The Puzzle of Low Inflation: Implications for Monetary Policy

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Introduction

Thank you, Birgit, for that kind introduction. It is always a pleasure to visit Grand Rapids, which is notable for many reasons, native son Gerald Ford and micro-breweries not least among them.

Today, I would like to share with you my thoughts on the course of the economy and monetary policy. First, though, I need to issue the usual disclaimer, namely, that the views I will express today are my own and do not necessarily reflect those of my colleagues on the Federal Open Market Committee (FOMC) or within the Federal Reserve System.

As you know, to combat the financial crisis, the Fed made dramatic cuts in its main interest rate policy tool, the federal funds rate, bringing it essentially to zero in December 2008. That is about as low as it can go. Seven years later, in December 2015, the Fed finally felt economic and financial conditions had improved enough that we could lift the funds rate from this lower bound. Since then, we have very gradually increased the funds rate, and today it lies in a range between 1 and 1-1/4 percent.[1]

My main message this afternoon is that such a gradual and cautious approach continues to be the appropriate strategy as we contemplate the next steps in our path toward policy normalization.

Congress has mandated the FOMC formulate monetary policy to achieve the dual goals of full employment and price stability.[2] The fundamentals for economic growth in the U.S. are sound, and we are close to our full employment goal. But inflation has been lower than the FOMC's 2 percent target for too long, and there is little in the recent data to suggest that inflation will soon rise to target. So I believe maintaining policy accommodation until we are more demonstrably on a sustainable path to 2 percent is key for reaching that objective—and for maintaining the credibility of our price stability goal.

Outlook: Close to full employment but inflation is too low

Now for the details. Let me start with the economic outlook.

[1] The history of changes to the FOMC's target federal fund rate is available online, https://www.federalreserve.gov/monetarypolicy/openmarket.htm.
[2] For more on the Federal Reserve's dual mandate, see our dual mandate webpage, https://www.chicagofed.org/research/dual-mandate/dual-mandate.

The U.S. economy has made tremendous progress in recent years, and the fundamentals are sound. Real gross domestic product (GDP) growth in the first half of this year averaged about 2 percent, moderately above the U.S. economy's current trend rate of growth, which my staff estimates at around 1-1/2 to 1-3/4 percent.

The outlook for the rest of the year is complicated by the devastation caused by Hurricanes Harvey, Irma, and Maria. It is too early to assess the impact of these terrible events on the national economy. Based on past experiences with natural disasters, we should expect lower national output growth in the third quarter. Of course, there is a lot of uncertainty about the size of the effects—current private-sector estimates of the hurricanes' effects range between ½ to 3 percent, with most centering around 1 percent or a little less. After that, we should see some boost to growth as economic activity recovers and rebuilding efforts get under way. But even though the GDP growth numbers may average out in the end, we should not lose sight of the horrible costs of the hurricanes—first and foremost, in terms of the human suffering and, second, in terms of the destruction of economic infrastructure and personal and business property.

Looking past the hurricane effects, we can expect solid growth for the aggregate U.S. economy. In projections made just last week, the median FOMC participant anticipates real GDP will grow in the range of 2 to 2-1/2 percent over the next few years before settling in at 1-3/4 percent over the longer term.[3]

Over the past few years, the consumer sector has been the main driver of growth, and it should continue to play this role. Consumer spending grew about 3-1/4 percent last quarter and appears on track for another solid gain in the second half of the year. Of course, Michigan is importantly linked to the auto industry, where sales have fallen off some this year. This drop in vehicle sales is unlikely to be a precursor to a more general weakening in consumer spending. The labor market is strong, household balance sheets have improved, interest rates are still low, and consumer confidence is high. Furthermore, the nearly 17-1/2 million unit annual rate that light vehicle sales reached in 2015 and 2016 was likely above a longer-run sustainable trend, so some drop in sales clearly was to be expected.

For some time, growth in other sectors of the economy has not been as robust as in consumption. Housing markets have only been trending up slowly since the recession ended. And compared with previous recoveries, business investment generally has been lackluster, as firms have been reluctant to expand capacity in the face of uncertain and uneven demand. However, on a positive note, the capital spending numbers have looked a good deal better in recent months.

[3] Quarterly, each of the FOMC participants submits his or her projections of key economic variables, along with assumptions for the appropriate monetary policy path that underlies those forecasts. These are published in what is known as the FOMC's Summary of Economic Projections, or SEP. For the most recent one, see Federal Open Market Committee (2017).

