Overheating and Monetary Policy: How Does Low Inflation Affect the Policy Narrative?

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Introduction

The University of Wisconsin has a long tradition of excellence in education based on a core principle that the university should improve people's lives beyond the classroom. The James A. Graaskamp Center for Real Estate embodies that principle with its mission to connect its esteemed faculty with students, alumni, the professional real estate community, and government agencies, as well as the general public. I am pleased to speak to you today and to continue the tradition of public engagement that you foster.

Before I begin, let me remind you that my comments are my own and do not necessarily reflect the views of the Federal Reserve System or the Federal Open Market Committee (FOMC).

Today I'm going to talk about recent economic developments and monetary policy. To preview my main topic, I will be focusing on the relationship between inflation and a very strong economy with low unemployment.

I want to confront one of the most difficult questions that a central banker can face: When is low unemployment a very good thing, and when is it a worrisome harbinger of something potentially more challenging for the economy? I'm going to state the issue this way because it starkly lays bare the dilemma that we face today.

A softer and easier way to characterize the situation is to use that familiar description made famous in the 1950s by former Fed Chair William McChesney Martin: We're at a cocktail party that has just hit its stride, and the host from the Fed has to decide when to take the punch bowl away.[1] That's a clever analogy, but since the Fed's legislated dual mandate is in terms of maximum employment and price stability—and not in spiking the proverbial punch bowl—I'll just stick with the labor market theme.

But first, let me briefly recap the economic situation.

[1] Martin (1955).

The current economic situation and outlook

Economic activity was solid in 2017. For the year as a whole, real gross domestic product (GDP) rose 2.9 percent. Overall, the U.S. economy is firing on all cylinders and has plenty of momentum.

Consumers have been the key engine of growth in recent years. There are a number of reasons for this. The household sector's net worth has grown impressively, reaching record levels as a percentage of disposable income. Labor markets continue to strengthen. Over the course of 2017, job gains averaged over 170,000 per month and have picked up steam so far in 2018.[2] This pace far exceeds the rate needed to absorb new entrants into the labor force; and not surprisingly, the unemployment rate declined by over half a percentage point in 2017 and is now at a very low 4.1 percent. The solid job market and increases in wealth have left households feeling pretty good, and surveys of consumer sentiment are at very high levels. Consumer spending was a bit soft during the first three months of the year. But this followed very strong growth in the fourth quarter of 2017. Moreover, the fundamentals underlying consumer spending remain quite strong.

These improvements in household fundamentals have generated a slow but steady recovery in housing markets as well. Residential construction, however, remains below estimates of longer-run trends, in part reflecting the severe disruptions to these markets during the financial crisis.

In the business sector, capital spending is also showing a good deal of forward momentum. In particular, outlays for equipment, which had been lackluster in 2016, picked up significantly in 2017, and orders for capital goods and other forward-looking indicators remain quite strong.

Adding to this, fiscal policy has swung into a strong expansionary gear. Lower corporate and personal income taxes from last December's tax legislation and higher government spending associated with the February budget agreement will boost economic activity. How all the changes—including large increases in the federal budget deficit—will translate into GDP growth is highly uncertain. Still, by most analyses, fiscal stimulus should add significantly to aggregate activity in the near and medium terms.

The U.S. isn't the only economy doing well. Growth is picking up around the globe. Of course, there are concerns about potential changes to trade policy. At this point, we can only speculate on what we will actually see from both the U.S. and our trading partners. So this is an area of uncertainty in the outlook.

Putting all these elements together, in their latest projections made in March, my colleagues on the FOMC expected the strength in economic activity to continue over the

[2] Job gains averaged over 200,000 for the first quarter of 2018.

next several years.[3] The median participant anticipates GDP growth of 2.7 percent this year and 2.4 percent next year—that's about 1/4 percentage point higher than projected in December and quite a bit higher than the median estimate of the underlying trend in GDP growth, which is 1.8 percent. Growth above trend should reduce the unemployment rate further: The median FOMC participant expects the unemployment rate to fall to 3.8 percent by the end of this year and to reach 3.6 percent by the end of 2019.

