# Navigating the Decade Ahead: Implications for Monetary Policy

# An Introduction to the Bank's 2020 Economic Symposium

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Will the sluggish economic growth, low interest rates and height-ened uncertainty that characterized the global economy prior to the COVID-19 pandemic define the next decade as they did the last? Have household and consumer expectations been scarred by, first, the global financial crisis and, now, by the COVID-19 pandemic? If so, low equilibrium interest rates will likely lead to longer and more frequent episodes in which conventional monetary policy is constrained by the effective lower bound (ELB) on nominal rates. Understanding why economic growth has been so sluggish, why interest rates are historically low, how households and businesses form expectations and how changes in those expectations affect economic activity is critically important for central bankers as they develop strategies to achieve their mandates. A versatile monetary policy toolkit and clear central bank communications will be essential for achieving and sustaining economic expansion, especially in times of financial stress.

To address these issues, the Federal Reserve Bank of Kansas City sponsored a virtual symposium titled "Navigating the Decade Ahead: Implications for Monetary Policy" on Aug. 27-28, 2020. The symposium brought together a distinguished group of central bank officials and academic, policy and business economists to discuss the economic developments of the last decade and how they might

unfold over the decade ahead. Each day of the symposium began with a keynote address, followed by two papers with discussants, and concluded with a panel discussion.

# **Day One Keynote Address**

The program began with a keynote address from Federal Reserve Chair Jerome Powell. Chair Powell's remarks focused on the Federal Open Market Committee's (FOMC) newly revised Statement on Longer-Run Goals and Monetary Policy Strategy (FOMC 2020). The revised Statement—which lays out the Committee's goals, describes its framework for monetary policy, and serves as the foundation for policy actions—was the culmination of a year-and-a-half-long public review. Powell highlighted that four developments in particular motivated the review. First, estimates of the economy's longer-run growth potential had declined. Second, the general level of interest rates in the United States and globally had fallen. Third, the unemployment rate had declined to near historic lows, well below previous estimates of its sustainable level. And fourth, low unemployment had been sustained without an increase in inflation. In fact, inflation had remained persistently below the Committee's goal of 2% set in 2012.

Powell then turned to the key elements of the revised statement. He began by noting that the proximity of interest rates to the effective lower bound has reduced the FOMC's ability to provide monetary accommodation by cutting interest rates. This in turn has increased downside risk to employment and inflation and requires the FOMC to be "prepared to use our full range of tools to support the economy." With respect to the Federal Reserve's maximum employment mandate, the revised statement indicates that labor market conditions will be assessed relative to "shortfalls of employment from its maximum level" rather than by "deviations from its maximum level." The implication is that employment may at times run above estimates of its maximum sustainable level unless it is accompanied by an undesired increase in inflation or "the emergence of other risks that could impede our goals."

With respect to the Federal Reserve's price stability objective, Powell said the revised statement maintained the longer-run goal of an

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inflation rate of 2%. But he also noted that to ensure inflation expectations remain well anchored at 2%, the Committee would seek to achieve inflation that averages 2% over time. Thus, after a period in which inflation has run persistently under 2%, such as now, the Committee would "aim to achieve inflation moderately above 2% for some time."

Looking ahead, Powell suggested that in an ever-changing economy, conducting such reviews at regular intervals would help policy-makers adapt policy as required to achieve the Fed's dual mandate. Accordingly, the revised statement commits the Federal Reserve to a "public review of its monetary policy strategy, tools and communications practices roughly every five years."

### Why has the Trend Rate of Growth Declined?

The first paper, by Ufuk Akcigit and Sina T. Ates, examines the underlying reasons for the slowdown of business dynamism and productivity growth in the United States. Although various factors potentially affect business dynamism, the authors show that a decline in knowledge diffusion plays a dominant role in explaining the slowdown of U.S. business dynamism in recent decades. They provide empirical evidence that factors discouraging competition between the leaders in U.S. industries and their competitors are a key driver of the observed slowdown. In particular, they note that "a decline in knowledge diffusion, which allows laggard firms to learn from and implement the practices of the frontier firms, has potentially obstructed rivals from exerting enough competitive pressure on the frontier firms, leading dynamically to a decline in leaders' incentives to experiment and innovate." Over time, the wedge between market leaders and their rivals increases due to the reduction in knowledge diffusion. Moreover, the market leaders are then shielded from competitive pressures, resulting in a loss of business dynamism.

Akcigit and Ates also discuss several implications of slower business dynamism. For example, sectoral economic activity could consolidate in a small number of large firms. In addition, higher average markups caused by a decline in knowledge diffusion might limit the effectiveness of monetary policy by making investment decisions

less sensitive to changes in interest rates (Van Reenen 2018). These trends could be exacerbated by the COVID-19 pandemic because small and medium-size firms have been more adversely affected than large firms. To improve competition (and therefore business dynamism), policymakers might reconsider regulations that favor market leaders, implement more effective antitrust policies, develop secondary markets for the diffusion of technology, and increase reliance on foreign competition.