We at the Chicago Fed are very fortunate to be advised by an engaged board of directors and to hear from contacts from a range of industries and organizations throughout our District. The data are pretty consistent with what I have been hearing from my directors and other contacts for some time: Businesses that primarily supply the consumer sector have been experiencing stronger demand than those that primarily serve other firms, but, lately, business spending has improved. By the way, if your organization is on our Beige Book contact list or is represented on one of our industrial roundtables or advisory councils, thank you for your participation. I assure you that your insights are very important to us for taking the pulse of the economy.

As I just noted, a big part of the strong consumer story is the labor market. Progress here has been steady and unmistakable. Since the beginning of the year, an average of over 175,000 jobs has been added each month. This pace continues to be well above what is needed to absorb new entrants to the labor force.

By most measures, the economy is close to achieving our full employment goal. Today the unemployment rate stands at 4.4 percent—in stark contrast to 10 percent eight years ago. In addition, during the Great Recession and for years afterward, many people exited the labor market altogether and the labor force participation rate fell. Some of this was to be expected as baby boomers entered retirement, but some was due to workers becoming discouraged about job prospects and simply giving up on looking for a job. Over the past year or so, however, the participation rate has leveled off and is back near its underlying trend. We also continue to hear anecdotes of firms having difficulty finding workers with specific skills. These are all signs of a strong labor market.

I anticipate further progress in the coming years. Again, the most recent SEP provides a useful guide. The median FOMC participant sees the unemployment rate declining to between 4 and 4-1/4 percent in the next couple years.[4]

Of course, long-run job market challenges remain. As a society, we have much work to do in providing many of our members with the appropriate skills and opportunities to achieve even stronger labor market outcomes than they have today. But the structural policies aimed at achieving these important goals are beyond the scope of monetary policy.

Now let me turn to our price stability mandate. Here, progress has been unsatisfactory. The FOMC has operationalized its price stability mandate by setting an inflation target of 2 percent, as measured by the Price Index for Personal Consumption Expenditures (PCE). This is a symmetric target, meaning the Committee is equally concerned if inflation is either persistently above or persistently below 2 percent. This also means that a healthy outcome would be for inflation to be moderately above 2 percent about as often as it is moderately below 2 percent, leading to an average 2 percent inflation over a reasonably sufficient period of time.

[4] Federal Open Market Committee (2017).

While our objective is stated in terms of overall PCE inflation, core inflation—which strips out the volatile food and energy sectors—is a better gauge of sustained inflationary pressures and where inflation is headed in the future. Unfortunately, by either measure, inflation has been below the FOMC's 2 percent target almost continuously since 2008. The situation looked to be improving in late 2016 and early 2017, but then inflation retreated. For the 12 months ending in July, core inflation was only 1.4 percent.

Over the next two to three years, FOMC participants expect inflation to gradually increase, with the median SEP projection showing both core and total PCE inflation moving up to our 2 percent target by 2019. While my forecast is slightly less optimistic, I still think that—with appropriate monetary policy—we will reach our target over the medium term.

However, given the recent data and a nine-year track record of low inflation, it's reasonable to ask why we expect inflation to get back to 2 percent.

Factors influencing inflation

Although economists argue over the details (we love to argue—you should meet my staff), there is general agreement that inflation can be explained by three elements: 1) temporary cost factors, 2) resource pressure, and 3) inflation expectations.

Temporary cost factors are, by definition, transitory. For example, a stronger dollar and associated declines in import prices played a large role in reducing inflation at various times over the past nine years. But the stronger dollar is not a factor holding back inflation today: The dollar was relatively stable through most of 2015 and 2016, and then has depreciated against most currencies so far this year. However, temporary idiosyncratic declines in the prices of certain goods and services earlier this year—such as cell phone plans and prescription drugs—might offer a partial explanation for the low inflation readings since spring.

What about the second element, resource pressure? In general, tight resource constraints put upward pressure on costs and lead to increases in prices. It's perhaps easiest to think of this in terms of the labor market. Think about how your company's payroll expenses increase in a tight job market: When it is increasingly difficult to hire and retain qualified staff, you would have to raise wages to get the workers you need. Since this is usually occurring in an environment of strong demand, you are able to recover at least some of these cost increases with higher prices on your products and services. Conversely, loose labor market conditions are associated with lower wage growth and lower inflation.[5]

[5] This is the so-called Phillips curve relationship. The Phillips curve was named after William Phillips, who noted an inverse relationship between money wage changes and the unemployment rate in the British economy. See Phillips (1958).

