The views expressed today are my own, not necessarily those of my colleagues on the Federal Reserve Board of Governors or the Federal Open Market Committee.
Good afternoon. Thank you for inviting me to join you today. As we gather today, improvements on the public health front, coupled with fiscal and monetary policy actions, make this a hopeful time to discuss the outlook for the U.S. economy.

Despite continuing concerns with COVID-19 variants, which have contributed to infection rates still being elevated, over one-third of Americans have already received at least one dose of vaccine, and the economy is beginning to show signs of recovering from the devastating effects of the pandemic.

Even with this relatively positive public-health outlook, policymakers must be mindful that many businesses and households continue to experience significant economic distress brought on by the pandemic. The effects have, unfortunately, fallen disproportionately on lower-wage workers in industries where social distancing and remote work are difficult – segments of the workforce that include many Black and Hispanic workers. Women and younger workers have also suffered disproportionately during the pandemic. With economic recovery in sight, we should focus on creating a more inclusive economy in which opportunities are widely shared.1

There are a number of signs that the economy is recovering, starting with the recent employment report. The employment report for March illustrates the strength of the recovery, with payroll employment growing by over 900,000 jobs. However, the U.S. unemployment rate is still elevated, at 6 percent, and many workers and firms impacted by social distancing requirements (or continued consumer fears, at least for the time being) are still struggling. Assuming vaccines remain effective against new variants of the virus, the U.S. economy should experience a significant rebound this year, propelled by highly accommodative monetary and
fiscal policy, and significant pent-up demand from consumers and firms whose ability to spend has been restrained by the pandemic.

At the March meeting of the Federal Reserve’s policy-making body, the Federal Open Market Committee (FOMC), the median projection of participants for real GDP growth for 2021 was 6.5 percent, with the unemployment rate expected to finish the year more than 2 percentage points lower (i.e., better) than at the end of 2020. Many private forecasters expect particularly strong consumption growth this year, fueled by fiscal stimulus payments and the easing of restrictions that have limited consumers’ ability to spend on certain leisure and entertainment services. As people become vaccinated, domestic travel is likely to pick up. Indeed, airlines, hotels, and restaurants that were particularly hard hit over the past year are already showing evidence of recovery in high-frequency spending data.

Despite this very strong forecast, I expect a return of the economy to pre-pandemic levels will likely take longer than many private forecasters expect. With labor-market slack still significant, and inflation still below the Federal Reserve’s 2 percent target, my perspective is that the current highly accommodative stance of monetary policy is appropriate.

Certainly everyone hopes that we quickly return to an economy with tighter labor markets and a significant improvement in many of the sectors of the economy hardest hit by the pandemic. A strong labor market and a return to in-person schooling, for instance, would make it easier for parents who left the job market last year to care for children (a dynamic that disproportionately involved female workers), to reenter the labor force and find a job. I expect that over the next couple of years, we will see the unemployment rate falling back to pre-pandemic levels, with significantly improved labor force participation rates.
The current accommodative stance of monetary and fiscal policy should help return the economy to full employment much faster than in the previous downturn. Indeed, the Federal Reserve’s revised monetary policy framework puts an emphasis on seeing economic evidence (for example, of higher inflation) before shifting the stance of policy.

Of course, the Fed seeks to avoid a prolonged slow recovery such as the one that followed the financial crisis of 2007-2008 and the ensuing Great Recession. Nonetheless, it is important to acknowledge that running a so-called “hot” economy for a prolonged period is not without risks, as I have discussed many times in recent years. As I will discuss today, it arguably factored into some of the challenges to financial stability that emerged at the start of the pandemic. Going forward, such issues should be addressed to limit financial markets’ potential to amplify the effects of adverse economic outcomes in the future. Today, I will focus on three such risks.

- First, I will highlight that in the last two downturns (the episodes beginning in 2007 and 2020), prime and tax-exempt money market funds experienced rapid, large outflows of funds, which badly disrupted short-term credit markets. (This necessitated emergency lending facilities, which were administered by the Federal Reserve Bank of Boston on behalf of the Federal Reserve System.) I will also highlight risks in certain open-end mutual funds.

- Second, many financial firms experienced a liquidity squeeze that led to a wave of sales of usually liquid Treasury securities, badly disrupting the Treasury market which is the cornerstone of the U.S. bond market.
And third, I will share my view that extensive forbearance for borrowers and banks was necessary to continue the flow of bank credit.

