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The Economic Outlook, Monetary Policy, and the Demand for Reserves

Remarks by

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I would like to thank the organizers for the opportunity to speak to you today. My plan is to address some topical and important issues, some of which are quite technical but technicalities that I think can have significant consequences.[1] After providing my thoughts on where the economy and monetary policy are now, I will turn to what we can expect from monetary policy in the years to come.

Changes in the economic environment since the financial crisis, including an apparent decline in the equilibrium interest rate, have complicated the conduct of monetary policy as we work to achieve our dual mandate of maximum employment and stable prices. The Federal Open Market Committee (FOMC) is currently undertaking a review of its monetary policy strategy, tools, and communication practices to make sure we are best positioned to confront the challenges ahead. Since the Committee is still actively discussing the review, I have no intention of front-running the results. Instead, I would like to address a separate but not unrelated topic, the interaction of bank supervision and regulation with monetary policy, and how supervision and regulation might work to make monetary policy implementation more effective in the current environment, particularly as it relates to a bank's demand for reserves.[2]

But first, let me start with a brief take on the current economic outlook. There is much to be encouraged by in the nation's current economic performance even as some notable risks require careful monitoring.

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[1] All of my remarks today represent my own views, which do not necessarily represent those of the Federal Reserve Board, the Federal Open Market Committee, or the Financial Stability Board. I would like to thank Courtney Demartini, Etienne Gagnon, Michael Hsu, and Laura Lipscomb for their assistance in preparing these remarks.

[2] This subject is one on which I have previously spoken. See Quarles (2018).

The labor market continues to perform remarkably well, providing a key pillar of support for the rest of the economy. The unemployment rate is at a 50-year low. The labor force participation rate has been steady for some time now despite continued predictions for its decline premised on an aging population moving into retirement. Taken together, low unemployment and steady participation have boosted the employment-to-population ratio, which has finally surpassed its pre-crisis level. A strong labor market, in turn, supports a healthy pace of consumption growth and the economy more generally.

There has been some public discussion about what constitutes a tight labor market. I am in the camp that believes that some additional slack remains in the market, particularly in the potential for higher labor force participation. I have spoken for some time about my confidence that a strong labor market will continue to draw in workers—and lead other workers to delay retirement or otherwise remain in the labor force—and, so far, I remain optimistic.

Although I feel good about the outlook, a few developments give me pause. Significantly, investment continues to be weak, declining over the course of 2019. Increasing the capital stock and investing in new technologies are important for productivity growth, rising living standards, and the economy's long-run growth rate, so reversing the recent downward trend is essential for the overall health of the economy.

In part, the fall in investment likely reflects business concerns over the pace of global growth and risks to the outlook. In particular, 2019 was a bad year for economic growth among U.S. trading partners, and, as a consequence, our exports suffered. Recently, I have been encouraged by the progress in U.S. trade negotiations. I am hopeful that the recently signed phase-one deal with China will boost U.S. exports and lead to

considerable reduction in the uncertainty that has been weighing on businesses, as will the continued progress in enacting the trade agreement with Canada and Mexico.

While the recent progress on trade should boost business confidence, the outbreak of the Wuhan coronavirus introduces a new element of uncertainty. In addition to the human toll, the virus also threatens significant economic disruption, particularly for China and its neighbors, as workers and consumers stay home and normal activities are otherwise disrupted. It is too early to say what the full economic effect of the outbreak will be, and this situation will require careful monitoring.

In summary, I remain optimistic about the outlook, but I am also highly aware that some notable risks still threaten growth, both overseas and at home.

A few words on inflation. Both headline and core inflation, as measured by the price index for personal consumption expenditures, or PCE, came in at 1.6 percent in December, somewhat below the FOMC's 2 percent objective. This deviation does not worry me that much, in part because I expect inflation to move back to target over the medium term, in part as some unusually low readings in early 2019 pass out of the data. Already, various trimmed price indexes are running much closer to 2 percent.

Monetary Policy Considerations

I view the current stance of monetary policy as appropriate given the economic outlook and relatively muted inflation pressures. Policy is in a good place to support continued economic growth, strong labor market conditions, and inflation returning to target. That said, now is a good time to be thinking about the challenges that monetary policy is likely to face in the coming years.

