Fed Challenge Winner Presentation: Dartmouth College
October 9, 2020

KIRA KOEHLER. Good morning fellow FOMC members, and welcome to today's meeting. On our agenda today, we will review our dual mandate and current macroeconomic conditions, evaluate the effectiveness of our policies in response to the COVID pandemic, and provide our policy recommendation.

USTAV JALEN. First, let's consider the employment side of our mandate. Our “why” statement with long run goals and monetary policy strategy emphasizes that our aim is to maximize employment, which requires an analysis of a broad range of indicators. September's headline rates stood at 7.9 percent and the U-6 rates was 12.8 percent. The spread between the U-3 rate and the U-6 rate remains elevated relative to pre-COVID levels, implying an increase in underemployment. In addition, weekly unemployment claims recently rose to nearly 900,000 and LFPR has fallen. Notably, while the prime-age male LFPR is on track for recovery, the decline for prime-age females is more sustained.

AYAN AGARWAL. The pandemic has impacted certain communities disproportionately. Unemployment rates for Black and Hispanic people remain elevated and are recovering more slowly than the all-inclusive U3. Resolving key demographic disparities in employment is critical to fulfilling our dual mandate. However, our toolkit to resolve these issues is limited, and fiscal support is required to help address them.

TENCH COXE. Clearly, we have a long road to recovery ahead in the labor market. The second part of the fed's dual mandate is price stability. The yearly change in the Core-CPI stood at 1.7 percent, and the yearly change in the Core-PCEPI stood at 1.6 percent, both below our target rate of 2 percent. In response to our persistent under and shooting of the inflation target, we've agreed to engage in flexible average inflation targeting, allowing inflation to run

moderately above 2 percent for a period of time. This will also enable us to keep long run inflation expectations anchored.

KIRA KOEHLER. Moving on to economic conditions, let's look at real GDP. In the first quarter of 2020, it fell by 5 percent, while the second quarter annualized rate declined by almost a third. This number reflects the nationwide stay-at-home orders issued in March and April. The pandemic stifled both business health and consumer demand, and in order to best understand the current economic conditions, we will take a closer look at the components of real GDP.

ZACHARY OLSON. First, let's discuss consumption. Since September 2019, consumer sentiment has fallen over 20 percent, signaling pessimistic expectations. Though it has risen since, never hitting the historic lows of the Great Recession. Slowed spending due to the pandemic has disproportionately affected certain industries. Retail data suggests lower department and clothing store sales, contrasting with higher online retail sales. High frequency data from traveling restaurant industries show significantly lower TSA checkpoint traffic and muted dining activity. On the other hand, some consuming measures have rebounded including new orders for durable goods. We will further look at this data when we discuss policies to aid small and medium sized businesses, a crucial component of the economy.

UTSAV JALEN. Let's move on to the investment picture. Both residential and non-residential fixed investments have dropped significantly. This trend is further reflected in the decline in gross fixed capital formation. However, manufacturing recovery appears strong as seen from the PMI data. Housing stats also point to strength in the real estate market due to our commitment to very low interest rates and the continuation of our QE program.

AYAN AGARWAL. Our trade balance has also been affected by the pandemic as cross border movement of goods and people has been stifled. While only comprising 9.2 percent of GDP, exports of goods and services continue to be unpredictable with the lingering presence of trade tensions and the slow recovery from the global shutdown.

ZACH OLSON. In addition, much of the recovery in household spending can be attributed to the CARES Act. We continue to hope for additional fiscal support, especially for disproportionately affected communities and industries. In its absence, we are more likely to have softening consumer confidence and downward pressure on inflation.

TENCH COXE. It's necessary to acknowledge the continuing and potential future risks that threaten American economic stability. While social distancing measures have aided in the nation's recovery from the initial outbreak, delaying vaccine development in a second wave could lead to future shutdowns. We encourage everyone to help foster a safe and healthy community so we can move our nation and economy forward together.

KIRA KOEHLER. While prompt fiscal and monetary stimulus have supported the economic recovery, the historic collapse will take on to reverse. In our discussion on policies and tools, we will talk about the effective lower bound, forward guidance, quantitative easing and yield curve control, as well as liquidity programs with an emphasis on the main street lending program.

AYAN AGARWAL. Since the economic and financial fallout first began, we swiftly lowered our target for the fed funds rate to zero. More recently, we issued strong forward guidance, indicating our intention to keep rates at the ELB. This guidance should promote economic expansion.

