more of that. You will see more instances in which LIBOR will no longer work, will no longer be usable in particular contexts, and that is what Fannie and Freddie did this week, or announced this week.

Mr. TIPTON. And to follow up on Mr. Stivers' question in regards to community banks, do you see any pluses or minuses, in regards to using SOFR over LIBOR for community banks?

Mr. POWELL. Yes. I think LIBOR itself is really a problem in the sense that there is no guarantee that the rate will continue to be published after the end of 2021. But there is a question about having a credit-sensitive rate in addition to SOFR. SOFR will be the main substitute for LIBOR, but we are working with the regional and some of the larger banks too, about the idea of also having a credit-sensitive rate, and that is something that is ongoing.

Mr. TIPTON. Okay. We have had a little conversation about the coronavirus, China, the impacts on the economy. The President just signed into law the United States-Mexico-Canada Agreement (USMCA). Do you see that as creating a runway for further economic expansion in the U.S., for job opportunities and wage growth?

Mr. POWELL. We don't give advice on trade policy, but I would just say this, that I think the signing and the enactment and implementation of USMCA will be a positive, at least in the sense that it removes uncertainty around trade policy. And I think that has been part of the issue of the last year or so, not knowing what the rules of the game are going to be. And I think getting those rules settled is certainly a positive thing.

Mr. TIPTON. Great. Thank you. My time has expired.

Chairwoman WATERS. Thank you. The gentleman from Illinois, Mr. Foster, is recognized for 5 minutes.

Mr. FOSTER. Chairman Powell, first off, I would like to thank you for facilitating our meeting with Governor Brainard, the meeting that Representative Hill and I had on digital currency. We really enjoyed that, as well as the meeting with the staff, who were excellent, and it is great to see how plugged in they were to this issue.

In a speech last week, Governor Brainard highlighted, "The role of central bank digital currencies is in ensuring that sovereign currencies stay at the center of each nation's financial system." Do you agree with her characterization? And, in particular, do you think that establishing a digital dollar would help ensure that the U.S. dollar continues to serve as the core of the U.S. and the world's financial system?

Mr. POWELL. To take the first part of that, I think having a single government currency at the heart of the financial system is something that has served us well. It is a very, very basic thing that really hasn't been in question. And I think, before we move away from that, we should really understand what we are doing. So, I think preserving the centrality of a central, widely accepted currency that is accepted and trusted is an enormously important thing.

I think whether a digital currency moves us along that path or not is an open question. As you know, every major central bank is

currently taking a deep look at that; we feel like that is our obligation. Technology has now made this possible. The private sector is innovating. They are doing it. I think it is very much incumbent on us, and other central banks, to understand the costs and benefits and tradeoffs associated with a possible digital currency.

Mr. FOSTER. How would you characterize your state of progress on this, compared to other countries—the Swedish central bank developing an e-krona, well, the Chinese. One of the reasons there was so much concern about the Libra project is they would immediately have scale if they just rolled out the product. Another entity in a position to do that is the Chinese government, to roll out at scale, using their already established payment-by-cell-phone systems. They would immediately have the scale comparable to Facebook, if they rolled that out.

How would you characterize our ability to respond to this potentially competitive threat?

Mr. POWELL. We are working hard on it. We have a lot of projects going on, a lot of efforts going on, on that right now. We haven't had the problem that many—you mentioned Sweden. A lot of the northern European economies have moved away from cash, to a remarkable degree, and that really has not happened in the U.S. economy, even though it seems like it must have happened with our kids not using cash very much. Nonetheless, the amount of cash in the U.S. economy continues to grow at faster than nominal GDP.

Mr. FOSTER. But if you look at the curve of adoption of payment by cell phone, it starts slowly, and then all of a sudden, it just happens. So, it seems like that transition can happen in a period of just a couple of years, and so we have to be able to respond. If that is the driving factor, then we have to be in a position where we can respond by rolling out, for example, a digital dollar, on a couple-of-year timescale.

Mr. POWELL. I completely agree with that, and I think, frankly, Libra really lit a fire under that, and it was a bit of a wakeup call that this is coming fast, and could come in a way that is quite widespread and systemically important, fairly quickly, if you use one of these big tech ne2rks like Libra did.

So, we are working hard on it. We fully appreciate the importance of making quick progress. We have not decided to do this, though. I think there are many questions that need to be answered around a digital currency for the United States, including cyber issues and privacy issues. Many, many operational alternatives present themselves. And so, we are going to be working through all of that and doing that work early and responsibly.

Mr. FOSTER. Do you feel as though you have adequate visibility into what the Chinese are doing on this? Do you have sort of working-level contacts that give you some idea of what their rollout is likely to do, likely to look like?

Mr. POWELL. Yes. We certainly have that. But they are in a completely different institutional context. There are things that—for example, the idea of having a ledger where you know everybody's payments, that is not something that would be particularly attractive in the United States context. It is not a problem in China.

But nonetheless, we are following—

Mr. FOSTER. But from a competitive point of view, they are claiming they are going to roll it out on the Belt and Road countries sometime very quickly. And so, I urge you to keep the fire lit. Thank you.

Mr. POWELL. Thank you.

Chairwoman WATERS. The gentleman from Texas, Mr. Williams, is recognized for 5 minutes.

Mr. WILLIAMS. Thank you, Madam Chairwoman, and thank you for coming back to our committee, Chairman Powell. We appreciate it.

With baseball season slowly approaching, I wanted to make sure of one thing before I continue, that you still are on, "Team Capitalism."

Mr. POWELL. Oh, yes.

Mr. WILLIAMS. Thank you. I appreciate that.

Experian recently released their 2019 Consumer Credit Review, and I wanted to read a section from the report because I think it accurately depicts the state of our economy. As you know, I am a Main Street business guy and the economy is really good right now.

"Indeed, the U.S. economy exceeded expectations. Record job growth caused unemployment rates to drop to historic lows while the stock market flexed throughout the year. Consumers, in return, showed their confidence as they continued to borrow and spend energetically, most recently evidenced by the strong 2019 holiday shopping season."

The report goes on to say that, "consumer credit scores reached an all-time high in 2019, at an average of 703. This translates to people being able to get better rates to borrow money, to buy a house, to get a small business loan, or whatever they need financing for in order to live out their American dream."

Chairman Powell, what should we be focusing on in this committee to continue the explosion in new jobs that we have seen over the past few years?

Mr. POWELL. Honestly, I think the focus for me really ought to be on things that address, what are our longer-run issues that can be addressed by legislation? And there are really two important things. One is labor force participation. What are the things that you can do, that we really can't do, that will help people stay more attached to the labor market? We still have low labor force participation compared to essentially all of our economic competitors.

And the other one is productivity, what is it that drives productivity? It is a stable legislative environment. It is a legislative and administrative environment that supports growth and innovation and investment and those sorts of things.

Those would be my main focuses.

Mr. WILLIAMS. I know you are aware of the Fed's work on the international insurance capital standard that is being developed for the world. I have had my reservations about entering into an international agreement that does not conform with our current State-based approach to regulating our domestic insurance companies. One particular piece of the international standard that I want to ask you about is the flexibility that our government was given to

develop an equivalent solvency standard that would better fit our insurance ecosystems.

My question to you is, how does the Fed plan on ensuring the standards being developed in the U.S. will be deemed equivalent by the international group, given this continued resistance you are facing from the Europeans?

Mr. POWELL. I can just say that we will not be a part of approving any international standard that doesn't accommodate our own American insurance regulatory framework.

Mr. WILLIAMS. That is great. We are leaders, not followers.

Some of my colleagues on the other side of the aisle have called for a financial transactions tax. I think this is an extremely short-sighted approach to raising revenue that will greatly impact the amount and the ways that Americans save for the future. Additionally, the thought that adding an extra layer of taxation to other assets so redundant since capital gains taxes are already in place, and they should be lowered, that take away money from successful investments.

If we want to further expand economic growth, we need to focus on continuing to lower the personal and corporate tax rate so Americans can keep more of their hard-earned income, and businesses can invest that profit back into their operations.

So, Chairman, can you explain how implementing a financial transaction tax would impact the U.S. economy?

Mr. POWELL. I think I need to stay in my lane here. We don't do fiscal policy, and if I start commenting on particular taxes, I am worried about where that might go.

Mr. WILLIAMS. I understand that. But I will tell you, from a Main Street standpoint, it will really hurt the economy, an extra layer of tax. We need to actually cut taxes.

Looking at financial trends across the world, and with being in business for over 50 years, like myself, one data point that catches my eye are negative interest rates. Can you help me understand the economics behind negative interest rates and talk about the potential threats that this phenomenon poses to financial stability?

Mr. POWELL. A number of countries around the world, as you know, face the problem of what do you do when your policy rate gets to zero, and some of them actually went below zero. The United States chose not to. We chose not to at the Fed. We used other tools when we got to the lower bound, and those were forward guidance and large-scale asset purchases.

I think, going forward, our inclination would be to rely on the tools that we did use as opposed to negative rates. So, that is our instinct, is that in the U.S. context, that is not a tool we are looking at. The question about intermediation is, when you have negative rates, does it wind up creating downward pressure on bank profitability, which limits credit expansion?

Mr. WILLIAMS. Right.

Mr. POWELL. And there is some evidence of that. In any case, we are watching other institutions around the world who have done that and we will be able to see what the results are.

Mr. WILLIAMS. Thank you for being here.

Chairwoman WATERS. The gentlewoman from Michigan, Ms. Tlaib, is recognized for 5 minutes.

Ms. TLAIB. Thank you, Madam Chairwoman. Chairman Powell, I don't know if you know this, but in 2013, Detroit filed for Chapter 9 bankruptcy, which was marked as the largest municipal bankruptcy filing in U.S. history.

In July, when you were here, I asked you why, if the Federal Reserve is willing to backstop or support big banks and corporations during periods of credit market distress, we wouldn't want to make equally sure that State and local governments had access to credit, as well. And you mentioned that you didn't have the authority to lend to local and State governments.

Madam Chairwoman, I would like to submit for the record, Section 14(2)(b) of the Federal Reserve Act, asserting that the Federal Government actually does have the authority to buy municipal debt.

Chairwoman WATERS. Without objection, it is so ordered.

Ms. TLAIB. Chairman Powell, given that you actually do have the authority, can you explain to me why the Federal Reserve shouldn't ensure that State and local governments have access to funding during times of distress?

Mr. POWELL. We have, as you know, limited authority, I think it is to buy short-term municipal obligations. We did do that in the 1970s briefly, and have not done it since. I think a series of FOMCs and Fed Chairs, in all kinds of different political environments, have thought of that as something that is not appropriate really for us, in the sense that it is government finance. That is to be dealt with by fiscal authorities rather than by the monetary authority. We focus on the job you have given us, which is maximum employment and stable prices, and to some extent, also with other agencies, we work on financial stability and bank supervision, as opposed to the solvency of State and local governments.

Ms. TLAIB. Yes or no? The Federal Reserve reserves the ability to open emergency lending facilities? Is that accurate, in stabilizing the economy?

Mr. POWELL. Well, yes, to financial institutions, we do.

Ms. TLAIB. So when the Fed steps in to rescue banks in a crisis, is that because you believe their role in the economy is vital?

Mr. POWELL. It is really because we had no choice. It was to prevent the financial system from collapsing in 2007 and 2008.

Ms. TLAIB. No. My City filing bankruptcy was devastating to so many retirees, sir. For 40 or 50 years, they worked for the City of Detroit, and saw their pensions completely diminished, gone.

Do you not believe that the governments of Detroit and Puerto Rico also play a vital role that should be preserved, even if a financial crisis makes it hard for them to borrow money?

Mr. POWELL. What I believe is that is not a job for the Fed, which has a particular role and particular authorities. And lending to State and local governments and supporting them when they are in bankruptcy is not part of our mandate.

Ms. TLAIB. We are going to strongly disagree. I believe you do have the authority.

Now, you have mentioned that in the face of another financial crisis, you would use the same tools of expanding the balance sheet and purchasing long-term bonds, in other words, more of the same. Correct?

Mr. POWELL. Yes.

Ms. TLAIB. I am afraid that simply is not good enough, and I think your predecessors, former Chairs Yellen, and, I believe, Bernanke, seem to agree, based on remarks both gave last month. For instance, Chairman Bernanke has suggested a money-financed fiscal program might be helpful during the next recession. Do you agree that would be helpful?

Mr. POWELL. I think that is really an untested and not widely-supported perspective. I don't believe Chairman Bernanke said that a money-supported fiscal policy would be something that we should do. I know that there has been a group of people who have pushed that idea, but I don't think it included former Chairman Bernanke. You may have seen something that I haven't seen.

Ms. TLAIB. I know, and Chairman, look, the Federal Government is supposed to be about people, and I don't see that we are treating pensioners in a city like the City of Detroit, which is frontline communities that have really been hit hard by the financial recession—they keep saying Detroit is coming back. If I show you neighborhoods, they will tell you, "We don't know what you are talking about," because poverty has actually increased, and access to housing has decreased. We need to start reflecting and understanding that I believe the Federal Reserve Act actually gives us authority to help and treat, just like we bailed out big banks, that we can do the same for our people, the residents of the City of Detroit.

I thank you for that, and again, I would ask you and push you to look at this from a different lens versus the same old process, which I believe hasn't really worked for working-class people.

Thank you so much, and I yield back.

Chairwoman WATERS. Thank you. The gentleman from Arkansas, Mr. Hill, is recognized for 5 minutes.

Mr. HILL. Thank you, Chairwoman Waters. And again, Chairman Powell, welcome back to the House Financial Services Committee. I want to thank you for your discussion that you had with Dr. Foster a few minutes ago. I, too, want to thank you for your work with Governor Brainard and our discussion that we had with the Governor and the staff about the concept of a digital dollar and the work being done at the Treasury about that.

I won't belabor some of the points that Representative Foster made, but there are a couple of comments that I would have for you on that. Would you advise our committee, or ask the Fed to advise our committee, what legal authorities the Federal Reserve might require in order to consider the use of a digital dollar?

Mr. POWELL. Yes. That is a good question, and it is one we are looking at. A lot of it would depend on the design of that currency.

Mr. HILL. Exactly. And one thing we also talked about, and we have had a lot of discussions in our Fintech Task Force about, is Europe's approach to this idea of a payment provider license, which is now part of their financial services code. Part of the open banking movement, and the idea that one would have a regulatory license here in the United States for being a payment provider—it might be a bank or it might be a nonbank—is that something that the Fed is looking at as well?

Mr. POWELL. I wouldn't say we are specifically focused on that, but more broadly, it is, we think, a good idea to look at the whole

landscape of oversight of our payment system, and that would be a piece of that. As you may know, Governor Brainard talked about that in another of her speeches last week.

Mr. HILL. Right. Thank you for that.

Last month, the Chinese regulators bailed out Hengfeng Bank. It was a $14 billion loan that they arranged through one of their sovereign wealth funds. The Chinese banking assets, at $41 trillion now, are 47 percent of world GDP.

Does instability in the Chinese banking industry pose a financial threat to the global financial system? Is it a financial virus, like they have already contributed a physical virus?

Mr. POWELL. Generally, as I am sure you are aware, China has had very high debt-to-GDP for an economy at its stage of development, and that includes the banking system. And the government has actually, for several years now, been taking measures, led, I think, by the central bank, to try to control the growth of debt, and they have stuck to that through the last couple of years, even though those were challenging years economically for them. So, it is something that they are addressing.

The other thing to say is that they have plenty of fiscal power. If you look at it fiscally, they have plenty of power to respond to a downturn.

I wouldn't go so far as to say that their debt is a systemic threat to the world economy or anything like that, but it is something that they need to address, and they are addressing it.

Mr. HILL. I think it is something that deserves review. Mr. Barr talked about their misallocation of resources. At 47 percent of global GDP, that seems like an over-allocation in the banking sector in China, and it could pose a threat to our system.

In your report, on page 24, you talk at length in your financial stability section about the decline in bond yields, about how, particularly in the high-yield market, the ratings have fallen. And I was looking at a mutual fund annual report the other day and it says of particular concern is the continuing high rate of issuance of BBB bonds, the lowest category of investment-grade-rated bonds. If the economy stumbles, rating downgrades issues could be a flood of fallen angels. And this particular mutual fund said they are staying away from the lower end of the high-yield market.

Are you concerned about the high-yield market?

Mr. POWELL. That is the so-called BBB cliff, and the idea is that there are a handful of very large issuers, which, if they were downgraded, would then be non-investment grade, and the idea is that some holders are not permitted by the terms of their agreements with their investors to hold non-investment grade, and it would trigger sales. So, that is an issue we have been monitoring for some time now, really.

With leveraged lending more generally, yes, we are monitoring it very carefully. You do see low compensation for risk taken. You see high leverage. You see a lack of covenants. You see all of that. I think it is a complicated picture, though. That paper is now largely held in CLOs and mutual funds and exchange-traded funds rather than on bank balance sheets, and those vehicles tend to be stably funded, in the sense that their liabilities are actually longer than the expected maturing of the underlying instruments.

Mr. HILL. But it is still a source of financial concern to the FSOC, I would think, and therefore I commend you for noting it in the report, and I thank you for your continued attention to it.

I yield back. Thank you.

Chairwoman WATERS. The gentleman from Illinois, Mr. Casten, is recognized for 5 minutes.

Mr. CASTEN. Thank you, Madam Chairwoman, and thank you, Chairman Powell. I appreciate you sticking around all the way to the bottom of the dais here.

If I get elected 8 more times, fingers crossed, I will have as much experience in this line of work as I do in the energy sector. I still come here primarily as an energy nerd, and I have a real concern that we are not dealing with the realities of climate change scientifically. We understand this, really, what it means to have rising sea levels, but we haven't really thought about what it means to have an accelerating rate of change. Compound interest confuses people, and compound changes in the environment, we don't even really think about it as well as we should.

Just a couple of data points that I hope all of us can appreciate. The first evidence that hominids made fire is a cave a million years old. James Watt invented the steam engine 244 years ago and ushered in the Industrial Revolution, and 50 percent of all the CO2 we have ever emitted as a special is since Back to the Future came out in 1985.

It is this massively accelerating shift, and if we went to zero CO2 tomorrow, we are looking at 2 feet of sea level rise coming. The more realistic trends we are on is at least 6 feet of sea level rise coming, and at that level, there is estimated about $23 trillion of economic loss to the system, $900 billion of U.S. property at risk, before factoring in debt losses and pulling out of insurance. And there are some serious systemic risks to the economy if we leave those unaddressed.

I just want to understand a little bit how you and the Fed are thinking about those risks. Number one, given that the assets exposed to climate change exceed the entire subprime mortgage market prior to the global financial crisis, how, if at all, is the Fed thinking about climate change as a systemic risk to the economy?

Mr. POWELL. Climate change, again, is a very important issue, one that is really the provenance of elected representatives to set the overall direction of society and how we will respond to climate change and its challenges. Nonetheless, we have a job to do, and that is to think about the potential implications for the financial system, for the economy, and I think we are at the very early stages of filling in what exactly that means.

In terms of things like particular assets, these are longer-term considerations. We are essentially mainly concerned with business cycle issues. That is what we are focused on, is issues for the medium term. Climate change is a much longer cycle kind of thing.

Mr. CASTEN. If I may, part of the concern I have is that the actors in the space do not have planning horizons that match the reality that you do, and we do, right? There are people signing 30-year mortgages right now for properties in Miami Beach, and they may plan on reselling that mortgage a number of times, but somebody is going to be left holding the paper with that sea level rise

coming. The insurance industry typically has a one-year holding period.

And even if the U.S. is successful at reducing carbon emissions, there still is a massive reallocation of capital. Have you looked at the transitional risks in thinking about how that starts moving around and dislocating the economy?

Mr. POWELL. Those are the things that we are at the beginning stages of looking into. As you obviously know, there is a lot going on in the financial markets. There is a lot of disclosure happening and expectations around disclosure are changing significantly for publicly held companies, and that will have an effect. But that is not really what we do. We do monetary policy, bank supervision.

To your point, our banks have to be taking into account the risk of severe weather events, and potentially, I suppose, of rising sea levels—

Mr. CASTEN. Maybe, let me give a specific one that has been bugging me lately. If you look at the fossil fuel industry, the oil and gas companies, the coal companies, the debt that they hold relative to their assets, given that their assets are so heavily dominated by fossil fuel reserves, if they were to extract all of their fossil fuel reserves, things are going to be way worse than the $23 trillion I just told you.

Have you ever considered stress testing to see whether their failure to fully monetize their reserves might effectively make them fiscally insolvent? Because that, to me, sounds like a materially adverse event, but I wouldn't want to bet that the economy is going to commit suicide. But if I look at the financial statements of a lot of those companies, it is not clear to me that they can monetize those assets. That has a meaningful effect on the risk of money that is held today. I think there was $700 billion lent to fossil fuel companies in the last couple of years. Have you considered that as a systemic risk?

Mr. POWELL. For us, it is a systemic risk to the financial system, and we would be stress-testing banks. As you know, the Bank of England is doing some of that now, and we are going to be watching to see what they learn, and maybe that is the path we will follow.

Mr. CASTEN. Thank you.

Mr. POWELL. We haven't made that decision.

Mr. CASTEN. Thank you. I will follow up with you offline. I yield back my time. Thank you.

Chairwoman WATERS. The gentleman from Georgia, Mr. Loudermilk, is recognized for 5 minutes.

Mr. LOUDERMILK. Thank you, Madam Chairwoman. Chairman Powell, thank you again for being here.

First of all, I kind of want to touch back on LISCC. I know that some have already touched on this subject, and as you know, several weeks ago, Vice Chairman Quarles gave a speech where he outlined a number of changes that he would like to make to the Fed supervisory and regulatory process. He said he intends to bring transparency to the LISCC regulatory regime by developing clear and transparent standards for designating firms.

He also proposed aligning LISCC designation with the Fed's tailoring categories and limiting it to only Category 1 firms.

My question is, at a press conference after last month's Federal Open Market Committee meeting ,you said you generally agree with Vice Chairman Quarles in what he had articulated. I appreciate that. But can you give us an idea of when you expect LISCC designation to be confirmed with new tailoring rules?

Mr. POWELL. I don't actually have a sense of where that is in terms of the timing of it. At any given time, we have a bunch of things to do, and that is certainly one of them.