The factors underlying these financial market stresses, in my view, must be addressed – to avoid a future repeat of the issues the economy experienced at the start of the pandemic.

The Economic Outlook

For the past year, economic forecasts have been intertwined with projections of COVID-19 infections and mortality, which were reflected in many of the movements of higher-frequency mobility and spending data. Today, I am pleased to focus for a moment on a more optimistic picture – vaccination rates. As Figure 1 shows, in the U.S., 33 percent of the population have received at least a first dose of the vaccine. Here in New England, the rollout of vaccinations has been better than in many parts of the country, with all six New England states among the states with the highest percentage of residents who have received at least one shot.

In contrast, as the figure shows, Europe has had difficulty obtaining a sufficient vaccine supply, and then getting that supply to people, at a time when variants of the virus are unfortunately proving more contagious. This has caused several European countries to once again confront rising infection rates with increased restrictions on social mobility. Without these policies hospitals would again become strained and deaths would rise. The problem is even worse in many third-world countries, where there is little to no domestic vaccine production, and vaccine costs are prohibitively high.
Figure 2 shows that as the vaccination rollout in the U.S. has improved since the beginning of the year, FOMC participants have upgraded their outlook for GDP, as reported in the Summary of Economic Projections, which is a collection of economic projections made by Fed policymakers four times a year. Passage of the large fiscal stimulus also played a role. Specifically, between the December projections and the March projections, the median GDP growth forecast for this year has risen by more than 2 percentage points.

This optimism appears to also be shared by private-sector forecasters. Figure 3 reports the four most recent GDP forecasts from the Blue Chip Survey (which polls roughly 50 private-sector economic forecasters). Many of the Blue Chip forecasters have upgraded their forecast of how quickly the economy will recover. Passage of fiscal stimulus also played a role. Between January and April, these private forecasters have increased their forecast for economic growth, particularly in the first half of the year.

Figure 4 provides a sense of the distribution of the Blue Chip forecasts. The average of the 10 forecasters with the highest growth rate are expecting GDP growth in excess of 10 percent. The average of the 10 forecasters with the lowest growth rate still exceeds 3 percent through this year.

The rapid projected growth in GDP is similarly reflected in expectations for significant improvements in the labor market. Figure 5 shows the unemployment rate forecast from the FOMC’s Summary of Economic Projections. From September to March, FOMC participants have been lowering their estimate of the path of unemployment as they raised their estimated path of GDP growth. Over that six-month period, with substantially more fiscal spending than estimated last September and better vaccination outcomes than expected at the end of 2020,
participants have reduced their forecast of unemployment for the end of this year by 1 percentage point, with declines in forecasts for subsequent years also substantial. Figure 6 shows that the most recent Blue Chip consensus forecast follows a similar pattern – but starting from a slightly higher level, ends at a slightly higher level than the SEP, despite a slightly less gradual decline in 2022.

FOMC participants have also been increasing their estimates for core PCE inflation, shown in Figure 7. The most recent forecast, shown as squares, has core inflation somewhat exceeding 2 percent in 2021 and 2023. The average core inflation rate for the Blue Chip forecasters is roughly in line with the Summary of Economic Projections from FOMC participants. However, as Figure 8 shows, the range of Blue Chip survey forecasts is quite large between the average of the 10 highest inflation forecasts and the average of the 10 lowest inflation forecasts.

As the economy returns to full employment and 2 percent inflation, the median FOMC participant expectation is that short-term interest rates will remain close to zero through 2023, as is shown in Figure 9. Note that during most previous economic recoveries, forecasts of returning to full employment at the target inflation rate would have been accompanied by expectations of gradual increases in interest rates. However, with the revised monetary policy framework adopted by the FOMC, monetary policymakers can be more patient and wait for more tangible signs that inflation has increased, rather than just forecasts, before starting to raise rates.
The Employment Report

Turning to the labor markets, the most recent data on employment are quite consistent with an economy beginning to expand from the constraints of the pandemic. **Figure 10** shows that after a pandemic-related slowdown at the end of last year, payroll employment has been increasing. In March alone, more than 900,000 new jobs were created.

