Confluence Investment Management

Weekly Geopolitical Report

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November 7, 2016

Inflation Targeting: What's so special about 2%?

Speaking at the Boston FRB conference on October 14th, Fed Chairwoman Janet Yellen indicated that Fed officials are considering the benefits of running a "high pressure economy." This sparked speculation that the central bank would allow its inflation target to temporarily exceed 2% as the labor market and aggregate demand improve.

The Fed's dual policy mandate calls for the central bank to maximize employment and maintain stable prices. The central bank has designated a target of 2% as its inflation goal, but has not identified a policy target for employment levels. Optimal employment levels change over time given the cyclicality of labor markets, so it makes sense to keep a moving target for the labor market.[1] But why did the Fed choose to specify an explicit 2% inflation target?

This week, we will take a closer look at the reasons behind the Fed's 2% inflation target. We will also review the historical data and academic research that support this optimal level of price increases.

The Fed and Inflation

The Federal Reserve Act established the Fed in 1913 with the primary purpose to issue dollars and Fed notes as legal tender. Over time, the Fed has maintained control over the money supply through its power to create credit with fed funds rate changes and reserve requirements, even though the Treasury now issues dollars. Additional Fed responsibilities now include acting as the lender of last resort, supporting financial market stability, moderating long-term interest rates, maximizing employment and stabilizing prices. The last two are known as the Fed's dual mandate. Although supporting economic growth is not one of the Fed's explicit targets, its dual mandate is designed to aid long-term economic growth.

Under the gold standard, the central bank's effectiveness was limited as the supply of money was limited by mining activities and inflation was determined by the intersection of money supply and demand. The Fed, like any other major central bank under the gold standard, could alter money demand by changing the amount of credit available on the market through its open market operations, but it did not have an effect on inflation.

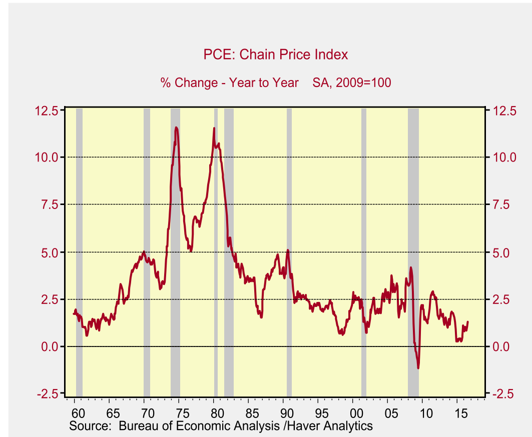
Although the Fed was established in 1913, its independence and effectiveness were limited by political constraints as the Treasury Secretary and Comptroller of Currency both sat on the Fed's governing board. These two positions were removed from the Fed in 1935, but the Treasury could still ask the Fed to maintain low interest rates for political reasons as it did during WWII and the Korean War. Inflationary pressures were building during the Korean War period, and the Fed was torn between fulfilling the Treasury's request of keeping interest rates low in order to finance the war effort and controlling inflation. The Treasury-Fed Accord of 1951 established

[1]The Fed does target a natural rate of unemployment, which is unemployment arising from all other sources except fluctuations in aggregate demand: https://fred.stlouisfed.org/series/NROU.

the Fed's true independence by removing its obligation to monetize the Treasury debt at a fixed rate.

Controlling inflation became crucial following a period of hyperinflation in the 1970s. Inflation was brought under control under Chairman Volcker's monetary policies, although the ongoing political changes of de-regulation and globalization played a major role in easing supply-side price pressures.

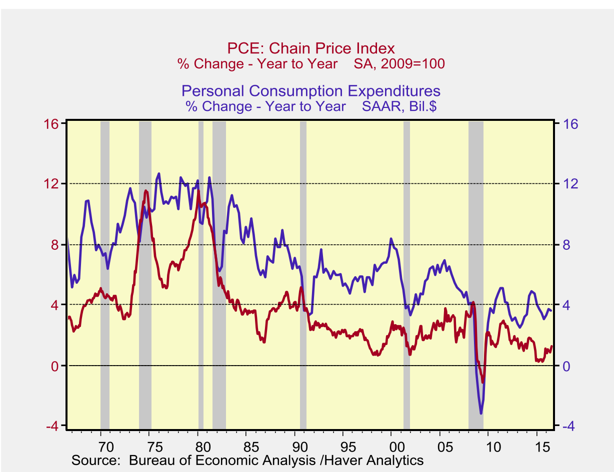
Under Chairman Greenspan, investors suspected that the Fed was targeting an implicit inflation level, but it was not until January 23, 2012, that the Fed designated the headline Personal Consumption Expenditures (PCE) index as its main benchmark interest measure and Chairman Bernanke announced the explicit inflation target of 2%. The PCE measures price changes in the consumption sector of GDP, thus it changes with consumption patterns. We note that this is a longer term target, meaning the Fed is not looking for the PCE to hit 2% every month but, over time, it should trend toward 2%. However, the Fed also references the core PCE, which excludes the more volatile categories of energy and food. The chart below shows the annual change in the PCE since 1960. Inflation has remained below 5% since 1990, and interestingly enough the measure has remained below 2% since 2012, the same year that Bernanke announced the specific target.



