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Lessons Learned on Normalizing Monetary Policy

Remarks by

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Thank you, Meredith and Cullum and thank you to the Society for the invitation to speak to you today. This week, the Federal Open Market Committee (FOMC) took another significant step toward achieving our inflation objective by raising the Federal Funds rate target by 75 basis points. In my view, and I speak only for myself, if the data comes in as I expect I will support a similar-sized move at our July meeting. The Fed is “all in” on re-establishing price stability, and part of that effort involves understanding the forces that have boosted inflation and also examining how policymakers responded. Today, I intend to look back on monetary policy in 2020 and 2021, as I have before in recent speeches, but go a bit further and try to discern some lessons learned.¹

In addition to the Federal Reserve’s emergency lending programs, the monetary policy actions taken during this time were deemed extraordinary. We swiftly lowered the target range for the federal funds rate to close to zero—the effective lower bound—and made an open-ended commitment to purchasing securities. It was only the second time that the Fed had taken such dramatic steps. But the first time for these actions was scarcely a decade ago, and there is good reason to think such a response may not be extraordinary anymore. Structural changes in the economy have tended to lower interest rates and limit the room that the Federal Reserve will have to cut rates during a slowdown.² I hope we never have another two years like 2020 and 2021, but because of

¹See Christopher J. Waller (2022), “Reflections on Monetary Policy in 2021,” speech delivered at the 2022 Hoover Institution Monetary Conference, Stanford, California, May 6, <https://www.federalreserve.gov/newsevents/speech/waller20220506a.htm>; and Christopher J. Waller (2021), “A Hopeless and Imperative Endeavor: Lessons from the Pandemic for Economic Forecasters,” speech delivered at the Forecasters Club of New York, New York, December 17, <https://www.federalreserve.gov/newsevents/speech/waller20211217a.htm>. These remarks represent my own views and not any position of the Federal Reserve Board or the Federal Open Market Committee.

² Research has suggested a large number of developments may have contributed to a decline in the equilibrium real interest rate, focusing on factors that may have shifted aggregate savings and/or investment

the low-interest-rate environment we now face, I believe that even in a typical recession there is a decent chance that we will be considering policy decisions in the future similar to those we made over the past two years. Because of that likelihood, it is especially useful to consider the lessons learned.

Let's start at the beginning, when the United States was faced with the economic shock from COVID-19. Over several weeks starting in early March 2020, the FOMC lowered the target range for the federal funds rate to the effective lower bound and began purchasing Treasuries and agency mortgage-backed securities (MBS). Meanwhile, the Fed established numerous liquidity and credit market facilities.³ All these actions were taken to support liquidity in the financial system and keep credit flowing to households, businesses and state and local governments. Asset purchases were undertaken in response to disruptions in financial markets, particularly in the normally stable U.S. Treasury market. Besides supporting smooth market functioning, asset purchases also aided in the transmission of monetary policy to broader financial conditions.

Financial markets stabilized relatively quickly. Over the course of 2020, the Fed's liquidity and credit facilities saw reduced demand and most of the emergency

in a manner that depresses the real interest rate required to equilibrate savings and investment. For example, lower trend economic growth likely lowers aggregate investment, while demographic factors such as an increase in life expectancy may increase savings. Other research has emphasized an increase in demand for safe assets among emerging market economies, which depresses interest rates in advanced economies. For a review and references, see Michael Kiley (2020), "The Global Equilibrium Real Interest Rate: Concepts, Estimates, and Challenges," *Annual Review of Financial Economics*, vol. 12 (1), pp. 305–26.

³ Supported by funds provided by the CARES Act, the Federal Reserve created, with the authorization of the U.S. Treasury Department, a number of emergency lending facilities. The extraordinary 'dash for cash' early in the pandemic threatened the orderly functioning of money markets as well as the flow of credit to employers. The Board responded with a set of emergency lending facilities that, collectively supported the flow of credit throughout the economy both by providing backstops and, in some cases, by more directly supplying funding. Future downturns are unlikely to see the same global, sharp, and intense demand for liquidity, and thus not warrant the same kind of emergency lending. For more details on the Fed's facilities to support households, businesses, and municipalities during the COVID crisis see the November 2020 *Financial Stability Report* at [Financial Stability Report \(federalreserve.gov\)](https://www.federalreserve.gov/financialstability)

programs were decommissioned around year end. Perhaps the most straightforward takeaway for monetary policy is that in times of severe stress, lending facilities, along with sharp cuts to the federal funds rate and the introduction of large-scale asset purchases, are very effective in reviving the economy.