In his discussion of the Akcigit-Ates paper, Gauti Eggertsson agreed that increasing market power and the associated slowdown in knowledge diffusion was a plausible mechanism contributing to slower productivity growth. However, he questioned why the slowdown in knowledge transmission began some 40 years ago. Noting that market power declined from the 1960s to the mid-1970s before rising in the 1980s—and that real interest rates follow this same pattern—Eggertsson suggested something more than knowledge diffusion may be at work. He argued that demographic change—in particular, slowing growth in the labor supply and the aging of the U.S. labor force—could be the unifying explanation. For example, if young workers more easily adapt to new technology, a slower growth in the supply of younger workers may affect the probability of a follower firm catching up to the industry leader.

# Why Are Interest Rates so Low?

In the second paper, Julian Kozlowski, Laura Veldkamp and Venky Venkateswaran argue that beliefs about the likelihood of an extreme negative shock to the economy can have long-term implications for future economic outcomes. In particular, large shocks such as the global financial crisis or the COVID-19 pandemic can scar beliefs about the future probability of another large adverse shock, causing households and businesses to make future decisions with these risks in mind. This belief-scarring lowers capital investment and makes risk-free liquid assets more attractive. As a result, output growth and investment are depressed "substantially" and interest rates decline "modestly" for decades to come.

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The authors examine the effects of belief-scarring using a macroeconomic model with beliefs that are updated in response to an epidemiology event that erodes the value of capital. Reflecting the considerable uncertainty about outcomes, they present results from two scenarios that differ in the strength of steps taken to mitigate the spread of the disease. Their analysis suggests that, due to belief-scarring, the long-run economic costs associated with the pandemic are much larger than the substantial short-run costs. In addition, their analysis suggests that belief-scarring makes safe, liquid assets more attractive, depressing the long-run natural rate of interest.

In his discussion of the paper, Kenneth Rogoff pointed out that the idea of rare events having long-lasting economic effects is not new. He noted, for example, Nordhaus' (1974) work on the effects of the Great Depression and World War II in depressing equity prices and raising subsequent rates of return, possibly due to fears of another Great Depression. He also noted the difficulty of studying the effects of a rare event such as a 100-year flood with 25 years of data. On a more technical issue, Rogoff questioned Kozlowski, Veldkamp and Venkateswaran's use of skewness as a market measure of disaster risk. While skewness incorporates expectations of extreme negative and positive outcomes, disaster risk is one-sided. Summing up, he acknowledged the importance of tail risk and encouraged central bankers to incorporate it into their policy analysis.

### Panel on Crisis Management in the COVID-19 Economic Shutdown

A panel of central bank policymakers then provided their perspectives on crisis management in the COVID-19 economic shutdown. Philip Lane, member of the Executive Board of the European Central Bank (ECB), outlined challenges for the ECB in the wake of the pandemic, discussed the ECB's policy response and assessed progress to date. He identified three challenges: stabilizing markets, protecting credit supply, and neutralizing the pandemic-related downside risks to inflation. He then discussed the policies the ECB adopted to address these challenges, including its "flagship policy initiative": the pandemic emergency purchase program (PEPP) that helped stabilize markets and provided a substantial easing in the stance of

monetary policy. Other complimentary actions included easing the conditions for banks to acquire liquidity under the targeted long-term refinancing operations (TLTROs). In assessing progress to date, Lane suggested that the ECB's policy package had "stabilized markets, protected credit provision and supported the recovery." He also emphasized that fiscal support was crucial to secure a strong recovery in the euro area.

Next, Tiff Macklem, governor of the Bank of Canada, spoke about the "imperative for public engagement." As central banks have taken unprecedented monetary policy actions in response to COVID-19, public perceptions of central bank operational independence have been challenged. Thus, Macklem argued, it is essential for central banks to be seen as trusted sources of information and analysis and to build deeper relationships with the public. He gave four principles for communicating effectively with the public: (i) Central banks' messages should be "coherent and consistent" with incoming data and over time; (ii) Public communications should be clear and free of jargon; (iii) Public communications should be "relatable and relevant"; and (iv) central banks should listen to the public and find out what is preoccupying them. By following these principles, central banks would be able to make better policy decisions and enhance their legitimacy as public institutions.