**Figure 11** shows that some of the growth in jobs has been in industries that had been strongly impacted, initially, by the pandemic and the need for social distancing. Leisure and hospitality employment, which declined during the second wave of the pandemic at the end of last year and the beginning of this year, has since been rising – though employment still remains well below levels seen prior to the pandemic. If one looks at total employment not including leisure and hospitality, jobs have been increasing gradually, but still remain somewhat below their pre-pandemic levels.

Other indications of the continued strains on the labor market as a result of the pandemic are the changes in the labor force participation rates for prime working age men and women, shown in **Figure 12**. With many schools either in a remote or hybrid learning mode, many parents have left the workforce to provide support for their children. Those who leave the labor force are not counted as unemployed, even though some of them would nevertheless prefer to be working if the childcare situation were different and job conditions were better. In this respect, reduced labor force participation represents a concerning development. While labor force participation has been improving of late, it is still well below the participation rate we saw before the pandemic.
Given the challenges in the labor market, fiscal and monetary policy are unusually stimulative, with the hope that the economic recovery will be much faster than the one following the Great Recession. As Figure 13 shows, five years after the 2008 recession, the unemployment rate was still close to 8 percent. Of course the nature of the 2020 shock was very different, as was the condition of banks this time, but with a much more aggressive monetary and fiscal policy response and the rapid development of vaccines, the unemployment rate has already fallen much more quickly this time. And as I previously showed, FOMC participants expect that the unemployment rate will decline to just under 4 percent within two years.

Some Risks to the Economic Outlook

While there are downside risks to economic activity from potential COVID-19 virus variants, risks to the upside are also present, as the amount of fiscal and monetary stimulus is much greater now than in previous cycles. These upside risks could, in turn, pose some financial stability risks when the next recession occurs. As I mentioned earlier, my view is that other remaining risks are the structural ones that contributed to the financial market disruptions that occurred when the pandemic began last year.3

The first of the three structural risks I see relates to short-term credit markets, which, in the past two recessions, have been disrupted by runs on prime and tax-exempt money market mutual funds (MMMFs). Figure 14 shows the run on prime funds as a sharp reduction in assets under management, in 2008 and in 2020. These funds invest in relatively high-quality, short-term credit instruments, which can experience liquidity problems if investors pull their money from the money funds quickly, forcing the funds to sell relatively illiquid assets into distressed
markets. Figure 15 depicts that problem, showing that in both 2008 and 2020, such selling into distressed markets caused a spike in the spread above the Fed Funds rate for highly rated, asset-backed commercial debt. Other indicators of funding market stress also spiked during both episodes, including those for short-term municipal debt.

Simply put, prime and tax-exempt MMMFs should not need emergency lending facilities as they did in the financial crisis that began in 2007, and more recently at the onset of the pandemic. Unlike prime and tax-exempt funds, government MMMFs (which invest in short-term U.S. Treasury and agency securities and private debt fully collateralized by such instruments) did not experience the same problems – rather, government funds experienced large inflows. One potential solution would be to require prime and tax-exempt MMMFs to convert to such government funds.\(^4\)

I should mention that the pandemic also shed a light on the remaining structural vulnerabilities in open-end mutual funds (MFs), particularly corporate debt MFs, which allow daily redemptions, notwithstanding the liquidity of their underlying assets.\(^5\) A potential remedial action would be to require all MFs to adopt swing pricing, which is currently voluntary.\(^6\) A properly calibrated swing pricing system could reduce investors’ incentives to run, as it would force them to at least partially bear the cost of their redemptions, without disadvantaging those investors choosing to remain in the fund. Alternatively, measures that match a MF’s redemption frequency to the liquidity profile of its underlying holdings are worth exploring.

A second risk that came into view at the onset of the pandemic involved a “dash for liquidity,” in which a variety of entities, seeking to bolster their liquidity positions, sold large
volumes of U.S. Treasury securities. However, the infrastructure for buying and selling U.S. Treasury securities relies primarily on broker-dealers and could become strained if unusually large volumes of Treasury securities are being sold, as was the case in March. One possible solution would be to create a structure less reliant on broker-dealers’ balance sheets to maintain liquid markets for these securities. One way this could be done is by creating expanded central clearing mechanisms for Treasury securities and the financing of Treasury securities.