There are some other lessons, I think, from the experience of tightening monetary policy, a process which was put in motion by the guidance that the FOMC issued in 2020 about how long it would keep the federal funds rate at the effective lower bound and continue asset purchases. In September and December of 2020, the FOMC provided criteria or conditions in the meeting statement that would need to be met before the FOMC would consider raising interest rates and begin to reduce asset purchases, respectively. These conditions were, in effect, the FOMC's plan for starting the process of tightening policy. This guidance was short term, specific to the task of when to tighten policy in this current cycle, and focused on specific tools.

Let me make an important distinction here. A bit earlier, in August 2020, the Committee completed a multi-year review of our overall strategy for achieving and sustaining our economic goals. The strategy statement is very different than the tightening guidance—it is about longer-run goals, not specific actions related to the current circumstances. The goals in the strategy statement apply in all economic circumstances and don't include any details on the settings of policy tools. I mention this distinction because some have argued that the FOMC's new strategy was a factor that led the Committee to wait too long to begin tightening monetary policy. A bit later, I will explain why I do not believe this is the case, and I will explain how the guidance for

tightening policy, laid out in the FOMC's post-meeting statements, was the basis for our decisions.

So, let's think about how the economy evolved and how the criteria for that guidance steered the path of policy. In early 2021, the Committee began noting whether the economy was making progress toward our employment and inflation goals, and thus getting closer to decisions on unwinding our highly accommodative policy. Based on our positive experience with unwinding after the Global Financial Crisis (GFC), we thought it would be appropriate to use the same sequence of steps: taper asset purchases until they ceased, then lift rates off the effective lower bound, then gradually and passively reduce our balance sheet by redeeming maturing securities. Most importantly, through various communications, we made it clear that tapering of asset purchases would have to be completed before rate liftoff to avoid the conflict that would occur by easing via continuing asset purchases versus tightening through rate hikes.

In the previous episode of tightening policy after extraordinary accommodation, this process was very gradual. Tapering of asset purchases took 11 months, and then the first rate hike did not occur until more than a year after purchases ended. Balance sheet reduction began more than a year and half after that. This gradualism worked well then, and it surely influenced the Committee's approach this time.

Implementing this approach required two pieces of guidance: first, criteria for beginning the tapering process, and, second, criteria to begin raising the policy rate from the effective lower bound. Through explicit language in FOMC statements, we told the public the necessary conditions that needed to be met before we would adjust these two policies.

For asset purchases, the Committee declared that tapering would wait “until substantial further progress has been made toward the Committee’s maximum employment and price stability goals.”⁴ Meanwhile, the FOMC said that it would keep rates near zero until our employment goal had been reached and until inflation had reached 2 percent and was “on track to moderately exceed 2 percent for some time.”⁵

A fair question is: what did these words mean? And, in particular, what did the phrases “substantial further progress” for tapering and “for some time” for liftoff mean? In large part the interpretation hinged on how the Committee viewed the economy would recover from the pandemic. Looking across forecasts at the time by Committee participants and the private sector, no one expected substantial progress toward both our goals to happen very soon. The economy had begun to recover, but at the end of 2020 COVID was bad and getting worse and vaccines were just arriving, so we didn’t know how soon schools would reopen and people would get back to work. In November and December 2020, the unemployment rate was 6.7 percent and inflation seemed to be in check: 12-month personal consumption expenditures inflation was declining, and core inflation, which excludes volatile energy and food prices, was more or less steady at 1.5 percent. The Summary of Economic Projections by FOMC participants in December 2020 had the unemployment rate moving down to 4.2 percent at the end of 2022 and

⁴ See Board of Governors of the Federal Reserve System (2021), “Federal Reserve Issues FOMC Statement,” press release, June 16, <https://www.federalreserve.gov/newsevents/pressreleases/monetary20210616a.htm>

⁵ This phrase echoed a new detail in our monetary policy strategy that recognized the 12 years that inflation had run persistently below 2 percent and noted that as a result, “appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time.” See Board of Governors of the Federal Reserve System (2020), “2020 Statement on Longer-Run Goals and Monetary Policy Strategy,” policy statement, August 27, <https://www.federalreserve.gov/monetarypolicy/review-of-monetary-policy-strategy-tools-and-communications-statement-on-longer-run-goals-monetary-policy-strategy.htm>.

inflation moving up to 2 percent only in 2023. Only one participant had liftoff occurring by the end of 2022.

Based on this SEP, the Committee did not expect the economy to recover quickly. And, looking at the Federal Reserve Bank of New York's Survey of Primary Dealers back in January of 2021, the median respondent thought tapering would start in the first quarter of 2022 and liftoff wouldn't be until the end of 2023 or later.