Tharman Shanmugaratnam, chairman of the Monetary Authority of Singapore, discussed three challenges in the era of COVID-19: the immediate challenge of a public health crisis and the associated economic recession; the changing structure of demand, supply and the job market; and a legacy of income stagnation, job polarization, pension gaps and climate change. While the world has focused on avoiding downside risks such as mass unemployment and bankruptcies caused by the COVID-19 crisis, Shanmugaratnam suggests that the next phase of policy response should also aim at achieving stronger productivity growth and addressing the issue of job polarization. He proposes six policy initiatives: (i) shift policies away from subsidizing the stock of existing jobs toward incentivizing the flow of new jobs; (ii) get displaced people back into jobs for which they

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are a good match; (iii) invest more systematically in education and life-long learning; (iv) incentivize technology investments that augment labor rather than displace it; (v) ensure that growth of labor compensation does not fall below productivity growth; and (vi) ensure that the small- to medium-size business sector survives the pandemic and continues to foster a competitive marketplace. With respect to monetary and fiscal policies, Shanmugaratnam urges policymakers to take a longer-term view.

#### **Day Two Keynote Address**

The second day of the symposium began with a keynote address by Andrew Bailey, governor of the Bank of England. In his remarks, he looked back at the last decade and at the disruption caused by the COVID-19 pandemic to draw lessons about how central banks should use their balance sheets as a policy tool. He noted that in response to the COVID-19 crisis and the resulting unprecedented downturn in economic activity, central banks used balance sheet policy to stabilize financial markets and provide monetary policy accommodation. These policies were conducted at a decisive pace and in large scale—a policy he labeled "go Big and go Fast"—to avoid a sharp increase in financing costs to households and businesses. In assessing the efficacy of the policy, he said asset purchases "worked effectively," and "clearly acted to break a dangerous risk of transmission from severe market stress to the macroeconomy, by avoiding a sharp tightening in financial conditions and thus an increase in effective interest rates."

Looking ahead, Governor Bailey made two tentative points. His first point was that balance sheet policies aimed solely at market functioning are likely to be temporary. That said, the recent balance sheet policies of the Bank of England were not addressed solely to market functioning but also to help mitigate the effects of the pandemic on the outlook for the economy and inflation. His second point was that to the extent asset purchases are a more powerful tool during crises, central banks should ensure they will have the capacity to use them again when needed in the future. This means that policymakers need to consider how they can unwind these purchases when the crisis is

over—and that balance sheet policies may play more of a countercyclical role in the next decade than they did in the last decade.

#### Micro Uncertainty and Policy Uncertainty

In the first paper of the day, Jose Maria Barrero and Nick Bloom discussed how economic uncertainty might impede a rapid recovery from the COVID-19 recession. They examined three forward-looking measures of economic uncertainty: a measure from a textual analysis of newspaper articles, a measure of forecaster disagreement, and a subjective measure computed from business expectation surveys. All measures surged to all-time highs with the onset of the pandemic. The text-based measure from newspaper articles suggested that uncertainty about future fiscal policy and health policy increased particularly sharply during the pandemic. The authors argued that such an unprecedentedly high level of uncertainty is the major obstacle to a fast recovery.

Heightened uncertainty can delay the recovery from the COVID-19 recession through three primary channels. First, uncertainty raises discount rates because households and businesses are risk-averse. The resulting increase in borrowing costs deters spending at the micro and macro levels. Second, in the language of "real options," where firms regard their investment choices as a series of options, high uncertainty increases the option value of waiting for more information and delaying investment and hiring decisions. Similarly, uncertainty also leads households to postpone purchases of durable goods. And third, uncertainty makes firms more prudent in their responses to changes in business conditions, thus weakening the stimulus from monetary and fiscal policy. Barrero and Bloom conclude their paper with a discussion of other factors delaying the recovery, including the reallocation of labor and business activity, the increase in workfrom-home arrangements that makes hiring and on-boarding new employees more difficult, and medical uncertainty about the course of the disease and the prospects for a vaccine.

In her commentary on the paper, Janice Eberly examined the composition of the decline in U.S. real GDP in the aftermath of the COVID-19 shock. She noted that the 33% decline in real GDP in

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the second quarter of 2020 was not driven by consumer durables or investment, but by services. In fact, within consumption, spending on autos and recreation durables rose, while spending in all services categories continued to decline. In addition, although traditional real-options models suggest firms delay investment when faced with increased uncertainty, some firms, in fact, choose to expand into new areas, such as virtual platforms. And while investment in structures declined, investment in computers and peripherals increased. Thus, rather than delaying investment, some firms saw the COVID-19 recession as an opportunity to invest in new equipment in anticipation of a future pickup in demand.

