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"Monetary Policy in a Low Inflation and Low Unemployment Economy"

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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 morning. I would like to thank the Economic Club of New York for inviting me to join you today. It is good to be with you.

My remarks this afternoon will be about today's economic environment, characterized by low inflation and low unemployment – and specifically about monetary policymaking in that environment. I'll touch on the outlook for the economy, and the Fed's "dual mandate" goals – maximum sustainable employment and stable prices – wherein the readings are sending somewhat opposite signals at present. I'll spend some time walking you through the data and analysis that underpin my views on the matter of undershooting the target for inflation that the Fed has established. And I'll comment on the implications for current policy, from my own perspective of course. First, however, I'd like to spend a moment on trade, which is on everyone's mind and of course has implications for prices and the broader economy.

Trade Issues and the U.S. Economy

Obviously, the last 10 days featured plenty of market volatility in response to difficulties surrounding the trade negotiations between the United States and China. It is still unclear whether, and for how long, recently proposed tariffs by the U.S. and China will be in effect. U.S. tariffs are effectively taxes on imports, and our trading partners' tariffs are taxes they pay on our exports.[1] Even before they are in place, an announcement of a future tariff might affect trade.[2] In addition to the effects on imports and exports, policymakers would expect financial markets to react to tariff announcements. And if the tariffs are widespread and prolonged, the financial market reaction would likely be greater, as would the overall slowing effect on growth.

Of course, tariffs matter when it comes to inflation, which we at the Fed are mandated to manage. In general, tariffs will tend to raise prices on imported goods to the U.S. Of course, these effects can be mitigated by many factors, such as how easy it is to find alternatives to goods subject to tariffs. If Chinese products have competitors in non-tariff locations, buyers in the U.S. could simply shift purchases to those competitors. The same holds for U.S. exports.

But generally speaking, price levels for imported goods should rise due to the tariffs.[3] However, for now, I am optimistically assuming that both sides in the trade negotiations will work to reach an agreement. I am also assuming that while the uncertainty is not helpful, it will be transitory, and thus have only a modest effect on the forecast for the U.S. economy overall.

The Economic Outlook, and the Implications for Monetary Policy

Setting aside recent trade-related concerns, the broader U.S. economy seems to be displaying a sounder footing than it was at the beginning of this year. Equity markets declined significantly in the fourth quarter of last year, but had largely recovered prior to recent events. Other concerns – for example, worries about foreign growth slowing as a result of Brexit, and about the Chinese economy faltering – appear to have subsided since the beginning of the year. And first-quarter growth in the U.S. was stronger than many forecasters expected.

Consistent with a reduction in some non-trade risks, and improvement in financial conditions, the higher-frequency U.S. economic data to date are consistent with a moderate pace of economic growth. A recent survey of professional forecasters posted a median growth rate for 2019 real GDP of 2.6 percent.[4] While this growth rate is a little bit stronger than my own forecast, both the consensus outlook and my own forecast suggest a modest step down from last year's pace but still imply enough momentum to push the unemployment rate down even further.

Clearly, however, the uncertainty surrounding U.S.-China trade negotiations poses a potential downside risk to this forecast. If the trade uncertainty is prolonged, financial markets could retrench further, and households and firms could curtail spending. While my baseline forecast assumes that a trade agreement will occur without seriously disrupting global trade or global economies, it may be some time before that uncertainty is resolved.

Assuming that the consensus of private forecasters proves right, and we continue to have solid growth in the U.S. – with no significant foreign shocks – what should that imply for monetary policy?

The U.S. unemployment rate is currently at 3.6 percent, well below the median of Federal Open Market Committee (FOMC) participants' estimates[5] of the longer-run unemployment rate, 4.3 percent, as described in the Fed's most recent Summary of Economic Projections (SEP).[6] If the central bank focused *only* on labor markets, the current level of unemployment might call for a somewhat more restrictive monetary policy.

But, of course, Congress has also charged the Fed with the responsibility of attaining a low and stable inflation rate. As of the most recent reading, the core PCE inflation rate is 1.6 percent, somewhat below the Fed's 2 percent inflation target. These latest data follow a period of several years during which inflation had generally underrun the 2 percent target, although the same measure nearly reached 2 percent as recently as last December. Lower than desired inflation might imply a somewhat accommodative, or looser, policy stance – to ensure that inflation rises more persistently to the Fed's 2 percent target.

The Fed's dual mandate from Congress had not posed this type of conflict in the early years after the global financial crisis, as unemployment had been undesirably high and inflation somewhat low. Both implied the need for monetary stimulus. But today, the two elements of the Fed's mandate are sending opposing signals for monetary policy, with low unemployment perhaps suggesting a bit tighter policy, and low inflation the opposite.

The Federal Reserve's current monetary policy framework says that policymakers will take a "balanced" approach when the implications of our goals are conflicting. That is, policymakers will weight equally the extent to which employment and inflation deviate from their goals in setting policy.