Despite the strength in economic activity, inflation continues to run somewhat below the FOMC's explicit symmetric objective of 2 percent, as measured by the annual change in the Price Index for Personal Consumption Expenditures (PCE). However, the median FOMC participant expects inflation to move up close to 2 percent this year.[4]

Regarding monetary policy, the current setting remains accommodative, with the federal funds target range at 1-1/2 to 1-3/4 percent.[5] This is about 100 to 150 basis points below the median participant's assessment of where the funds rate will be in the long run, after all of the various transitory factors affecting the economy have run their course. But with the economy strong and inflation expected to improve, the federal funds rate is expected to rise gradually over the next couple of years.

At this point, I might as well admit that the most popular questions I get are the following:

- When will the next funds rate increase occur?
- Will rate increases only be at meetings with press conferences?
- And how high will the FOMC eventually raise interest rates?

Of course, I can't answer these questions! The details of our story have not been written yet, and details matter.

So let me now turn to a detail that I think about a lot and will be a key factor in my monetary policy decisions as we navigate the terrain ahead.

Are we at maximum employment?

I began paying attention to business conditions and inflation back in a 1974 high school economics class, and it is surprising to me that inflation remains low today given the strong economy. Most people over the age of 50 and everyone in my advanced AARP age group would associate strong growth and low unemployment with an expectation that higher inflation must be just around the corner as the economy overheats.

[3] Four times a year the FOMC releases its Summary of Economic Projections (SEP), which presents FOMC participants' forecasts of key economic variables (including the appropriate path for monetary policy) over the next three years and for the longer run. For the most recent projections, see Federal Open Market Committee (2018a).

[4] In February 2018, 12-month core PCE inflation, which cuts through a lot of the statistical noise in overall prices, was 1.6 percent. This is about the average annual total inflation rate we had over the past eight years. So, inflation has consistently undershot the FOMC's 2 percent objective for quite some time.

[5] Federal Open Market Committee (2018b).

Indeed, strong growth at this stage of the business cycle typically overheats the economy, driving up wages and other business costs and leading to undesirably high cyclical inflation. This conclusion emerges from careful economic analysis of the post-World War II economy through 2003. But the past 15 years have been somewhat different: The response of inflation to above-trend growth has been much more muted, raising some important challenges to the old overheating story.

So I now want to describe how our policy mandates interact with both my 1970s economic intuition and the changes we have seen over the past 15 years. And it turns out to be more complicated than my high school economics class made it out to be. In fact, it's very difficult to determine whether today's low unemployment rate is about right or is instead a signal of an overheating economy that poses significant risks to economic stability.

Let's start with the FOMC policy mandates. The Fed's job is to promote financial conditions that support the attainment of maximum employment and price stability.[6] Since 2012, the FOMC has defined its price stability goal explicitly as a symmetric 2 percent target for PCE inflation.

The maximum employment goal needs more detail to render it operational. Full employment cannot be reasonably defined as the entire population having a job. Obviously, young children and the elderly do not work, and some individuals choose not to seek work for reasons that are largely outside of the realm of monetary economics. So our employment benchmark needs to account for the working-age population, as well as trends in individuals' willingness to seek work and engage in it—what economists refer to as the trend in labor force participation.[7] Since about 2000, demographic trends and other factors have caused the trend participation rate to fall gradually, and this represents a downward influence on maximum employment.

Now, the unemployment rate is about the best single gauge of labor market health.[8] Of course, it moves around over time, both as recessions and expansions push it up and down and as long-term structural changes—mainly these factors affecting trend labor force participation—influence the labor market. For our maximum employment benchmark, we'd like a measure of the unemployment rate that accounts for these trends. One such measure is the FOMC participants' estimate of the long-run

[6] The FOMC announced its longer-run goals and strategy in January 2012 and has reaffirmed them annually. See Federal Open Market Committee (2018c) for the most recent statement.
[7] According to the U.S. Bureau of Labor Statistics (BLS), the labor force participation rate is defined as the proportion of the civilian noninstitutional population aged 16 years and older that is either employed or jobless and actively seeking work. More information is available online, https://www.bls.gov/cps/cps_htgm.htm#definitions.
[8] According to the BLS, the unemployed are all persons aged 16 years and older who had no employment during the reference week for the *Current Population Survey*; were available for work, except for temporary illness; and had made specific efforts to find employment sometime during the four-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed. Further details are available online, https://www.bls.gov/cps/cps_htgm.htm#unemployed.

