

Inflation and Interest Rates

Theory vs. Reality

By Kevin Chambers

At the end of 2015, the Federal Reserve announced that the target Federal Funds Rate will start to increase. This signaled the first increase in interest rates since the mortgage crisis in 2008. One of the issues that will affect future decision making will be inflation. The job market and employment has continued to improve, strengthening the Fed's outlook on interest rate increases. However, inflation has been lagging. Even though inflation often has a bad reputation, a small amount of inflation is important to encourage growth in the economy. In 2015, inflation increased by 0.7%, falling behind the Fed's currently set inflation target of 2%.

Basic Economic Theory: Inflation and Interest Rates

In macroeconomics, the basic theory dictates that interest rates and inflation have an inverse relationship. As interest rates rise, there is a higher benefit to consumers to save their money versus spending it. Their bank accounts and investment accounts pay more income, so there is more incentive to keep that money saved instead of spending it. Money

in the bank is making money. It is also harder to buy things on credit, as loans cost more with higher interest rates. This causes inflation to decrease. Less spending causes less demand and prices fall.

Conversely, if interests fall, the theory implies that inflation will increase. This was the basis of the Fed's strategy of dramatically decreasing interest rates after 2008 to fight the recession. Their plan was to get the American public and corporations to spend their way out of the recession through easy credit and no incentive to keep money in the bank. It was very successful.

INFLATION:

Inflation is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling. Central banks attempt to limit inflation, and avoid deflation, in order to keep the economy running smoothly.

Source: Investopedia

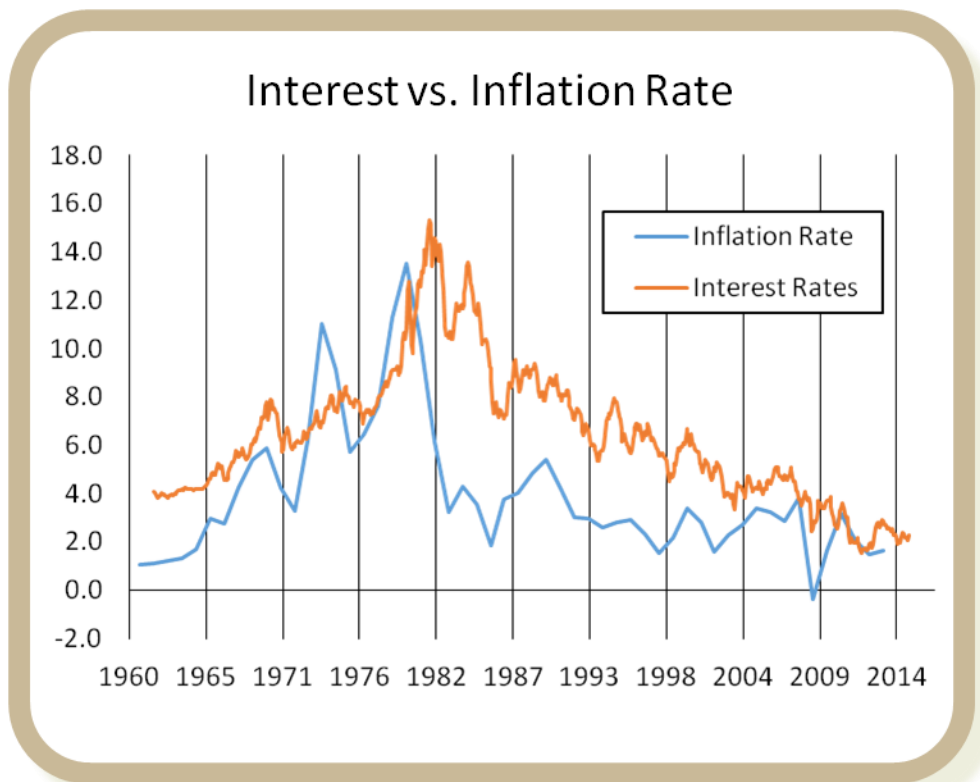
Dropping interest rates proved to be an effective tool to combat an economic downturn. The Fed will not have this tool the next time around unless they can increase interest rates before the next recession.