In weighing currently conflicting employment and inflation readings, it is important to consider whether these opposing outcomes are likely to persist, or reflect only temporary deviations. In current circumstances, if one were concerned that the economy would falter significantly, the likely rise in unemployment and fall in inflation further below target might lead policymakers to ease. If, alternatively, one expects the economy to grow quickly and believes that the recent decline in inflation was only temporary, a further decline in unemployment and eventual rise in inflation to target might lead policymakers to tighten.

And in fact, currently most forecasts envision the economy growing somewhat above the rate considered its "potential" this year, then slowing to a growth rate somewhat below potential in subsequent years. And most see the current low readings on inflation as temporary.

In this setting, I see no clarion call to alter current policy in the near term. I view current policy as slightly accommodative and likely to be consistent with inflation returning to the Fed's 2 percent inflation target over time. This is likely to occur more rapidly if tariffs are imposed.

However, given that inflation has underrun the target over the last several years, it is wise to admit to some uncertainty about this part of the forecast. It is my view that the Fed can afford to wait to see if that forecast does indeed materialize. In addition, the presence of a prominent downside risk – more disruptive trade negotiations – seems to me to be another important reason for policymaker patience until this source of uncertainty is more resolved.

Challenges with Undershooting Inflation

Now let me walk you through the data and analysis that underpin my views on the matter of undershooting inflation.

Figure 1 shows inflation as measured by the *core* PCE inflation rate, which excludes food and energy prices, and *total* PCE inflation, which includes all consumer goods and services – from January 2014 through March 2019.

Parenthetically, the Fed's inflation goal is couched in terms of total inflation – because, of course, food and energy prices are important components of consumers' expenditures, but economists often look to core inflation as a measure that may better capture the underlying movement of inflation. As implied by the difference between the core and total inflation measures shown in Figure 1, food and energy prices can move around quite dramatically, but most often those shifts are temporary and not reflective of the underlying inflation trend. Thus, the core measure that excludes food and energy prices may provide a more reliable indicator of where the total inflation rate is heading.

Both series – core and total – hit 2 percent toward the end of last year, but both are currently undershooting the 2 percent target. As discussed a moment ago, an important question for monetary policymakers is whether these misses reflect more persistent factors, such as reduced inflationary pressures or a reduction in inflation expectations, or instead more temporary factors.

Figure 2 shows the same graph as Figure 1 – now with a third line representing the Trimmed Mean PCE measure, which is calculated by the Federal Reserve Bank of Dallas.[7] The Trimmed Mean PCE inflation rate is an alternative measure of core inflation. Rather than excluding specific categories that tend to be volatile, like food and energy, the Trimmed Mean measure is more agnostic about which series are "noisy," and instead excludes those prices that moved up or down dramatically during a specific period. By excluding these outliers, it is hoped that the Trimmed Mean measure better captures the underlying trajectory of inflation, by focusing on the price movements of goods and services that did not experience unusually high or low transient price level movements that period. As Figure 2 shows, the Trimmed Mean measure since 2014 has been gradually returning to the 2 percent inflation target, and is currently 1.96 percent, which rounds to the Fed's 2 percent inflation target.

Figure 3 provides an example of two prices that declined substantially recently: indices for clothing and footwear, and for portfolio management and investment advice services. Note that the scale is much larger than in the previous two charts. The behavior of the clothing and footwear category is notable, because the price index registered a decline of more than 2 percent in the most recent report. This movement reflects, in part, changes in the way the government collects information on apparel prices, a change that presumably does not reflect underlying pricing trends. The price for portfolio management and investment advice services is based on the fees paid to asset managers and thus is tied to fluctuations in asset values, so the downward movement in asset prices at the end of last year resulted in a lower index value for this component.

These are two examples that demonstrate why looking at the Trimmed Mean PCE inflation rate may provide a better sense of the underlying inflation trend. One can see the benefit of excluding these sorts of large, but temporary, price changes.

Figure 4 shows the inflation forecasts from the previously mentioned Survey of Professional Forecasters, for core inflation through 2021. The median forecast implies that recent declines in inflation are indeed transitory, as the median forecast sees core PCE very close to the Fed's 2 percent inflation target in 2020 and 2021.

Given that inflation has been undershooting the Federal Reserve's 2 percent inflation target over much of the last several years, it makes sense to ask why policymakers should have more success achieving the inflation target over the next several years? Certainly, one reason is that labor markets are tight. **Figure 5** shows FOMC participants' median estimate for the unemployment rate in the longer run, the solid line, along with the range of FOMC members' estimate of what the unemployment rate will be in the longer run, the shaded region. The dashed line shows the actual unemployment rate. At 3.9 percent for the first quarter of 2019 and more recently 3.6 percent for the month of April, the current unemployment rate is below not only the median estimate, but indeed the bottom of the range of estimates for full employment. With labor markets tighter than what is estimated as sustainable in the longer run, wages would be expected to gradually rise. Of course, workers getting paid more is good news, and up to a point accelerating wages can be paid by productivity gains and shrinking profit margins – but at some point, accelerating wages result in firms raising prices more quickly.