sustainable unemployment rate—that is, the rate we would expect to prevail in the absence of cyclical ups and downs. We write down an estimate for this each time we publish our Summary of Economic Projections. In our March forecasts, the median estimate of this long-run unemployment rate—which is called u^* by some—was 4-1/2 percent.[9]

Three possibilities concerning low inflation and low unemployment and their implications for monetary policy

At 4.1 percent, the current unemployment rate is obviously below this long-run level.

Can this be a bad thing? At face value, it seems like more employment should be associated with maximum employment. It must be a good thing for society, businesses, workers, and households when people choose voluntarily to work at the offered wage. This is a sign that markets are working, isn't it?

However, history clearly indicates we need to be careful in making this assessment without additional scrutiny. We need to ask if the FOMC's forecast of 3.6 percent unemployment in 2019 represents an accomplishment with only positive implications or whether such low unemployment may portend trouble ahead. The latter could be the case if 4-1/2 percent is truly the best assessment of the economy's sustainable unemployment rate.

Of course, the immediate worry is what I noted earlier, that such an undershooting of the long-run unemployment rate often has been associated with an overheating economy and ever growing inflationary pressures. Today, however, inflation remains low. My high school economics class didn't adequately prepare me for this scenario—nor did my undergraduate or graduate classes. What do we make of this apparent contradiction? Does it mean that the labor market is about to overheat enough that stronger, unwelcome inflation is just around the corner? Or does it mean the FOMC is wrong about its estimate of the long-run sustainable rate? Or, put somewhat differently, is it the case that the combination of low unemployment and low inflation is due to structural labor market inefficiencies that monetary policy cannot fix? These structural inefficiencies might still pose problems for society, and other policies might be able to address them. But interest rate policy won't.

These are three pretty different economic scenarios. And they have quite different implications for what we should do with monetary policy. So let me go through each of these cases.

First, let's examine the overheating story. To start, I want to discuss the relationship between the labor market and other cyclical cost pressures and inflation—what economists call the Phillips curve.[10] Until 2003, our post-World War II experience

[9] Federal Open Market Committee (2018a). Some also refer to this long-run rate of unemployment as the natural rate of unemployment.

[10] The Phillips curve is a statistical relationship that describes a negative correlation between inflation and unemployment—that is, lower unemployment is associated with higher price and wage inflation. It is often

suggested that the Phillips curve was relatively steep, so that modest drops in the unemployment rate below the long-run, or natural, rate would result in markedly higher inflation. Moreover, we found that policies that sought to maintain unemployment below its natural rate had an accelerating influence and resulted in ever-escalating inflation, as households and businesses incorporated higher inflation expectations into their decision-making, which reinforced the inflationary cycle.

If we faced such an accelerationist situation today, the Fed would have to raise rates aggressively and push the unemployment rate above its natural rate in order to fight the self-reinforcing inflationary cycle.

At the moment these risks are not particularly high. For one thing, if you look at data over the past 15 or 20 years, the Phillips curve seems much flatter than it was when I first learned about it. Statistical evidence indicates that the linkage between unemployment and inflation is weaker. That is, any given amount of labor market slack today plays a smaller role in generating inflation than it did, say, in the 1970s or 1980s.

Furthermore, most recent analyses of inflation see little risk today of the accelerating self-reinforcing inflation dynamics that were evident back then. As I mentioned, these dynamics occur as expectations of higher future inflation become embedded in current wage and price decisions. But, after many years of below-target inflation, inflation expectations today are actually too low. Ideally, someone would authoritatively publish accurate measures of the inflation expectations workers and firms use when deciding how to establish wages and prices. Instead, a good deal of analysis and inference is required to assess inflation expectations. Most measures—such as the Treasury Inflation-Protected Securities (TIPS) whose returns are linked to inflation outcomes and survey measures from households—suggest inflation expectations are low relative to the FOMC's 2 percent objective.