Mr. LOUDERMILK. Okay. Hopefully, sooner rather than later.

Mr. POWELL. I don't want to commit to something that—there are a lot of things that we are working on at all times. But if the Vice Chair gave a speech about it, I am aligned with that, and I expect we will be moving forward.

Mr. LOUDERMILK. That is very good to hear.

I would like to quickly touch on the CRA. I believe that all 3 banking agencies need to have a unified CRA framework, and I know you are hesitant to speak on behalf of the other agencies, specifically the OCC and the FDIC and their proposals. If you don't want to comment on that, and I understand that, what are some of your ideas, or the Fed's ideas for CRA modernization?

Mr. POWELL. Let me talk about the process. We kind of agree on the overall goals and the quesion of, how do you get after that? And so, our thinking was try to get to a set of improvements, really, that would lead to a more efficient, more effective CRA. We are looking at ways to make the assessment, the test clearer. In our thinking, at the retail level, there is a separate test for community development and for retail lending.

And also, the other thing we are saying is, let's make sure that it is all very grounded in data. We have, as the Chair mentioned earlier, 6,000 datasets that we look at. I think we really know when you make a change in the metrics, we kind of know what the effects are going to be, and we feel good about that.

So, we tried to develop our proposal around that. There were a lot of overlaps, but there are a handful of differences that prevented us from getting to full agreement.

Mr. LOUDERMILK. In the overall objective, do you believe that we can remove some of the ambiguity on what projects do and do not qualify?

Mr. POWELL. Absolutely, transparency ex ante, more transparency ex ante as to what qualifies and where, more objectivity. All of that should help to encourage banks to do more, if they really know what is going to qualify and what is not, and I think that is all very constructive. It is really about how you implement it. It is a very important law, a very, very important law. We want to have a high level of confidence that what we change is going to have the desired effects, and that is what we are focused on.

Mr. LOUDERMILK. I appreciate that, because I would like to see us make changes to where it is not financial institutions just checking boxes to get credit but actually investing in projects that do help revitalize these communities.

As you know, the Fiscal Year 2020 appropriations law directs the Treasury Department, in consultation with the banking agencies, to study whether any changes in banks' regulatory capital requirements are needed because of CECL. If the study concludes that

that is the case, are you open to modifying regulatory capital requirements accordingly?

Mr. POWELL. Well, yes. I think we have said that with CECL, we are going to be monitoring very carefully what the implementation is showing, because of some of the concerns that have been raised.

Mr. LOUDERMILK. Okay. Thank you. I probably don't have time to get into any other questions, so with that, I yield back the balance of my time.

Chairwoman WATERS. Thank you. The gentlewoman from California, Ms. Porter, is recognized for 5 minutes.

Ms. PORTER. Thank you. Chairman Powell, you have frequently spoken about your belief in maintaining the independence of the Federal Reserve. Do you still have that belief?

Mr. POWELL. I do.

Ms. PORTER. Has anything changed in the New Year?

Mr. POWELL. No.

Ms. PORTER. Okay. Because we don't want the Fed to be making decisions about things, like where to set interest rates, based on any factors other than the best interests of the country. And I know you have had some experience with the President publicly and aggressively attempting to lean on you to lower interest rates, and I appreciate your continually affirming the importance of the independence of the Fed.

But it is not just our President. There are a lot of people out there who would love the opportunity to weigh in on Fed decisions. Outside of Administration officials, what other kinds of people might want to influence you in regard to the Fed's decision-making?

Mr. POWELL. What other people might want to influence us? Potentially, quite a wide range of people, I would think.

Ms. PORTER. Major investors? Financiers?

Mr. POWELL. I don't know that people are really seeking to—you say, "might want to influence us." I really don't know the answer to that.

Ms. PORTER. Okay.

Mr. POWELL. Many people follow what we do and respect what we do. I think people often, when I meet them, really shy away from giving advice. They really do. They feel like they don't presume to give us—

Ms. PORTER. So, you don't feel undue pressure from political or special interests?

Mr. POWELL. No, I really don't.

Ms. PORTER. Would you say that someone like Jeff Bezos, the CEO of Amazon, one of the richest men in the world, could benefit from having influence over the Fed's decisions?

Mr. POWELL. I wouldn't know, actually. I don't know.

Ms. PORTER. What about Jared Kushner and Ivanka Trump?

Mr. POWELL. I don't know.

Ms. PORTER. They are very wealthy people. Do they have savings and make different amounts of money depending on what the Fed does with interest rates?

Mr. POWELL. Yes.

Ms. PORTER. What about Kellyanne Conway? Does she, in her role as advisor to the President, and the President has expressed

these public views, does she potentially have an interest in amplifying the President's messages? That is, after all, her job.

Mr. POWELL. I suppose. I don't know.

Ms. PORTER. Okay. Mr. Powell, I am going to project a picture up here, so that the audience can see, but I am also going to hold it up for you. Is this you, Mr. Powell?

Mr. POWELL. That is.

Ms. PORTER. Where are you?

Mr. POWELL. That is a party after the Alfalfa Club dinner, an after-party that I went to.

Ms. PORTER. Where was that party held?

Mr. POWELL. At Jeff Bezos' home.

Ms. PORTER. At Jeff Bezos' home. And when was it taken?

Mr. POWELL. Excuse me?

Ms. PORTER. When was this picture taken?

Mr. POWELL. Saturday night after the Alfalfa Club dinner.

Ms. PORTER. Give or take, you will stipulate end of January 2020?

Mr. POWELL. Yes.

Ms. PORTER. Recently. Can you imagine how attending a lavish party at Jeff Bezos' $23 million home, along with Jared and Ivanka and the CEO of JPMorgan Chase, Jamie Dimon, might give off the sense to the public that you are not, in fact, immune from external pressures?

Mr. POWELL. I would certainly hope not.

Ms. PORTER. What did you talk about at that party with them?

Mr. POWELL. I didn't. I didn't talk to any of the people you named.

Ms. PORTER. You didn't talk to anybody?

Mr. POWELL. I didn't talk to any of the people you named.

Ms. PORTER. Oh. Can you tell me who you did talk to?

Mr. POWELL. I mainly escorted my son and his brand-new wife, and I actually introduced them to General Mattis.

Ms. PORTER. Okay. Great. I would just suggest that attendance at this kind of event with these kinds of people is inconsistent with what I would otherwise commend you on for doing a very good job, I think, of reaffirming to the public. This plants in the public's mind, I think, a seed that is counter to what you have been doing.

Quickly, Mr. Powell, if you can just name a couple of the biggest drivers of economic growth in this country, since the recession in the 1970s. What has been making our economy grow? What factors?

Mr. POWELL. What factors have been making it grow? Well, the hard work of the American people. I think what you have seen is tremendous growth in some sectors and less in other sectors. Of course, the big technology companies weren't around 40 years ago. So, I think we have seen lots of growth in some areas, and in other areas, much less so.

Ms. PORTER. Mr. Powell, would it surprise you if I told you that women in the workforce are actually a bigger driver of economic growth than technology companies, and in a span of 4 decades since the 1970s, 38 million women joined the workforce, and without those women, our economy would be 25 percent smaller?

When we talk about the health of our economy and we talk about GDP growth, what I don't hear a lot about, and I would like to hear more from you about, is about the economic effect of things like child-care availability. In those same 4 decades in which women grew the economy 25 percent, the cost of child care shot up 2,000 percent. Do you know, Mr. Powell, how much child care in America costs today?

Mr. POWELL. How much it costs today in America? It costs a lot.

Ms. PORTER. You are an economic expert. Could you put a little firmer number on that?

Mr. POWELL. I don't know. My kids are grown up.

Ms. PORTER. Thank you. I yield back.

Chairwoman WATERS. The gentleman from Ohio, Mr. Davidson, is recognized for 5 minutes.

Mr. DAVIDSON. Thank you, Madam Chairwoman. Chairman Powell, thank you so much for your time here today. Thanks for the good work you and so many of your colleagues are doing at the Federal Reserve.

Just to address comments that came from my colleague recently, is it unprecedented for the Chairman of the Federal Reserve to attend a party or a reception?

Mr. POWELL. No.

Mr. DAVIDSON. It is certainly not the first time that a Fed Chair has attended a party. I am certain it is not the first time a Member of Congress has attended a reception or a party. And so, I don't know that we want to say, hey, just because you were at an event, somehow this is nefarious. I mean, heck, you might have actually talked to a Russian on a subway or something. So, the way that these things are linked, for political motives, is embarrassingly partisan and bad, and I just thank you for resisting all of those pressures.

Many of them are public, of course, but one that I am concerned about right now is the repo market. Back home, a lot of people don't know that there is such a thing as repo, but it is a big factor for our economy. And I think some of the warning signs in it have given rise to the Fed, in kind of a blend between regulatory action and monetary policy, injecting a lot of cash into that market.

Vice Chairman Quarles spoke recently about the need for that to continue for some time. Can you explain the process about how the Fed is going about reviewing the factors that are contributing to this repo spike, and what you have learned from the review?

Mr. POWELL. Sure. What happened is in, as you know, early September, there was a spike in repo rates, and the Federal funds rate moved slightly outside of our band, our target range for a day or so. And we didn't see that coming. Market participants didn't either. And so, we have been asking since, why is that? One clear reason is that the level of reserves, which is cash on deposit at reserve banks, needs to be higher than we had thought, and so in that stream we have immediately set a plan and executed it, and it has worked fine to create that—

Mr. DAVIDSON. Some have called this quantitative easing. I know you have objected. But essentially, we are artificially interjecting cash to produce an outcome that the market isn't producing of its own accord.

I think it is odd that our action is to inject cash from the Federal Reserve to grow the balance sheet at the Fed instead of looking at the underlying regulatory things. What have we talked about? What has the Board talked about in terms of regulatory factors that, instead of injecting cash to fix a problem, treating the root cause of the problem and changing the regulatory framework?

Mr. POWELL. We are doing both things. The reason we are injecting the cash is to supply the demand for cash for basically banks that need to have a certain amount of cash for liquidity purposes. Turning to the second issue, though, we also said that without undermining safety and soundness, we would look at ways in which regulation and supervision might have interfered with the otherwise free flow of cash to where it was needed. And I think we have done a lot of work on that.

And Vice Chair Quarles hit on a broad theme there, which I think is important, and that is the idea of making the treatment, the supervisory treatment really of cash the same as that of Treasuries for this purpose. You could achieve a better flow of liquidity through the system without affecting the overall level of liquidity in the system, which is just what we are looking for. He broached some ideas for how to do that, and I think that is a very profitable line of inquiry.

Mr. DAVIDSON. Okay. Thank you for that. One of the changes, as LIBOR is going away and market forces are coming, is we are talking about replacing the benchmark rate. And, of course, ARC includes 250 entities, but there is a concern that as you have done this, that the best rate isn't necessarily being provided. Is the Fed taking the best proposed rate offered in these repo deals, or are we giving it out at a special rate to maybe the top 10 SOFR banks?

Mr. POWELL. I'm sorry. I lost track of that.

Mr. DAVIDSON. When this liquidity is injected—

Mr. POWELL. I see, the repo rate.

Mr. DAVIDSON. —into the repo rate, going into the repo rate.

Mr. POWELL. I'm sorry. I missed that. The rate we have been offering on the repos, they have been settling at a level that is a couple of basis points below the interest rate on excess reserves (IOER), but that won't be a persistent issue.

Mr. DAVIDSON. But are they settling at a rate that is when it is paid out at the high rate, is it paid to the best available offer or is it paid to the best available customer?

Mr. POWELL. We don't distinguish. Anybody who is eligible can bid, and as long as you are eligible, we will sell to the—

Mr. DAVIDSON. Thank you. My time has expired.

Chairwoman WATERS. Would the gentleman like to ask the witness to provide a more complete answer in writing for the record?

Mr. DAVIDSON. I appreciate the Chair's suggestion. I would love to see a written answer for how that is actually working.

Chairwoman WATERS. The witness is requested to provide an answer in writing for the record.

Mr. DAVIDSON. Thank you.

Chairwoman WATERS. The gentlewoman from North Carolina, Ms. Adams, is recognized for 5 minutes.

Ms. ADAMS. Thank you, Chairwoman Waters, for convening the hearing today, and Chairman Powell, thank you for your testimony.

FDIC Board Member Martin Gruenberg voted against Comptroller Otting's proposal, describing it as, "a deeply misconceived proposal that would fundamentally undermine and weaken the Community Reinvestment Act." Can you comment on the deficiencies of Comptroller Otting's misguided attempt to gut the CRA, an essential piece of civil rights and banking law?

Mr. POWELL. I guess I feel like our role is not to be commenting on the other agencies' proposals. The public is doing that now. We very much look forward to seeing the comments that they do make. I can talk about our own thinking about this, but it is not really for us to be publicly commenting on the other agencies' proposals.

Ms. ADAMS. Will the Federal Reserve release its own proposal on the Community Reinvestment Act, one that takes into account the needs of low- and moderate-income communities?

Mr. POWELL. That, of course, was why we undertook this work, was to do that. We actually haven't made a decision yet about whether or when to make a proposal, but nonetheless, the whole effort was undertaken with a view to creating a modernization proposal for CRA.

Ms. ADAMS. Okay. As you know, the Federal Reserve has a dual mandate: price stability; and maximum employment. Will the Fed set a goal for wage growth, and are you considering this approach as part of the framework review?

Mr. POWELL. I don't see us targeting wage growth as an independent item. It is something we monitor very carefully. Our goal, as assigned by Congress, is maximum employment and stable prices. Those are our two statutory objectives, and those are the things that we target. I don't see us targeting a particular level of wage growth.

Ms. ADAMS. Okay. Have you considered adopting a floor for wage growth, for example, once we set a certain percentage increase in pay in wages, that the Fed may consider switching to a 2-percent inflation rate?

Mr. POWELL. We have said that the sense of this project is we want to make the 2 percent symmetric inflation goal more credible, and we have been missing it, and central banks around the world have been missing their objectives for a decade now, on the low side. And we want to resoundingly achieve 2 percent inflation. That is really the objective of this review that we have undertaken.

Ms. ADAMS. Okay. Let me ask a question about the Volcker Rule. Why has the Fed decided to support further changes to the Volcker Rule, given that banks enjoy certain benefits, including access to the Fed discount window, and that the Rule was intended to limit banks from engaging in risky investment activities that could contribute to a future financial crisis?

Mr. POWELL. We did just put out a proposal on part of the Volcker Rule, and, of course, we think that proposal is entirely consistent with both the letter and the spirit of the law. But we are going to be reading the comments. It is out for comment now—we just put it out—and we are looking forward to reviewing those comments.

Ms. ADAMS. Okay. I understand that you collect a large number of daily trading metrics from banks subject to the Volcker Rule, yet it has never been made clear exactly how these metrics are used to determine whether a bank is complying with the Rule, nor have any of the metrics been released to the public. Is that true?

Mr. POWELL. I think it is true that the—so we published the first Volcker Rule, I want to say 6 or 7 years ago, and I think very widely, regulators and financial institutions found it to be a bit unworkable. And so, we set out to provide a simpler set of metrics and ways that companies could conduct perfectly legal activity and have more certainty that they were doing so without having to prove, for every single trade, what was in the mind and the heart of every trader, because there is going to be trading activity around legal activities that were not covered by the Volcker Rule.

I think that is what we are doing. We are trying to make that Rule more effective and efficient, but we are doing it in a way that is consistent with the letter and the spirit of the law.

Ms. ADAMS. Okay. Thank you, Madam Chairwoman. I yield back.

Chairwoman WATERS. The gentleman from North Carolina, Mr. Budd, is recognized for 5 minutes.

Mr. BUDD. Thank you, Madam Chairwoman. And Chairman Powell, again, welcome. I want to start by thanking you and Governor Quarles and your Fed staff in charge of insurance regulation for your collaborative work with the U.S. State insurance commissioners on solvency regulation. I also wanted to thank you for the pushback against the European efforts to try and force their system of insurance regulation onto our unique and sound 50-State insurance regulatory regime. Notwithstanding the progress achieved to date, many in the industry are telling me that the Europeans are still resistant and they ultimately seek to change our regulations so that they mirror theirs.

Given that, here is my question: Will you commit to directly reaching out to your peers in Europe to tell them explicitly that the U.S. will not be adopting a European-centric or international capital standard (ICS), and that we have our own rules that work very well?

Mr. POWELL. I will just say clearly that we have a State-based insurance regulatory system, and the Federal rule is what it is, and that is not something we are seeking to change, and we are committed to that going forward.

Mr. BUDD. Chairman, they are seeking to change us, and so I fear that if we are passive, it will migrate towards them. But have you had any conversations with any senior European leaders yet on the ICS, international capital standard?

Mr. POWELL. No, I haven't.

Mr. BUDD. Okay. Is there any reason why not, or is that something that has been avoided?

Mr. POWELL. No. I just am not involved directly in the insurance. There are senior people who are. I am sure Vice Chair Quarles is.

Mr. BUDD. I would encourage you, again, and Governor Quarles, to continue to press that. We have a great system that continues to work well.

Also, Mr. Chairman, as part of the Basel III finalization efforts, a number of changes to the capital rules will have the effect of rais-

ing capital requirements on capital market activities. Can you discuss your views on the appropriate level of capital markets-related activity, such as market making or underwriting?

Mr. POWELL. Sure. Those are critical activities in the functioning of our financial markets and our economy, and they do need to be appropriately capitalized.

I would say that overall, I think that the level of capital in our banking system is about right, and I don't see a need to further raise capital. I know we are pushing forward with the fundamental review of the training book and the other Basel III end-game things, but I don't see them as needed to raise overall levels of capital.

Mr. BUDD. Chairman, can you share how your view on capital requirements and things like market making and underwriting, how they could affect the balance between bank-driven and market-driven finance in the U.S. system?

Mr. POWELL. I think, to the extent you raise capital requirements and they become quite binding, they encourage activity to move outside of the banking system into less-regulated and supervised entities.

Mr. BUDD. Very good. Mr. Chairman, there has been a lot of discussion in recent months about leveraged loans, and FSOC and others monitoring the market. In fact, you have had a couple of questions on this topic today, but when people discuss the issue, sometimes I think they are referencing different things. To help us get on the same page here, in your opinion, how would you define leveraged loans?

Mr. POWELL. You are right. There are a lot of different ways to think about it, but a reasonable ballpark would be something that is rated below BBB. Or you could also say an amount of leverage—typically, they will have a leverage of maybe 6 times cash flow EBITDA. There are different ways to think about it, but I think that the best way to think about it is probably not investment grade.

Mr. BUDD. Do you think there is a difference in leveraged loans in the banking sector and in the nonbanking sector?

Mr. POWELL. Yes. I think there has been a trend over time for leveraged loans to be held by longer-term holders outside the banking system, and that has accelerated. So, far fewer of them are on the books of banks with deposit insurance and the safety net, as opposed to collateralized loan obligations or exchange-traded funds or mutual funds or pension funds or hedge funds. That is where those loans are going now.

It is more like it has become a distribution business as opposed to a traditional lending business, where banks would make a loan, and they would put it on the balance sheet. That is not what is really happening. You have a bank performing an origination function on behalf of a sophisticated investor that is stably funded, we hope, and in the case of the CLOs is, but that is something we need to keep monitoring.

Mr. BUDD. Thank you, Chairman.

Chairwoman WATERS. Thank you. The gentleman from Illinois, Mr. Garcia, is recognized for 5 minutes.

Mr. GARCIA OF ILLINOIS. Thank you, Madam Chairwoman, and thank you for being here, Chairman Powell. I would like to return to the topic of climate change for a bit. Extreme weather events have had a great impact on the Midwest and working-class communities like those in my Chicago district, and they are often the hardest-hit during such disruptions. Climate change is also a risk to the financial sector.

Jim Cramer, host of Mad Money on CNBC, in a discussion last week, said major institutional investors want nothing to do with fossil fuels because of concerns about climate change. To guard against climate change impacts, the Bank of England has decided to stress test the UK's largest banks and insurance companies against the risks associated with climate change. Will the Federal Reserve follow suit and develop climate-related stress tests?

Mr. POWELL. We are monitoring what the Bank of England is doing. By the way, those are stress tests that are not like our stress tests, in the sense that they would have direct effects on the bank's ability to make distributions and things like that. They are really trying to make an assessment. So, we will be watching that carefully. We haven't made a decision to proceed with something like that.

Mr. GARCIA OF ILLINOIS. Good. I am encouraged. Looking ahead, incorporating climate change into economic forecasts will become more important. Climate disasters, such as Hurricane Maria in Puerto Rico or the wildfires that swept through California last year, are currently labeled transitory risks by the Federal Reserve. But we know extreme weather events will become more frequent and severe, with the likely result a corresponding increase in economic losses and physical risks, the brunt of which will be felt by communities of color and working-class communities.

Chairman, when the Fed develops its economic forecasts, at what point should climate change shift from being considered a transitory factor to a structural factor?

Mr. POWELL. Our forecasts, both the individual ones that FOMC people like me write down, and the staff forecasts, are not for the sort of longer term. What is important is the next year, the next 2 years, the next 3 years. And climate change just operates on a longer cycle than that.

Of course, as you suggest, as severe weather becomes more common, and that is connected to climate change, you will see those things entering the forecast period, and it is certainly entering our supervisory practices as well as our economic forecasting.

Mr. GARCIA OF ILLINOIS. Okay. In a recent speech at the San Francisco Fed's Conference on the Economics of Climate Change, Fed Governor Lael Brainard said, "By participating more actively in climate-related research and practice, the Federal Reserve can be more effective in supporting a strong economy and a stable financial system." Do you agree with Governor Brainard's statement? If yes, what more will the Fed do in the future to identify and mitigate the financial risks of climate change?

Mr. POWELL. I do think it is incumbent on us to do the research and understand the implications of climate change for our supervisory roles and our roles in looking after financial stability, and that is what we are doing. I think it is early days for that, but the

public will expect that we do that and that we take the measures that we need to take to make sure that the financial system is resilient.

Mr. GARCIA OF ILLINOIS. Do you agree with her statement, generally?

Mr. POWELL. That statement I do, yes.

Mr. GARCIA OF ILLINOIS. Okay. Thank you.

