Thank you for the opportunity to offer my views on monetary policy and reform in practice. I appreciate the Hoover Institution bringing together leading academics and monetary policy makers to share ideas about the practical issues facing central banks today. We have much to learn from each other.

My comments this afternoon focus on some of the practical issues I think about as I formulate my own policy views. As I do so, you’ll hear me describe these issues with more questions than answers, reflecting the nature of the policy landscape today.

Before I continue, however, I want to note that these are my own views and are not necessarily representative of others in the Federal Reserve System.

**TODAY’S POLICY LANDSCAPE**

Nine years after the financial crisis, the Fed has, at least for the moment, achieved its objectives of maximum employment and price stability. Yet the legacy of the crisis—through the response of the Fed and fiscal authorities—has left us in a very different place than before the crisis in a number of ways. The equilibrium nominal policy rate is low by historical standards. The current target for the federal funds rate is considerably lower than the Federal Open Market Committee’s (FOMC) projection of its longer-run value.
Our balance sheet is almost five times its pre-crisis size. The Fed’s footprint in financial markets is considerably larger than before the crisis. The banking sector is consolidating and big banks have gotten even bigger. Federal deficits and debt are high and projected to rise to unprecedented levels.

Despite this legacy, many of the structural developments that dominate our thinking today were well under way before the onset of the financial crisis and Great Recession. An aging population, slowing productivity growth, rising globalization and declining equilibrium interest rates all predate the crisis. In this sense, things have not changed. Moreover, since the mid-1990s and through the financial crisis, Great Recession, and current expansion, core inflation—as measured by the personal consumption expenditure price index—has fluctuated in a relatively narrow range of roughly 1 percent to 2 ½ percent.

Given the structural changes that have been developing over the last several decades, it may well be that we are in a low-growth, low-interest-rate environment. Yet, from a cyclical perspective, the economy appears to be operating at or beyond full employment with inflation expected to rise over the medium term, while the FOMC’s funds rate target of 1½ percent to 1¾ percent remains well below the FOMC’s projection of its longer-run level of about 3 percent. The current gradual normalization of interest rates is geared toward removing accommodation at a pace that is expected to sustain the expansion without generating undesired increases in inflation, on the one hand, or creating financial instability, on the other. But there are clearly risks.

And there are still uncertainties about how the landscape will look once policy has achieved a “new normal.” In particular, questions remain to be answered about the Fed’s future operating framework, its strategic framework, and its role in promoting financial stability. I’ll discuss each of these issues in turn.
DETERMINING A LONG-RUN
OPERATING FRAMEWORK

In 2016, the FOMC held lengthy discussions about potential long-run frameworks for monetary policy implementation. The committee discussed the merits of maintaining an abundance of reserves in the banking system versus returning to a framework of reserve scarcity. With an abundance of reserves, the Fed would rely on interest on reserves and the overnight reverse repurchase agreement (ON RRP) to maintain control over short-term market rates. With a scarcity of reserves, the open market desk at the New York Fed would control market rates through its control over the supply of reserves. The discussion ended with agreement that “decisions regarding the long-run implementation framework were not necessary at this time.”¹ Since that time, however, we have begun to normalize our balance sheet with an understanding that the balance sheet will be smaller than it is today but larger than it was in 2007. As the balance sheet continues its steady decline, I would suggest that we again need to consider the appropriate long-run size of the balance sheet and our related operating framework.

While it may simply be a case of nostalgia on my part, I found our minimalist pre-crisis operating framework to have a number of features that served us well for many years. We maintained a small balance sheet with liabilities that were comprised almost entirely of currency in circulation with reserves averaging about $10 billion, compared with more than $2 trillion today. We maintained a Treasuries-only balance sheet with duration-matching Treasury issuance to maintain a neutral influence on financial markets. We had a small number of counterparties and we managed the supply

of reserves to achieve the target federal funds rate. As a result, our footprint in the financial markets was relatively small.

Relative to this pre-crisis framework, the current operating framework—made necessary by a large balance sheet—has had a number of undesirable consequences, some of which were unintended. The Fed now owns significant outstanding shares of Treasuries and mortgage-backed securities (MBS) and is no longer a neutral influence on financial markets. We have a large number of counterparties, including nonbanks, made necessary by the ON RRP facility. Increases in the funds rate are achieved by raising an administered rate—the interest rate on excess reserves (IOER). Some have expressed concern that as IOER goes up, payments to banks—including to foreign banks—go up. Finally, the nature of unconventional policies has drawn both attention and criticism to the Federal Reserve’s large balance sheet with consequences for central bank independence and fiscal discipline. Congress has begun to see the Federal Reserve as a source for plugging spending gaps, drawing on the Fed to fund the Consumer Financial Protection Bureau, finance highway spending, and, more recently, to contribute $2.5 billion to the federal government from its capital surplus as part of the budget deal passed in February after the brief government shutdown.