Just as rising inflation seems less likely while inflation expectations are low, escalating inflation is also difficult to imagine in the absence of commensurate wage gains. Although I described a rosy picture of labor markets earlier, strong wage growth has been a missing piece. Over the past year, average hourly earnings have risen 2.7 percent. This is nearly a full percentage point lower than the wage gains we saw before the financial crisis. Other measures of labor compensation have been similarly sluggish.

With the Phillips curve apparently flatter, inflation expectations low and well anchored, and a lack of fuel from strong wage growth, I don't foresee an outsized risk of a breakout in inflation. As long as this picture continues, the FOMC can increase rates gradually while monitoring any rising inflationary pressures.

Now, let's move on to the second scenario. It goes like this: Inflation is low because the sustainable rate of unemployment is actually much lower than the FOMC's 4-1/2

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drawn as a negatively sloped curve that has a measure of labor market tightness, such as the unemployment rate, on the horizontal axis and a measure of wage or price inflation on the vertical axis. See Phillips (1958).

percent estimate, so today's 4.1 percent unemployment rate really isn't putting any pressure on labor markets. In this scenario, low unemployment clearly reflects better labor market outcomes for workers and society. If this situation was permanent, then great! The risks of overheating would be lower, and perhaps interest rate adjustments could be smaller. We could enjoy our good fortune.

But—and here's a different bad harbinger story—maybe the natural rate of unemployment is only temporarily lower, and before too long, this temporarily low u^* will move back up to its long-run level. For example, u^* could be temporarily reduced if memories of the Great Recession are still weighing on workers and they are willing to accept less attractive offers than they otherwise would, just to make sure they have a job. As these concerns fade over time, u^* would drift back up to its long-run level. In this scenario, the appropriate role for monetary policy would be to let the unemployment rate rise in tandem with u^* and not try to fight it.

This brings us to the third scenario. This is where unemployment running below its natural rate, u^*, without rising inflation is due to labor market inefficiencies that are outside the purview of monetary policy.

Let me sketch out this argument a little further: While low unemployment means it is easy for workers to find jobs, it also means it is difficult for employers to find workers. Instead of workers being matched to jobs for which they are particularly well suited, highly productive firms are unable to find the workers they need to reach their full capacity. In such a case, economic productivity may be less than ideal, resulting in subpar growth in output, investment, and household wealth.

I admit right away that this is a vague and highly speculative view of possible labor market matching frictions, but anecdotal evidence suggests that this scenario is at least a possibility. Currently, many businesses report that they find it difficult to recruit the kind of workers they want to hire—especially for higher-skilled positions. Of course, standard economic principles would suggest that firms should offer higher wages to attract desired workers. But businesses often list many impediments to hiring that they claim higher wages won't fix. Location is clearly one. The intensity of labor market shortages varies by locale. Some regions may do better than others in recruiting higher-skilled workers, depending on skill needs and location. For example, Chicago faces all of these challenges, but perhaps to a lesser extent than many other locations. Major metropolitan areas likely fare better than smaller midwestern municipalities. This seems likely to be the case around the country too. It's like buying and selling real estate: It's all about location, location, location.

While such hiring difficulties clearly exist, it's hard to see why they do not generate more wage growth and higher prices. If firms were exposed to excess competition for workers because scarce labor doesn't move quickly enough or easily enough into new jobs, wages should increase—and perhaps by a lot. Rising wages ought to be an incentive for people to enter the labor force, change jobs, or move to a new location. They could also lead to inflation moving higher—and so the low unemployment situation wouldn't

be as puzzling. The situation would look more like the first possibility I discussed, and monetary policy should tighten accordingly.