A third risk that became apparent early in 2020 was the concern that banks would constrict credit, potentially exacerbating the economic downturn. A variety of regulatory relief proposals were adopted, including greater forbearance for borrowers, encouragement to utilize capital buffers, and a relaxation of some of the prevailing capital requirements. In addition, banks were asked to stop share repurchases and limit dividend payments until it was clear that their capital was sufficient to weather the recession brought on by the pandemic. While these measures were needed at the time, and thus appropriate, in my view they reflect a capital regime that is not sufficiently flexible during economic downturns. Investors in banks, and bank management teams, would prefer to avoid the attendant uncertainty around capital planning, and bank regulators would prefer to not suspend bank regulations in economic downturns.

A solution to this problem is to provide a Countercyclical Capital Buffer, or CCyB, that gets built up during economic recoveries, but is expected to be drawn down during economic downturns. Rather than disrupt bank capital planning and rely on temporary relief from capital regulations, the CCyB provides a “shock absorber” that, if appropriately implemented, would allow borrower financing to continue without these temporary extraordinary and less predictable measures.
A policy that runs a “hot” economy could pose other financial stability challenges, as I have discussed in previous speeches. However, my view is that these three structural risks seem the most immediate to address in an effort to avoid a repeat of the financial problems experienced at the outset of the pandemic.

**Concluding Observations**

It seems likely that the economy will grow rapidly this year. This should reduce the slack in the labor markets and eventually return inflation to the Federal Reserve’s 2 percent target. Assuming virus variants do not become especially problematic, we should see an unusually strong post-recession recovery.

While the near-term public health and macroeconomic improvements are more than welcome and critically important, I also believe that policymakers across the spectrum should take the time to examine some of the problems brought to the forefront over the past year. In doing so, they can help to ensure we are rebuilding an economy that works for all Americans throughout the inevitable business cycle.

The combination of accommodative monetary and fiscal policy, and consumers and firms well positioned to renew spending, should result in returning to full employment much more quickly than after the last financial crisis and Great Recession. However, many of the underlying problems that can disrupt financial stability – as at the outset of the pandemic – still need to be addressed. During the economic recovery, policymakers should be diligent about
removing these risks to financial stability, which translate into risks for the economy and every firm and worker in it.

Thank you for having me speak today, and best wishes for good health and economic recovery in the months ahead.

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1 For more discussion, see Feb. 19, 2021, talk by Eric S. Rosengren entitled: *Perspectives on the Eventual Economic Recovery*.

2 For more discussion of the changes to the framework, see: *Federal Reserve Board - 2020 Statement on Longer-Run Goals and Monetary Policy Strategy*.

3 For more discussion, see Oct. 8, 2020, remarks by Eric S. Rosengren, entitled *Economic Fragility: Implications for Recovery from the Pandemic*, and also Jan. 12, 2021, remarks entitled, *The Economic Outlook – Optimism Despite the Challenges Ahead*.

4 Some MMMF sponsors have converted their prime funds into government funds. For example, Vanguard, noting the “…rewards of even the most conservatively managed prime funds are no longer worth the risk,” reorganized its prime money market fund into a government fund. See: Vanguard, Aug. 2020, *Vanguard Announces Changes to Money Market Fund Lineup*.

5 Policymakers have highlighted “liquidity transformation” risks as a vulnerability arising from the MF structure. Such funds offer daily redemptions, irrespective of the liquidity profile of their holdings. The key concern is that heavy investor redemptions would force MFs to liquidate assets at “fire sale prices,” which could impact other financial markets. Last March, corporate and municipal bond MFs experienced significant redemptions, which likely contributed to strains in bond markets during that period.

6 A fund that adopts swing pricing will reduce (increase) its price per share by a pre-established “factor” if net redemptions (purchases) exceed a certain threshold. We are not aware of any U.S. MF that has adopted swing pricing. In contrast, swing pricing is widely used in Europe, and some research suggests it reduces redemptions during periods of stress. See, for example: Dunhon et al, Nov. 2019, *Swing Pricing and Fragility in Open-Ended Mutual Funds*, International Monetary Fund Working Paper.

7 To be more specific, easing of the leverage ratio for the largest firms and adjusting the CBLR requirement for some small banks.

8 For additional discussion of the CCyB and other financial stability policy tools, see March 23, 2018, remarks at the Tenth Conference of the International Research Forum on Monetary Policy by Eric S. Rosengren, *Monetary, Fiscal, and Financial Stability Policy Tools: Are We Equipped for the Next Recession?*