UTSAV JALEN. I found President Kashkari's dissenting statement to be quite compelling. He advocated or us to explicitly state that we will maintain the target range until core inflation has reached 2 percent on a sustained basis. He expressed concerns about a premature rate hike, citing the tightening process that began in 2015.

ZACH OLSON. I disagree with President Kashkari, and like President Kaplan, believed in being conservative with forward guidance. In an environment where the markets already expected policy to remain accommodative, there isn't much need for us to solidify our interest rate trajectory. Issuing stringent long term forward guidance limits our flexibility to deal with feature shocks and potentially strains our credibility.

KIRA KOEHLER. Yes, our credibility is what gives us the ability to steer the economy. As Carvalho, Hsu and Nechio at the San Francisco fed show, our statements have a significant effect on longer term rates and the yield curve.

ZACH OLSON. Beside lowering rates to the ELB, we have also taken unprecedented measures to support consumers, small businesses and corporations' access to credit. In early March, volatility spiked and financial markets faltered, threatening to lock up credit to borrowers in need. To restore financial stability, we established numerous facilities to ensure adequate liquidity in the markets and avoid indiscriminate asset sales. These facilities have been largely successful. Spreads have narrowed to pre-pandemic levels, and bond issuances have rebounded in most sectors.

UTSAV JALEN. Similarly, our QE measures have proven successful. Since the pandemic began, we have increased the size of our balance sheet by roughly $3 trillion. Through purchases of treasuries and agency MBS, we've stabilized financial markets and supported the health of the housing market.

TENCH COXE. I don't think that we can necessarily attribute all of these successes to QE. If we compare recovery from the 2008 financial crisis to Canada's, they're shockingly similar. Yet, we chose to expand our balance sheet almost 24 percent of GDP, while Canada's balance sheet remained only a fifth of the size. According to Steven Williamson in the St. Louis fed, if QE had been effective in stimulating our recovery, we should have seen a difference in economic performance after the financial crisis, but we don't. In fact, relative to the first quarter 2007, real GDP grew 2 percent higher in Canada in the fourth quarter of 2016 than it did in the US, reflecting a stronger economic recovery without the aid of three rounds of QE.

UTSAV JALEN. I disagree with Williamson. The US faced significantly greater downside risk compared to Canada in 2008. In addition, GDP is not the best metric to measure QE effectiveness given exogenous variables. In contrast, Eric Swanson at the NBER shows that QE, coupled with forward guidance, can have a significant impact on long term bond yields, and is equally as effective as the fed funds rate. In addition, Edison Yu at the Philadelphia Fed acknowledges that the relationship between QE, GDP, and inflation is significant. That being said, I agree that we should use this time to discuss additional tools such as negative interest rates, yield curve control and modifications to existing lending facilities.

TENCH COXE. I think we should keep negative interest rates in our toolkit, should the need arise. Negative interest rates will have three key benefits. First, banks will be charged a fee on reserves above a certain threshold, encouraging lending. Second, negative rates will lead to declines in longer term interest rates, making monetary policy more accommodative. And lastly, a lower rate would weaken the currency and help improve the trade balance. Moreover, there's no clear discontinuity in the effects between a 10-basis point or negative 10-basis point rate, according to former Chairman Bernanke.

KIRA KOEHLER. We've already dismissed negative interest rates after learning from experiences of the European and Japanese central banks. Negative rates can lead to currency hoarding and financial fragility. Also, economists Albrizio and Conesa found that monetary policy easing lead to an over-allocation of credit to tangible assets in low productivity firms, indicating that lower interest rates reduces aggregate productivity. Given the uncertainty surrounding the effects of this policy, I think we should discuss yield curve control, or YCC, as a policy alternative.

AYAN AGARWAL. YCC would target longer term rates directly by imposing caps on particular maturities. A number of current and past board members have expressed support for YCC as the natural step forward after hitting the ELB. Caps on medium to long term rates would affect the economy in many of the same ways as traditional monetary policy. Lower rates on treasuries would translate into cheaper rates on mortgages, car loans, and business credit. It would support asset prices and bolster long term investment by reducing the cost of capital. And lastly, it would boost net exports through a weaker dollar. In fact, Eberly, Stock, and Wright at the NBER argue that the use of YCC in the global financial crisis would have led to a faster economic recovery. They argue that YCC, coupled with a higher inflation target, would have helped the labor markets for, quote, "recover seven quarters earlier."

