Opening Remarks for Hoover Monetary Policy Conference

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I would like to thank John Taylor , John Cochrane and the other organizers for inviting me to participate once again in the Hoover monetary policy conference. When this group last convened in May of 2019, none of us did nor really could have foreseen the public health calamity and economic catastrophe that would within months befall the economy as a consequence of the COVID pandemic. The pandemic and the mitigation efforts put in place to contain it in 2020 delivered the most severe blow to the US economy since the Great Depression. GDP collapsed at an annual rate of over 30% in the second quarter of 2020. More than 22 million jobs were lost in just the first two months of the crisis, and the unemployment rate rose from a 50-year low of 3.5% in February to a postwar peak of almost 15% in April of 2020. A precipitous decline in aggregate demand pummeled the consumer price level and inflation fell sharply in 2020. The resulting disruptions to economic activity significantly tightened financial conditions and impaired the flow of credit to US households and businesses.

The monetary and fiscal policy response to the COVID crisis in the United States, and in many other advanced economies, was unprecedented in its scale, scope, and speed (Clarida, Duygan – Bump, Scotti (2021)). Legislation passed by Congress in March 2020, December 2020, and March 2021 provided a total of nearly $5.8 trillion in fiscal support to the US economy – about 28% of US GDP. The Federal Reserve acted decisively and with dispatch as it deployed all the tools in its conventional kit – cutting the Federal funds rate to the ZLB, launching large scale purchase programs for Treasury and mortgage backed securities, and providing outcome based guidance for the future path of the policy rate - and as it designed, developed, and launched within weeks a series of temporary backstop facilities to support the flow of credit to households and businesses.

But if 2020 was the year of the pandemic, economic collapse, and the policy response, then 2021 was the year of vaccines, economic recovery, and repercussions flowing from the policy response. In 2021, the real side of the economic recovery was about as good as it gets with strong growth and robust hiring, and in the first half of the year this rapid return to the economy's potential was accompanied by indicators of underlying inflation that remained consistent with the Fed's 2 % objective. But in the second half of 2021, and continuing into this year, there has been a surge in inflation that has been about as bad as it gets, not only in the US but also as well in many other economies around the world. It was certainly not moderate, it was not foreseen in the Fed's SEP projections, and it is turning out to be distressingly persistent and increasingly broad based as evidenced in both price and wage data.

Speaking for myself, I came into the year 2021 with a Bayesian prior that inflation expectations were well anchored, that in the aggregate there remained substantial slack in the economy, and that also there were some significant but likely short lived sectoral imbalances between supply and demand that would require large increases in some relative prices – for example the relative prices of durable goods versus contact intensive services (Clarida 2021b). As a starting point, with well anchored inflation expectations the textbook monetary policy response would be to look through such relative price changes caused by supply shocks so long as inflation expectations stayed well anchored and economic slack remained evident. That was certainly my view in the spring of last year, it was not inconsistent with the available data on price and wage inflation that we had at the time, and it was also the view of virtually all private sector forecasters as documented in the Wall Street Journal, Bloomberg, and Survey of Professional Forecasters surveys conducted in the first half of last year.

But of course that prior proved to be wrong, and beginning in the summer of 2021, the incoming data - for example, the data on trimmed-mean inflation calculations, on wage and compensation dynamics, and on unit labor cost trends - began to reveal, at least to me, that the balance of risks to the inflation outlook were skewed decidedly to the upside, and I indicated as much in remarks delivered at a Peterson Institute event in August (Clarida 2021c). It was turning out to take longer to re-open and rebalance 20 trillion dollar economy than it did to shut it down, the US labor market tightened much faster than Fed and most others had been expecting in the spring, and the cause of the aforementioned sectoral imbalances was revealed to be due as much to excess demand than to transitorily depressed deficient supply.