Big bank mergers and market concentration—3 months ago, the Federal Reserve approved a merger between BB&T and SunTrust, which created the sixth-largest bank in the U.S., with more than $450 billion in total assets, and the Federal Reserve's own research suggests that the failure of a single $250 billion bank would be far worse for the economy than the failure of 5 separate $50 billion banks. Furthermore, the former FDIC Chair, Mr. Gruenberg, has warned that the FDIC would not be able to wind down a bank the size of the combined BB&T/SunTrust without imposing significant losses on the deposit insurance fund, and potentially destabilizing the financial system.

In this light, can the Federal Reserve justify its conclusion that, "this transaction would not appear to result in meaningfully greater or more concentrated risk to the stability of the financial system?"

Mr. POWELL. Yes, I think we can, and I think we did. We evaluate these mergers under a very clear statutory framework, very transparently. We had a number of public hearings on it and looked at all the statutory factors, and essentially, you have 2 banks coming together to form a regional bank that is akin to, or smaller than many of the other regional banks, and it doesn't appear to me to have significant financial stability implications at all.

Mr. GARCIA OF ILLINOIS. Thank you, Mr. Chairman. I yield back, Madam Chairwoman.

Chairwoman WATERS. The gentleman from Tennessee, Mr. Kustoff, is recognized for 5 minutes.

Mr. KUSTOFF. Thank you, Madam Chairwoman, and thank you, Mr. Chairman, for appearing today.

I heard your statements in your opening remarks about the coronavirus and certainly in regards to some of the questions that you have had today. I noticed this morning, in a report that Axios listed, they quoted from the Global Port Tracker, and it said that traffic at U.S. ports is expected to decline in February almost 13 percent, and in March, between 9 and 10 percent, year over year.

Now assuming that those numbers are true and correct, what impact, if any, would that have on the retail sector, and what impact, if any, would that have on the overall economy?

Mr. POWELL. I think there is a lot of uncertainty around what the ultimate economic effects will be outside of China, and particularly in the United States. We do expect, consistent with that report, that there would be some effects. The question really will be, what will be the size and scope of them, and also, will they be persistent, or will it be something that just passes through? And ultimately, the bottom-line question for us is, does it represent a material change in the outlook, something that we should react to with monetary policy? That is really the question for us, and it is really

too early to say. We will be monitoring it like everyone else will, very carefully, and that is where we are.

Mr. KUSTOFF. Along those same lines, and also from Axios, they quoted from a Bank of America security report. They said they surveyed 3,000 companies about the global supply chain, and that many companies around the world are looking at relocating. The called it, in the report, a "tectonic shift" in global supply, looking to other areas of South Asia, India, and also North America.

My question to you—first of all, I don't know whether you are familiar with the study, this Bank of America securities study or report? Are those numbers, or those anecdotal statements, consistent with anything that the Federal Reserve is seeing?

Mr. POWELL. I am not familiar with that report, and therefore can't comment on it. I would say there are a number of channels through which this could have an effect, the first of which is just tourism, really. The second is that our ability to export to China is less because there is just less going on there, so exports could go down.

You mentioned supply chains. Many U.S. companies buy intermediate goods as part of creating their final product, so supply chain issues, we don't have any real evidence on that yet. And I would say the last channel is really financial markets; financial markets themselves can be a channel for the transmission of risk off behavior, which can affect economic behavior.

We will be looking at all of that. It is way too early to say what it will amount to. We are just going to have to wait and see. There is no way to be kind of confident of anyone's assessment, and there are a range of assessments.

Mr. KUSTOFF. Based on what you just said, I think I know your answer, but I will ask it anyway. The report mentioned a number of reasons. One is the tariffs between our country and China and the impact that it has had on China and subsidiary companies, but also automation and the increase in automation. Does that sound consistent with relocating these supply chains?

Mr. POWELL. Yes, separate from the questions about the virus, there clearly has been, on the part of American companies, a lot of activity in moving to other jurisdictions. Vietnam, in particular, gets mentioned quite a bit. I saw a report last week. A number of other countries have had American businesses moving their production activities out of China to other locations, and that certainly has happened.

Mr. KUSTOFF. Including the United States.

Mr. POWELL. Yes.

Mr. KUSTOFF. Thank you. Or relocating back to the United States.

I guess, along those same lines, I represent part of Memphis and west Tennessee. In Memphis, just outside my district, there was an announcement Amazon made 2 or 3 weeks ago that they are locating a new facility there. It will bring 1,000 jobs, and incidentally, we had questions on the minimum wage. They are going to start their wages at at least $15-an-hour, plus benefits.

But it talked about these new jobs in combination with automation, automation in terms of packing and shipping. You have talked about your concerns of automation and the effect that will have on

employment in the future. Can you see the two coexisting, for instance, like with this Amazon plant?

Mr. POWELL. Over the last 2½ centuries, we have seen advancing technology, and there has been a concern that it would replace human labor, and that has happened. But what has happened, though, is it has made human labor, over time, more productive. So, there is displacement of current workers, but over time, advancing technology has led to rising incomes. But that doesn't mean there won't be disruptions and a lot of pain for people in the short term, but nonetheless the process over time has led to rising incomes.

Chairwoman WATERS. The gentleman from Florida, Mr. Lawson, is recognized for 5 minutes.

Mr. LAWSON. Thank you, Madam Chairwoman. Mr. Chairman, welcome to the committee.

And I would like for you to explain to me, for the past almost 3 hours, 2 hours and maybe 45 minutes, when you were talking, and members on the committee were speaking in terms of how well the economy is doing, how we have more opportunity for jobs in the economy, when you started speaking, the Dow was up 125 points, and while you were speaking, it went down. Can you tell me why, when something like this occurs, who is listening to your speech this morning in front of the Financial Services Committee that would cause the Dow to go down? Is it because of the cuts in the interest rate? How do you explain it?

Mr. POWELL. I really can't. I am not following the market, as I sit here answering your questions.

Mr. LAWSON. Okay. I know that the President tweeted out something similar, that when you started, the Dow was up, and then the Dow went down. Do you react to that, or it doesn't really mean that much to you?

Mr. POWELL. I'm sorry. Do I—

Mr. LAWSON. Do you react to that? The President tweeted also about how the Dow went down and the cutting of interest rates. Do you react to that, or is it just something that happens?

Mr. POWELL. My colleagues and I are completely focused on using our tools to support the American people, to support the achievement of our goals, and that is really all we are focused on.

Mr. LAWSON. Okay. Explain to me, too, from a staff report they stated that starting in July of last year, about 3 different times, the interest rate was cut by a quarter percent. How do you make the decision? Did that stimulate the economy, when you made those cuts, all the way through October, a quarter percent cut in the interest rate?

Mr. POWELL. We were really looking at a few things when we did that, and yes, the intention was definitely to support the economy. Part of it was to offset the effects of global factors, and there I would say just the slowdown in growth in the global economy just went on and on, and we felt the need to offset that and also take out some insurance against the effect that might have on the United States.

Trade policy uncertainty was weighing on the U.S. economy. We tried to offset any potential effects and take out some insurance there. And the third reason was that we wanted to do what we

could to guard against a more prolonged shortfall of inflation from our symmetric 2 percent objective. We have supported growth to support inflation moving back up.

So, those were the reasons why we did those 3 things, and that is the thinking that we had and that we announced.

Mr. LAWSON. Okay. Could there be a correlation between the growing student crisis and the slowdown of the housing market, which we talked about a great deal, in the last couple of months? As you know, many borrowers of student loans are not able to get homes because of their high debt-to-income ratio. Could that be a signal that there is a great need to address, first, the mounting student debt crisis?

Mr. POWELL. I would say that the rising student debt is certainly a concern. It has been rising fast and is now large. There is increasing evidence that shows that students who can't pay that and can't service that debt have difficulty having normal economic lives and buying homes and things like that.

I haven't seen any evidence that would suggest that it is an important factor currently today, driving the housing industry. I would say the housing industry has actually been—activity in housing has been moving up here over the course of the last 7, 8 months, as the effect of lower rates and just an overall good labor market and things like that are showing up in more house building and also housing sales.

Mr. LAWSON. My time is about to expire. I have a lot of students in my district, in the Fifth Congressional District, many of them coming out of school. One of the things they are concerned about is the housing issue, with going into the job market, how can they best share in the American Dream like their parents without getting help from their parents?

And so with that, Madam Chairwoman, I yield back.

Chairwoman WATERS. Thank you. The Chair wishes to remind Members that we have a hard stop at 1 p.m. today. The gentlewoman from Massachusetts, Ms. Pressley, will be the final Member to ask questions today.

With that, the gentleman from Indiana, Mr. Hollingsworth, is recognized for 5 minutes.

Mr. HOLLINGSWORTH. I appreciate the time, and I, both in private and in public, have been extremely complimentary of the work that you and your colleagues have done, not only in calibrating conditions to match the current economy but also in the framework by which you make many of your decisions and how you present that in public. I really appreciate that.

And I know a cornerstone of what you have been trying to do at the Fed is bring even more transparency to the Fed in some of the decision-making, and the press conferences that you have had have added a lot of transparency to it.

It is hard for me to understand some of the challenges in CCAR and the stress capital buffers and some of the more vague language or inability to pin down a timeline for changes to that, expectation of changes to that, especially when 2020 CCAR has already started.

I know Mrs. Wagner also asked about this. I had asked Vice Chair Quarles about this in December. I think I sent a letter to you and Quarles, signed by every member on this side of the aisle on

Financial Services, just trying to get a feel for, what are the changes that are going to be made, what is the timeline for those that would undertake these stress tests, getting those changes. They are trying to make decisions with trillion-dollar balance sheets, multi-billion-dollar balance sheets, trying to make their plans.

This time is now upon us and I feel like we are still being very vague about what is coming down the pike and when we can expect even, whatever that is that is coming down the pike, when we could expect that to arrive before us.

And so, I wondered if you might give some more color on that, or give some reasons why you and your colleagues have been a little more hesitant to answer that?

Mr. POWELL. I can't give more clarity than exists, so I will just say again, we do expect that the core of the stress capital buffer will be incorporated into the stress test this year, and we will do that in a way that is timely for CCAR.

Mr. HOLLINGSWORTH. Okay. In our previous conversations, I think we had had just kind of a general agreement, and don't let me overstate that if that is incorrect, that some of the aspects of this needed to be calibrated. We put a lot of this into play post-Dodd-Frank. We felt like we were doing the right thing in doing so, but perhaps we either had unintended effects, maybe the intended effects were not as great as we thought they would be, or perhaps this wasn't the area we needed to focus on. And I think we had agreed that some of this requires significant calibration going forward.

Do you expect that there will be further review and calibration of these tests to reflect either current conditions, or, alternatively, what we have learned since the crisis about what works and what doesn't work, and what may be adding to significant reserves at many of these institutions?

Mr. POWELL. My strong view is that capital, the levels of capital, particularly in the largest institutions, are about right, and there is not a need to raise or to lower them, and that should reflect that.

Mr. HOLLINGSWORTH. Just out of curiosity, tell me, when you say, "about right," buttress that with data. Help me understand kind of what do you look at to say this means, "about right?"

Mr. POWELL. Capital levels are much higher and the quality of our capital is much higher.

Mr. HOLLINGSWORTH. That is undoubtedly true, but I think we all agree that during the crisis, or pre-crisis, capital levels weren't adequate. So to say that they are higher isn't definitive in terms of, are they too high? Are they still too low? Are they about right? What do you use to indicate this is the "about right" level of capital?

Mr. POWELL. The stress test, for one. You look at the stress test, and you throw a scenario that is equivalent or maybe even a little stronger than what happened during the global financial crisis, and you see, do these institutions have the wherewithal to remain reasonably well-capitalized and really well-capitalized enough to continue to have the confidence of the markets? That is really the question. They have to be above certain minimums, and they do, but not by some giant margin. It doesn't suggest that capital is too

high. It suggest that it is just about right. And the stress tests are probably a great test for that.

Mr. HOLLINGSWORTH. Yes. I think you could see how it might be concerning for institutions that feel like they are caught in a bit of a circular logic, right? We can try these stress tests, and then if they chin the bar on the stress test then we believe that is right, that is exactly right, without going back and changing some of the underlying factors that go into the stress test.

You can always say that, right? You can always say as long as they chin the bar that it is about right, no matter what the bar is. They want to go back and just look underneath the hood and say, gosh, are these assumptions still correct? The way that we have done these stress tests, is it the right way to do that? Right?

Maybe in a relative sense, yes, it is higher, the capital is higher than what the stress tests have indicated, but in an absolute sense, we are not asking the question, is this testing the right thing and are we doing this test correctly, and does it include all the right variables? And I think that is what they are looking for, is just further clarification on when we can expect that review, comprehensively, that the Fed has talked about for so long.

Mr. POWELL. I think we have been doing that all along. We had a conference on the stress test last summer with experts both internal and external—academics, people from the banks. We are doing that all the time. Everything we do with the stress test is transparent, public, out for comment, things like that. Maybe not ex ante, but people can look back. It is not like we haven't adjusted the stress test.

Chairwoman WATERS. The gentlewoman from Massachusetts, Ms. Pressley, is recognized for 5 minutes.

Ms. PRESSLEY. Thank you, Madam Chairwoman, and I also want to thank the activists in the room who have been organizing for a more responsive Fed. I know, having been raised by a tenants' rights organizer, that activism can be a full-time job, and so we thank you for taking it on, and I thank the Chairman for testifying before the committee today.

Just as with the Fed now, the decisions you make do impact everyday working people. Your decisions impact how many jobs we have, who has what jobs, how much they are being paid, and who is most harmed when unemployment is higher.

In the past, you have said, "We want prosperity to be widely shared. We need policies to make that happen." However, the Fed's approach has never successfully ensured enough well-paying jobs are available to everyone who wants to work, even for a small time.

In a 1944 address, FDR called for a second Bill of Rights, which included the right to a useful and financially rewarding job. Justice Thurgood Marshall argued that the right to a job is secured by the 14th Amendment. And Dr. Martin Luther King called on the government to guarantee a job to all people who want to work and are able to work. Dr. King's legacy is often reduced to just one speech, and the March on Washington often mischaracterized. The March on Washington was actually the March on Washington for Jobs and Freedoms. It was a march for economic justice.

And I take special claim to the fact that Dr. King and Coretta actually met in Boston. I represent Boston, and I don't think that

she gets enough credit for the role that she played in the movement. And after Dr. King's assassination, Coretta Scott King picked up the mantle, pushing the Fed to adopt a full employment mandate, and was actually standing behind President Carter as he signed the Humphrey-Hawkins Act into law, and that is the reason that you are here today.

In the interest of time, if you would indulge me and answer as succinctly as possible, yes or no, Mr. Chairman, given persistent concerns about inflation, do you believe that the Federal Reserve can achieve full employment, and by full employment, I mean anyone who wants to work and can work will have a job available to them?

Mr. POWELL. First, thank you for that history. I didn't know that.

That is our goal. That is what we are working to do at all times. And I think, we are never going to say we have accomplished that goal, but we certainly have made some progress.

Ms. PRESSLEY. I will take that as a yes. Could a Federal jobs guarantee succeed where the Federal Reserve has not? Yes or no?

Mr. POWELL. That is a hard one to answer. I don't know.

Ms. PRESSLEY. Guaranteeing a job, that is the history that I was providing, that anyone who wants to work and is able to work—

Mr. POWELL. I think the numbers on that—

Ms. PRESSLEY. Okay. Chairman Powell, by all indications, the U.S. economy has had output well below potential for 8 of the past 10 years, and for most of the decade prior. Is it true that most of that period has seen unemployment well above target, while we almost never have seen inflation above target?

Mr. POWELL. That is true.

Ms. PRESSLEY. Okay. Meanwhile, Black unemployment remains double that of white unemployment. Now, the Fed began raising rates in 2016, even though inflation was still below target, and when rates go up, unemployment tends to as well. Did the Fed consider how raising rates would disproportionately impact those who were already struggling to secure employment, like communities of color, individuals who were formerly incarcerated, and our immigrant neighbors?

Mr. POWELL. I would say that unemployment has continued to go down quite significantly since we began to raise rates at the end of 2016, actually the end of 2015.

Ms. PRESSLEY. But again, did the Fed consider how raising rates would disproportionately impact those who were already struggling to secure employment?

Mr. POWELL. I think our consideration was really that the right thing to do was to get monetary policy back toward a place where it reflected an economy that had recovered quite a bit, for the benefit of all people, including low- and moderate-income people, including minorities.

Ms. PRESSLEY. A lot of people are still recovering. But in the interest of time, given that there have been no signs of the economy overheating since then, and you are now cutting rates, is it possible you began cutting rates too soon?

Mr. POWELL. I think history will judge that. We have to make the decisions in real time. Though we really have learned some-

thing since then, which is that unemployment can be lower than most people thought, without inflation.

Ms. PRESSLEY. Bearing that in mind, knowing what you know now, would you still have supported raising the interest rates when the Fed did?

Mr. POWELL. I did support it then, and hindsight is 20–20. I think you have to judge those decisions on what we knew at the time.

Ms. PRESSLEY. Would more Americans have jobs today if the Fed had not increased rates over the past 3 years?

Mr. POWELL. I don't know. We are at a 50-year low. That is a fair question.

Ms. PRESSLEY. Thank you.

Mr. POWELL. Thank you.

Chairwoman WATERS. I would like to thank Chairman Powell for his testimony today.

The Chair notes that some Members may have additional questions for this witness, which they may wish to submit in writing. Without objection, the hearing record will remain open for 5 legislative days for Members to submit written questions to this witness and to place his responses in the record. Also, without objection, Members will have 5 legislative days to submit extraneous materials to the Chair for inclusion in the record.

Thank you all, and this hearing is now adjourned.

[Whereas, at 1:02 p.m., the hearing was adjourned.]

A P P E N D I X

February 11, 2020

For release at
8:30 a.m. EST
February 11, 2020

Statement by

Jerome H. Powell

Chair

Board of Governors of the Federal Reserve System

before the

Committee on Financial Services

U.S. House of Representatives

February 11, 2020

Chairwoman Waters, Ranking Member McHenry, and other members of the Committee, I am pleased to present the Federal Reserve's semiannual *Monetary Policy Report*.

My colleagues and I strongly support the goals of maximum employment and price stability that Congress has set for monetary policy. Congress has given us an important degree of independence to pursue these goals based solely on data and objective analysis. This independence brings with it an obligation to explain clearly how we pursue our goals. Today I will review the current economic situation before turning to monetary policy.

Current Economic Situation

The economic expansion is well into its 11th year, and it is the longest on record. Over the second half of last year, economic activity increased at a moderate pace and the labor market strengthened further, as the economy appeared resilient to the global headwinds that had intensified last summer. Inflation has been low and stable but has continued to run below the Federal Open Market Committee's (FOMC) symmetric 2 percent objective.

Job gains averaged 200,000 per month in the second half of last year, and an additional 225,000 jobs were added in January. The pace of job gains has remained above what is needed to provide jobs for new workers entering the labor force, allowing the unemployment rate to move down further over the course of last year. The unemployment rate was 3.6 percent last month and has been near half-century lows for more than a year. Job openings remain plentiful. Employers are increasingly willing to hire workers with fewer skills and train them. As a result, the benefits of a strong labor market have become more widely shared. People who live and work in low- and middle-income communities are finding new opportunities. Employment gains have been broad based across all racial and ethnic groups and levels of education. Wages have been rising, particularly for lower-paying jobs.

Gross domestic product rose at a moderate rate over the second half of last year. Growth in consumer spending moderated toward the end of the year following earlier strong increases, but the fundamentals supporting household spending remain solid. Residential investment turned up in the second half, but business investment and exports were weak, largely reflecting sluggish growth abroad and trade developments. Those same factors weighed on activity at the nation's factories, whose output declined over the first half of 2019 and has been little changed, on net, since then. The February *Monetary Policy Report* discusses the recent weakness in manufacturing. Some of the uncertainties around trade have diminished recently, but risks to the outlook remain. In particular, we are closely monitoring the emergence of the coronavirus, which could lead to disruptions in China that spill over to the rest of the global economy.

Inflation ran below the FOMC's symmetric 2 percent objective throughout 2019. Over the 12 months through December, overall inflation based on the price index for personal consumption expenditures was 1.6 percent. Core inflation, which excludes volatile food and energy prices, was also 1.6 percent. Over the next few months, we expect inflation to move closer to 2 percent, as unusually low readings from early 2019 drop out of the 12-month calculation.

The nation faces important longer-run challenges. Labor force participation by individuals in their prime working years is at its highest rate in more than a decade. However, it remains lower than in most other advanced economies, and there are troubling labor market disparities across racial and ethnic groups and across regions of the country. In addition, although it is encouraging that productivity growth, the main engine for raising wages and living standards over the longer term, has moved up recently, productivity gains have been subpar

throughout this economic expansion. Finding ways to boost labor force participation and productivity growth would benefit Americans and should remain a national priority.

Monetary Policy

I will now turn to monetary policy. Over the second half of 2019, the FOMC shifted to a more accommodative stance of monetary policy to cushion the economy from weaker global growth and trade developments and to promote a faster return of inflation to our symmetric 2 percent objective. We lowered the federal funds target range at our July, September, and October meetings, bringing the current target range to 1-1/2 to 1-3/4 percent. At our subsequent meetings, with some uncertainties surrounding trade having diminished and amid some signs that global growth may be stabilizing, the Committee left the policy rate unchanged. The FOMC believes that the current stance of monetary policy will support continued economic growth, a strong labor market, and inflation returning to the Committee's symmetric 2 percent objective. As long as incoming information about the economy remains broadly consistent with this outlook, the current stance of monetary policy will likely remain appropriate. Of course, policy is not on a preset course. If developments emerge that cause a material reassessment of our outlook, we would respond accordingly.

Taking a longer view, there has been a decline over the past quarter-century in the level of interest rates consistent with stable prices and the economy operating at its full potential. This low interest rate environment may limit the ability of central banks to reduce policy interest rates enough to support the economy during a downturn. With this concern in mind, we have been conducting a review of our monetary policy strategy, tools, and communication practices. Public engagement is at the heart of this effort. Through our *Fed Listens* events, we have been hearing from representatives of consumer, labor, business, community, and other groups. The February

Monetary Policy Report shares some of what we have learned. The insights we have gained from these events have informed our framework discussions, as reported in the minutes of our meetings. We will share our conclusions when we finish the review, likely around the middle of the year.