Given these developments, the current thrust of policy can become more difficult to gauge. At the same time the funds rate is being normalized, we have embarked on a program to gradually reduce the Fed’s security holdings by decreasing reinvestment of principal payments. While I support this policy—with balance sheet normalization occurring largely on autopilot and in the background—it does pose challenges as we try to understand the implications for the stance of policy. Is policy tighter than we think because the balance sheet is shrinking? Or is the still-large balance sheet putting downward pressure on longer-term rates, making policy more accommodative than we think?
Whether it is desirable or even possible to return to our pre-crisis operating framework remains an open question for the FOMC. Can we return to the corridor-like framework with scarce reserves? Or will we need to retain the current floor system? If we maintain the current system, by how much can we reduce the supply of reserves? And what is the eventual role of the ON RRP facility? Can IOER guide the funds rate without reliance on the floor established by the rate on ON RRPs? Answers to these questions will be shaped by the FOMC’s future discussions.

STRATEGIC FRAMEWORK

In addition to uncertainties about the longer-run operating framework, a number of strategic challenges and uncertainties pose practical issues for policy makers. With little countercyclical policy space available to respond to a future downturn, monetary policy options must contemplate how interest rate and balance sheet policies will work before, during, and after a crisis. Aggressively purchasing assets in a downturn and only gradually allowing them to roll off once the economy has fully recovered suggests the possibility of a balance sheet that grows bigger and bigger over time.

This dynamic, combined with varying degrees of uncertainty about the efficacy of asset purchases, has led to calls for a discussion about future policy strategies for the next encounter with the zero lower bound. Ideas like price-level targeting, a higher inflation objective, or nominal GDP targeting all offer worthwhile and intellectually stimulating debate. And certainly the time is right to consider the trade-offs around various strategies, but determining if these ideas might work in practice is challenging.
PROMOTING FINANCIAL STABILITY

These uncertainties make it all the more important to ensure the current economic expansion is sustained as interest rates rise and the balance sheet normalizes. We should take every measure possible to prevent a crisis rather than hope that we can devise a monetary policy cure after the fact.

As the FOMC gradually moves away from the zero lower bound, with a slowly shrinking but still-large balance sheet and growing federal debt, maintaining financial stability is paramount.

Here, I would like to make two key points:

- First, in contemplating a future bout of financial instability, we should be realistic about the robustness of macroprudential tools with a good dose of humility around the necessary finesse to deploy them in a timely fashion.
- Second, we should not waver in our aims to bolster resilience in our banking system, especially for the largest banks.²

There is little dispute that financial stability is a necessary condition for achieving the FOMC’s employment and price stability mandates. It is recognized in the FOMC’s “Statement of Longer-Run Goals and Strategies” as well as being the objective of macroprudential policies. However, there remains a tension as to the trade-off between macroeconomic goals and financial stability. The “lean or clean” debate is ongoing. Specifically, some argue that the output losses associated with using monetary policy to lean against growing financial imbalances far outweigh the possible benefits. Instead, they suggest that macroprudential policies are the appropriate response to financial instability. In my view, this approach might be more effective in theory than in practice.

² The eight US global systemically important banks (GSIBs) held $11 trillion in total assets at the end of 2017, an amount equal to 57 percent of US gross domestic product.
A few years ago, I participated with some of my colleagues in a tabletop exercise designed to assess the efficacy of certain macro-prudential policy tools in responding to a hypothetical financial crisis. In the exercise, we examined the use of capital-based, liquidity-based, and credit-based tools, along with stress testing and supervisory guidance, in mitigating the effects of an overheating of the financial markets. What we discovered in conducting the exercise was that the effectiveness of the tools varied because of realities like implementation lags and/or limited scope. In addition, monetary policy looked to be a relatively more attractive option than some might have expected before the exercise.\textsuperscript{3} Obviously, this particular exercise is not conclusive in all scenarios, but rather a caution about becoming overly confident in relying on macro-prudential tools to address growing financial imbalances.

In thinking about the role of financial stability in the conduct of monetary policy, I find recent research from the Bank for International Settlements (BIS) to be compelling. This research sees financial market deregulation from the 1980s and 1990s as having increased the likelihood of crises and posits a growing financial cycle in which monetary policy responds asymmetrically over time to crises, easing rates aggressively during the crisis but raising rates only gradually after the crisis has subsided. Their prescription is for policy makers to break this cycle by making policy more attentive to financial imbalances and more symmetrical in the response.\textsuperscript{4}

We should take advantage of the current economic conditions to bolster resilience in the financial system. Instead, the United States has yet to implement a countercyclical buffer and the banking


agencies contemplate steps in the direction of relaxing capital requirements. Recently issued for comment is a proposal to modify the enhanced supplementary leverage ratio on global systemically important banks (GSIBs) that would have the effect of lowering capital requirements.\(^5\) With the US economy in a sustained expansion and at risk of growing financial imbalances, this is a time in the credit cycle when GSIBs and other banking organizations should be building capital instead of increasing leverage.

**CONCLUSION**

The financial crisis and Great Recession left a legacy of low interest rates, a big balance sheet, and large fiscal deficits. And a number of long-running structural trends have become prominent considerations for understanding their implications for future growth. This landscape is accompanied by an economy growing at or above trend with full employment, stable prices, and easy settings for monetary policy. Whatever the “new normal” is, monetary policy is not yet there. When times are good, as they are now, it is an opportune time to resolve some of the uncertainties around how we will implement monetary policy in the future, what strategies we will employ in response to the next downturn, and how we can best promote resilience and stability in our financial system. I hope we do so before we find ourselves cleaning up after the next crisis.

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