One important development, as I mentioned at the start, is that interest rates at home and abroad have declined significantly from their pre-recession levels. Policymakers, economists, and market participants see much of this decline as reflecting a permanent fall in the equilibrium rate of interest—that is, the level of the federal funds rate that keeps the economy at full employment with stable inflation in the longer run. For example, in the most recent Summary of Economic Projections compiling the individual forecasts of FOMC participants, the median estimate of the longer-run federal funds rate, a value that incorporates policymakers' assessments of the equilibrium rate, was 2-1/2 percent, down from 4-1/4 percent in early 2012.[3]

All else being equal, a fall in the equilibrium rate of interest lessens the scope for the FOMC to cut rates in response to a significant economic downturn, as the distance to zero shrinks. In the absence of compensating policy actions, this situation may aggravate economic downturns. Thankfully, in practice policymakers have several additional tools to ease financial conditions and support the economy.

One such tool is forward guidance: By credibly conveying to the public that policymakers will likely pursue a path for the policy rate that is lower than previously anticipated, policymakers can put downward pressure on longer-term interest rates. In addition, policymakers can implement policies such as large-scale asset purchases (LSAPs) that affect the size and composition of the balance sheet: By purchasing longer-term securities in the open market, the Federal Reserve reduces the quantity of such assets

[3] The extent and origins of the global decline in neutral interest rates are much debated. Among the likely contributing factors are population aging, a slowdown in the rate of productivity growth, and changing attitude toward risk. For a discussion, see Fischer (2016).

The most recent SEP appeared as an addendum to the minutes of the December 2019 FOMC meeting. See Board of Governors (2020).

available for purchase. The increased scarcity tends to raise the price of these securities and depress their yields. Balance sheet policies can put further downward pressure on longer-term yields by reinforcing the credibility of the forward guidance if these policies are seen as a signal that policymakers intend to keep the policy rate low for an extended period.[4]

The FOMC used both forward guidance and balance sheet policies in response to the financial crisis. Some observers argue that forward guidance and asset purchases fully offset the shortfall in policy accommodation caused by a lack of space to cut interest rates further, so that the limits on the Fed's policy rate did not ultimately constrain our policy response to the financial crisis. Other observers see these policy tools as having had, at best, a small positive effect on the economy. Somewhere between these two extremes, the majority view is that forward guidance and balance sheet polices likely made up for some, though not all, of the shortfall.[5]

The experience gained with these tools during and after the financial crisis will likely facilitate their prompt and effective deployment in future episodes when there is no longer space for further cuts in the policy rate.

In retrospect, many of the potential negative effects associated with forward guidance and LSAPs did not materialize. In particular, inflation remained contained, and longer-run inflation expectations did not become unanchored. A large balance sheet did not prevent the FOMC from raising the policy rate when it deemed such action was appropriate.

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[4] See Woodford (2012) for a discussion of the importance of the signaling channel.
[5] See, for example, Swanson (2018); Debortoli, Galí, and Gambetti (2019); Sims and Wu (2019); and Bernanke (2020).

To gain the full benefit of our toolkit, it will be important to continue to communicate clearly about our willingness to use all of our tools in future downturns.[6] The greater the public confidence that policymakers will use these tools in response to episodes when the ability to cut the policy rate is constrained, the more real longer-term interest rates will systematically decline in response to negative economic developments, providing an automatic stabilizer to the economy. Moreover, public confidence in the FOMC's ability to react to economic downturns—even when the policy rate is very low—will support the resilience of longer-term inflation expectations at levels consistent with the FOMC's objective. Keeping inflation expectations anchored will in turn further support the FOMC's ability to lower real interest rates if the economy were to weaken substantially.

Balance Sheet Policies and Reserve Demand

Taking stock, I note that one approach to the constraints on policy imposed by the current low level of interest rates is to make what were previously unconventional tools—balance sheet policies and forward guidance—as conventional as possible. Although I fully support the FOMC's current plan to purchase Treasury bills and increase the size of the balance sheet in the very short term, over the longer-term, I believe that the viability of balance sheet policies is enhanced if we can show that we can meaningfully shrink the size of the balance sheet relative to gross domestic product following a recession-induced balance sheet expansion. In effect, I believe that balance sheet policies are more credible if

[6] See the Statement Regarding Monetary Policy Implementation and Balance Sheet Normalization, which is available on the Board's website at https://www.federalreserve.gov/newsevents/pressreleases/monetary20190130c.htm.

we can show that there is not a persistent ratcheting-up effect in the size of the Fed's asset holdings.