The current low interest rate environment also means that it would be important for fiscal policy to help support the economy if it weakens. Putting the federal budget on a sustainable path when the economy is strong would help ensure that policymakers have the space to use fiscal policy to assist in stabilizing the economy during a downturn. A more sustainable federal budget could also support the economy's growth over the long term.

Finally, I will briefly review our planned technical operations to implement monetary policy. The February *Monetary Policy Report* provides details of our operations to date. Last October, the FOMC announced a plan to purchase Treasury bills and conduct repo operations. These actions have been successful in providing an ample supply of reserves to the banking system and effective control of the federal funds rate. As our bill purchases continue to build reserves toward levels that maintain ample conditions, we intend to gradually transition away from the active use of repo operations. Also, as reserves reach durably ample levels, we intend to slow our purchases to a pace that will allow our balance sheet to grow in line with trend demand for our liabilities. All of these technical measures support the efficient and effective implementation of monetary policy. They are not intended to represent a change in the stance of monetary policy. As always, we stand ready to adjust the details of our technical operations as conditions warrant.

Thank you. I am happy to take your questions.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Waters:

Monetary Policy

1. Post-financial crisis, IOER is supposed to define the top end of the benchmark fed funds rate while the actual fed fund rate floats in the middle between IOER and the reverse repo rate. Since summer 2019, the Fed has pushed down the IOER four times [1]. Does the Fed expect further adjustments to the IOER rate in the coming year?

[1] "Interest Rate on Excess Reserves". Federal Reserve Bank of Saint Louis. Accessed on Feb. 5, 2020. https://fred.stlouisfed.org/series/IOER

In a monetary policy implementation regime with ample reserves, control over the federal funds rate and other short-term interest rates is exercised primarily through the setting of administered rates. We used technical adjustments to the administered rates—interest rate on excess reserves (IOER) and the overnight reverse repurchase (ON RRP) rates—in the past to foster trading in the federal funds market at rates well within the target range, and those adjustments worked as expected. In the future, the Federal Open Market Committee (FOMC) may again find it appropriate to make a technical adjustment to IOER, or both administered rates, to maintain the federal funds rate well within the target range in the event there is persistent upward or downward pressure on overnight funding rates, which may have implications for rate control. Such adjustments to administered rates are technical measures and do not represent a change in the stance of monetary policy.

2. In your press conference after the January FOMC meeting, you seemed to indicate that 2 percent is not a ceiling for inflation, especially since inflation has been running below 2 percent for a while despite being well into another round of expansion. Since establishing a 2 percent objective for inflation in 2012, Fed officials have repeatedly clarified that the target is symmetric, the inflation rate has remained stubbornly below 2% despite moderate wage gains, low unemployment, and high labor force participation. In a speech in late February, Governor Brainard called on the Fed to adopt "flexible inflation averaging," which will clarify that the Fed may temporarily allow inflation to run above two percent to make up for the prolonged periods that inflation has been below two percent. Will the Fed incorporate this inflation targeting methodology coming out of its monetary policy strategy review, and if not, why not?

In the review of monetary policy strategy, tools, and communication practices, we have been assessing our current framework for monetary policy. Policymakers agree that our current framework served the FOMC well in the aftermath of the financial crisis and that it provides a strong foundation for us to pursue our maximum employment and price stability goals. In addition, the current framework has been flexible enough to allow the FOMC to choose policy actions that best support its objectives in a wide array of economic circumstances. Because of the downside risk to inflation and employment associated with the effective lower bound (ELB) on the policy interest rate, most FOMC participants are open to the possibility that the dual

mandate objectives may be best served by strategies that deliver inflation rates that over time are, on average, equal to the FOMC's longer-run objective of 2 percent. Promoting such outcomes may require aiming for inflation somewhat above 2 percent when the policy rate is away from the ELB, recognizing that inflation will tend to be lower than 2 percent when the policy rate is constrained by the ELB. At FOMC meetings in 2019, we discussed several alternative strategies, including ones that make up for past inflation shortfalls and others that respond more aggressively to below-target inflation than to above-target inflation. Our review is not yet completed so we have not yet determined what policy strategy we will adopt, but we will announce and explain our findings to the public when we conclude the review.

Policy Normalization

3. Three years ago, the Fed decided the economy was healthy enough to start shrinking its $4.5 trillion balance sheet. However, following the repo market disruption in September 2019, the Fed embarked on a new program to buy $60 billion of short-term Treasury bills from banks a month, increasing the reserves available to banks to support repo operations and other market functions.[1] As of January 15, the Fed balance sheet was holding about $4.18 trillion.[2] What is the Fed's current timeline for completing balance sheet normalization?

> **A. The Fed has repeatedly stated that this balance sheet expansion will taper off once there are "ample" reserves to conduct monetary policy. Can you clarify what is considered an "ample" level of reserves?**

[1] "Credit and Liquidity Programs and the Balance Sheet". Board of Governors of the Federal Reserve System. Accessed on Feb. 5, 2020. https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm
[2] Brian Cheung. "Powell: 'Hard to say' if balance sheet expansion is affecting risk assets". Yahoo Finance. Jan. 30, 2020. https://finance.yahoo.com/news/federal-reserve-powell-balance-sheet-expansion-not-designed-to-affect-risk-assets-120815002.html

The plan detailed in October 2019 put us on a path toward achieving a sustainable level of reserves without the need for active repurchase agreement (repo) operations around the middle of this year. The plan worked well in supplying a quantity of reserves that is considered ample, ensuring smooth functioning of money markets and maintaining the federal funds rate in the FOMC's target range. Reserves stood around $1.7 trillion in early March and our intention was to slow the pace of bill purchases in the coming months and eventually transition to smaller purchases that would offset underlying growth in non-reserve liabilities to maintain ample reserves. Then, severe strains emerged in financial markets due to the COVID-19 pandemic around mid-March, and the Federal Reserve took a number of actions to address the strains, which led to a substantial increase in the level of reserves. Reserves are currently above $3 trillion. Reserves balances are projected to increase and remain elevated in the near term given the ongoing purchases of Treasury and agency mortgage-backed securities (MBS), repo operations, and take-up at the lending facilities. There is, of course, high uncertainty around economic outcomes and the policy path ahead, which affects the level of reserves. However, when the size of the balance sheet is normalized, our intention is for reserves to be at a level that

is no larger than necessary to conduct monetary policy efficiently and effectively. In the longer run we expect the balance sheet to grow in line with the growth in nominal GDP. As always, we will be transparent about all of our plans and communicate them well in advance.

4. You've stated repeatedly that this expansion should not be called QE4, yet we've seen an injection of $390 billion over a five-month period. Are you concerned that the market is treating this as a QE program? Do you think the stock market rise is linked in any way to this inflow of cash? How are you anticipating addressing another "taper tantrum" or other adverse market reaction once the Fed scales down Treasury purchases and active repo operations in the second quarter of 2020?

In October 2019, the FOMC judged that it was prudent to increase the quantity of reserves in the banking system to levels at or above those that prevailed in early September 2019. To accomplish this, the FOMC authorized the Open Market Desk (Desk), which carries out trading activities pursuant to the FOMC's direction, to purchase Treasury bills at a pace of $60 billion per month and to conduct overnight and term repo operations to maintain ample reserves and address pressures in money markets that could adversely affect policy implementation.

The Federal Reserve does not view its repo operations as quantitative easing. In a repo operation, the Federal Reserve receives Treasury securities as collateral. The lender of the security continues to face the interest rate risk associated with it, unlike a quantitative easing operation in which the security seller faces no future risk from the security once it is sold to the Federal Reserve.

Our bill purchases and repo operations were successful in maintaining ample reserves, keeping the federal funds rate within the FOMC's target range, and ensuring smooth functioning of money markets. Reserves stood around $1.7 trillion when COVID-19-related strains emerged in financial markets. As a result of the number of Federal Reserve actions to support market functioning, reserves currently stand above $3 trillion and are expected to increase in the near-term given the ongoing market-functioning related purchases of Treasury and agency MBS, repo operations, and participation in our emergency lending facilities.

In contrast to the balance sheet expansion conducted in response to the financial crisis, neither the operations in response to the market disruption in September 2019 nor those in response to the COVID crisis were focused putting downward pressure on longer-term interest rates.

5. On January 29, you stated during a news conference on interest rate policy that the ongoing expansion of the Fed's balance sheet is not designed to affect risk assets.[1] What effects, if any, may be felt in the economy through the expansion of the Fed's balance sheet?

[1] Ibid.

Please see response to question 4.

Repo Market Interventions

6. Has the Fed yet decided if it will establish a standing repo facility, even after it reduces its balance sheet? If the Fed's plan to gradually reduce its intervention extends beyond the current timeline, will the Fed decide to establish a standing repo facility?

> **A. Former FDIC Chairman Sheila Bair has expressed skepticism that banks were constrained from intervening in repo markets due to their liquidity and capital requirements arguing that, "a bank is not truly liquid if it can't deploy its cash when market conditions dictate."[1] Window-dressing is the practice by which regulated entities adjust their activity around an anticipated reporting or disclosure date, with the objective of appearing safer or reducing bank capital requirements. In order to address this issue, regulators have started to move away from these point-in-time reporting requirements to reporting averages over a quarter or year, which reduces the ability of entities to artificially adjust their numbers to minimize their capital requirements. G-SIB surcharges, however, continue to be evaluated using point in time reporting, and former Fed Governor Dan Tarullo has urged further adoption of using averages instead of point in time reporting.[2] The Fed's own analysis has shown that G-SIBs do try to reduce their capital surcharges by adjusting activity around the end of the fourth quarter. Vice Chair Quarles said recently that, "Preliminary analysis suggests that changing those [year-end] inputs to averages may be helpful. If we were to propose that change, it would not alter the stringency of the [G-SIB] surcharge."**

[1] Sheila Bair, "Why banks shouldn't blame the 'repo rupture' on regulation," Yahoo! Finance, Oct. 18, 2019, https://finance.yahoo.com/news/sheila-bair-repo-market-malfunctions-143450318.html.
[2] Daniel K. Tarullo, "The September Repo Price Spike: Immediate and Longer-Term Issues," Dec. 5, 2019, https://www.brookings.edu/wp-content/uploads/2019/11/BrookingsTalkonRepoMarketDisruption.pdf.

The Federal Reserve has not reached any decisions regarding a standing repo facility. In previous discussions, policymakers had noted that such a facility could be helpful as a backstop in addressing strains in money markets and in supporting effective policy implementation. However, they also noted a number of challenges in designing such a facility to avoid unintended consequences. Over recent weeks, the focus in conducting repo operations has shifted from considerations related to policy implementation to addressing the strains in money markets that emerged as concerns about the spread of COVID-19 intensified. These concerns resulted in severe stress in repo and money markets, particularly in March. To address these concerns, the Desk conducted very large overnight and term repo operations. More recently, a range of actions taken by the Federal Reserve along with fiscal measures approved by the Congress and the Administration have helped to address some of the concerns regarding the economic and financial effects of the spread of the virus. Conditions in repo markets and other short-term funding markets have improved substantially in recent weeks and take-up at the Federal Reserve's repo operations has fallen to low levels.

7. Should we be concerned that heightened market volatility around key reference dates, like the repo market crunch which coincided with corporate tax deadlines, a sign that banks are not as liquid as they appear to be?

The Federal Reserve has taken a number of steps to address market functioning issues associated with the evolving situation related to the spread of COVID-19, and continues to monitor market conditions closely. So far, the actions that the Federal Reserve has taken appear to be dampening some of the volatility in short-term funding markets.

More broadly, the largest financial institutions entered the current challenging period from a position of relative strength, particularly as compared to the global financial crisis. U.S. global systemically important banks' (GSIBs) liquidity positions remain resilient across a broad range of stress scenarios and time horizons. The willingness of banks to deploy opportunistically their liquidity to take advantage of market dislocations during sudden periods of uncertainty depends upon many factors. Banks' internal risk management and governance practices determine the extent to which and how rapidly banks will respond to events like the September repo market volatility. This includes constraints such as internal limits exception processes and the current liquidity buffer composition (for example cash versus securities). Supervisory and regulatory considerations also play a role.

Separately, given recent events the Federal Reserve and other banking agencies have publically encouraged firms to use their liquidity buffers to support the smooth functioning of markets.

8. Should the G-SIB surcharge rule be modified to incorporate averages instead of year-end inputs so that U.S. G-SIBs do not engage in window dressing? Can this be done without reducing capital requirements for G-SIBs? What's the timetable for such a change?

The Federal Reserve Board's (Board) GSIB surcharge rule, adopted in 2015, identifies U.S. GSIBs based on indicators associated with systemic risk. Under the GSIB surcharge rule, a firm calculates its indicators at the end of each calendar year that determine whether it is a U.S. GSIB and the size of any applicable risk-based capital surcharge. Some indicators are measured based on data collected daily over the preceding quarter or calendar year, but the majority of indicators are reported as spot values at the end of the year.

Consistent with its longstanding practice, the Board periodically evaluates its regulations, including the GSIB surcharge, to ensure they are working as intended and are consistent with the aims of efficiency, transparency, and simplicity. Measuring certain indicators as of quarter-end and calculating the GSIB surcharge as of year-end was done to reduce burden and to be consistent with similar capital surcharge frameworks in other jurisdictions. This approach may not appropriately reflect a firm's systemic profile, however, if year-end values are not representative of the firm's risk profile throughout the calendar year. Board staff are assessing the measurement approach used in the GSIB surcharge rule.

With regard to the level of capital requirements, maintaining the safety and soundness of the largest banking firms is fundamental to maintaining the stability of the U.S. financial system and

the broader economy. The Board expects that any potential refinements to the GSIB surcharge rule would preserve strong capital requirements for the U.S. GSIBs.

9. The Basel Committee has previously encouraged bank regulators to address window dressing concerns for capital requirements.[1] How do other jurisdictions, like Europe, compare to the United States on this issue, and can the Federal Reserve, through the Basel Committee and the Financial Stability Board, further encourage your international counterparts to address this concern too?

[1] Reuters, "Basel proposes crack down on banks inflating capital measure," Dec. 13, 2018, https://www.reuters.com/article/us-basel-banks-regulations/basel-proposes-crack-down-on-banks-inflating-capital-measure-idUSKBN1OC280.

As a participant in the development of international regulatory standards in international fora, including the Basel Committee on Banking Supervision (Basel Committee) and the Financial Stability Board (FSB), the Federal Reserve and the other U.S. agencies can influence the standards in ways that promote the financial stability of the United States and the competitiveness of U.S. firms. For example, in this role, the Federal Reserve, along with the other U.S. bank regulatory agencies, has promoted standards to mitigate the incentive for firms to adjust exposures at period-end to temporarily improve regulatory measures (period-end adjustment), also known as window dressing. Beyond the benefits to our economy from strong standards in the United States, the financial stability of the U.S. is also enhanced when foreign banks are subject to strong standards that apply to their global consolidated operations.

With respect to period-end adjustment, most other jurisdictions, including member states of the European Union, use a point-in-time measurement for total leverage exposure to measure the denominator of the international leverage ratio. The United States uses an average of daily values over a calendar quarter for that measure, eliminating the incentive for firms to adjust exposures at period-end to temporarily improve leverage ratios.

The Federal Reserve supported the Basel Committee's revisions to leverage ratio disclosure requirements (released in June 2019 and effective in 2022) with respect to the disclosure of the average of daily values of securities financing transactions, which is an input to the leverage ratio. Further, the Federal Reserve has advocated for the FSB to assess the effects of period-end adjustment in other contexts, including its on-going review of the prudential standards enacted in response to the global financial crisis.

Community Reinvestment Act (CRA)

10. In a January speech at the Urban Institute, Governor Brainard described the Federal Reserve's development of a database to evaluate "how to strengthen the [CRA] by using metrics to provide greater certainty about how activities will be evaluated." In your testimony, you indicated that you were "not totally sure" whether you have used this database to evaluate the CRA proposal advanced by the OCC and FDIC. Would you commit to using this database to evaluate how activities will be evaluated?

The Board is committed to Community Reinvestment Act (CRA) modernization that focuses on strengthening the regulations in fulfillment of the spirit of the law:

- To serve low- and moderate-income communities,
- To increase clarity, consistency, and transparency of what counts for CRA credit, how it counts and where it counts,
- To tailor an approach to account for differences in banks' sizes and business models, local markets, needs, and opportunities, and expectations across business cycles, and
- To minimize burden, where possible, and tailor collection and reporting requirements in the process of modernization.

To help inform these objectives, Board staff created the CRA Analytics Data Tables, which were published in early March 2020. The tables combine Home Mortgage Disclosure Act (HMDA) data and CRA small business and small farm data, and manually extracted data from CRA performance evaluations. These data are supplemented by third-party vendors to include bank attributes (e.g., deposits, branching, demographic, etc.) and other information, and they provide insights on the interaction between retail loans, performance evaluations, and assessment areas.

Our intention is to inform CRA regulation and supervision with relevant data as much as possible to help improve transparency and ex ante certainty in the examination process. While useful, these data are limited in that they cannot be applied in a full analysis of the specific proposals made by the Office of the Comptroller the Currency (OCC) and Federal Deposit Insurance Corporation (FDIC) given differences in the OCC/FDIC approach to performance evaluation relative to the approach analyzed in the Federal Reserve data tables.

Volcker Rule

11. In August 2019, federal regulators, including the Federal Reserve, finalized significant revisions to the Volcker Rule.[1] [2] The rule states that additional Volcker Rule reforms will be addressed in a future rulemaking. During your testimony, you indicated that your proposal is "entirely consistent with both the letter and the spirit of the law." In January, federal banking agencies proposed additional revisions to the Volcker Rule by allowing banks to invest in the same risky assets that contributed heavily to the financial crisis and to become more entangled in private equity and hedge funds. Critics have characterized the rule as effectively undoing the Volcker Rule's prohibition on speculative proprietary trading with federally insured deposits. What data or specific insights does that Federal Reserve have to suggest that weakening the Volcker Rule will not lead to another financial catastrophe similar to the one American taxpayers experienced in 2008?

[1] Federal Reserve, OCC, FDIC, SEC, and CFTC, joint statement, "Agencies Finalize Changes to Simplify Volcker Rule," press release, Oct. 8, 2019.
[2] For example, see Pete Schroeder, "U.S. regulators hand Wall Street a major win with stripped-down 'Volcker Rule'," Reuters, Aug. 20, 2019. Also see Statement by FDIC Board Member Martin Gruenberg, Aug. 20, 2019 ("The final rule before the FDIC Board today would effectively undo the Volcker Rule prohibition on proprietary trading by severely narrowing the scope of financial instruments subject to the Volcker Rule. It would thereby

allow the largest, most systemically important banks and bank holding companies to engage in speculative proprietary trading funded with FDIC-insured deposits.")

The Volcker Rule prohibits banking entities from engaging in proprietary trading and limits a banking entity's ability to sponsor, invest in, and have other relationships with a private equity fund or hedge fund (a "covered fund"). At the same time, the statute preserves the ability of banking entities to provide customers critical banking and financial services.

Since the regulations implementing the Volcker Rule were finalized in 2013, the rule has led to compliance uncertainty and imposed limits on certain banking and financial services and activities that the Volcker Rule was not intended to restrict. To address these concerns, the Board, OCC, FDIC, Commodity Futures Trading Commission, and Securities and Exchange Commission (together, the agencies) simplified requirements for the proprietary trading restrictions in November 2019 in a manner that preserves the core prohibition on proprietary trading, while providing greater certainty to banking entities that engage in other activities permitted by statute (such as market-making, underwriting, and hedging).

On January 30, 2020, the agencies issued a proposal to modify regulations implementing the Volcker Rule's prohibition on banking entities' activities related to covered funds. The proposal would improve the Volcker Rule's treatment of foreign funds, simplify and clarify operation of the rule, and permit banking entities to engage in additional fund activities that do not present the risks that the Volcker Rule was intended to address. However, the proposal would maintain the core statutory restrictions on sponsoring, investing in, and having certain relationships with covered funds, while allowing banking entities to engage in activities like extending credit and providing banking and financial services to their customers. The agencies will carefully consider all comments on the covered funds proposal.

Leverage Lending

12. The leverage lending market has increased up to 80% over the past ten years, and this increase is primarily fueled by the same practices – lax underwriting standards, standardized loan terms, and funding companies with higher ratios of debt to income – that led to the financial crisis of 2008. On January 31, 2020, the Federal Reserve, OCC and FDIC issued the Shared National Credit Review report, which found risk remains elevated in leveraged loans.[1] Increasingly, leveraged loans are being used by non-bank institutions such as private equity firms, which fund acquisitions of highly indebted companies with weak credit ratings. In your testimony, you reiterated the Fed's concern and said you were monitoring lending on behalf of a "sophisticated investor that is stably funded, we hope." Beyond monitoring, what specific actions is the Fed or FSOC taking to address these concerns?

[1] "Shared National Credit Review finds risk remains elevated in leveraged loans." Joint Press Release. Board of Governors of the Federal Reserve System. Federal Deposit Insurance Corporation. Office of the Comptroller of the Currency. Jan. 31, 2020. https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200131a.htm

The Federal Reserve dedicates substantial resources to provide oversight of leveraged loans in supervised institutions and closely supervises institutions with leveraged loan exposures through processes such as the Shared National Credit (SNC) review. We use the SNC Program to identify the portion of leveraged loans held by non-bank lenders, and we also examine banking organizations that lend to non-bank institutions. In addition, Federal Reserve staff performs ongoing analysis to assess and understand the risks within the broader leveraged lending market.

The Federal Reserve does not have the authority to regulate non-bank financial institutions such as private-equity firms. The Treasury Secretary serves as chair of the Financial Stability Oversight Committee (FSOC) and is best placed to answer questions regarding the FSOC's work on the leveraged lending market.

13. Does the continued growth in leveraged lending warrant reconsideration of activating the countercyclical capital buffer?