This is why, now, they want to increase interest rates. However, the specter of low inflation has the Fed worried. By increasing interest rates, basic economic theory states that inflation is expected to decrease. That doesn't leave inflation a lot of room to fall. This situation of low interest rates and low inflation is unprecedented in modern monetary policy.

The Great Inflation

Inflation used to be one of the major financial issues facing the United States. For the first 4 years of the 1960s, inflation hovered around 1% a year. Soon after, prices started to rise, peaking at above 14% in the 1980. There were three main reasons for the increase in prices. First, after WWII and the Great Depression, the federal government was very supportive of government spending programs and heavily focused on getting American's jobs and lowering unemployment. As a result of both the increase in spending from the government and more American's with jobs spending money, prices increased. Second, the Fed ended the Bretton Woods Agreement in the 1960s. Ending this monetary relationship which linked the US dollar to the price of gold allowed the dollar to float more freely, so the demand for dollars as the world's reserve currency pushed the price of the dollar up. Finally, the price of oil increased dramatically due to the Arab-Israeli War and the OPEC oil embargo in 1973 (Bryan, 2013).

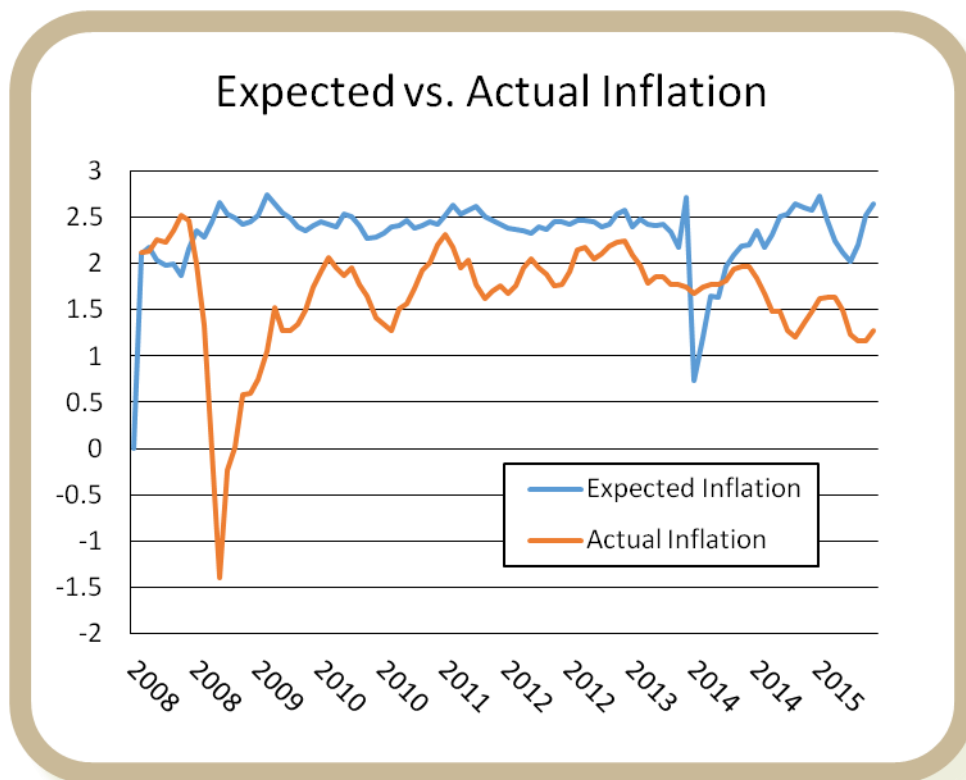
For most of the 1970s, inflation was a concern that grew to a borderline national emergency. Gerald Ford gave a famous speech to rally the American public to "Whip Inflation Now," kicking off the "WIN" campaign. He asked all people to save more, drive less, eat less, and consume less (Ford, 1974). The media has given the moniker "The Great Inflation" for this period.



Source: Federal Reserve Bank of St. Louis FRED

Gerald Ford's WIN campaign was not successful. Then in 1979, Paul Volcker became the chairman of the Fed. He took dramatic steps that were unpopular with many Americans, but proved successful in caging inflation. Volker's plan also centered on basic economic theory. He raised interest rates and slowed reserve growth. Through this plan, interest rates skyrocketed, along with the unemployment rate. The US economy fell into a recession from 1981 through 1982 and the unemployment rate spiked at 11%. Although it was a harsh correction, inflation fell and stabilized. Then the Fed was able to lower interest rates (Bryan, 2013). This set up years of stable inflation and interest rates through the 1990s and early 2000s. It also made inflation a main target for the Fed. From 1992 to 2007, inflation averaged 2.04% and everything felt good until 2008.