Certainly by the fall of 2021, monetary policy rules I consult based on my research with Mark Gertler and Jordi Gali (1999;2000) – for example as highlighted in a presentation I delivered (virtually) to a Hoover seminar in January 2021 (Clarida 2021a) and as studied in an excellent recent paper by David Papell (2022) - were indicating that lift off from the ELB was or soon would be warranted (Figure 1). In the event, the FOMC began to pivot in the fall of last year to end QE earlier than had been expected, to commence rate hikes sooner than had been expected, to signal a faster pace of policy normalization than had been previously projected, and likely to commence balance sheet normalization much sooner and at a much faster pace than was the case following the GFC. Taken together these actions have tightened financial conditions considerably and pushed nominal (but not real) bond yields and mortgage rates to levels last seen at the peak of the last rate hike cycle when the funds rate reach 2.5 percent, roughly equal to the FOMC current assessment of neutral. Indeed, there appears to be broad support on the Committee to return the funds rate "expeditiously" to neutral.

But I judge at least from my vantage point back at Columbia University that simply and even expeditiously "getting to neutral" will not be enough this cycle to return inflation over the forecast horizon back to the 2% longer run goal. And let me be clear: even if through good policy or good luck inflation does return to 2% over the forecast horizon, average PCE inflation as calculated using either backward or forward looking windows of two, three, even five years will work out to be well above 2% (Atlanta Fed 2022). That was a point I made in my August 2021 PIIE remarks: because of the size and nature of the pandemic shock and monetary and fiscal policy response to the shock, the ELB in this cycle did not turn to have been ex post a binding constraint on the ability of monetary and fiscal policy in tandem to return inflation to 2% from below or for inflation to average 2% over time. And monetary policy should, I argued, reflect this reality.

In practice, this will mean that, even under a plausible best case scenario in which most of the inflation overshoot last and this year turns out to have been transitory, the Funds rate will I believe ultimately need to be raised well into restrictive territory, by at least a percentage point above the estimated nominal neutral rate of 2.5 percent, for inflation to be credibly projected to return to 2%. The Taylor rule arithmetic is both simple and compelling: if PCE inflation a year from now is running at say, 3%, a policy rate reaching 4% would be implied by the Taylor principal and the policy rule I outlined in my Hoover remarks.

The policy path for the Funds rate I've just described does not incorporate the possible additional tightening of financial conditions that could arise as the Fed allows its balance sheet shrink over time, although bond yields likely already price in some assumptions about the ultimate destination for the size of the balance sheet and duration of the program. Were the term premium to increase substantially from current levels - due to Fed balance sheet policy, coupon supply, a decline in the value of Treasuries as a hedge against equity risk (Clarida 2019), or a global rise in term premia as major central banks shrink their balance sheets in tandem – the required rise in the Funds rate to return inflation to 2% could be somewhat smaller than indicated by popular policy rules. On the other hand, if the consensus and SEP forecast for inflation to fall below 3% in 2023 turns out once again to be overly optimistic, then the tightening of monetary policy required to return inflation to the 2% longer run goal would be greater than in the baseline scenario consistent with the SEP projections and many private sector inflation forecasts. And of course, *r–star* itself is unobserved and time varying and could turn out to be higher than the committee expects, in which case the peak funds rate in this cycle consistent with returning inflation to 2% would be higher than indicated in Figure 2.

In closing, the Fed in March 2020 faced a "whatever it takes" moment and I believe, without any pretense of impartiality, that history will judge that it rose to that challenge. Today, the Fed faces a different challenge, that of insuring that the hard won battles under Paul Volcker and Alan Greenspan to achieve price stability are not squandered. The Fed has the tools to meet this challenge, officials understand the stakes, and are determined to succeed. But the Fed's instruments are blunt, the mission is complex, and difficult trade offs lie ahead.

Thank you for your time and attention. I very much look forward, as always, to listening to and learning from what I'm sure will be a lively discussion at year's Hoover conference.

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Figure 1

Inertial Policy Rules from Papell and Prodan (2022)