But let's consider the possibility that unemployment remains low and some structural problem keeps wages and prices from rising to attract workers. Is this really a problem that monetary policy is suited to address? I think the answer is no. We could make unemployment go up, but that would not be addressing any underlying impediments to markets efficiently matching workers and jobs. Other policy interventions may help, but they would be outside the purview of monetary policy.[11]

Some might argue that the problem with low unemployment is not that it is associated with distortions in the labor market right now, but with building imbalances that might make the next downturn more severe. For example, low unemployment could be associated with the creation of many jobs in which workers are not very productively employed and thus could be quickly terminated in response to even a modest downturn. This would make the economy vulnerable to macroeconomic shocks.[12] While this is a logical possibility we should be aware of, I currently don't see much, if any, evidence of this kind of overhiring. Indeed, many firms continue to report that they are being very cautious in bringing on new workers. Thus I don't think such concerns make a persuasive case for more aggressive monetary policy tightening.

Still another possibility is that low unemployment is a sign of excess liquidity in the economy that may be manifested in rising asset prices rather than in rising goods prices. Excessive asset price inflation raises concerns about financial stability. But as I have argued elsewhere, the best way to address those concerns is through appropriately rigorous supervision and regulation rather than monetary policy.[13]

Wage and price data will be important clues

I just laid out three possible scenarios for thinking about current low unemployment and low inflation. In the first two scenarios, a response from monetary policy is called for, but the calibrations are different. In the third scenario, monetary policy is not going to be able to solve the real structural problem.

Unfortunately, there is no way to know for sure which situation we are in: u^* is a latent variable, and despite a great deal of cutting-edge analysis, its level will always be subject to some uncertainty. That said, as growth in economic activity proceeds, wage and price data should help sort out which of the three scenarios is most relevant. If wages and prices don't start rising faster, then either the natural rate of unemployment is lower than our current estimate and policy does not need to tighten much or we are facing nonmonetary issues that also would not elicit an interest rate response. However, if wages and inflation started rising above levels consistent with our symmetric 2

[11] An example of using monetary policy to address a structural problem concerns the case where monopolistic competition creates an equilibrium level of output that is too low relative to the competitive equilibrium outcome. See Ireland (1997).
[12] See Jackson and Tebaldi (2017).
[13] See Evans (2013); and for a more recent discussion, see Evans (2018).

percent inflation objective, then the sustainable unemployment rate is very likely higher after all and policy should react.

How strong might that policy response be? Here, too, it's problematic if we rely on our experiences in the 1970s and early 1980s. Back then, the Fed faced two problems with regard to inflation: 1) cyclical inflation was rising as the economy overheated and productive resources were under great pressure, and 2) inflation was already much too high, and had been so for some time. As a result, the FOMC had to fight both cyclically rising inflation and an unacceptably higher long-run inflation trend. The situation required large increases in interest rates at certain times—like the Volker tightening in 1979–80 or the Greenspan moves in 1988–89.

Today, our problem is different: We face low inflation trends and low inflation expectations. Indeed, some cyclical upturn in inflation is actually welcome because it should help solidify expectations symmetrically around our 2 percent objective. This is necessary for achieving our inflation target on a sustainable basis.

In this setting, the federal funds rate does not need to be increased as much above its neutral setting as in the past when trend inflation needed to be taken down several notches. Gradual policy increases in this context make sense—certainly as a way to limit the damage if policy ever actually becomes overly tight too soon.

Sometimes I wonder if I risk having my PhD revoked for being seduced into amnesia about the Great Inflation of the 1970s. A lot of ink has been spilled on this topic, and Nobel prizes have been awarded for path-breaking insights on it. The pursuit of unsustainably low unemployment below its natural rate with unanchored inflation expectations was an integral part of the double-digit inflation story. The monetary policy responses required to tame unacceptably high inflation produced painful results and recessions. The federal funds rate had to be hiked to nearly 20 percent between 1979 and 1982, and 10 percent unemployment followed. No one wants to repeat such a scenario. And I don't think we will.

The lessons from that painful experience are embodied in the FOMC's adoption of its long-run strategy. We have a dual mandate that includes a symmetric 2 percent inflation objective. As long as we act to keep inflation within the symmetry envisioned, inflation expectations should be contained.

And while it is incumbent upon policymakers not to forget the painful lessons of the 1970s and 1980s, we are living under different circumstances today. For the reasons I discussed, I think we have the opportunity to more patiently read—and react to—the incoming data. That is, I think we can undertake more moderate monetary policy adjustments today than often was the case in the past.

Thank you.

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