Source: Federal Reserve Bank of St. Louis FRED

Inflation and Interest Rates Post-2008

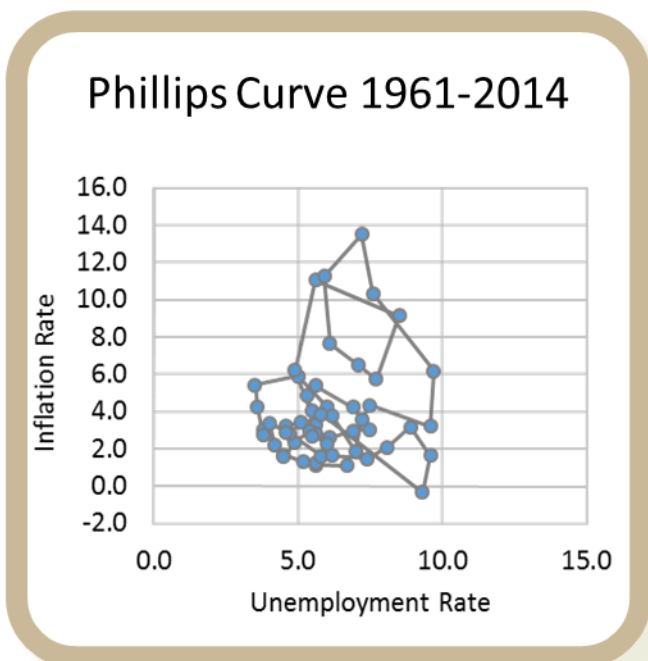
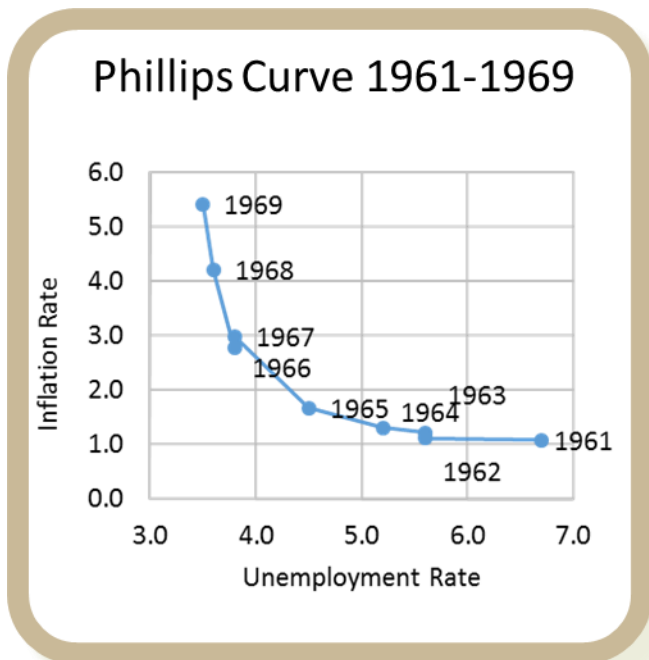
Today, most developed countries, including the US, UK, Europe, and Japan, are struggling to get inflation going, even though their economies are recovering slightly. The US had 0.2% inflation with 2.2% growth; the Eurozone had 0.1% inflation and 1.9% growth; UK had -0.1% inflation and 2.3% growth; and Japan had 0.3% inflation and 1.1% growth.

One of the problems facing the central banks around the world in this low interest rate regime is that they have lost their ability to set targets on inflation. Most of the central banks release a forecast for expected inflation over the course of the next year. For the last 5 years, these forecasts have been overestimated. In the US, one of the expectation measures is the 5-year forward inflation expectation rate, created by the Federal Reserve Bank of St. Louis. By that measure, the Fed has been overestimating inflation by 0.7% since the start of 2008. One of

the unforeseen problems in the last year was the collapse of oil prices; however, even measures that exclude energy prices show inflation lagging behind forecasts.