The Federal Reserve continues to monitor developments in the leveraged lending market, and we have been attentive to the risks of leveraged loans and corporate debt in general, noting the issue in several speeches, testimony, the June 2020 Monetary Policy Report, and in our Financial Stability Reports, published twice a year. Highly levered companies may experience greater strains during a downturn than those with less leverage, and we are closely monitoring the effects of those strains on banks and other financial institutions. Over the past decade, U.S. banks of all sizes have built up substantial buffers of capital and liquidity in excess of their minimum requirements. Our recent stress tests show banks have enough capital to absorb significantly higher-than-normal related losses and continue to lend to creditworthy borrowers.

The Federal Reserve is committed to use its full range of tools to support the U.S. economy, particularly in this challenging time. Consistent with that goal, the Federal Reserve is encouraging banks to use their capital and liquidity buffers as they lend to households and businesses who are affected by the coronavirus.

The Countercyclical Capital Buffer (CCyB) is one of the many prudential tools available to protect economic and financial stability. It is currently set at zero, its minimum value. A low value of the CCyB allows banks to use their capital to increase lending to households and businesses who are affected by the coronavirus and undertake other supportive actions in a safe and sound manner, which we encourage them to do.

14. How does the Fed reconcile the concern about nonbank leveraged lending with its loosening of Volcker Rule restrictions that prevented banks from investing in private equity firms and hedge funds?

While the recent revisions to the rules implementing section 13 of the Bank Holding Company Act (Volcker Rule) include new exclusions from the definition of "covered fund," such as the credit fund exclusion, the agencies put in place certain parameters to tailor the scope of the exclusion. For example, the credit fund exclusion only allows banking entities to use a fund structure to extend credit, similar to what banking entities can already perform directly under applicable federal banking laws and regulations.

Financial Deregulation

15. According to data from the Federal Reserve Bank of New York, Tier 1 leverage ratios at the largest banks have dropped steadily during your tenure as chair – almost 90 basis points since their peak in 2016. That may not sound like much, but it represents losing almost one-quarter of the gains in bank leverage capital since the financial crisis. As you know, leverage ratios are the broadest metric of the capital banks have available to absorb losses over their entire asset base. Does this development concern you at all? Does this decline in leverage ratios lead you to reconsider your removal of leverage ratio requirements from bank stress tests and the proposal to reduce the enhanced supplementary leverage ratio (eSLR)? Why hasn't the Fed activated the countercyclical capital buffer?

Large banking organizations have substantially increased the quality and levels of their capital since the global financial crisis. In large part, this is a reflection of the strong capital requirements imposed by the Federal Reserve, including the leverage ratio requirements. Because leverage requirements are not risk-sensitive, the Board has long held the view that the leverage ratio should serve as a backstop to the risk-based capital requirements. This is because firms that are bound by the leverage ratio may be incentivized to invest in riskier assets with higher returns, without a corresponding increase to minimum capital requirements to account for an increased risk profile.

While ensuring that the leverage ratio serves as an appropriate backstop, recent Board rulemakings preserve strong requirements for common equity tier 1 (CET1) capital, the highest-quality form of regulatory capital. For example, the recently issued stress capital buffer requirement—which combines the Board's stress test rules with the non-stress regulatory capital rules—is expected to increase the Board's CET1 capital requirements for U.S. GSIBs by approximately $46 billion.

Because banking organizations, and in particular large U.S. banking organizations, were already subject to robust stress testing and enhanced supervision of their capital planning processes, they have been maintaining significant buffers of capital over the existing requirements. Thus, they remain well positioned to continue to lend to borrowers during the current economic downturn. In addition to encouraging banking organizations to use their capital buffers to support lending to households and businesses, the Federal Reserve is encouraging banking organizations to work constructively with borrowers in response to COVID-19. Since the onset of the pandemic, the Board has issued a number of targeted, temporary revisions to our regulatory capital framework that reduce burden while preserving safety and soundness, and promote increased market intermediation in the current environment. We will continue to evaluate whether additional revisions to the capital framework, including to the supplementary leverage ratio and the capital buffer requirements, are warranted as the situation progresses.

16. In 2007, Federal Reserve supervisors rated nearly all large bank holding companies as "satisfactory" or above. Today, Federal Reserve supervisors are rating only about 60% of large bank holding companies as "satisfactory" or above. While enhanced scrutiny of these

large banks is helpful, I am concerned that it appears the Fed is planning to weaken bank supervision and restrict the ability of supervisors to effectively hold banks accountable. In a recent speech, Vice-Chair Quarles laid out a lengthy set of potential new limitations on supervisors, including restricting them from using violations of Federal Reserve guidelines to penalize banks, greatly increasing the requirements for supervisors to escalate an ongoing issue with bank management, and more.[1]Chair Powell, would you agree that maintaining the discretionary power of front-line bank supervisors to act when they see a risk to safety and soundness or to consumers is critical for protecting the public?

[1] See speech by Vice Chair for Supervision Randal K. Quarles, "Spontaneity and Order: Transparency, Accountability, and Fairness in Bank Supervision," Jan. 17, 2020, https://www.federalreserve.gov/newsevents/speech/quarles20200117a.htm

The Federal Reserve is committed to continually reviewing its supervisory processes and practices in order to increase their effectiveness and enhance transparency, while maintaining a supervisory framework that promotes a safe, sound, and stable financial system. Fundamental to this work is our belief that effective supervision requires clear two-way communications and transparent supervisory expectations. We are working to ensure that our framework for supervisory communications focuses supervised institutions on the most important safety-and-soundness and compliance concerns identified by examiners. The assessment of our supervisory communications framework is currently in progress, and we would be happy to provide additional information and to answer the specific questions posed in your letter once we have completed our review.

The Federal Reserve takes very seriously its role in supervising financial institutions under its jurisdiction. Strong supervisory processes and practices, including rigorous examination activities, are vital to that role. Critical components of effective supervision include evaluating banking organizations' activities and practices and, as warranted, issuing findings that require supervised institutions to take corrective action in a timely manner. Early identification of supervisory concerns helps to deter actions or activities that may otherwise significantly impair institutions' safety and soundness.

17. In a recent speech, Vice-Chair Quarles stated that "non-compliance with [supervisory] guidance may not form the basis for an enforcement action (such as a cease-and-desist order) or supervisory criticism (such as a Matter Requiring Attention (MRA)). This rule would be binding on the Board and on all staff of the Federal Reserve System, including bank examiners." It is our understanding that supervisory guidance is intended to instruct bank supervisors and banks concerning matters that are a high priority for supervisory attention because they reflect current risks and issues in bank practices. How exactly can supervisory guidance perform this function if putting a matter in supervisory guidance will prevent supervisors from actually acting on the matter through taking action to improve bank practices?

See response to question 16.

18. In the same speech, Vice-Chair Quarles stated that "The fourth process improvement would be limiting future MRAs [matters requiring attention] to violations of law, violations of regulation, and material safety and soundness issues." MRAs are critical supervisory tools as they require banks to take action on an issue or else see their supervisor ratings possibly decline. If supervisors are not permitted to use this tool until banks have already violated a law or there are critical safety and soundness issues already outstanding, then it could be extremely difficult for bank supervisors to have banks take action on a concern before the issue has actually caused harm to the safety and soundness of a bank. Could you outline the materiality standard that would apply to issuing an MRA under this new "process improvement" and how it differs from the materiality standard that currently applies in issuing an MRA?

See response to question 16.

19. A bank holding company must be "well capitalized" and "well managed" in order to become and remain a financial holding company (FHC) eligible to engage in an expanded range of financial activities, such as merchant banking and underwriting or dealing in securities. Nearly all large bank holding companies, including all of the U.S. G-SIBs, have elected to become FHCs. According to the Federal Reserve's most recent Supervision and Regulation Report, however, more than 40 percent of BHCs with more than $100 billion in assets are in less-than-satisfactory supervisory condition and therefore do not satisfy the "well managed" requirement to continue engaging in expanded financial activities. Wells Fargo and Deutsche Bank are among these chronically noncompliant FHCs, according to media reports. Congress adopted the "well capitalized" and "well managed" requirements to ensure that only strong, well-run firms would be permitted to engage in potentially-risky financial activities. However, instead of using its statutory authority to revoke these firm's FHC status, the Federal Reserve has instead issued ineffectual "4(m) agreements," which critics have described as a "penalty box devoid of meaningful constraints." Why has the Federal Reserve never revoked a noncompliant company's FHC status? Why does the Federal Reserve allow Wells Fargo, Deutsche Bank, and the other 40 percent of large FHCs to continue engaging in risky financial activities despite not satisfying the minimum statutory requirements?

When a financial holding company (FHC) falls out of compliance with section 4(l) of the Bank Holding Company Act, by becoming less than well-managed or well-capitalized, the noncompliant FHC enters into a confidential 4(m) agreement with the Board requiring, among other things, that they remedy the identified deficiencies. This agreement is an enforcement action that permits the FHC to continue operating while it addresses its deficiencies. The agreement is approved by the Board and may be modified or terminated by the Board.

Through the 4(m) agreement, the FHC is required to seek prior approval from the Board to engage in any new financial activities or to make nonbank investments or acquisitions.[1] The Board may also impose other restrictions on the FHC as appropriate. This approach incentivizes the firm to focus on fixing its supervisory issues.

---

[1] 12 CFR 225.83(d).

If a noncompliant FHC fails to address the identified deficiencies within the specified period of time then the Board may require the institution to divest its depository institutions unless the FHC chooses to voluntarily cease all of its FHC-only permissible activities. The Board regularly assesses a noncompliant FHC's progress in remediation of identified issues and as part of this review considers whether it would be appropriate to implement other limitations or ultimately exercise authority to require divestiture.

Climate Change

20. A March 25th report by the Federal Reserve Bank of San Francisco found that climate change increases the risk to financial institutions by increasing the potential for loan losses and bankruptcies caused by storms, droughts, wildfires, and other extreme weather events. These climate-related financial risks could also affect the broader economy through elevated credit spreads, greater precautionary saving, and, in the extreme, a financial crisis.[1] In October, Managing Director of the IMF, Kristalina Georgieva announced that the IMF is "is gearing up very rapidly to integrate climate risks into our surveillance work" and noted that central banks will increasingly need to factor climate change considerations into their economic forecasts and monetary policy.[2] Furthermore, a recent paper by Graham Steele published by The Great Democracy Initiative last month explained that the law, specifically the Dodd-Frank Wall Street Reform and Consumer Protection Act, provides regulatory tools to require financial institutions to internalize the financial risks associated with lending and investments that drive climate change. The proposal focuses on several authorities under Title I of Dodd-Frank to, for example, deploying enhanced prudential standards that incorporate climate risks. How has the Fed incorporated climate change considerations into its risk models and stress-testing?

[1] Glenn D. Rudebusch "Climate Change and the Federal Reserve." Federal Reserve Bank of San Francisco. Mar. 25, 2019. https://www.frbsf.org/economic-research/publications/economic-letter/2019/march/climate-change-and-federal-reserve/ For additional research and materials from the Federal Reserve Bank of San Francisco, see https://www.frbsf.org/community-development/publications/community-development-investment-review/2019/october/strategies-to-address-climate-change-low-moderate-income-communities/, https://www.frbsf.org/economic-research/events/2019/november/economics-of-climate-change/, and https://www.frbsf.org/our-district/press/presidents-speeches/mary-c-daly/2019/november/why-climate-change-matters-to-us/.
[2] Gillian Tett. "Central banks are tuning in to climate change" Financial Times. Oct. 17, 2019. https://www.ft.com/content/e99d9b56-f0d2-11e9-ad1e-4367d8281195

> **A. Are you open to convening a climate risk advisory council that includes climate experts and economists alike?**

The modeling and analysis of climate-related financial risks is a rapidly evolving field. Federal Reserve staff are contributing actively to the research on climate-related financial risks and are working to develop a foundation for any further action that would be consistent with our mission,

such as incorporating climate-related risks into supervisory activities like stress tests. This work is in its early stages, and we are mindful of the need for external engagement and expertise as we conduct it, including with experts on climate science and environmental economics.

B. Is the FSOC looking at these risks? Why or why not?

The Treasury Secretary, as Chair of the Financial Stability Oversight Council (FSOC), is best able to answer questions regarding the FSOC's work. As a member of the FSOC, I am committed to supporting work undertaken by the FSOC, including any work to understand the financial stability implications of climate-related financial risks.

21. As Graham Steele notes in his paper, investments in assets that drive climate change, including fossil fuels and industries that engage in deforestation, all involve systemic risks. Section 165 of the Dodd-Frank Act provides the Federal Reserve with broad authority to use prudential standards to limit fossil fuel investments on the basis of their prospective risks to financial stability. Can you respond to why the Fed has not exercised this authority to implement measures such as updating capital rules to reflect the potential for capital-intensive losses based on financial climate risks, more stringent margin requirements for securities and derivatives tied to climate-damaging commodities, portfolio limits on CO2 emissions or entire sector exclusion on the basis of climate risk?

The Federal Reserve is focused on its mandates of fostering maximum employment and stable prices, in addition to our responsibilities to ensure the safety and soundness of financial institutions, and promote financial stability. Addressing climate change is a task that Congress has entrusted to other agencies. However, the transmission of climate-related risks to financial institutions and the financial system that would undermine safety and soundness and financial stability is a concern we take seriously. With that in mind, researchers across the Federal Reserve System have undertaken a range of work to better measure and assess climate-related risks to financial institutions and the financial system as a whole. We are committed to continuing this work, and where possible, to sharing its results with Congress and the public.

Diversity

22. According to a 2018 McKinsey report, ethnically diverse organizations are 35% more likely to outperform their competitors, operating margins increase by 48% when management is gender diverse, and $12 trillion would be added to the global economy by simply achieving gender equity in the workplace. All signs point to diversity being a tremendous asset. Despite data proving that diverse companies perform more successfully, we still find that the financial services industry is largely white and male at its highest levels. The same can be said for regulators such as the Fed where minorities comprise only 22% of executive and senior level positions but approximately 44% of the total workforce. What more can you do as Chair to incentivize diversity and equity within the Federal Reserve System? What are you doing to encourage diversity and equity at the firms you regulate and supervise? Please be specific about tangible next steps you and your staff are considering.

The Board and Federal Reserve Banks continue to emphasize the importance of diversity and inclusion and impact on policies, practices and achieving sustainable progress. Actions being taken include: (1) continuing to assess the current state of diversity and inclusion to guide strategic decisions around talent sourcing, development, promotions, supplier diversity technical assistance, community relations and workplace climate assessment; (2) providing training on leading with conscious inclusion; (3) strengthening relationships with minority executive associations for talent acquisition; and (4) creating development opportunities through job rotations and stretch assignments for leadership and management positions. With respect to regulated entities, our activities include: (1) continuing to host diversity summits regionally that enable us to benchmark diversity and inclusion practices and methods resulting in increased diversity and solutions to financial industry diversity challenges; (2) on-going monitoring and evaluation of submitted diversity and inclusion self-assessments; (3) upon request, meeting with companies to discuss submissions; and (4) collaborating with industry associations such as American Bankers Association, Community Bankers Association to host webinars on diversity and inclusion self-assessments.

National Security

23. Please share the Federal Reserve's perspective on how we might better align the supervisory examination process with the Bank Secrecy Act mission and the national security threats faced by the US and our financial system, including those identified in the recently released "National Strategy for Combatting Terrorist and Other Illicit Financing?"

Consistent with its statutory mandate, 12 U.S.C. § 1818(s), the Federal Reserve has long viewed the evaluation of a bank's Bank Secrecy Act (BSA) compliance program and overall compliance with the BSA as an integral part of the supervision process. The Federal Reserve supports efforts to better align the supervisory examination process with the goals of the BSA and the national security threats identified by Treasury and the broader U.S. government. To that end, Treasury and the federal banking agencies have formed a principal-level working group to improve BSA/AML regulations and the supervisory process. The work of this group is ongoing.

Banks are expected to maintain risk-focused compliance programs to identify and report potential money laundering, terrorist financing, and other illicit financial activity. This enables banks to allocate compliance resources commensurate with the institution's risk profile while, at the same time, providing the institution flexibility to deal with emerging risks. Federal Reserve examiners likewise follow a risk-focused approach in their examinations, and evaluate the adequacy of a bank's BSA compliance program relative to its risk profile and its compliance with applicable laws and regulations, tailoring examination plans and procedures accordingly. The Federal Reserve and other banking agencies recognize that banks vary in focus and complexity, and that these differences create for each bank a unique risk profile. This risk-focused approach to examinations is reflected in the FFIEC BSA/AML Examination Manual, which is used in the BSA examinations conducted by the federal banking agencies, including the Federal Reserve. In addition, the Federal Reserve, together with the Financial Crimes Enforcement Network and the other federal banking agencies, recently issued a statement

emphasizing the risk-focused approach to supervision,[2] which also was noted by Treasury as being central to its National Strategy for Combatting Terrorist and Other Illicit Financing.[3]

The threats identified in Treasury's *National Strategy* describe the types of risks banks should consider in structuring their BSA compliance programs under a risk-focused approach. As noted, since each bank has a unique risk profile, a bank's evaluation of its own risk, usually identified through the bank's risk assessment, informs the types of risks in the *National Strategy* that are most applicable to a particular bank and therefore should be reflected in its BSA compliance program. It is also our understanding that law enforcement may have certain specific priorities (for example, human trafficking or terrorist financing) that can change in focus over time, and that there may be interest in aligning those priorities even more closely to a bank's compliance program under the BSA. While the Federal Reserve does not oppose having a framework that places greater emphasis on law enforcement priorities, we would need to review carefully the details of such a framework in order to come to an informed position on the matter.

Facebook, Libra, Cryptocurrencies

24. During your testimony, you characterized Facebook's proposed Libra currency as "a bit of a wakeup call that [digital currency] is coming fast," and affirmed your belief that "a single government currency at the heart of the financial system is something that has served us well." What is the Fed's stance on regulating cryptocurrencies, and what risks do you think cryptocurrencies and projects like Libras pose to economic stability?

Cryptocurrencies present many risks. Consumers and investors active in cryptocurrencies can face diverse risks such as fraud, loss, and identity theft, as well as hidden fees and opaque costs when interacting with cryptocurrency service providers. Additionally, consumers may incorrectly assume they enjoy the same protections for cryptocurrencies as they do with traditional financial assets and intermediaries. Domestic and international regulators continue to be concerned with the anonymity of cryptocurrency networks and their uses for money-laundering, terrorist financing, financial crimes, and black markets. That said, in their current form and as a relatively small portion of the global financial system, cryptocurrencies, pose limited concerns with respect to monetary control or financial stability.

The Libra initiative brought to light the possibility of a cryptocurrency scaling rapidly and operating globally. Because of the size of Facebook's current user-base, if it is successful in turning a substantial portion of social media users into payments users, the Libra payment network potentially could achieve immense scale over a short period in multiple jurisdictions.

The authority of the Board with respect to cryptocurrencies is generally limited to cryptocurrency-related activities of entities that the Board supervises, such as state member banks, bank holding companies, savings and loan holding companies, and certain affiliates. Each component of the Libra project—including the Libra Association, custodians of

[2] See Joint Statement on Risk-Focused Bank Secrecy Act/Anti-Money Laundering Supervision (2019) at https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20190722a1.pdf.

[3] https://home.treasury.gov/system/files/136/National-Strategy-to-Counter-Illicit-Financev2.pdf.

its reserve, digital wallet providers, and exchanges—will likely be subject to different rules and authorities based on the nature of each entity's role in Libra. The Federal Reserve does not supervise Facebook, and no banking organizations are currently members of the Libra Association. Specific questions relating to the Federal Reserve's authority will depend on the details of the Libra initiative. These details appear to be still in development, including potential changes to the information that was previously made public by Facebook. Federal Reserve staff continue to participate in interagency and international group work efforts.

The Federal Reserve and other regulators want to understand the specific activities that each part of the Libra ecosystem will conduct, in order to ensure that those activities are safely executed and appropriately overseen. Many questions remain regarding how or if Libra could achieve robust risk management. Central banks additionally are much attuned to potential implications for monetary policy conduct and transmission, but further details about the Libra project are necessary to draw conclusions. All things being equal, the potential for disruption to effective monetary policy implementation and more generalized substitution of domestic currencies is greater in smaller economies with currencies that are not as robust as the U.S. dollar.

Asset Bubbles

25. The minutes from the January Federal Open Market Committee meeting reflect participants' general belief in the strength of the economy and the financial system, but also reported that "Some participants remarked... that keeping policy rates low to achieve both the Committee's dual-mandate objectives may contribute to a buildup of financial vulnerabilities, especially at times when the economy is at or above full employment, a development that could pose future risks to the economy and to the ability of the Committee to achieve its dual mandate." A 2016 report by economists Dean Baker and Josh Bivens examined whether higher interest rates are an appropriate tool for managing asset bubbles, and concluded that "the Federal Reserve has numerous tools besides rate increases that would be more effective and inflict less collateral damage on the nonfinancial side of the economy." Do you believe that increasing interest rates is the most effective tool for addressing "the buildup of financial vulnerabilities" identified by FOMC participants? What prudential tools are available to the Fed that might help policymakers target emerging asset bubbles without slowing down economic growth?

In setting monetary policy, the FOMC seeks to achieve its statutory mandate of price stability and maximum employment. The stability of the financial system is important to the achievement of these goals. To address financial vulnerabilities that may potentially impede the attainment of the FOMC's objectives, it is important to use tools other than monetary policy. At the Federal Reserve, we have emphasized a combination of strengthened structural safeguards along with countercyclical macroprudential tools to ensure that monetary policy is able to stay focused on achieving the FOMC's statutory objectives. These measures include strong, through-the-cycle capital and liquidity requirements for banks, as well as the CCyB, which is particularly well suited to address financial imbalances that may occur over the business cycle. The CCyB helps build resilience at large bank holding companies when there is an elevated risk of above-normal losses, which often follow periods of credit growth or rapid asset price appreciation.

In addition, the Federal Reserve conducts stress testing in its comprehensive Capital Analysis and Review (CCAR) to evaluate whether the largest financial institutions have sufficient capital to absorb potential losses and continue to lend under stressful conditions. These stress test scenarios are designed to generally be more severe during buoyant economic periods when financial vulnerabilities may build. The Federal Reserve also monitors a wide range of indicators for signs of potential risks to financial stability, and publishes a summary of this monitoring in a semiannual Financial Stability Report. If vulnerabilities are identified as being meaningful above normal, the Federal Reserve can require large banks to increase their loss-absorbing capacity through increases in the CCyB.

