# OBSERVATION

## TD Economics

October 27, 2014

# U.S. INFLATION LIMBO – HOW LOW CAN IT GO?

### Highlights

- Inflation in America is slowing. The consumer price index (CPI) rose 1.7% year-over-year in September, down from 2.1% in August. The Fed's preferred measure – the price index for personal consumption expenditures (PCE) – is even lower, expected to hit 1.5% in September.
- Inflation is likely to slow further in the months ahead. Energy prices declined in October even more than they did in September. Food prices, which have been driven up primarily by the impact of drought and disease, are also likely to decelerate in the months ahead.
- The divergence in economic growth and expectations for monetary policy between the United States and its trading partners is likely to keep upward pressure on the dollar. This will maintain the disinflationary impulse over the next year. We expect headline inflation to fall to just north of 1.0%, hitting a trough in mid-2015. Core inflation (excluding food and energy prices) will remain sturdier, but is likely to remain below 2.0%.
- Continued improvement in the labor market will eventually move inflation back to the 2.0% target, but the decline over the next year makes it less likely that the Fed will be in a rush to raise rates in 2015. This is consistent with our view that the Fed will not move off the sidelines until at least September.

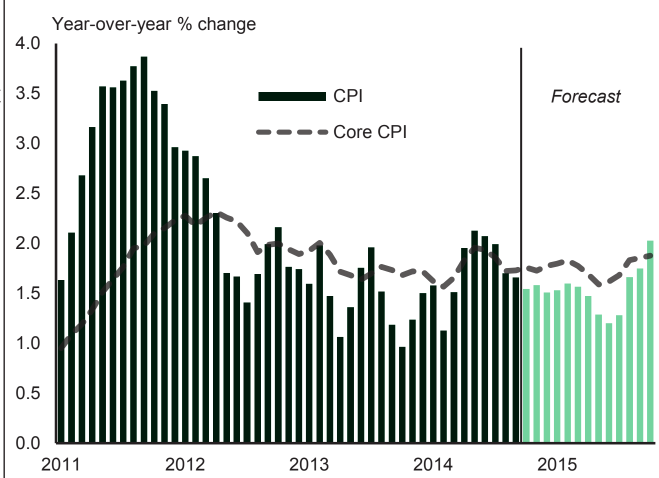
After rising through the summer months, inflation in America has taken a U-turn southward. Consumer prices, as measured by the consumer price index (CPI), rose 1.7 % in September from a year-ago, down from 2.1% in June. The Federal Reserve's preferred inflation metric, the price index for personal consumption expenditures (PCE) for September will be released at the end of this week, but likely rose by just 1.5% over the same period.

The downturn in oil and gasoline prices takes much of the credit for falling inflation, but not all of it. Excluding food and energy prices, core CPI inflation moved down to 1.7% from its recent peak of 2.0% in July. Core PCE inflation is even lower, likely to hit 1.5% in September.

Given the magnitude of the recent decline in energy prices, inflation is likely to continue to trend lower over the next year. The fall in energy prices was even more pronounced in October than in September. In combination with the disinflationary pressure from a higher U.S. dollar, inflation (whether measured by CPI or PCE) is likely to move within a bowshot of 1.0%, hitting a trough in the middle of 2015. Core inflation is likely to prove sturdier; but, the disinflationary impulse is also likely to keep the core rate below 2.0%.

The fall in inflation and signs that this may be pushing down inflation expectations is likely to become a more

**CHART 1: CONSUMER PRICE INDEX**



Source: Bureau of Labor Statistics. Forecast by TD Economics.

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important factor in future Federal Reserve decisions. While the continued improvement in the labor market will eventually move inflation back towards the 2.0% target, the decline over the next year makes it less likely that the Fed will be in a rush to raise rates in 2015. This is consistent with our view that the Fed will not move off the sidelines until at least September, by which time they will be anticipating higher inflation over the next twelve to eighteen months.