Figure 6 shows that consistent with the recent and likely continued tightening of labor markets, wages and salaries have been gradually rising. In the wake of the financial crisis, wage growth was quite low, but has now risen to about 3 percent, whether measured by average hourly earnings or by the employment cost index measure of workers' wages. Wage growth at 3 percent is consistent with a standard benchmark in which workers are compensated for cost-of-living increases — roughly 2 percent inflation — plus the roughly 1 percent increase over the same period in their productivity.

If productivity growth increases, wages can rise even further without putting pressure on the net cost to employers, and thus easing the pressure on employers to raise prices more quickly to cover the higher wage costs. **Figure 7** shows a 20-quarter moving average of a productivity measure, the change in real output per hour worked. This measure had dipped below 1 percent – well below productivity gains seen 15 years ago. However, more recently this measure of productivity has risen somewhat above 1 percent. Again, if productivity continues to gradually improve, there should be room for non-inflationary wage increases of the sort that are not "financed" by lower profit margins. However, in the absence of continued improvements in productivity, a rising trend in wages could eventually place upward pressure on inflation.

Another potential source of price pressures could be generated if tariffs become more prevalent and more persistent. If virtually all goods imported from China were subject to tariffs, the resulting increase in prices would likely become much more apparent to consumers.

While tight labor markets and the potential for further tariffs could cause some upward pressure on prices, it is interesting to note that inflation has been tracking below 2 percent for some time. **Figure 8** shows the average rate of inflation over a variety of time periods. For all of the periods displayed, average inflation has been below the Fed's 2 percent target.[8] Because our framework states that the inflation target is to be symmetric — that is, the Fed cares equally about inflation that exceeds *or* falls short of 2 percent — average measured inflation would not be expected to deviate significantly from 2 percent over long periods of time in such a framework.

While policy should not overreact to temporary inflation misses from the Fed's target, it would not be desirable to continue consistently undershooting inflation. Regularly undershooting could cause inflation expectations to decline, a process that has been shown to be difficult to reverse in other developed areas, including Japan and Europe. For this reason, the current stance of monetary policy, which I view as mildly accommodative, should be helpful in restoring inflation more convincingly to the 2 percent inflation target over time.

Concluding Observations

In sum, inflation is currently below the Fed's target, and has fairly consistently been below target in recent years. Still, labor markets remain tight, and there is an upward trend in wages. Given those current outcomes for our dual mandate goals, I believe the Fed's current framework and its balanced approach do not provide much impetus to alter the stance of monetary policy at this time.

The Federal Reserve is currently conducting a review of its monetary policy framework, including the strategy, tools, and communication practices the U.S. central bank uses in pursuing its dual mandate. An interesting question for the ongoing discussion of the monetary policy framework is whether the Federal Reserve should aim for somewhat above-target inflation during recoveries, knowing that it will likely underrun its inflation goal in downturns or recessions. This concern is heightened by the likelihood that prevailing short-term interest rates will be low, and thus more likely to hit the effective lower bound during downturns.

Such an approach would not change the Fed's inflation target over the cycle. Rather, it might reinforce the notion that policymakers aim to achieve 2 percent inflation *on average*, not allowing long periods of below-2 percent inflation to reset inflation expectations below the 2 percent inflation goal.

Thank you.

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[1] If imposed, retaliatory tariffs affect both the amount purchased and the prices paid of both imports and exports, both for final purchases and for key inputs to products produced here and abroad. Thus a "trade war" can have a variety of impacts on the economic outlook.

[2] Specifically, imports and exports may temporarily surge to avoid the tariff. On the other hand, if people assume that a tariff will be temporary, perhaps because they believe that trade negotiations will eventually be successful, buyers in the U.S. and China may defer purchases, awaiting a return to normal prices.

[3] In terms of inflation, temporary tariffs will raise prices on imports. The price effects on imports could be muted if firms can find suppliers with a similar-enough product that is not subject to the tariff, at a price below the after-tariff price of the taxed good. Similarly, if exporters can find alternative markets, the price effect will be muted. But it is unlikely that this will be a common occurrence, at least in the short run, so the effect on producers' and sellers' costs will often be hard to avoid. In addition, producers of un-tariffed products similar to those that have been so taxed may view the imposition of tariffs as providing an opportunity to raise prices; this would be especially true in industries in which wages have been rising more quickly, squeezing profit margins.

[4] The most recent survey was released by the Federal Reserve Bank of Philadelphia on May 10, 2019. More here: https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/2019/survq219.

[5] FOMC participants include Federal Reserve governors and Federal Reserve Bank presidents. Not all presidents are voting members in each year but all presidents submit forecasts.

[6] For more about the Summary of Economic Projections, see: https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20190320.pdf.

[7] For more about the Trimmed Mean PCE measure, see: https://www.dallasfed.org/research/pce/.

[8] Of course, over some of these periods, we were in, or recovering from, a huge recession, so one would expect to see inflation below target during those times. But that is not the case for all the periods displayed.