To move forward, policymakers had to evaluate "substantial further progress" and "for some time." The phrases, admittedly, are not concrete in their meaning. Inflation averaging doesn't define how much above 2 percent is moderate and how long some value of elevated inflation should be tolerated. In addition, for assessing progress on the health of the labor market, different policymakers will prefer different measures that may not provide the exact same signal. On top of this, the data used to measure progress in the labor market can revise substantially and reshape the evaluation of the strength of this market quite quickly. For example, a key input—payroll data—in the latter half of 2021 painted a picture of a slowing labor market. But revised data over several subsequent months revealed that the slowdown never happened. Instead, job gains were quite robust. In particular, initial reports of job creation between August and December were a cumulative 1.4 million, but by February of this year that number was revised up to nearly 2.9 million.

Overall, the economy evolved rapidly in 2021. I won't get into the month-by-month details, as I have in recent speeches, but by October and November, policymakers thought the economy had improved enough to meet the criteria to start tapering at the early November meeting. Then, later that month, data indicated inflation was

accelerating, so the Committee hastened the pace of tapering at the December meeting, making a plan to wind down purchases by early March. Between December and March of this year inflation data came in very elevated, and at that point there was no question that inflation had been above 2 percent for “some time.” Given continued improvement in the labor market and the high inflation readings, the Committee began raising interest rates in March, as soon as asset purchases were completed.

With these actions in the rearview mirror, we can now ask: knowing what we know now, should we have done anything differently? To be clear, by asking this question my intent is not to criticize the decisions of the Committee. Rather, it is to assess our policy strategies should we be confronted with another crisis in the future.

One question to ask is whether the guidance we issued was too “restrictive”; in other words, did it allow enough flexibility for the FOMC to begin raising the policy rate when it was appropriate to? Recall, we had decided that raising the policy rate would not occur until the tapering of asset purchases had finished. But to finish, tapering must start—for a given pace of tapering, the longer it takes to start tapering, the longer it will be before the policy rate can be raised. Of course, one can keep the liftoff date fixed and simply taper at a much faster rate, including the possibility of a hard stop of asset purchases. But concerns about financial market functioning, including the ability of markets to absorb the purchases the Fed stops making, typically limits how fast the tapering can be, particularly given the amount of asset purchases we were making at the time (\$120 billion per month).

Given the tapering criteria and subsequent data, we ultimately had to pivot hard to accelerate the tapering pace and, in fact, completed the tapering of purchases just a few

days before we lifted off. Unlike the normalization timeline after the financial crisis, we did not have flexibility to raise the target range sooner. However, if we had less restrictive tapering criteria and had started tapering sooner, the Committee could have had more flexibility on when to begin raising rates.⁶ So, by requiring substantial further progress toward maximum employment to even begin the process of tightening policy, one might argue that it locked the Committee into holding the policy rate at the zero lower bound longer than was optimal.

My takeaway is that a less restrictive tapering criteria would have allowed more flexibility to taper “sooner and gradually,” as opposed to the relatively “later and faster” approach that occurred. Experience has shown that markets need time to adjust to a turn from accommodation to tightening, and that surely was a factor for FOMC statements over the years in framing criteria for key policy actions during the recovery from the GFC and the pandemic. So, I’m supportive of issuing such criteria but we need to be careful to use language that allows the Committee the flexibility it needs to respond to changing economic and financial conditions.

Now let’s turn to the liftoff criteria. It was also quite restrictive. The liftoff criteria required the economy to be in a situation where our dual mandate had been achieved. It can be argued that this meant getting the economy back to its 2019 state with very low unemployment and inflation near 2 percent. But the policy rate in 2019 was well above zero and close to its neutral value. Consequently, if the state of the economy

⁶ There are a couple of reasons why a less restrictive tapering criteria can create more policy space. First, a less restrictive tapering criteria allows policymakers to reduce the amount of purchases, perhaps more than once or even potentially end purchases, all while a more restrictive criteria may not even be triggered. Second, if policymakers believe that market functioning considerations constrain the dollar amount that Fed purchases can be reduced in a given month, then a policy with less restrictive criteria that has started tapering may be able to end purchases before one with a more restrictive criteria.

is telling you to be at neutral and you are at zero, then any Taylor rule would say the policy rate needs to rise much faster than was typically done in the past.

So, it should not have been a surprise that the policy rate would rise fast in 2022. Rate hikes would need to be larger and more frequent, relative to the 2015-2018 tightening pace, to get back to neutral. Looking back, should the Committee have signaled a steeper rate path once the liftoff criteria had been met? Perhaps another lesson is that giving forward guidance about liftoff should also include forward guidance about the possible path of the policy rate after liftoff.

In closing, I hope that our country is not faced with another crisis as severe as the one precipitated by COVID, and that the Fed is not faced with the challenges of setting monetary policy under such conditions. But if we again face those challenges, we now have the additional insight that only experience can bring. I hope that this latest experience will help us approach the future with a more complete understanding of the policy choices and tradeoffs.