Conceptually, resource slack or pressure must be measured against some benchmark. Because these conditions often occur at the same time in many markets and because labor is the largest cost of production for the economy as a whole, the benchmark for the labor market is a useful aggregate standard. We call this benchmark the natural rate of unemployment. It is the unemployment rate that would prevail in an economy making full use of its productive resources or, put differently, the rate that we would experience over the longer run in the absence of shocks to the economy. When the labor market is tight, the unemployment rate is below the natural rate and wages and prices tend to rise. Conversely, slack labor markets are characterized by an unemployment rate that exceeds the natural rate and correspondingly weaker wages and prices.

The natural rate is a theoretical concept that is not directly observable and, therefore, must be estimated. Moreover, it changes over time, depending on the structure of the labor market. One good proxy for it is the long-run forecast for the unemployment rate made by the median FOMC participant—that number is currently 4.6 percent.

Throughout most of the recovery, the unemployment rate far exceeded its estimated natural rate, and so resource slack offered a reasonable partial explanation for low inflation readings. However, by most metrics, we are at or very near full employment today. Therefore, with resource slack close to zero, it's generally a neutral factor for the current inflation rate.

Most FOMC participants anticipate that the unemployment rate will continue to fall and further undershoot its 4.6 percent longer-term level. According to the standard paradigm, we should see some upward pressures on wages and inflation. How much can we expect?

In my view, they will be modest—tighter labor markets will contribute to a gradual increase in wage and price pressures, but not an outsized increase in inflation. First, I do not foresee a large undershooting of the natural rate, so that the pressure on resources will not be too great. Second, statistical evidence indicates that the linkage between unemployment and inflation is not as powerful today as it was in earlier times. In other words, any given amount of labor market slack today plays a smaller role in generating inflation than it did, say, in the 1970s or 1980s.

These are arguments for why wage and price increases have been so modest and why I expect them to firm only gradually over time. However, some economists argue that there is a significant risk of a return to stronger inflation—indeed, of inflation rising well above our 2 percent objective. One reason is a concern that inflation will respond more and more to larger and larger deviations of the unemployment rate from its natural rate. That is, when the unemployment rate is close to the natural rate, changes in unemployment are associated with only small changes in inflation and wage growth. However, as the unemployment rate falls further, each additional decline may result in a larger change in inflation and wage growth. Indeed, there may be some threshold unemployment rate below which outsized wage and price pressures will emerge. If such effects are important—and if the threshold will soon be breached—then the high-inflation risk is more salient and needs to be accounted for by monetary policy.

This is an important question. And, appropriately, many researchers have investigated the issue. My evaluation of the literature is that the evidence that we may be on the precipice of escalating inflation is not strong.

As one example, in one innovative exercise, my staff looked into the question using state-level wage and unemployment data, searching for effects that might be masked in the national data. They found only spotty evidence of such thresholds. And the results are sensitive to the way the relationship is modeled and the time periods used to estimate their model.

Other researchers have found evidence of thresholds in the relation between unemployment and inflation, but the effects either are economically small or become evident only at very low levels of the unemployment rate.[6] For example, one researcher concluded that the threshold is more than a percentage point below the natural rate. That would be somewhere below 3-1/2 percent.[7] And FOMC participants' current forecasts don't see the unemployment rate falling that low anytime over the next several years.

In light of such evidence, under the current outlook, I don't see much risk of an outsized breakout in inflation. More colorfully, my colleague from the Minneapolis Fed, President Kashkari, has referred to current concerns about an acceleration in inflation due to increasing labor market tightness as a "ghost story"—scary tales we tell each other, based more on imagination than evidence.[8]

Instead, I am more concerned about our ability to get inflation back up to target within a reasonable period. One reason is, as I mentioned, the natural rate is difficult to measure and changes over time. So, it is possible that there is actually greater slack in labor markets than we currently estimate. However, there is another, more troublesome potential development: I am concerned that inflation expectations—the third element in the standard inflation model—may be too low.

Expectations of future inflation play an important role in the inflation process. For example, workers build these expectations into their wage demands—they want to make sure their salaries will maintain purchasing power in the face of higher prices.