Of course, the balance sheet is not going back to pre-crisis levels, when the size was primarily determined by the Fed's currency liabilities. As the FOMC announced in January of 2019, the Committee intends to implement monetary policy in an ample-reserves regime.[7] With that approach, control over the level of the federal funds rate and other short-term interest rates is exercised primarily through the setting of the Federal Reserve's administered rates and is not, over the longer term, reliant on frequent and large open market operations. The Committee also reiterated that it would assess the level of reserves most consistent with efficient and effective monetary policy implementation. Questions about this level have moved to the forefront following market dislocations and money market pressure amid a temporary, but pronounced, reduction in the supply of reserves as a result of an increase in our nonreserve liabilities in September. Indeed, this episode has been cited by a number of firms and analysts who estimate that the amount of reserves consistent with an ample framework was higher than they previously had thought.

Following the mid-September volatility, the Committee stated that it would seek to maintain, over time, a level of bank reserves at or above the level that prevailed in early September, a level that we believe is sufficient to operate an ample-reserves regime. Looking ahead, I judge that it is reasonable that we ask ourselves whether it may be possible to operate with a lower level of reserves and remain consistent with the ample framework.

[7] See the Statement Regarding Monetary Policy Implementation and Balance Sheet Normalization in note 6.

I will spend the remainder of my time exploring possible means to enhance the efficiency of our monetary policy implementation, including reserve provision, through adjustments to our existing regulatory and supervisory regime. In particular, I will focus on liquidity regulation and supervision as well as interactions with monetary policy tools. And I will suggest a policy-based approach to some of the issues I identify.

Before going into more detail about what I mean, let me emphasize that I will be touching on some issues that the Federal Reserve is in the process of observing and evaluating and, in some cases, may be far from reaching any final decisions. As such, my thoughts on these issues are my own and are likely to evolve, benefiting from further analysis and monitoring of bank behavior and financial markets over time.

Let me take a step back to highlight some of the key features of the current liquidity regulation and supervision regime, features that have resulted in significant increases in the liquidity resilience and risk-management capabilities of our largest institutions. Taken together, these features—including the Liquidity Coverage Ratio (LCR), Regulation YY's enhanced prudential standards, and resolution planning—require large firms to demonstrate that they hold sufficient liquid assets to meet outflows in stressed scenarios and in resolution.

In short, we expect firms to manage their liquidity risk prudently—*to self-insure*—so they can withstand the types of runs we saw during the crisis without relying on taxpayer support. This outcome has contributed to a more resilient financial system and leaves taxpayers in a much better place today.

Following the implementation of these requirements, large banks have more than doubled their buffers of liquid assets. More specifically, our largest banks have

significantly increased their holdings of assets known as Level 1 high-quality liquid assets (HQLA). Level 1 HQLA includes central bank reserves, Treasury securities, and Ginnie Mae securities.

As discussed in the original design for the LCR, all forms of Level 1 HQLA are treated as substitutes. There is no preference for reserves versus, say, Treasury securities in the calculation of the ratio.

Despite the regulatory text's equal treatment of Level 1 HQLA, we know that reserves have special characteristics when it comes to stress. Even though the Treasury market is the most liquid in the world, in an *actual* stress event, banks would still need to take steps to monetize Treasury securities to meet cash outflows.

However, it may be difficult to liquidate a large stock of Treasury securities to meet large "day one" outflows. For firms with significant capital market activities, wholesale operations, and institutional clients (such as hedge funds), this scenario is not just theoretical. In the global financial crisis, several firms experienced outflows exceeding tens of billions of dollars in a single day.

The LCR does not capture these on-the-ground realities. But supervision does. Under Regulation YY's enhanced prudential standards, large firms are required to conduct internal liquidity stress tests (ILSTs). Supervisors expect firms to estimate day-one outflows and to ensure that their liquidity buffers can cover those outflows without reliance on the Federal Reserve. For firms with large day-one outflows, reserves can meet this need most clearly.

Yet it is worth remembering that a principal reason for the Federal Reserve's creation was to facilitate the movement of reserves when needed from banks with an excess

reserve position to those in need of reserves.[8] Indeed, it is the reason we are called the Federal Reserve. I do not think that is a fact of purely historical interest. Excessive friction in the movement of cash in the financial system was likely a contributor to the market dislocations of last September. In that regard, I think it is worth considering whether financial system efficiency may be improved if reserves and Treasury securities' liquidity characteristics were regarded as more similar than they are today—that is to say, that reserves and Treasury securities were more easily substitutable in the context of liquidity buffers. To be clear, the ideas I will discuss do not involve any decrease in banks' liquidity buffers. Rather, I want to explore options that would maintain at least the level of resilience today while also facilitating the use of HQLA beyond reserves to meet the immediate liquidity needs projected in banks' stress scenarios.