The Fed states that its longer term inflation goal of 2% is most consistent with the Fed's mandate of price stability and maximum employment. When considering the implicit target the Fed has to consider the effects of inflation that is too high and inflation that is too low. A "modest" inflation level is considered healthy for the economy as it helps debtors to reduce their levels of leverage. However, determining the level of "modest" and beneficial inflation is much harder. Although Bernanke announced a longer term target of 2%, other Fed officials and academics have indicated that an appropriate inflation target could be anywhere between 1% and 4%.

To explore the question, we'll start by looking at hyperinflation and deflation, the extreme effects of price change, and describe their effects on the economy, focusing on why the Fed would like to avoid each scenario. Finding the correct inflation target is complicated—easier to solve in theory rather than in practice. Theoretical studies generally assume that the rest of the economic conditions remain unchanged, while in practice each economic cycle is different. We will look at the extreme cases of inflation and deflation and then consider reasons why the Fed might have decided to aim for a 2% inflation rate.

Why avoid high inflation?
The principal concern that the Fed sees under a higher inflation scenario is the public's reduced ability to make accurate longer term economic and financial decisions. Well-anchored inflation expectations allow consumers and businesses to make purchasing decisions without taking inflation into consideration. The chart below shows the annual change in the headline PCE and personal consumption expenditures. Consumers and businesses consider two things when making economic decisions. First, modest inflation rates balance current and future consumption through a consistent pricing environment. Second, and perhaps more importantly, stable prices lead to optimal consumption and investment decisions. As the chart below indicates, the high and volatile inflation during the early 1970s initially led to higher and unstable consumption as consumers hoarded in anticipation of higher inflation. Consumption remained stable during the 1990s as inflation psychology stabilized. We note that consumption always falls during recessions; however, inflation does not necessarily decline.



Alongside inflation targeting, the Fed aims to increase transparency for inflation and economic growth expectations. Bernanke believed that the Fed's credibility would be enhanced if it communicated its projections for both its policy mandates, leading to the release of Fed projections and increased communication via press conferences. The Fed believes that transparency stabilizes inflation expectations, reduces economic and financial uncertainty and ultimately increases the effectiveness of monetary policy.

Why avoid deflation?
On the other extreme, deflation is not desirable as it leads to cash hoarding and less consumption. Cash hoarding leads to weaker demand, which leads to falling prices and even less incentive for consumers. It is generally associated with very weak economic conditions. Additionally, wages are likely to fall under deflationary conditions. As opposed to conditions during higher inflation, deflation expands the real value of debt, weakening households' balance sheets. A small level of inflation makes it less likely that the economy will experience harmful deflation if economic conditions weaken.[2]

Brief History of Inflation Targeting
The first country to utilize inflation targeting was New Zealand in 1989, following two decades of high and volatile inflation and five recessions within the same time period. The chart below shows the annual change in New Zealand's headline CPI along with the country's recessions indicated by the shaded bars. Canada, the U.K. and Sweden implemented inflation targeting shortly after New Zealand. Approximately 25 countries are using inflation targeting in some form. Germany implemented many inflation-targeting elements before any other country, but the ECB's current mandate calls for a CPI level "below 2%."

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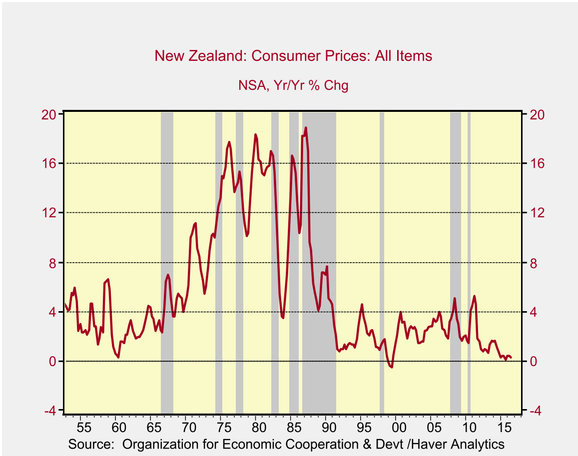
2 https://www.federalreserve.gov/faqs/economy_14400.htm