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[6] For instance, Babb and Detmeister (2017) look for evidence of thresholds using metropolitan-statistical-area-level data from the Consumer Price Index. Instead of using price data, Fisher and Koenig (2014) and Kumar and Orrenius (2015) focus on the relation between the unemployment rate and wage growth. However, the direction of causation from wage growth to inflation has always been weak. So, even if there were evidence found in the unemployment–wage growth link, the implications for inflation are unclear. See Hu and Toussaint-Comeau (2010) on this point.

[7] Nalewaik (2016).

[8] See President Kashkari's recent comments, as reported by Boesler and Bachman (2017).

Such higher wages feed directly into the cost structure of firms. Inflation expectations also influence the pricing decisions of firms; for example, think about how your views of future inflation affect the structure of longer-term contracts you may be negotiating. In effect, actual inflation can take on a bit of a self-fulfilling nature, as expectations of future inflation become embedded in current wage and price decisions. I am concerned that inflation expectations are too low today, making it harder to achieve our 2 percent target.

Admittedly, we do not have clean, accurate measures of the inflation expectations being used by workers and firms as they decide how to set wages and prices. But some of the measures that we do have—say, the pricing of financial market instruments that are linked to inflation outcomes, such as Treasury Inflation-Protected Securities (TIPS), and survey measures from households—suggest inflation expectations are low.

Expectations for continued low inflation appear to be embedded in the labor market as well. For instance, strong wage growth has been the one piece missing from the rosy picture of labor markets I painted earlier. Over the past year, average hourly earnings have risen only 2-1/2 percent. This is a full percentage point lower than the wage gains we saw before the financial crisis. Other measures of labor compensation have been similarly sluggish.

Slow wage growth is, in part, due to the low productivity growth in recent years. However, it also likely reflects expectations for low inflation. For instance, imagine that an employee in your firm increases the value of your products in real terms by 1 percent and that you both expect inflation to be only 1-1/2 percent. Well, 2-1/2 percent would seem to be a fair increase in wages for that worker. If you both thought inflation would be 2 percent, then you'd probably end up at a 3 percent wage hike.

This worry about inflation expectations is not mere hyperbole. As I pointed out earlier, inflation has been below 2 percent for many years and, although the FOMC has declared a 2 percent symmetric inflation target, people may doubt that we will be able to deliver on that objective any time soon. So I am concerned that low inflation expectations may exert a strong influence to keep inflation low for some time.

Cautious approach remains appropriate for monetary policy

What does all of this mean for monetary policy? As I noted earlier, the fundamentals for economic growth are good and, in cyclical terms, labor markets are robust. The real economy looks to be on a solid footing. But disappointingly low core inflation is telling us that important pricing headwinds persist. There is more for our accommodative policy to do to reach our 2 percent inflation objective.

Our actions must strongly defend our strategic commitment to a symmetric inflation objective. This calls for communicating a policy path that truly generates the possibility that inflation will rise moderately above 2 percent during this rate cycle. This is because under a symmetric inflation objective, 2 percent is not a ceiling that inflation should never breech. Rather, it is a rate around which we should expect to see modest movements both above and below over time.

To reinforce expectations of future inflation that are aligned with our stated policy objectives, an appropriate policy path should incorporate only a gradual removal of monetary accommodation. The FOMC's actions taken last week to begin to reduce the size of our balance sheet are consistent with this gradual approach. The planned path of reductions is very shallow and has been well communicated to markets. Accordingly, it should generate only a modest change in financial conditions. Moreover, we plan for balance sheet normalization to be essentially on autopilot, adjusting the stance of monetary policy primarily with the federal funds rate. Looking ahead at the future path for the funds rate, given my current outlook, I am broadly comfortable with the projections associated with the median SEP, which see the rate rising to 2.7 by the end of 2019.

However, my views about this path are not set in stone. As the FOMC comes to decision points over the coming months, I think we need to see clear signs of building wage and price pressures before taking the next step in removing accommodation. We should avoid taking policy steps that could be misread as a lack of concern over the inflation outlook. In my view, that would be a policy misstep that would further delay achieving our inflation objective.

More generally, we should always keep a strong focus on our mandated objectives—something I like to call "outcome-based" policy. The appropriate metrics for judging policy success are how actual outcomes for inflation and employment measure up against our mandated policy goals. Ultimately, our actions should appropriately be driven by how events transpire to influence the outlook for achieving our policy goals. Setting our tools with a steadfast adherence to meeting the Federal Reserve's mandated objectives should be the overarching determinant of monetary policy.

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