In September of 2015, Chairwoman Yellen gave a speech about inflation. She argued that the Federal Reserve target would be actualized in the upcoming twelve months. Yellen, as most economists do, referenced economic theory. The theory of macro-economics called the Phillips Curve, attributed to A. W. Phillips, is based on a connection between unemployment and inflation during the 1960s. The theory states that there is a tradeoff between inflation and slack in the economy. Yellen argues that as oil prices and the dollar stabilize, the increasingly stronger job market will correct the slack in the economy (output vs capacity) and bring inflation up to target (Zumbrun, 2015).





However, there are many economists that argue that this relationship is temporary and only works in specific situations. Davis Stockton, a former top economist at the Fed, told the Wall Street Journal,

“Everyone knows it is a bad model... The problem is, no one has put a better one on the table” (Leubsdorf, 2015).

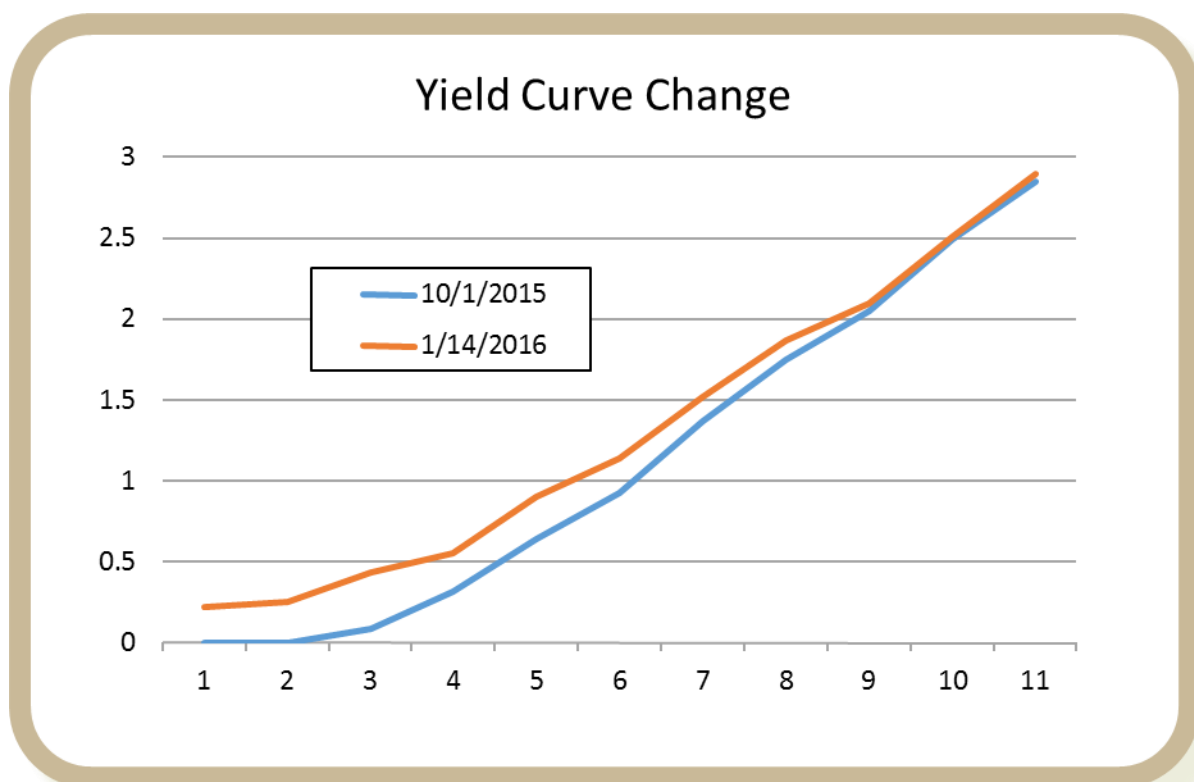
The general consensus is that in the long-term the Phillips Curve is unreliable, yet proponents still claim its effectiveness in the short term. This is evident if you look at the Phillips Curve data points from 1961 through 2014. The nice curve from 1961-1969 is obvious at the bottom of the graph, but after that time frame, there doesn't seem to be a very good argument for the relationship.

Source: Federal Reserve Bank of St. Louis FRED

How have interest rates changed?