Defining Full Employment

26. Since its January 2012 publication of longer-run goals and monetary policy strategies, the Fed has established a 2% long-term target for inflation, but it has never set an explicit objective for labor market outcomes. The Fed's website contains the following language: "maximum employment, which means all Americans that want to work are gainfully employed." If the Fed has chosen to interpret price stability as 2% core PCE, how does it choose to interpret maximum employment? Following Chair Powell's February testimony, Evercore ISI economist Ernie Tedeschi told *Bloomberg*, "Defining full employment as 'anyone who wants to work and can work will have a job available to them' is different from defining it as the level of unemployment at which inflation will begin to rise, which could be interpreted as 'just a glorified inflation mandate.'" Is the maximum employment mandate actually "just a glorified inflation mandate"? If not, shouldn't the Fed further define a target for maximum employment?

The FOMC's maximum employment objective is a separate and independent objective from its longer-run inflation objective. Given that the rate of inflation over the longer-run is determined solely by monetary policy, the FOMC can set an explicit numeric target for inflation. In contrast, the maximum level of employment is largely determined by non-monetary factors that affect the structure and dynamics of the labor market. These factors change over time and are not directly measurable. Consequently, the FOMC does not have a fixed goal for employment. To help provide a quantitative interpretation of economic conditions consistent with maximum employment, the FOMC regularly publishes estimates made by FOMC participants of the longer-run normal rate of unemployment in its Summary of Economic Projections. While these estimates are informative about the maximum level of employment, other indicators are also relevant. Consequently, the FOMC considers a broad range of labor market indicators in assessing the maximum-employment level, including how many workers are underemployed, or discouraged and have stopped looking for a job, while recognizing that such assessments are necessarily uncertain and subject to change as the economy evolves.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Beatty:

As you know the Federal Reserve is currently developing capital requirements for insurance companies that own depository institutions, otherwise known as insurance savings and loan holding companies, due to passage of the Insurance Capital Standards Clarification Act in 2014. This legislation clarified that the Federal Reserve should tailor capital standards for insurance companies. I am concerned and perplexed why the proposed rule would impose a separate Section 171 banking capital calculation from the Dodd-Frank Act on some of these insurance companies based on their organizational structure. This seems to me to stand in contradiction to congressional intent. Imposing a Basel banking capital calculation on insurance companies is the outcome that Congress was trying to avoid when we passed that law back in 2014.

As a primary co-sponsor of the 2014 legislation, I know Congress did not intend this outcome and am concerned with its inclusion in the proposed rule.

1. **Can you provide your legal justification for inclusion of the Section 171 banking capital calculation within the Federal Reserve's insurance capital rule?**

As part of the Federal Reserve Board's (Board) notice of proposed rulemaking regarding capital requirements for depository institution holding companies that are significantly engaged in insurance activities (proposal), the Board proposed to establish a section 171 calculation to comply with section 171 of the Dodd-Frank Wall Street and Consumer Protection Act (Dodd-Frank Act), which, in part, requires the Board to establish minimum risk-based capital requirements for depository institution holding companies on a consolidated basis. The proposed section 171 calculation would satisfy the requirement in section 171 of the Dodd-Frank Act to establish a minimum risk-based capital requirement on a consolidated basis for depository institution holding companies, while excluding from this calculation state-regulated insurers to the full extent permitted by the Insurance Capital Standards Clarification Act of 2014 (the Clarification Act).

2. **Will you commit to ensuring that all savings and loan companies who are primarily insurance companies will be subject to the same set of rules for capital calculation?**

The proposal is designed to ensure that savings and loan holding companies that are significantly engaged in the business of insurance are subject to appropriate risk-based capital standards, regardless of their organizational structure. The Board invited public comment on all aspects of the proposal, including the section 171 calculation. Several commenters suggested that the Building Block Approach (BBA) would comply with the statutory requirements without an additional calculation because the BBA's minimum requirement would not be less than the generally applicable capital requirement. Consistent with the Administrative Procedure Act, the Board will consider the comments on the proposal, as well as the requirements of section 171 of the Dodd-Frank Act (as amended by the Clarification Act), as well as other provisions of law, before making a final rule.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Budd:

1. Thank you for your collaborative work with the U.S. State Insurance Commissioners on solvency regulation. I also wanted to thank you for the pushback against the European efforts to try and force their system of insurance regulation onto our unique and sound 50-state insurance regulatory regime. I would like to respectfully request that you discuss this issue further with European Commission, Executive Vice President, Valdis Dombrovskis, who has political oversight for financial services in the European Commission.

The Federal Reserve has consistently maintained that the European insurance capital regulation is not appropriate for the U.S. insurance markets, and we remain committed to our current system. As part of our international engagement on these topics, Federal Reserve Board staff regularly interacts with staff from the European Commission, which is a member of both the International Association of Insurance Supervisors and Financial Stability Board. Both Federal Reserve Board Vice Chair Randal Quarles and I receive updates on the status of these deliberations and will continue to monitor this important issue.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Cleaver:

I would like to flag a Wall Street Journal article that ran on January 15, titled "The Era of Fed Power is Over: prepare for a more Perilous Road Ahead [1]"

It features a report by former Treasury Secretary Larry Summers, which notes the economy has changed in ways that weaken its response to interest-rate cuts including past methods of Quantitative Easing and negative rates used by your European counterparts.

The economy's two most interest-sensitive sectors (durable goods manufacturing, such as auto, and construction,) fell as a share of output precipitously because America's aging population spends less on houses and cars.
-10% of national output in 2018 from 20% in 1967

Over the same period, financial and professional services, education and health care nearly doubled (47% from 26%)

Do you concur with the findings of Secretary Summer's research? Why or why not

[1] https://www.wsj.com/articles/shrinking-influence-o-central-banks-ends-decades-of-business-as-usual-11579103829

It is correct that the auto and construction sectors are smaller shares of the economy than decades ago, as the shares of service-producing sectors have expanded. Nevertheless, monetary policy affects both financial conditions and the economic activity of households and businesses more broadly than just through mortgage rates and auto loan rates, as it affects a broad range of asset prices that are relevant for spending decisions by the private sector. As the article noted, and as I also discussed in my testimony, monetary policy does face challenges in the current low interest rate environment. This environment may limit the ability of central banks to reduce short-term policy interest rates enough to provide the necessary support for the economy during a downturn.

With this concern in mind and before the recent challenges related to the coronavirus outbreak, we had been conducting a review of our monetary policy strategy, tools, and communication practices. Consistent with the lessons we have learned over the past 15 years or so and that we have been discussing during the review process, we have employed a wide range of available monetary policy tools to support the economy during the current challenging situation. This has taken place alongside a rapid move on our part to lower the target range for the federal funds rate to its effective lower bound. I expect that we will complete the review by the end of the year.

Has the Federal Reserve explored means of putting pressure on these growing shares of our economy to effectuate a response to a crisis like a global recession?

- **If yes, what exactly has the Federal Reserve explored?**
- **If no, why not?**

In the pursuit of our congressionally mandated goals of maximum employment and stables prices, we look to foster conditions that support the economy broadly rather than target specific conditions in particular service-producing sectors. As I noted above, we had been conducting a review of our monetary policy strategy, tools, and communications practices before the recent events related to the coronavirus outbreak, and we have employed a wide range of monetary policy tools to support the economy during the current difficult situation.

Clearly these are closer to real people and where the economy is currently, and the Fed was able to design novel instruments through the commercial paper facility during the financial crisis.

Would the Fed be able to design a facility, as it did during the financial crisis, to put downward pressure on student loan rates as a means of exerting pressure on interest rates? Why or Why not?

Would the Fed be willing to conduct testing on such facilities? Why or Why not?

The Federal Reserve is acting to support the flow of credit to the student loan market through the Term Asset-Backed Securities Loan Facility (TALF), which was established on March 23, 2020. This facility is similar to the one that was used to support the student loan market during the global financial crisis. Student loan originators raise funds in the asset-backed securities (ABS) market and, when the ABS market is experiencing strains, student loan rates rise and student loans become less available. The TALF is designed to support the ability of student loan originators to raise funds in the ABS market and thus put downward pressure on student loan rates.

What alternative mechanisms of influencing interest rate pressure is the Federal Reserve exploring?

The Federal Open Market Committee (FOMC) continues to influence interest rates through the setting of monetary policy in pursuit of its dual mandate of maximum employment and price stability. The FOMC has engaged in a review of its monetary policy strategy, tools, and communications practices over the past year. As part of this review, the FOMC discussed a range of monetary policy tools that could be used to provide additional accommodation through downward pressure on longer-term interest rates once the effective lower bound on its short-term policy rate, the federal funds rate, had been reached. Many of these tools, such as forward guidance and balance sheet policies including large-scale asset purchases, were implemented by the FOMC during the last recession to aid the economic recovery. At the June FOMC meeting, my colleagues and I continued our discussion of approaches for conducting monetary policy when the federal funds rate is at its lower bound. We will continue our discussions in upcoming meetings and will evaluate our monetary policy stance and communications as more information about the trajectory of the economy becomes available.

In response to the economic effects of the COVID-19 pandemic, the Federal Reserve is using its full range of tools to support the flow of credit to households, businesses, and state and local governments, thereby promoting its maximum employment and price stability objectives. In

addition to reducing the target range for the federal funds rate to near zero percent, the FOMC has undertaken purchases of Treasury securities and agency residential and commercial mortgage-backed securities to support the smooth functioning of these markets and the effective transmission of monetary policy to the economy. In addition, the Federal Reserve has modified existing programs and established many new credit and liquidity facilities to alleviate severe dislocations that have arisen in a number of financial markets. Relieving these dislocations puts downward pressure on interest rates in these financial markets and supports the flow of credit to households, businesses, and state and local governments.

REPO

A number of press reports seem to indicate that markets have perceived the Federal Reserve intervention into REPO markets as quantitative easing by quantitative easing by other means.

Was this the Federal Reserve's intent, yes or no?

- **If yes, how is this consistent with the FOMC's monetary policy strategy and how was the formal FOMC process for monetary policy action engaged?**
- **If no, was this miscommunication by the Board that will result in a review of the communion tool within this context?**

Does the Federal Reserve consider its intervention a in REPO markets a monetary policy action and why?

The Federal Reserve does not view its repo operations as quantitative easing. In a repo operation, the Federal Reserve receives Treasury securities as collateral. The lender of the security continues to face the interest rate risk associated with it, unlike a quantitative easing operation in which the security seller faces no future risk from the security once it is sold to the Federal Reserve.

Repo operations have been the Federal Reserve's primary tool for adjusting conditions in short term funding markets for many decades. The scale of operations has fluctuated over time with changes in market conditions and changes in FOMC directives. Repo operations in March 2020 rose to meet imbalances in the supply and demand for lending against Treasury collateral. While the operations have declined in size as the market has normalized, some term repos initiated in March and early April have not yet matured.

Market participants are generally familiar with repo transactions and know that the Federal Reserve has traditionally implemented monetary policy through the repo market. Through our communications, we have underscored this. Given this familiarity and history, we believe that there is no need for a review of communications related to repo operations.

Climate Change

As you may be aware, my subcommittee hosted a hearing on climate change this past year and I submitted questions related to this point that I received a response to in November.

As you stated in your response, the Federal Reserve is actively working both within the Board and with outside institutions on climate change by "monitoring uncertainty and risks from such events in financial markets."

I was very pleased to hear this.

The Board has a vast and varied economic knowledge base that has proven invaluable to market participants and policymakers.

Would you be willing leverage that research base to coordinate with federal regulators to evaluate the macroeconomic effects of climate change? Why or why not?

Staff at the Federal Reserve Board (Board) participate in several forums with other U.S. federal regulators where the evaluation of the macroeconomic effects of climate change are particularly relevant. For example, Federal Reserve staff contribute to climate-risk analyses being conducted by the Basel Committee for Banking Supervision and the Financial Stability Board on the transmission of climate risks. Moreover, since the Board is an observer in the Network for Greening the Financial System, staff also contribute to its work.

What, if any, distinct research does the Board plan to undertake into the financial stability concerns related to climate change? (This would be separate from research undertaken at reserve banks.)

Staff at the Board are conducting research to understand the ways in which climate-related developments may pose risks to the economy and the financial system, and have made numerous contributions to the emerging research. Federal Reserve staff actively collaborate on research with staff from the Federal Reserve Banks as well as staff at other academic and policy institutions. This research is contributing to our own work in this area, as well as the work of international standard setting bodies, including the Financial Stability Board, on how climate-related risks could affect the financial system. Understanding emerging climate-related risks to the economy and financial system is a challenge. Meeting that challenge will require careful, sustained research and attention over an extended period of time.

<u>Community Reinvestment Act</u>

Your opening statement noted that "there are troubling labor market disparities across racial and ethnic groups across regions of the country."

You also noted that while wages have been rising, that has been primarily the case for "lower-paying jobs"

As you may agree, the Community Reinvestment Act could go a long way in easing some of this pain.

I recall you noted as much when you visited Kansas City during your Fed Listens event.

I understand that you aligned yourself with Governor Brainard's remarks at the Urban Institute during your FOMC Press Conference.

Among the statements made by Governor Brainard was, "If the past is any guide, major updates to the CRA regulations happen once every few decades. So it is much more important to get reform right than to do it quickly,"

I assume you agree with this, is that right?

"Dividing evaluations into separate retail and community development tests is important," Brainard said. "In contrast, an approach that combines all activity together runs the risk of encouraging some institutions to meet expectations primarily through a few large community development loans or investments rather than meeting local needs."

What are the perils, as you understand them, with such an approach?

In the FOMC press conference you noted, "We think that an interagency final rule together would be the best outcome," said Powell. "We're sorry we haven't been able to get there, and we still hold out some hope that we will be able to."

You seem still open to a joint rulemaking, and based on Governor Brainard's remarks, it seems like you are trying to engage unwilling partners. Is the FDIC and OCC just more interested in minting their timeline and course than a comprehensive unified final rule?

The Community Reinvestment Act (CRA) is an important law that places an affirmative obligation on banks to meet the local credit and banking needs of low- and moderate-income (LMI) communities. Further, banks and community organizations agree on the need to modernize the regulations to reflect the current financial services landscape, while maintaining CRA's core focus on activities benefitting LMI communities and households. The Board is committed to ensuring that any modernization of the regulations takes the time needed to address effectively areas of greatest concern: increasing transparency, objectivity, and certainty of what lending, investment, and service activities count under CRA, as well as ensuring that any reform strengthens the regulations' focus on meeting the needs of the law's intended beneficiaries.

With guidance from Governor Brainard and input from the Board, Federal Reserve staff worked closely with the Federal Deposit Insurance Corporation (FDIC) and the Office of the Comptroller of the Currency (OCC) (together, the agencies) on what we hoped would be an interagency proposal for modernizing the CRA regulations, offering a range of constructive proposals in an effort to reach a consensus. The agencies were unable to agree on key elements, and the OCC and FDIC decided to move ahead with a Notice of Proposed Rulemaking (NPR). We are reviewing the comments that were submitted to the FDIC and OCC on the NPR, and expect to learn much—including important insights related to the aspects of the NPR that reflect our own input—from the review. As you are aware, on May 20, the OCC separately issued a

final rule to modernize CRA regulations that applies only to OCC-supervised banks. In light of this development, our ongoing analysis of CRA modernization issues, and our review of comments to the NPR, we are assessing a path forward. However, we continue to work with the agencies on an ongoing basis, as we have demonstrated in actions on CRA during the current crisis, such as issuing a joint statement on assessing CRA-eligible activities that are responsive to banking needs of LMI households and areas as a result of actions taken in response to containing the coronavirus.

Economic Growth Inconsistency

I am trying to get a clear understanding of the united states economy from a clearly objective actor

One of the reasons I am so admitted about federal reserve independence is because of the importance of objective truths and facts in economics.

With that in mind, what do you anticipate growth will be over the next ten years?

- **The administration is projecting that economic growth will average around 3 percent over the next decade, which is more robust than what the Congressional Budget Office and others see it clocking in at.**
  - **What are the Federal Reserve projections?**
  - **Please explain the discrepancy, with these growth projections and why you believe your analysis is more likely to be accurate.**
- **The biggest area of disagreement appears to be that the administration believes the tax law will spur more long-term economic growth than CBO estimates, a senior administration official said Sunday.**
  - **Do you agree or disagree with this holding and why?**
  - **What has analyses found on receipts due to the tax reform legislation?**

What the tax reform measure expanded the tax base and spurred economic growth on pace with projects made by the OMB?

The FOMC regularly publishes a summary of the projections of individual FOMC participants for the growth rate of real GDP in the longer run. The most recent summary was released after the June 2020 FOMC meeting. The median projection of FOMC participants was that real GDP would increase at an annual rate of 1.8 percent in the longer run, with a range from 1.6 percent to 2.2 percent. GDP growth over the longer haul is the product of growth in labor supply and of labor productivity. It is unlikely that much of the difference between the FOMC projections and that of the Administration reflects different assumptions about labor force growth as both projections assume that the unemployment rate is close to 4 percent in the long run. The difference therefore is probably explained by different assumptions about labor productivity.

The FOMC projections are similar to those of the Congressional Budget Office that are based on the assumption that labor productivity growth will pick up over the next decade from the relatively slow pace exhibited over the past ten years, but remain below that of the late 1990s. By contrast, the Administration's projections assume more rapid gains in labor productivity,

similar to those during the tech boom of the late 1990s. In addition, business fixed investment, which is a key factor in labor productivity growth over the longer haul, has posted only moderate gains over the past two years, on average. How much of the recent economic performance reflects effects of the tax reform measures versus other factors is challenging to ascertain. Moreover, some of the gains in productivity flowing from increased business investment should only appear slowly as the capital stock grows. Accordingly, it is too early to quantify with any precision the economic effects of the tax bill.

While the federal reserve is no panacea, it is also no mere spectator.

How do you plan to help pull stalled investment and stagnant wages off the economic sidelines and into the homes of the working poor?

The FOMC is committed to pursuing its dual mandate from Congress of maximum employment and price stability. The current focus of the Federal Reserve is to use our full range of tools to support the economy amid the severe dislocations caused by the coronavirus outbreak.

In particular, the FOMC decided to lower the target range for the federal funds rate to 0 to 1/4 percent at its meeting in March. Moreover, the FOMC expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals. This action will help support economic activity, strong labor market conditions, and inflation returning to the FOMC's symmetric 2 percent objective, including encouraging business investment and wage growth. The FOMC will continue to monitor the implications of incoming information for the economic outlook, including information related to public health, as well as global developments and muted inflation pressures, and will use its tools and act as appropriate to support the economy.

Furthermore, the Federal Reserve is forcefully deploying its range of tools to support the flow of credit to households and businesses, which will also support the economic recovery, including employment, business investment, and wage growth. The FOMC has increased its holdings of Treasury securities and agency mortgage-backed securities to promote the smooth functioning of markets for these securities. Moreover, as noted above in response to your question regarding interest rate pressures, the Federal Reserve has modified existing or established new credit and liquidity facilities to alleviate severe dislocations that have arisen in a number of financial markets. Relieving these dislocations puts downward pressure on interest rates in these financial markets and supports the flow of credit to businesses and households, thereby helping to prevent an even greater reduction of economic activity and loss of jobs, while also dampening disinflationary pressures.

Supporting the flow of credit also enables the eventual recovery of economic activity and jobs to be as vigorous as possible.

<u>Diversity and Inclusion</u>

Section 342 of Dodd-Frank directed the relevant Directors of the respective Office's of Minority and Women inclusion to ensure the fair inclusion and utilization of minority-

owned and women-owned businesses in all business and activities of the agency and at all levels, including in procurement, insurance, and in all types of contracts.

The Federal Reserve manages funds for both its defined benefit and defined contribution plans.

What percent of Federal Reserve assets under management are invested with women-owned and minority-owned asset management firms?

- **Please provide the firm names, asset classes, total assets, and percent of total assets managed by minority- and women-owned asset management firms as an appendix to this response. (I would consider a failure to furnish this information and incomplete response)**

Please see the information below provided by the Federal Reserve System's Office of Employee Benefits (OEB). The names of the fixed income managers are also included in the EOB's Minority and Women Inclusion Report to Congress.

	OWMI Manager	Portfolio	Percentage
Fixed Income			
Pugh Capital Management	539.1		
Smith Graham Investment Management	120.3		
Sub-total FI	***659.4***	***8,639.7***	7.63%
Real Estate			
General Partner A	30.0		
General Partner B	15.0		
General Partner C	25.0		
Sub-total RE	***70.0***	***731.8***	9.57%
Private Equity			
General Partner A	42.0		
General Partner B	28.0		
General Partner C	100.0		
General Partner D	55.0		
General Partner E	6.0		
General Partner F	34.6		
General Partner G	66.0		
Sub-total PE	***331.6***	***957.9***	34.62%
Total AUM (FI + Return Seeking)		***18,748.2***	***5.66%***

Is the federal reserve satisfied with the level of racial, ethnic, and gender diversity in systemwide boards of directors?

- **If yes, please explain.**
- **If no, please explain how the board intends to actively address this issue?**

Monetary policymaking benefits from a diversity of perspective, and so we seek to make sure that the Federal Reserve System's (System) boards reflect the communities in which they serve. For this reason, the System has strong processes in place to help identify director candidates who are likely to contribute a wide range of diverse perspectives. For example, the Board provides guidance and feedback to each Reserve Bank regarding the composition and

characteristics—including gender, racial, and sector diversity—of boards in their District. After providing input and guidance, the Board seeks recommendations from the Reserve Banks for Class C and Board-appointed Branch director vacancies.

In vetting candidates, the Board considers factors such as professional experience, leadership skills, and community engagement. The Board also evaluates a candidate's ability to contribute meaningful insights into economic conditions of significance to the District and the nation as a whole. As part of this process, the Board focuses considerable attention on whether a candidate is likely to provide the perspective of historically underrepresented groups, such as consumer/community and labor organizations, minorities, and women. The Board also welcomes input and recommendations from sources such as public interest groups and community organizations, and we ensure that their recommendations are given serious consideration. As we are committed to our processes that reflect best practice, and we are continually striving to learn from our own and others' experiences and strengthening out processes.