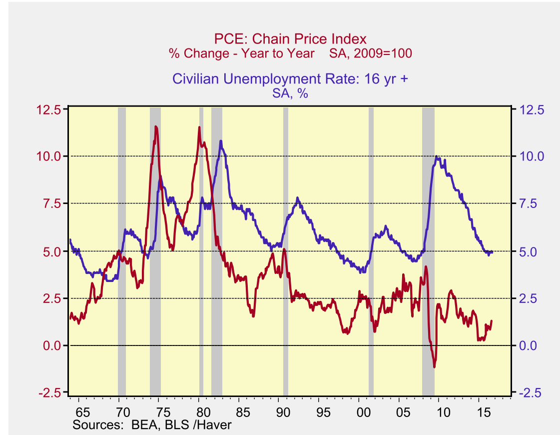


Currently, all the major developed world central banks are using some form of inflation targeting. Proponents of inflation targeting also point out that explicit inflation targets foster international policy coordination.

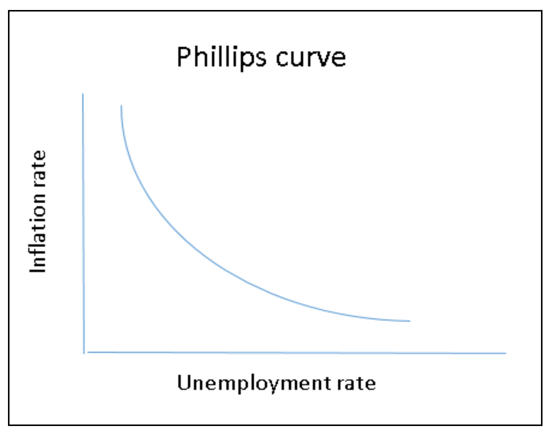
Determining the Target Rate

The market was aware of a Fed inflation target long before Bernanke officially designated the 2% level. We explained above why inflation in either extreme is not desirable, but it's a complex process to determine the optimal long-term inflation rate. The 2% inflation target serves three main purposes.

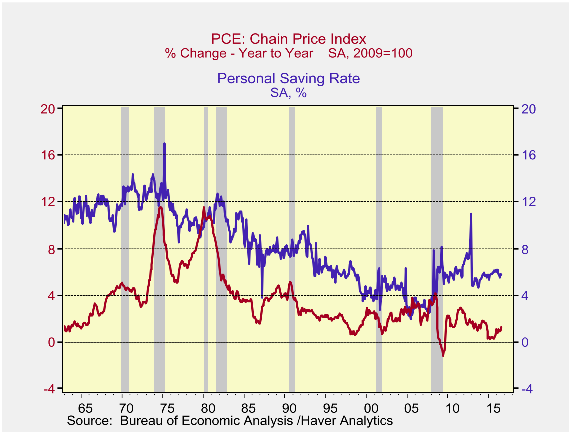
First, since the Fed has a dual mandate, it has to consider how the inflation target affects employment. The chart below shows the unemployment levels and the annual change in PCE. In general, when inflation rates have been between 1% and 3% and have remained stable, unemployment has also improved. Anchoring inflation expectations is important here, since the longer inflation remains stable, the more likely it is that unemployment falls and consumption and investment improve. Conversely, low unemployment generally leads to a pick-up in wages, which leads to overall inflation.



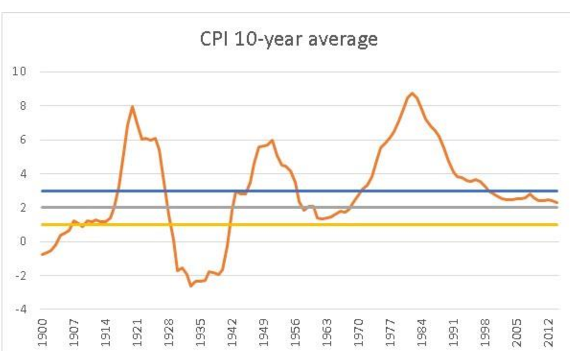
The classic economic theory link between unemployment and inflation is known as the Phillips curve. The chart below shows a hypothetical Phillips curve, which indicates that tight labor markets mean higher inflation and vice versa. The curve itself moves when inflation expectations shift. Recently, the effectiveness and relevance of the Phillips curve has been questioned as the correlation seems to have deteriorated as a result of structural changes in the labor market and rising global production capacity.