# **Expectations and Monetary Policy**

In the next paper, Bernardo Candia, Olivier Coibion and Yuriy Gorodnichenko showed how differences in the way households and businesses interpret inflation might affect how central banks should communicate their policy. Focusing primarily on inflation expectations, the authors find that professional forecasters, households, and businesses perceive information about inflation differently. Professional forecasters tend to interpret news about inflation as having demand-side origins and thus regard an increase in inflation as an indicator of faster output growth. In contrast, households tend to see inflation from the supply-side perspective and thus regard an increase in inflation as associated with bad news and a negative income effect. For businesses, the perspectives are mixed.

Acknowledging that professional forecasters, households and firms do not necessarily make the same inferences about the source of inflation, the authors provide three potential implications for monetary policy communications. First, targeting communications to specific audiences and using simple and transparent messages can potentially lead to substantial changes in households' and firms' beliefs and actions. Second, communications with the public should convey a more "holistic" message than just the outlook for inflation or interest rates. This approach can potentially clarify whether an increase in inflation is attributable to supply-side or demand-side factors. And third, because of a lack of understanding of the details of monetary

policy, guidance about the future path of policy should focus more on desired outcomes rather than the setting of policy instruments.

In his discussion of the paper, George-Marios Angeletos first addressed the question of who is right-professional forecasters or households? Based on data for the last 30 or 60 years that show no obvious systematic relation between inflation and real economic activity, he said that households may be more right than wrong. Angeletos then asked what this divergence of views about inflation means for macroeconomic theory and monetary policy. For macro theory, he said economists must allow for different agents in the economy to hold different views about how the economy works, such as, at a minimum, the relative importance of supply and demand shocks. But do households really engage in this kind of technical reasoning? If not, he said, "it seems plausible that, in reality, consumers don't understand the GE [general equilibrium] working of our models and interpret a commitment for a higher inflation in the 'wrong' way." Angeletos concluded that central bankers talk "simply, crisply, and constructively imprecisely" about jobs and income rather than inflation and interest rates because the right strategy is to focus on things that people routinely care about.

# Panel on Post-Pandemic Monetary Policy and the Effective Lower Bound

The second panel focused on post-pandemic monetary policy at the effective lower bound. Laurence Boone, the first speaker, described the need for fiscal, monetary, and structural policies to support economic activity in the post-pandemic global economy. She made three key points. First, the current mix of monetary and fiscal policies is providing the needed accommodation, and these policies would need to remain in place for a considerable period of time to support labor and capital reallocation over coming years. However, such accommodative policies are sustainable only as long as nominal growth remains sufficiently above interest rates. Second, fiscal policy should "lock in" low interest rates and use the available fiscal space, which varies across countries. And third, structural reforms are needed to accompany accommodative monetary and fiscal policies to

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encourage efficient reallocation. In particular, technology adoption and labor mobility across jobs and firms are needed to limit labor market scarring and boost employment.

Next, Jordi Galí described how structural economic changes that pre-date the COVID-19 pandemic call for a rethinking of monetary policy strategies. Two key changes are the decline in the long-run neutral real interest rate and the flattening of the Phillips curve. Galí noted that the pandemic will likely add to the policy challenges because of the expected duration of the downturn and the fear of a recurrence of pandemic shocks that will raise household precautionary savings and discourage business investment, bringing the neutral real rate even lower. In response, Galí offered three options for central banks to strengthen their ability to counteract future adverse shocks. The first option would keep the monetary policy framework unchanged while relying on ad-hoc unconventional monetary policies when interest rates fall to the effective lower bound. The second option would be to adopt a new strategy in which policymakers maintain the current 2% target but commit to making up past shortfalls of inflation by overshooting the target for some time in the future. The third option would be to set a higher numerical target for inflation while preserving the current "flexible inflation targeting" strategy. Galí discussed the pros and cons of the three options and concluded that a "two-handed approach combining a moderate, properly announced and timed, adjustment in the inflation target (to say 3%) with an (also moderate) revision of the strategy along the lines of the reformulation recently announced by the Fed is the best way to go."

The final panelist, Michael Woodford, suggested moving away from sole reliance on interest rate policy in the post-COVID-19 economy and relying more heavily on fiscal transfers as a tool of stabilization. Specifically, when borrowing constraints arise due to disturbances that are asymmetrically distributed throughout the economy, as in the COVID-19 recession, Woodford suggested that policymakers use fiscal transfers, assuming that at least part of the transfers go to borrowing-constrained sectors. "[S]uch transfers don't just increase aggregate

demand (something that interest-rate cuts can also achieve); they can increase the specific kinds of spending that are needed to achieve a more efficient allocation of resources. And they can do this even without having to be too precisely targeted." Woodford went on to say that sufficiently large transfers not only increase welfare but can achieve the first-best outcome. In addition, achieving this outcome requires no cut in interest rates because interest rate cuts stimulate inefficient use of resources. Nevertheless, Woodford said, central banks can still play an essential role in sustaining the recovery by ensuring the continued efficient functioning of the financial system.

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