UTSAV JALEN. I'm skeptical of YCC. We tried that in short and long term rates in 1942. These caps obligated us to keep buying securities, which made us lose control of our balance sheet size and increased the money supply in an economy which was already heating up due to World War Two. By 1951, annual inflation had moved over 20 percent, and we had to abruptly end experimental use yield curve control program through the Treasury-Fed Accord. Clearly, this policy did not work.

AYAN AGARWAL. While it's true our history with YCC hasn't been positive, the banks of Japan and Australia have been able to deploy this tool successfully. The failure of YCC in the '40s is due to two reasons which may no longer be pertinent. First, the program's implementation occurred during a wartime economy to help finance government debts. It was the mixing of expansionary monetary policy with an overheating economy that resulted in inflation. Given the presence of deflationary pressures and our updated inflation goal, I am not concerned about excess inflation. The second reason for failure was a lack of forward guidance by the Fed, concerning the exit from YCC. To fix this, we could explore a temporary or goal-oriented YCC as laid forth by Governor Brainard. We would issue clear forward guidance that the YCC will remain in place until the committee's assessment of our dual mandate has been achieved.

KIRA KOEHLER. In addition, YCC forward guidance and the ELB are mutually reinforcing. Forward guidance and the ELB together tell markets to expect lower rates for a while. Meanwhile, QE could put downward pressure on longer dated assets than those to which the peg applies. In other words, if used in combination, the three policies could simultaneously lower and flatten the yield curve. However, I don't see a need for deploying YCC just now. At the economic data softens by our December meeting, we should revisit this discussion. For the time being, let's move on to the Main Street Lending Program.

TENCH COXE. Main Street Lending Facilities were created to offer credit lines to SMBs, the largest source of job creation in our economy. But the MSLP has a significant underutilization problem, which has persisted even after a series of modifications. This indicates a need for further revisions. Based on public feedback to the program, business owners feel that the terms are too onerous for borrowers, which may be discouraging participation. Public

complaints centered around the minimum loan being too large, the five-year maturity too short, and the Forex debt to EBITDA requirement being too strict.

ZACH OLSON. I agree. I propose we decrease the minimum loan size, increase loan maturities by two years, and defer initial payments on principal an additional two years. These terms are more accommodative to borrowers and should increase demand. Additionally, we should begin offering asset-based lending. Firms with significant real estate assets who currently don't meet the EBITDA requirements are prohibited to borrow under the current terms. These companies, such as hotels and retailers, are some of the hardest hit by the pandemic.

TENCH COXE. I agree there's a lack of borrower participation. The real problem with the MSLP seems to be on the lender supply side; the banks aren't properly incentivized. Currently, the unattractive fee structure, coupled with the high fixed underwriting costs, discourages banks from making small loans. In order to fix this incentive, I suggest we allow banks to price risk accordingly by removing the 300-basis points spread from the term sheet. Naturally, spreads will increase for many borrowers. However, if we provide participating banks for the low interest loan, collateralized by the main street loan, the equilibrium spread on mainstream loans narrow. In other words, with cheap financing from the Fed, banks can earn the same or greater profits on a mainstream loan, while still offering below market rates to borrowers.

AYAN AGARWAL. I fully support those changes. That said, we need to acknowledge the limitations of monetary policy today. In 1933, during a time of extreme economic duress, Keynes wrote a letter to President Roosevelt, describing how it was unlikely that monetary policy would be effective. He likened it to trying to get fat by buying a larger belt, explaining that it's misleading to stress the quantity of money, which is only a limiting factor, rather than the

volume of expenditure, which is the operative factor. In today's economy, we have already significantly loosened the belt. We now rely on fiscal support to get the country fat.

KIRA KOEHLER. With that, we will now summarize our policy recommendation from today's FOMC meeting. In line with our previously issued forward guidance, we plan to keep the target federal funds rate at zero to a quarter percent. In addition, we will continue increasing our holdings of Treasury securities and agency MBS at the current pace. We will conclude with a vote for our policy recommendation. All in favor, raise your hand. While we have unanimously agreed on our policy trajectory, we will evaluate the use of YCC as an additional tool should economic data soften by December's meeting. In addition, we will share proposed MSLP modifications with the Board of Governors. This concludes today's FOMC meeting. Thank you.