In recent years, the System has made important strides in recruiting highly-qualified women and minorities. In 2020, 75 percent of Class C directors and nearly 70 percent of Class B directors are diverse in terms of gender and/or race. This represents significant progress over the past several years. For example, between 2016 and 2020, the number of racially diverse Class C directors increased by over 30 percentage points. Progress among Branch board directors has steadily increased as well. In 2020, over 50 percent of Reserve Bank-appointed Branch directors and nearly 70 percent of Board-appointed Branch directors are diverse in terms of gender and/or race. There is more work to do, and we are committed to making further progress.

<u>Exchange Rates</u>

Does the invoicing, reserve and safe harbor status put upward pressure on the dollar's exchange value thereby impacting with adjustments which would otherwise narrow the current account imbalance?

The widespread use of the dollar as a safe haven currency typically results in dollar appreciation in uncertain times, though its appreciation is not uniform: the dollar often depreciates against the Swiss franc and the Japanese yen during such situations.

More generally, the dollar's preeminent role as an international currency has persisted for decades, through periods of both dollar appreciation and dollar depreciation. Its role as an international currency does not seem to prevent significant dollar depreciation.

Moreover, the same factors that make the dollar attractive for international investments (the depth and liquidity of U.S. financial markets, trust in U.S. policy and institutions) also mean that borrowing costs—for the U.S. government, but also for U.S. firms and households—are held down by the strength of foreign demand. These lower borrowing costs reduce the investment income we pay to foreigners on their dollar investments, which in turn narrows the current account deficit.

What would a realignment of the value of the US dollar versus other major currencies have on the US account deficit?

– **Would it reduce the US current account deficit in the medium term?**

All else equal, dollar depreciation tends to boost U.S. exports and restrain imports, thus contributing to smaller trade and current account deficits. However, the current configuration of global current account balances—with a deficit in the United States and surpluses in some other advanced economies—owes in large part to differences in economic growth around the world. The U.S. economy has been growing more strongly than the countries that are running current account surpluses, and so our domestic demand has been stronger, which has contributed to the U.S. trade deficit.

Differences in fiscal policy stances can also contribute to the global configuration of current account balances. The current account balance measures the difference between national savings and investment, and government saving or dissaving is a component of national savings.

Former Federal Reserve Chairman Ben Bernanke said in 2005 that there was a global savings glut in other countries that flowed to the US giving rise to the increased current account deficit. Do you agree with his analysis? Do you believe that there is a global savings glut today that similarly flows to the US, pushing the current account deficit higher than it would otherwise be?

The "global savings glut" refers to the period before the 2008 financial crisis, when substantial reserve accumulation by China, other emerging Asian economies, and commodity exporters contributed to their sizable current account surpluses.

We do not see this as a major factor contributing to the U.S. current account deficit currently. Reserve accumulation by these countries has slowed notably in recent years, and as a consequence their current account surpluses have narrowed or even turned to deficits. Differences in global current account balances in recent years in large part reflect differences in economic growth across economies, with stronger growth in United States than in Europe, for example.

What is the Federal Reserve's perspective on a capital flow management policy?

Over the longer term, our economy has benefited significantly from having a flexible exchange rate and open capital markets. In particular, flexible exchange rates allow monetary policy the independence to focus on the dual mandate objectives of maximum employment and stable prices without the constraint of also targeting the exchange rate.

Open capital markets have allowed the United States to enjoy lower borrowing costs for the government, businesses, and households, and have helped promote a healthier and more efficient domestic capital market. But openness also brings increased spillover risks from external shocks. To mitigate these risks, it is essential to maintain a strong macroeconomic environment, with sound monetary, macroprudential, and fiscal policy frameworks.

The United States has a sound policy framework and enough scope for macroeconomic policy adjustment, so cross-border capital flow volatility is not a source of systemic financial risks for our economy. Thus, the United States does not need a capital flow management policy. This is unlike some emerging market economies, for example, where the scope for macroeconomic policy adjustment may be curtailed by the risk of substantial capital outflows.

Coronavirus

Has the Fed explored means of curbing the market impact of the corona virus?

- **If yes, please specific all mechanisms the Board has under consideration.**
- **If no, why not?**

The Federal Reserve is committed to using our tools to support the flow of credit to households, businesses, and state and local governments to support a return to economic strength. We have lowered interest rates to near zero in order to bring down borrowing costs. We have also committed to keeping rates at this low level until we are confident that the economy has weathered the storm and is on track to achieve our maximum-employment and price-stability goals.

We also have acted to safeguard financial markets in order to provide stability to the financial system. In order to support smooth financial market functioning, we are purchasing appropriate amounts of Treasury and agency securities, as well as providing liquidity and encouraging lending by easing the terms on which banks can borrow from the Federal Reserve and urging them to access their full range of resources. We are also working with central banks around the globe to ensure that they can support the continued functioning of the dollar market abroad, which in turns supports domestic markets and the U.S. economy.

With the backing of the Department of the Treasury, we are also using our emergency powers to provide support to areas of capital markets that are central to household and business borrowing. Our Commercial Paper Funding Facility and Money Market Mutual Fund Liquidity Facility ensure that the commercial paper market continues to function smoothly and that money market funds remain stable. Moreover, we established the Primary Dealer Credit Facility, which extends credit to primary dealers, which allows them to support the flow of credit to businesses and households.

We also have established facilities to support credit to businesses, large and small. Two facilities have been established to support credit to large employers—the Primary Market Corporate Credit Facility, to purchase new bonds and syndicated loans, and the Secondary Market Corporate Credit Facility, to purchase outstanding corporate bonds, including through exchange-traded funds. In addition, to ensure credit continues to flow to small- and medium-sized businesses, the Federal Reserve established the Paycheck Protection Program Liquidity Facility (PPPLF) and the Main Street Lending Program (MSLP). The PPPLF extends credit to lenders that originate or purchase the Small Business Administration's (SBA) Paycheck Protection Program loans in order to bolster the effectiveness of the Program. The MSLP will purchase up

to $600 billion in loans from eligible small- and medium-sized businesses. We also established the Term Asset-Backed Securities Loan Facility, which supports the issuance of securities that are backed by student loans, auto loans, credit card loans, and loans guaranteed by the SBA, along with other select assets. By supporting businesses now, we can provide a robust recovery once the public health crisis has passed.

To help state and local governments better manage cash flow pressures in order to continue to serve households and businesses in their communities, we established the Municipal Liquidity Facility. The facility will purchase up to $500 billion of short-term notes directly from U.S. states (including the District of Columbia), U.S. counties with a population of at least 500,000 residents, and U.S. cities with a population of at least 250,000. Eligible state-level issuers may use the proceeds to support additional counties and cities. Governors of each state will also be able to designate two issuers in their jurisdictions whose revenues are generally derived from operating government activities (such as public transit, airports, toll facilities, and utilities) to be eligible to directly use the facilities.

Is there any recessionary risks posed by the coronavirus, yes or no? Please explain.

An enormous contraction in the U.S. economy has occurred that reflects a sharp pullback in spending by households as result of people engaging in both mandatory and voluntary "social distancing." For example, consumers have severely reduced spending on items consumed in public social settings, on travel, or on items purchased in shopping malls or large showrooms. Job gains were significant in May, and retail spending rebounded as well. However, employment and economic activity remain well below their pre-COVID-19 levels. The prospects for the economy depend crucially on the path of the coronavirus. The Federal Reserve is committed to using its tools to support the economy so that, once the threat of the virus is behind us, a robust and sustainable recovery can take place.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Green:

1. Do you agree that further assessment is needed to better understand and address the impact of a $15 minimum wage on unemployment and the overall health of the U.S. economy?

Due to your authority on price stability and on wages I would like to request a study by the Federal Reserve to determine the economic impact of raising the minimum wage in the U.S. to $15 an hour.

I agree that further study of the effects of minimum wage changes would be helpful for policymakers and the broader economic community. Economists across the Federal Reserve System, at other government agencies, and across academia continue to conduct independent research on this issue. However, the Federal Reserve does not take a position on the appropriate level of the federal minimum wage and, and considers that issue as a matter that is appropriately determined by fiscal policymakers.

The Congressional Budget Office's (CBO) has published an informative report on the effects of increasing the federal minimum wage.[1] The CBO's point estimates, which are based on a review of existing studies as well as the CBO's own analysis, suggest that increasing the minimum wage to $15 per hour by 2025 would raise the weekly earnings of low-wage workers directly affected by the federal minimum wage by about 12 percent on average, but would also reduce employment by 1.3 million workers. However, the CBO also stressed that considerable uncertainty surrounds those estimates. For employment, the CBO judged that there is a two-thirds chance that the change in employment would be between about zero and a reduction of 3.7 million workers. The CBO did not provide a corresponding range for its estimates of the effects of a higher minimum wage on weekly earnings, but noted that considerable uncertainty attends those estimates as well.

[1] "The Effects on Employment and Family Income of Increasing the Federal Minimum Wage," Congressional Budget Office, July 8, 2019. The CBO also has developed an interactive tool that allows users to explore how various policies to increase the federal minimum wage would affect earnings, employment, family income, and poverty, at https://www.cbo.gov/publication/55681.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Heck:

Economic Effects of Novel Coronavirus Outbreak

1. I have seen a variety of predictions on the degree to which worldwide spread of this new coronavirus would trigger an economic downturn. I'd like to ask you just about the United States. Do you expect that an uncontained outbreak of this coronavirus in the United States would cause our economy to shrink?

One response of many state and local governments has been to adopt social distancing measures aimed at limiting the spread of the coronavirus. If these measures succeed, they will prevent society from having to face the consequences of a repeated outbreak. Thus far, these social distancing measures themselves have been imposing a large toll on the economy, as many businesses have fewer clients, and as workers are encouraged, and sometimes required, to stay home.

The coronavirus has already left a devastating human and economic toll in its wake as it has spread around the globe. The economic consequences of an even more severe outbreak, were it to occur, would be even larger. For example, more businesses would close and workers would miss work owing to illness or the desire to avoid unsafe workplaces, temporarily limiting the productive capacity of the economy.

2. How does the Fed model the impact of a public health emergency like this? What other threats is it similar to? Are there past economic downturns that are instructive in understanding the economic impacts?

There is very little direct experience on which to draw in assessing the effects of COVID-19. There are good reasons to think that the effects would be very different from those of a typical recession, or the 2008-2009 financial crisis. In particular, recessions and financial crises are typically the result of some imbalance in the economy itself. That is clearly not the case with COVID-19; indeed, the economy was in a very good place before the outbreak.

There is some similarity between the economic consequences of the COVID-19 outbreak and those of natural disasters, but there are some key differences. For one, natural disasters tend to be limited to a particular region and timeframe, whereas COVID-19 is national and global in scope. Also, natural disasters can destroy infrastructure, whereas the COVID-19 has had a significant economic effect given that workers are prevented from working as they abide by social distancing requirements. Finally, the direct effects of the COVID-19 outbreak will likely be more protracted.

We can draw some lessons from the experience of other countries. For example, in some countries that have emerged from strict formal social distancing measures, including China, demand for travel-related and hospitality services has remained weak, suggesting a risk of a similar outcome in this country.

3. It seems to me that a public health emergency mainly hurts the economy by limiting our potential output while leaving demand largely untouched. A typical recession sees a decline in demand while leaving out economic potential untouched. The Fed has strong tools to bolster demand, which is needed in a typical recession. What tools would the Fed use in a recession driven by a supply shock? Does the Fed expect that a recession triggered by a public health emergency would be driven by a supply shock?

The direct effects of illness and social distancing on the ability of workers to do their jobs can be thought of as a "supply shock" that reduces the productive capacity of the economy. At the same time, the loss of income associated with that drop in supply will lead to a drop in demand. There have also likely been important demand effects over and above those associated with the supply effects. Leading measures of consumer confidence, for example, have plummeted to their lowest levels in eight years. Investor confidence was also initially shaken, with dramatic decline in equity and other asset prices. Asset prices have since rebounded, boosted at least in part by the Coronavirus Aid, Relief, and Economic Security Act and other fiscal support as well as the Federal Reserve's actions to support financial market functioning. These declines in confidence and in asset prices suggest that there has been a decline in aggregate demand beyond those associated with the decline in supply.

Monetary policy is well suited to addressing these additional demand and confidence effects and developments in recent months have shown the effect of the Federal Reserve's actions. Lower interest rates, for example, have likely contributed to the rebound in asset prices, which may in turn help bolster consumer confidence. And as just noted, the Federal Reserve's actions in support of financial market functioning have likely been an important factor behind the rebound in the stock market and in other asset prices.

The responses of monetary policy to supply and demand shocks differ, with the differences deriving directly from the Federal Reserve's dual mandate: An adverse demand shock reduces both employment and inflation and so both legs of the dual mandate would dictate expansionary monetary policy. In the case of an adverse shock to labor supply such as the one associated with COVID-19, stimulus aimed at limiting the decline in employment would tend to raise inflation above what it would otherwise be. In general, this situation would present policymakers with a trade-off: qualitatively, policymakers would choose to offset in part the decline in employment while accepting somewhat higher inflation. In recent years, however, inflation in the United States has been falling short of the Federal Reserve's inflation objective. In this situation, an increase in inflation back to the Federal Reserve's two percent target would thus be welcome.

Monetary Policy Effect on Business Investment

1. As you know, I'm deeply interested in wage growth and how we can get more of it. I fully accept your framework that long-term wage gains requires productivity growth, which in turn requires capital spending. I'm deeply concerned at the slowdown in business investment in 2019 and the negative growth in the last two quarters.

So how do we get more business investment? You've stated that, at least in principle, the incentive for businesses to invest in labor-saving technologies should rise when the

economy is nearing full employment and labor markets tighten. This seems to imply that we can increase productivity by increasing employment. Do you believe that the Fed can increase productivity growth through more aggressive pursuit of its full employment mandate?

I believe that investment and productivity can be increased by aggressive pursuit of our full employment mandate, though by how much is difficult to gauge. When the economy is at full employment, wage growth is high and labor is scarce. These conditions provide incentives for firms to invest in labor saving technologies, which should boost productivity. Moreover, an economy that is sustainably and persistently at full employment provides a stable high-demand macroeconomic environment for firms, which should also promote a high level of investment. In the current economic environment, with economic activity severely restricted by our nation's attempts to combat COVID-19, the Federal Reserve can best promote investment and productivity growth by aggressively pursuing a return to full employment once COVID-19 is contained.

Of course, the most important drivers of productivity growth are outside of the Federal Reserve's control. These drivers include a legal, regulatory, and fiscal environment that is transparent and that provides incentives for research, technological innovation, investment in human and business capital, and reallocation of capital and labor toward their most productive uses. Historically, opportunities for productive investment have been widespread in the U.S. economy, and U.S. productivity has been high relative to many other advanced economies.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Hill:

1. There were several proposals introduced in this Congress to impose caps on how much a lender can charge for a loan. Yet new data from the American Bankers Association show that millions of credit card holders – including 95% of subprime cardholders – could lose access to their cards. Do you think that interest rate caps can have unintended effects on access to credit?

Research suggests for some riskier loans, interest rate caps could impact credit availability.[1] On the other hand, limiting certain loan features or the amount that may be borrowed may prevent some borrowers from falling into a cycle of debt. Subprime borrowers tend to pose more risk and a higher price is charged to cover the greater likelihood of default. Also, for shorter-term loans, fixed costs have to be amortized over a short period raising the cost per day that the loan is outstanding. Furthermore, for these reasons, higher interest rates might be necessary for a lender to be profitable. However, whether there should be a cap on the amount of interest a person pays on a loan is a decision for Congress and for the states.

2. The Fed currently believes in an "ample reserves regime," but in the past you have said that the level of needed reserves is uncertain, as we saw in September when there were challenges in the repo market.

What do you believe is the top of the range for "ample reserves;" and how have you arrived at that figure?

Reserves move in a wide range depending on volatility in non-reserve liabilities, particularly the Treasury General Account (TGA). Therefore, reserve levels must be high enough to remain ample reserves even when non-reserve liabilities spike, particularly during tax seasons.

Determining the minimum level of reserves consistent with an ample reserve regime is difficult, but survey information, statistical estimates and discussions with market participants suggested that the level could be in a range from $1 to $1.5 trillion. Given the very large expansion of reserves over recent weeks stemming from the Federal Reserve's actions to address the crisis associated with the spread of the coronavirus, reserves are likely to remain far above ample levels for the foreseeable future.

You noted at your January press conference that the Fed has undertaken work to review what went wrong in the repo market last fall. What specific lessons has the Fed drawn from that review?

Based on our analysis, the repo market strains last fall reflected a confluence of factors including

[1] See, e.g., Jonathan Zinman, "Restricting Consumer Credit Access: Household Survey Evidence on Effects Around the Oregon Rate Cap," Journal of Banking and Finance, 2010, vol. 34, issue 3, 546-556. But see, The Pew Charitable Trusts, "How State Rate Limits Affect Payday Loan Prices" (April 2014), suggesting that the loss of credit access may be small.

flows associated with Treasury auction settlements, tax payments, and a steep drop in reserves. These factors led to an imbalance of demand and supply in the repo market, resulting in sharply higher repo rates. A complete discussion of that episode is included in the February 2020 Monetary Policy Report to Congress.[2]

Currently, there is high uncertainty around economic outcomes and the policy path ahead, which affects the level of reserves, in light of the actions taken in response to COVID-19 disruptions. However, when the size of the balance sheet is eventually normalized, our intention is for the reserves to be at a level that is no larger than necessary to conduct monetary policy efficiently and effectively. In the longer-run, we expect the balance sheet to grow in line with the growth in nominal GDP. As always, we are going to be transparent about all of our plans, and communicate them well in advance, going forward.

3. At your January press conference, you noted that the Fed is looking at joining the Network for Greening the Financial System, or NGFS.

The NGFS has said that it "emphasizes the importance of a robust and internationally consistent climate and environmental disclosure framework." If the Fed joined the NGFS, would that represent the Fed's endorsement of an enhanced disclosure regime for the entities you regulate?

How would you reconcile your legislative mandates with recommended actions by the NGFS, and how would this affect the clarity of the Fed's communications to the public?

The Federal Reserve is still exploring the type of continued engagement with the Network for Greening the Financial System (NGFS) that would best align with the Federal Reserve's responsibilities. We understand the NGFS to be a voluntary organization, whose recommendations are not binding on its members. Regardless of the nature of any future engagement with the NGFS, we will continue to set supervisory and regulatory expectations, including expectations around banking organization disclosures, on our independent assessment of best practices, and will take regulatory burden into account in setting these expectations.

More broadly, the Federal Reserve is focused above all on its mandates of fostering maximum unemployment and stable prices, ensuring the safety and soundness of financial institutions, and ensuring financial stability. We are committed to ensuring that the Board's international activities, including any future engagement with the NGFS, are consistent with those mandates.

4. Yield curve control has not allowed Japan to reach two percent inflation, and it is unclear how much the Fed would have to add to its balance sheet if it pursued such a policy. What evidence do you have that yield curve control would reliably allow the Fed to fulfill its legislative mandate?

---

[2] See the box entitled Money Market Developments and Policy Implementation at https://www.federalreserve.gov/monetarypolicy/2020-02-mpr-part2.htm.

While yield curve control has not been used in the United States for many decades, it can be thought of as a form of balance sheet policy in which the balance sheet is adjusted as necessary to keep Treasury yields within a range or to impose a ceiling or cap. Most of the available evidence suggests that the Federal Reserve's large-scale asset purchases were effective in easing financial conditions and providing additional accommodation when the federal funds rate was constrained at the effective lower bound. Since yield curve control operates through similar channels, it could, like these programs, help maintain accommodative financial conditions. However, the evidence stemming from the Federal Reserve's asset purchases during the previous crisis is only suggestive at best, as there is little direct evidence on the effectiveness of yield curve control for the United States.

A key difference between yield curve control and the balance sheet policies used during the previous crisis is that under yield curve control the central bank targets or caps yields and lets the balance sheet adjust accordingly, while under an asset purchase program a central bank targets a purchase amount and lets yields move accordingly. Yield curve control therefore has the advantage of reducing interest rate uncertainty but raises the concern that the Federal Reserve may need to purchase a large share of outstanding Treasury securities in order to enforce the cap.

One way to address this concern is through a yield curve cap on short to intermediate Treasury securities that is aligned with forward guidance for the path of the federal funds rate. In particular, maintaining a cap on short to intermediate rates that is reinforced by the Federal Open Market Committee's (FOMC) forward guidance would likely require a smaller degree of asset purchases than a cap that was implemented independently from any forward guidance the FOMC may provide. The FOMC's ongoing discussion of the benefits and costs of using balance sheet tools to cap rates along the yield curve was summarized in the minutes from the October 2019 meeting. No decisions have been made regarding the potential adoption of such an approach in the future.

5. In December testimony before the European Parliament, Christine Lagarde, the new President of the European Central Bank (ECB), discussed ECB initiatives in instant payments, distributed ledger technologies, and oversight of digital currency. She concluded, "Looking ahead, the ECB will continue to act as a catalyst for change." How do you believe the Fed can most effectively shape the future of money in a way that maintains our economic leadership while nurturing private-sector innovation?

A sound currency and effective payment system are essential to the health of the U.S. financial system and the overall economy. Fostering the safety and efficiency of the payment system, including establishing and maintaining a reliable U.S. currency, is one of the Federal Reserve's key functions. Furthering this objective is the basis of much of the Federal Reserve's ongoing and forward-looking work related to the payment system, and the Federal Reserve is committed to working closely with the private sector in this work.

The Federal Reserve interacts with the private sector in the payment system as an operator of payment and settlement services, as an overseer of certain private sector financial market infrastructure, and as a catalyst for system improvements. The Federal Reserve has long

supported responsible private-sector innovation in the financial system that is carried out in a manner that addresses associated risks and preserves the safety and soundness of the financial system and U.S. financial stability.

Presently, we are actively developing a payments infrastructure to advance the goal of nationwide access to real-time payments. While new players are making important contributions to the digital transformation of payments, it is critical that consumers and businesses can achieve the same speed and efficiency using their trusted deposit account providers with the safety and security they have come to expect. To make this possible, it is vital to invest in real-time retail payments infrastructure with national reach.