My suggested options are grounded in the principle that the Federal Reserve has an important role in providing liquidity to depository institutions. Today this role is played by the discount window, through which Reserve Banks provide fully collateralized loans to healthy institutions. While the range of eligible collateral for such liquidity provision is very broad, it may be worthwhile to focus for the moment on the Federal Reserve's potential to provide liquidity that is collateralized only by Level 1 HQLA. With firms posting Level 1 assets as collateral, the Fed would be well positioned to provide liquidity to bridge the monetization characteristics of HQLA securities versus reserves. Acknowledging this potential role in stress scenarios, the Fed may promote efficient market

[8] See Edwin Seligman in the introduction to Warburg (1930): "Mr. Warburg recalled to our mind what had been forgotten by most of us, that the real pith of modern banking is the question of the reserve, and that the essential weakness of the American system was the extreme decentralization of resources, resulting in the time of stress or trouble in every individual bank attempting to secure its own solvency in disregard either of the welfare of other banks or of the needs of the business community." See also "A United Reserve Bank of the United States" in Warburg (1930).

functioning while assuming very limited risk. If firms could assume that this traditional form of liquidity provision from the Fed was available in their stress-planning scenarios, the liquidity characteristics of Treasury securities could be the same as reserves, and both assets would be available to meet same-day needs.

There are a variety of ways we could achieve this outcome. One approach would be to adopt a policy whereby firms are permitted to assume that the discount window can be used in their liquidity-planning stress scenarios under certain conditions.

The discount window is meant to be used by healthy banks when it is needed. While there has long been discussion about how the discount window is "broken" because of stigma about using it, we know it is still an important part of firms' contingency planning and preparations. Banks currently pledge over $1.6 trillion in collateral to the discount window, which means that banks have gone to the trouble of working with their local Reserve Bank to make sure they have access to the window, if needed, and they have set aside a portion of their balance sheets as collateral to do so.[9]

We have also already publicly clarified in the 2019 resolution planning guidance that firms can assume discount window access in their Title 1 plans if they can meet the terms for borrowing, such as recapitalizing the bank subsidiary.[10]

We could build on this approach by also allowing firms to rely on the discount window in their ILSTs as a means of monetizing, for example, Treasury securities in their scenarios. This approach would acknowledge a role for the discount window in stress planning, improve the substitutability of reserves and Treasury securities in firms' HQLA buffers, and maintain the overall level of HQLA that firms need to hold. Such an approach

[9] See the note to table 5 in Board of Governors (2019b, p. 14).
[10] See Board of Governors and FDIC (2019).

could improve the efficiency of monetary policy implementation, as firms might show a greater willingness to reallocate to Treasury securities, reducing reserve demand and improving market functioning.

An additional advantage of such an approach is that it could further improve the incentives of firms to be prepared to use the discount window, which we already know is important for contingency planning. If firms were to include the discount window in their plans for how they will weather a stress scenario, they would also need to demonstrate to supervisors that they are prepared to use it to ensure that their plans are credible. Also, with this approach, we would not need to set up any new programs. In connection with this, we are closely examining how international counterparts treat the equivalent of discount window access in their banks' stress-planning scenarios.

Another approach could be to set up a new program or facility: For example, there has been much discussion among market participants, as well as policymakers, about the potential benefits of setting up a standing repurchase agreement, or repo, facility for banks and how such a facility could improve the substitutability of reserves and Treasury securities for these firms.[11] While this option is still of interest, there may be benefits to working first with the tools we already have at our immediate disposal.

Finally, some firms and industry observers have pointed to the surcharge for global systemically important banks, and its partial dependence on year-end inputs, as potentially

[11] For additional discussion on the possible role of a standing repo facility (SRF) as part of the monetary policy implementation framework, see Board of Governors (2019a). The discussion highlights how the design of an SRF would differ based on the objectives of the facility. The current repo operations are conducted with only primary dealers and are designed to ensure a consistently ample supply of reserves to the banking system and support better interest rate control. As designed, these repos may have little effect on bank demand for reserves because the repo operations do not provide liquidity against HQLA to a wide range of bank counterparties. A facility intended to affect reserve demand may therefore require different design features.

exacerbating the issues I have discussed today. Preliminary analysis suggests that changing those inputs to averages may be helpful. If we were to propose that change, it would not alter the stringency of the surcharge. As such, this option is something that we are actively considering.

In summary, there are great benefits to safety and soundness and to financial stability for firms holding sufficient buffers of HQLA to meet potential outflows in stress. I am not proposing any changes to this basic framework. What I am proposing is that we can potentially improve the efficiency of monetary policy implementation by improving the substitutability of reserves and Treasury securities through adjusting our expectations for firms in stress-planning scenarios. There are a variety of approaches we could take, but I think the Fed has a role to play.

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