Second, mild inflation around 2% reduces the real value of debt, allowing debtors to improve their balance sheets. This is especially relevant in a high debt/low wage growth environment. A 2% inflation target allows this to work progressively, while putting the inflation target comfortably above the threat of deflation. The chart below shows the PCE and personal savings rate.

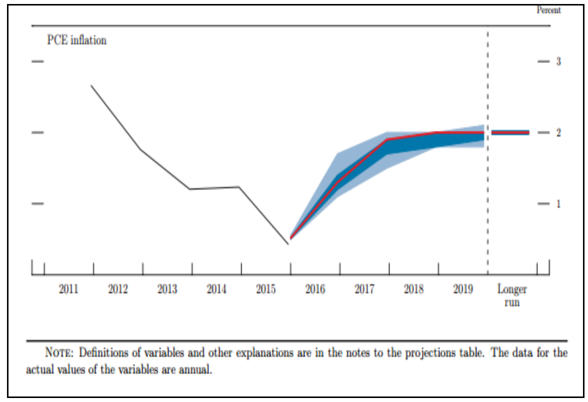


Third, as discussed above, a 2% level allows for inflation psychology to balance between the high inflationary and deflationary hazard. The chart below shows the 10-year average of CPI. The horizontal lines on the chart show 1%, 2% and 3% targets. In general, when the 10-year average inflation rate falls between 1% and 3%, the economy has remained the most stable. The 10-year average of CPI is a proxy for inflation expectations. Inflation expectations became well-anchored during periods of stable prices, such as the 1960s and 1990s, which also coincided with a stronger economy. Inflation anchoring seems to be a sufficient condition for growth, although perhaps not sufficient by itself.

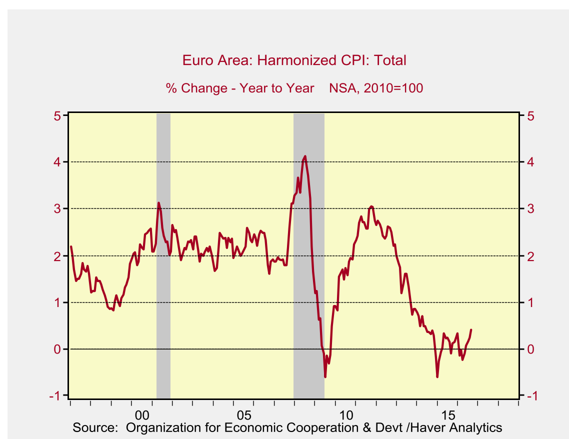


Current Situation

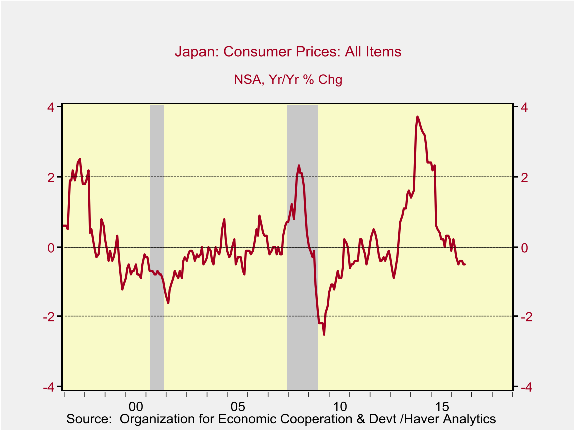
Currently, the headline PCE stands at 1.3% and has not reached its 2% target since 2012. The Fed's projections, as shown in the chart below, call for inflation to return to its long-term target of 2% by 2018.



At the same time, the Eurozone has also battled low inflation, despite its indicated inflation goal of 2%. The chart below shows the Eurozone harmonized CPI, which has been below 2% since 2013.



Additionally, Japan has fought deflation despite BOJ President Kuroda's calls for an inflation target above 2%. Japan's most recent CPI stands at -0.5%.



So, what's so special about 2%? There's no magic to it, but it does maintain a healthy margin between deflation and hyperinflation.

However, in the current environment of slow global growth, could a different inflation target work just as well? Perhaps a higher inflation target would account for current economic conditions, or perhaps it was a mistake to assign a numerical value to the inflation target.

Even though the 2% inflation target may not be the correct number for all economic conditions, it would be difficult for a central bank to either withdraw the target value or change it. Given that we saw market uncertainty rise after Yellen mentioned the possibility of a "high pressure economy," investors, businesses and consumers are using the 2% target to anchor their inflation expectations and changing that target could lead to unanchored expectations that would be difficult to control. Thus, we expect the target to remain at the current level, even if temporarily violated.

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