Last summer, the Federal Reserve Board announced that the Federal Reserve will launch the first new payment service in more than 40 years to help make real-time payments available to everyone. The Federal Reserve is developing the FedNow℠ Service as a platform for consumers and businesses to send and receive payments immediately and securely 24 hours a day, 7 days a week, 365 days a year. This initiative is intended to provide a neutral platform for new private-sector innovation in real-time payment services. Together, private-sector services and the FedNow Service are moving the U.S. banking system to real-time retail payments. These systems will enable consumers and businesses to settle retail transactions in real time, at any time, and allow them to manage their money with greater flexibility. Private-sector services and the FedNow Service should significantly increase the speed and efficiency of the U.S. payment system.

In addition to the FedNow Service, the Federal Reserve is undertaking an expansion of Fedwire® Funds Service and National Settlement Service operating hours to allow an additional window for same-day settlement of automated clearinghouse (ACH) transactions. The Federal Reserve is also exploring further expansion of Fedwire Funds Service and National Settlement Service operating hours. Finally, the Federal Reserve is working with the industry to improve the security of the payments system by, for example, increasing understanding of synthetic identity fraud and identifying a fraud classification approach to improve information sharing.

Looking further ahead, the Federal Reserve continues to research the potential benefits and costs of issuing central bank digital currency (CBDC) in the U.S. context and is monitoring similar efforts at other central banks. Many of the motivations cited by other jurisdictions, such as rapidly declining cash use, weak financial institutions, and underdeveloped payment systems, are not shared by the United States. The prospect for rapid adoption of global stablecoin payment systems, however, has intensified calls for central banks to issue digital currencies in order to maintain the sovereign currency as the anchor of the nation's payment systems. Given the dollar's important role, it is essential that we remain on the frontier of research and policy development regarding CBDC. Like other central banks, the Federal Reserve is conducting research and experiments aimed at providing hands-on experience to better understand the opportunities and limitations of possible technologies for CBDC. These efforts position the Federal Reserve to be able to react more expeditiously to rapid developments in this arena.

6. You have stated previously that, if there were an economic downturn, the Fed would have sufficient firepower using its balance sheet to address it. Quantitative easing is meant

to stimulate the economy through increased risk-taking and higher asset prices, but some argue that this risk-taking effect could have an impact on financial stability, which the Fed is of course responsible for safeguarding. How does this tradeoff inform the Fed's thinking on the use of unconventional monetary policy tools?

Quantitative easing stimulates the economy by reducing the supply of longer-term securities in private hands, putting upward pressure on their prices, and thus putting downward pressure on longer-term interest rates. Lower longer-term interest rates contribute to more accommodative financial conditions that, in turn, help support a stronger economy. Past QE episodes suggest that QE generates relatively modest reach-for-yield behavior, in part because the extent to which QE increases financial vulnerabilities depends on the stage of the business cycle. Indeed, pursuing accommodative monetary policy during an economic downturn is more likely beneficial, rather than detrimental, for financial stability, because subdued growth or a drift down in inflation expectations could lead to the build-up of financial vulnerabilities through channels such as weaker bank and borrower balance sheets or debt deflation.

The Federal Reserve relies on supervisory, regulatory, and macroprudential tools as the primary means to build financial resilience and mitigate financial vulnerabilities. This toolset includes capital and liquidity requirements for banks that are substantially stronger relative to before the financial crisis as well as higher for the largest and most systemic institutions; the enhanced resolvability of systemic firms; supervisory guidance for banks; the Comprehensive Capital Analysis and Review (CCAR) stress tests; and the countercyclical capital buffer (CCyB). The scenarios used for the CCAR stress tests are designed to be more severe during buoyant economic periods when vulnerabilities may build. The CCyB can be activated to boost bank capital and resilience in buoyant times when risk-taking is higher, and released when the economy weakens to promote continued lending. The appeal of using macroprudential, regulatory and supervisory tools rather than monetary policy to address financial vulnerabilities is twofold. First, it reduces potential conflicts with the monetary policy goals. Second, macroprudential and regulatory tools can be better directed towards pockets of vulnerabilities than monetary policy tools can be.

7. You have previously cautioned against the risks posed by our national debt. Can a low interest rate environment and a commitment to quantitative easing in the future risk expanding our debt by facilitating lax fiscal policy?

The Congress and the Administration have the responsibility to ensure that fiscal policy is on a sustainable longer-run trajectory. The Federal Reserve is charged by the Congress with promoting maximum employment and price stability. In pursuit of these objectives, we adjust our target range for the federal funds rate and the other aspects of our monetary policy as needed, to best fulfill our congressional mandate. Over the longer run, however, Treasury borrowing costs and the general level of interest rates are determined not by monetary policy but by structural factors, such as the pace of innovation in the economy and the rate of growth of the population, to name just two important ones. These borrowing rates can influence what is a sustainable fiscal policy. Fiscal policymakers should take these structural factors into account when determining the appropriate level of federal debt.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Sherman:

1. In 2014 the Federal Reserve Board and the New York Fed jointly convened the Alternative Reference Rates Committee (ARRC) to address the broad spectrum of risks associated with U.S. Dollar LIBOR. During a meeting of the ARRC on November 15, 2019, ARRC members announced plans to work with the State of New York to pass legislation through the state legislature intended "to address the trillions of dollars of existing LIBOR-linked contracts that either lack contractual provisions to deal with the end of LIBOR or have contractual provisions that do not effectively address a permanent cessation of LIBOR."[1] What is the Federal Reserve Board's best estimate of the total value for each class of outstanding LIBOR-linked contract that the legislation described above is intended to address?

[1] https://www.newyorkfed.org/medialibrary/microsites/arrc/files/2019/ARRC-Minutes-Nov-2019.pdf

If the State of New York were to adopt the legislation that ARRC members are advocating for, what would be the total value for each class of outstanding LIBOR-linked contract described above that would not be covered by the legislation?

As you note, the private-sector members of the Alternative Reference Rates Committee (ARRC) have proposed legislation that the state of New York could consider. The ARRC's proposal would most directly address contracts that have no fallback language, contracts that have fallback language that would revert to a poll of banks in attempt to recreate LIBOR, and contracts that have fallback language that would revert to a previous value of LIBOR. In these cases, if the state of New York were to enact the proposed legislation, the ARRC's recommended replacement for LIBOR would be recognized as a commercially reasonable substitute for LIBOR. Under the proposal, counterparties would be able to mutually agree to exempt contracts from this provision.

The types of contracts that predominantly contain the kinds of fallback language that the ARRC's proposal would most directly address are floating rate debt instruments, non-agency securitizations, and non-financial corporate contracts referring to LIBOR for late payment or other charges. The ARRC has estimated that there are approximately $3.6 trillion of floating rate debt instruments and securitizations that reference U.S. dollar LIBOR. The number of non-financial corporate contracts referencing LIBOR in late payment or other charges is difficult to estimate, but is considered to be large.[1]

[1] The ARRC's proposal, if enacted, would also cover derivatives contracts under New York law in cases where counterparties choose not to adhere to the International Swaps and Derivatives Association's (ISDA) impending protocol, and it would offer safe harbor for counterparties who elect to use the ARRC's recommendations in contracts that give them discretion to select a successor rate to LIBOR. The latter type of contract would primarily be consumer products, and many of these would not be under New York law. It is uncertain how many counterparties will choose not to adhere to the ISDA protocol, but the official sector has encouraged market participants to adhere and so the number may be limited.

In the United States, most of the contracts described above are covered by New York law. The total value of such contracts that would not be covered by New York law is difficult to estimate because comprehensive data on contractual fallbacks is unavailable in most cases, but it is thought to be small. Some securitizations, most notably agency securitizations issued for example by Fannie Mae or Freddie Mac, are not under New York law and would not be covered by the proposal. However, the ARRC's Second Report notes that the fallback language in these securitizations typically allow the noteholder (e.g., Fannie Mae or Freddie Mac) the discretion to name a successor rate if LIBOR is unavailable rather than reverting to a poll of banks or to a previous value of LIBOR.

2. On July 7, 2019, I sent you a letter along with Congressman Kustoff, and 41 of our colleagues, inquiring whether the Federal Reserve currently has sufficient authority to put in place a mechanism to require name matching, in addition to account and routing number matching, for wire transfers made through the Fedwire system, if not the broader U.S. wire system. In your response, you indicated that the Board regulation that governs the Fedwire Funds service is based on a model state law. However, this response did not address the underlying question. Please explain whether the Federal Reserve Board does or does not have the necessary authority to require name matching on U.S. wire transfers?

The Federal Reserve Banks (Reserve Banks) operate the Fedwire Funds Transfer system (Fedwire), which is a real-time gross settlement system that enables Reserve Bank accountholders to make final payments using balances held at Reserve Banks. In some funds transfers, the sending bank and the beneficiary's bank are both direct Fedwire participants and Reserve Bank accountholders. In other cases, however, a bank may use Fedwire for one leg of a funds transfer that involves one or more subsequent intermediary banks. In those circumstances, the beneficiary's bank would not be a Reserve Bank accountholder or direct Fedwire participant.

The Federal Reserve Act authorizes the Board to issue regulations governing the movement of funds involving the Reserve Banks and their accountholders.[2] Pursuant to this authority, the Board promulgated Subpart B of Regulation J (Subpart B), which governs funds transfers through Fedwire.[3] Subpart B generally incorporates Article 4A of the Uniform Commercial Code, which allows a beneficiary's bank to rely on an account number listed in a payment order to identify the beneficiary if the account number and name differ.[4] The Board incorporated Article 4A into Subpart B to ensure that the rules governing Fedwire funds transfers would be consistent with the rules governing funds transfers that are subject to state law.

Amending Subpart B to vary from state law and require payee matching for beneficiary's banks that are Reserve Bank accountholders could pose a number of problems. First, it would create discrepancies in the legal treatment of U.S. funds transfers depending on whether Subpart B or

---

[2] *See, e.g.*, Federal Reserve Act §§ 16(14) ("The Board of Governors of the Federal Reserve System shall make and promulgate from time to time regulations governing the transfer of funds and charges therefor among Federal reserve banks") and 19(f) ("The required balance carried by a member bank with a Federal reserve bank may, under the regulations and subject to such penalties as may be prescribed by the Board of Governors of the Federal Reserve System, be checked against and withdrawn by such member bank for the purpose of meeting existing liabilities").

[3] 12 CFR Part 210 Subpart B.

[4] 12 CFR 210.25(b)(1) and UCC 4A-207.

state law applies. Second, as noted in my letter dated July 9, 2019, imposing payee matching requirements could pose operational challenges for beneficiary banks that currently process hundreds of thousands of wire payments each day. The vast majority of these wires are processed by automated means using machines capable of reading standard payment order formats that identify the beneficiary's account.

The Federal Reserve Act does not explicitly authorize the Board to prescribe regulations governing banks that are not direct Fedwire participants. Accordingly, while subpart B governs the rights and obligations of the Reserve Banks and their accountholders, Subpart B binds third-party banks only in limited circumstances.[5]

While some funds transfers settle through Fedwire, others settle through correspondent banks[6] or the Clearing House Interbank Payment System (or CHIPS) funds transfer system.[7] The Board has no authority to require payee matching for funds transfers that do not settle through Fedwire.

---

[5] Specifically, Subpart B binds a third-party beneficiary's bank only where (1) the beneficiary's bank has agreed to be bound by Subpart B or (2) at the time the beneficiary's bank has accepted the payment order, the beneficiary's bank has "notice that [Fedwire] might be used in the funds transfer and of the" applicability of Subpart B to Fedwire. *See* UCC 4A-507(c) and paragraph (a)(3) of the Board's official commentary to 12 CFR 210.25.

[6] *See* https://www.bis.org/cpmi/publ/d147.htm.

[7] *See* https://www.theclearinghouse.org/payment-systems/chips.

Questions for The Honorable Jerome H. Powell, Chair, Board of Governors of the Federal Reserve System from Representative Tlaib:

1. The Bank of England, Bank of France, International Monetary Fund, Bank of International Settlements, and many other international bodies have released financial stability-related analyses on the risks of climate change. You are a voting member of the Financial Stability Oversight Council (FSOC).

Did FSOC include climate risk in its 2019 annual report?

Has FSOC or the Fed Board released any financial stability analyses related to climate risk?

Can you commit to doing so in the future?

The Federal Reserve's mission requires us to study and understand a wide variety of risks to the economy and financial system. We often have to begin assessing the nature and extent of potential risks as they emerge, even when economic research around those risks is still nascent. In the case of climate-related risks, and the ways those risks affect the financial system and the broader economy, we are both monitoring closely and contributing actively in the growing research.

Staff at both the Federal Reserve Board and at the Federal Reserve Banks around the country are conducting research to understand the ways in which climate-related developments may pose risks to the economy and the financial system, and staff have made numerous contributions to the emerging research. This research is contributing to our own work in this area as well as the work of international standard setting bodies, including the Financial Stability Board (FSB), on how climate-related risks could affect the financial system. Understanding emerging climate-related risks to the economy and financial system is a challenge. Meeting that challenge will require careful, sustained research and attention over an extended period of time.

The Federal Reserve publishes a Financial Stability Report twice a year. At this point, we have not published analysis related to climate change in that report, but we continually assess developments in the research.

The Treasury, as Chair of the Financial Stability Oversight Council (FSOC), is best able to respond to questions regarding the FSOC's work. As a member, the Federal Reserve is committed to supporting any work undertaken by the FSOC.

2. There is a growing international consensus around the severe risks that climate change poses to the financial system. It is critical for the Federal Reserve Board to have the expertise necessary to evaluate the risks of climate change and develop policy interventions to mitigate that risk.

Have you hired climate economists at the Fed to work on this issue?

Have you been briefed or advised by any climate scientists inside or outside of government on this issue?

Addressing climate change directly is a mandate that Congress has entrusted to other agencies. In addition, a large body of natural science research on the climate implications and risks from the rising level of greenhouse gases has been produced by the scientific community, which can be leveraged to inform economic research. Federal Reserve research staff have been in touch with members of the U.S. Global Change Research Program, the federal program mandated by Congress that produces the National Climate Assessment. Because of the availability of this scientific expertise outside the Federal Reserve, we do not expect to focus our hiring on natural scientists.

The Federal Reserve employs economists with doctoral training in a broad array of economic and financial topics, including staff with expertise in climate and environmental economics and related fields. Recent Federal Reserve staff research includes, for example, the effects of climate, weather, and disasters on economic and financial outcomes. Researchers inside and outside of the Federal Reserve are engaging in active work to better understand the specific interactions between climate-related risks, the real economy, financial stability, and the safety and soundness of financial institutions.

In addition, we are leading or participating actively in international efforts to understand these issues, including a new project at the FSB and a recently established Basel Committee Task Force on Climate-Related Financial Risks, co-chaired by the Federal Reserve Bank of New York's head of supervision.

Federal Reserve economists continue to produce research that informs the dialogue on climate-related economic and financial risks. Below is a representation of their publications.

- Aladangady, Aditya, Shifrah Aron-Dine, Wendy E. Dunn, Laura Feiveson, Paul Lengermann, and Claudia Sahm (2016). "The Effect of Hurricane Matthew on Consumer Spending," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, December 2, 2016.
- Arrow, Kenneth J., and Marcel Priebsch (2014). "Bliss, Catastrophe, and Rational Policy," *Environmental and Resources Economics*, vol. 58, no. 4, pp. 491-509.
- Baker, Steven D., Burton Hollifield, and Emilio Osambela (2020). "Preventing Controversial Catastrophes," *The Review of Asset Pricing Studies,* vol. 10, no. 1, pp. 1-60.
- Bansal, Ravi, and Marcelo Ochoa (2011). "Temperature, Aggregate Risk, and Expected Returns," *NBER Working Paper No. 17575.* The National Bureau of Economic Research.
- Bansal, Ravi, and Marcelo Ochoa (2011). "Welfare Costs of Long-Run Temperature Shifts," *NBER Working Paper No. 17574.* The National Bureau of Economic Research.
- Bansal, Ravi, Dana Kiku, and Marcelo Ochoa (2016). "Price of Long-Run Temperature Shifts in Capital Markets," *NBER Working Paper No. 22529.* The National Bureau of Economic Research.

- Bansal, Ravi, Dana Kiku, and Marcelo Ochoa (2019). "Climate Change Risk," Federal Reserve Bank of San Francisco, Working paper.
- Bansal, Ravi, Marcelo Ochoa, and Dana Kiku (2016). "Climate Change and Growth Risks," *NBER Working Paper No. 23009*. The National Bureau of Economic Research.
- Bayard, Kimberly, Ryan Decker, and Charles Gilbert (2017). "Natural Disasters and the Measurement of Industrial Production: Hurricane Harvey, a Case Study," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, October 11, 2017.
- Cai, Beilei, Trudy Ann Cameron, and Geoffrey R. Gerdes (2011). "Distal Order Effects in Stated Preference Surveys," *Ecological Economics*, vol. 70, no. 6, pp. 1101-1108.
- Blonz, Joshua A. (2019). "The Welfare Costs of Misaligned Incentives: Energy Inefficiency and the Principal-Agent Problem," Finance and Economics Discussion Series 2019-071. Board of Governors of the Federal Reserve System (U.S.).
- Blonz, Joshua, Dallas Burtraw, and Margaret A. Walls (2010). "Climate Policy's Uncertain Outcomes for Households: The Role of Complex Allocation Schemes in Cap-and-Trade," *The B.E. Journal of Economic Analysis & Policy*, vol. 10, no. 2 (Symposium), Article 5.
- Blonz, Joshua, Dallas Burtraw, and Margaret Walls (2012). "Social Safety Nets and US Climate Policy Costs," *Climate Policy*, vol. 12, no. 4, pp. 474-490.
- Bunten, Devin, and Matthew E. Kahn (2017). "Optimal Real Estate Capital Durability and Localized Climate Change Disaster Risk," *Journal of Housing Economics*, vol. 36, pp. 1-7.
- Bunten, Devin, and Matthew E. Khan (2014). "The Impact of Emerging Climate Risks on Urban Real Estate Price Dynamics," *NBER Working Paper No. 20018*. The National Bureau of Economic Research.
- Burtraw, Dallas, Margaret Walls, and Joshua Blonz (2010). "Distributional Impacts of Carbon Pricing Policies in the Electricity Sector," in Gilbert E. Metcalf (ed.). *U.S. Energy Tax Policy* (pp. 10-40). Cambridge University Press.
- Cai, Beilei, Trudy Ann Cameron, and Geoffrey R. Gerdes (2010). "Distributional Preferences and the Incidence of Costs and Benefits in Climate Change Policy," *Environmental & Resource Economics*, vol. 46, no. 4, pp. 429-458.
- Carson, Richard T., and Brigitte Roth Tran (2009). "Discounting Behavior and Environmental Decisions," *Journal of Neuroscience, Psychology, and Economics*, vol. 2, no. 2, pp. 112-130.
- Cummins, J. David, Michael Suher, and George Zanjani (2010). "Federal Financial Exposure to Natural Catastrophe Risk," in Lucas, Deborah (ed.). *Measuring and Managing Federal Financial Risk.* NBER Conference Report. Chicago, IL: The University of Chicago Press, pp. 61-92.
- Diebold, Francis X., and Glenn D. Rudebusch (2020). "Probability Assessments of an Ice-Free Arctic: Comparing Statistical and Climate Model Projections," Federal Reserve Bank of San Francisco Working Paper 2020-02.
- Fried, Stephanie, Kevin Novan, and William B. Peterman (2016). "The Distributional Effects of a Carbon Tax on Current and Future Generations," Finance and Economics Discussion Series 2016-038. Board of Governors of the Federal Reserve System (U.S.).

- Fried, Stephanie, Kevin Novan, and William B. Peterman (2018). "The Distributional Effects of a Carbon Tax on Current and Future Generations," *Review of Economic Dynamics*, vol. 30, pp. 30-46.
- Fried, Stephanie, Kevin Novan, and William B. Peterman (2019). "The Green Dividend Dilemma: Carbon Dividends Versus Double-Dividends," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, March 8, 2019.
- Fried, Stephie, Kevin Novan, and William B. Peterman (2019). "The Systemic Risk of Climate Policy (Preliminary)," Federal Reserve Bank of San Francisco Working paper.
- Gagnon, Etienne, and David López-Salido (forthcoming). "Small Price Responses to Large Demand Shocks," *Journal of the European Economic Association.*
- Gagnon, Etienne, and J. David López-Salido (2015). "Mass Population Displacement and Retail Activities in the Wake of Hurricane Katrina," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, August 26, 2015.
- Kruttli, Mathias S., Brigitte Roth Tran, and Sumudu W. Watugala (2019). "Pricing Poseidon: Extreme Weather Uncertainty and Firm Return Dynamics," Finance and Economics Discussion Series 2019-054. Board of Governors of the Federal Reserve System (U.S.).
- Li, Xin, Borghan Narajabad, and Ted Temzelides (2016). "Robust Dynamic Energy Use and Climate Change," *Quantitative Economics*, vol. 7, no. 3, pp. 821–857.
- Li, Xin, Borghan N. Narajabad, and Ted Temzelides (2014). "Robust Dynamic Optimal Taxation and Environmental Externalities," Finance and Economics Discussion Series 2014-75. Board of Governors of the Federal Reserve System (U.S.)
- Roth Tran, Brigitte (2019). "Divest, Disregard, or Double Down? Philanthropic Endowment Investments in Objectionable Firms," *American Economic Review: Insights*, vol. 1, no. 2, pp. 241-256.
- Roth Tran, Brigitte (2019). "Sellin' in the Rain: Adaptation to Weather and Climate in the Retail Sector," Finance and Economics Discussion Series 2019-067. Board of Governors of the Federal Reserve System (U.S.).
- Roth Tran, Brigitte, and Tamara L. Sheldon (2017). "Same Storm, Different Disasters: Consumer Credit Access, Income Inequality, and Natural Disaster Recovery," Working paper.
- Rudebusch, Glenn D. (2019). "Climate Change and the Federal Reserve," *FRBSF Economic Letter 2019-09.* Federal Reserve Bank of San Francisco.
- Schmalensee, Richard, Thomas M. Stoker, and Ruth A. Judson (1998). "World Carbon Dioxide Emissions: 1950-2050," *The Review of Economics and Statistics*, vol. 80, no. 1, pp. 15-27.