Regardless of the Phillips Curve's suitability in 2015, it is very unlikely that rates are going to rise quickly across the board. A more plausible situation would be that the interest rate curve will continue to flatten. The Fed has more control over bonds on the short end of the yield curve. As short term securities increase, intermediate term and long term bonds will probably stay flat or even fall slightly. This is because the rest of the world still has very low interest rates. As rates increase in the US, investors from Europe and Asia will increase their purchases of US bonds, tempering the increase in interest rates.

To illustrate, it may be helpful to see how interest rates have changed since the announcement of the Federal Reserves' new target. For analysis, we will use rates from the end of Q3 2015 as our base. Interest rates have increased on the short end fairly significantly. From 10/1/2015 – 1/14/15, 1-month treasuries have increased from 0 to 0.22. Intermediate bonds also saw an uptick, with the 5-yr treasury rate rising from 1.37 to 1.52. The long end of the curve didn't change at all with the 30-year treasury staying flat at 2.85.



Source: Federal Reserve Bank of St. Louis FRED

Inflation Protection in Portfolios

It is always important to have a piece of your investment portfolio that will do well in inflationary periods. During times of high inflation, stocks and bonds will most likely perform poorly. Having some inflation protection built into your asset allocation will position your portfolio to perform better than if you only have stocks and bonds. If you wait to read the headlines about inflation, you have already missed the boat. Historically, during inflationary periods these different investments are a good hedge against inflation.



TIPS:

Probably the most obvious security that investors buy to guard against inflation is Treasury Inflation Protected Securities, or TIPS. TIPS are a bond from the U.S. Treasury that is indexed to the CPI. If inflation rises, the par value of the bond increases accordingly. TIPS are considered fairly low risk as they are issued by the government; however, they are still subject to market conditions. For example, 2013 was a very bad year for TIPS as they returned -8.5%, the worst year for TIPS since their inception in 1997. However, investors are often comfortable taking negative returns because they believe they will be compensated in the future when inflation increases (Lin 2013). TIPS rebounded slightly in 2014, returning 3.6%, but fell by -1.4% in 2015. So far in 2016, TIPS have been basically flat, returning 0.1% year-to-date.

Commodities:

Commodities, such as gold and oil, are another investment that has done historically well in times of inflationary growth because commodity prices usually increase with prices in the rest of the economy. Commodities represent goods that most Americans can't do without, and will pay for regardless (within means) of the price. For example, most goods in the United States are transported by trucks and trains that run on gas. Since our economy can't function without them, producers just have to accept the higher cost of production. Other commodities such as orange juice, soybeans, and cotton also make good investments with rising inflation.

Social Security:

Cost of Living Adjustments (COLA) are made to Social Security each year to compensate for the rise in inflation. COLA adjustments are made according to the CPI-W. If there is no increase in the CPI-W there is no increase in Social Security payments. Social Security payments do not decrease when there is deflation, they just remain the same.

Real Estate:

Real Estate investments are popular for inflation hedging. Rising prices increase the value of property for resale. Also, because most landlords have the ability to raise rents over time, income from rentals can keep pace with inflation. The most effective rental properties for hedging inflation are those with higher turnover (for example, self-storage and residential), because there are more opportunities to renegotiate rental prices (Case, Wachter and Worley 2011). US REITs (Real Estate Investment Trusts) are a good way for investors to gain real estate exposure without having to tie up capital in hard real estate assets.



Conclusion

Inflation is always a double edged sword. Some inflation is an indication that the economy is growing. Too much inflation can be a detriment to the economy and hurt our pocketbooks. Currently, inflation has started to be a prime topic in the news again. This is probably just a sign that the economy is getting back on track. Fundamentals, such as employment, are stronger than they have been since 2008. The only reason the Fed chose to increase interest rates now is because they felt the US economy was strong enough to handle it. Most experts don't expect inflation to be an issue in the immediate future. The

Federal Reserve is balancing a tough situation and debates concerning how to steer the economy fully out of the problems faced after the financial crisis will continue. Keeping investments in your portfolio that guard against inflation is always a good idea. Just like movements in the stock market, inflation is often unpredictable. Dedicating a small portion of your portfolio outside of traditional stocks and bonds into assets that protect against inflation can increase the diversification of your portfolio and further protect your assets from unforeseen market events.

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