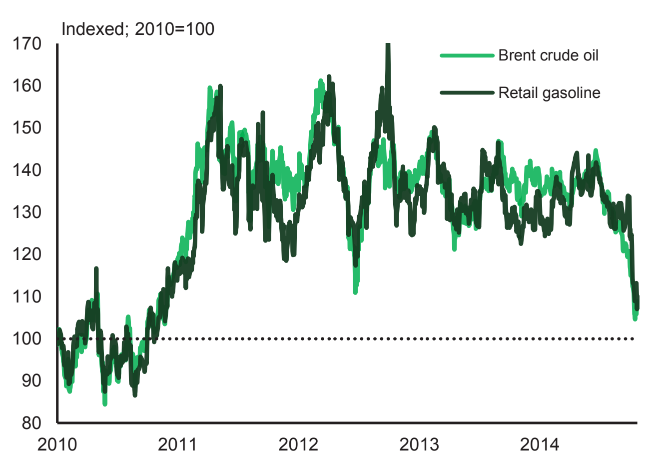
### Gasoline prices are back at 2010 levels

The most noticeable price change over the last few months has been in energy prices. From a peak of $106 a barrel in June, the West Texas Intermediate (WTI) benchmark oil price has fallen over 20%, to $82. The European benchmark Brent oil price has fallen by even more – down 25% since June.

For consumers, oil prices are less important than the price at the gas pumps, but gasoline prices tend to follow oil. Over the last several years, the price of gasoline has more closely tracked the Brent price. Gasoline prices have already fallen over 20% since June. Given a small lag between gasoline and oil prices, gasoline prices appear likely to fall even further in the weeks ahead.

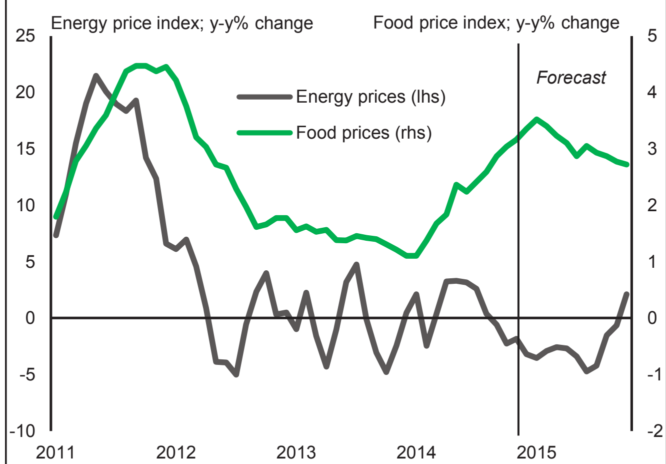
Spending on gasoline makes up a small (and falling) share of overall consumer spending. It makes up slightly over 5% of the CPI basket and just over 3% of PCE. Nonetheless, if the more-than-20% decline in gasoline prices is maintained, this will cut roughly a percentage point from CPI inflation and over 0.6 percentage points from PCE inflation. Given the challenges to the global economy, we expect WTI to average around $80 to $84 dollars a barrel and Brent to average around $89 to $94. In other words, this disinflationary impulse is likely to remain in place over the next year.

CHART 2: OIL & GASOLINE PRICES




Source: Wall Street Journal / Haver Analytics.

CHART 3: FOOD & ENERGY PRICES




Source: Bureau of Labor Statistics. Forecast by TD Economics.

### Food price growth is likely to soften

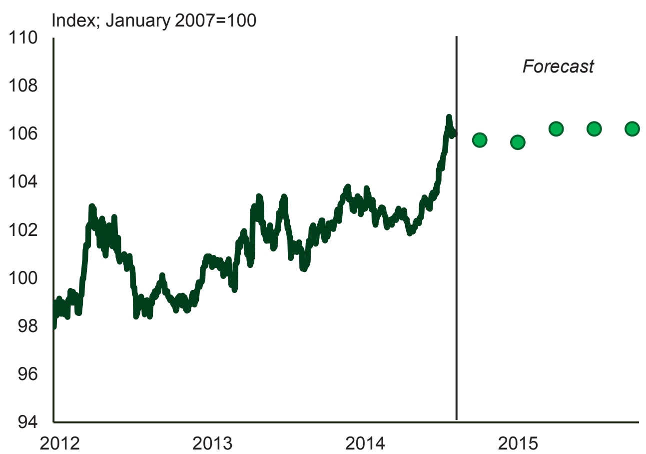
One of the factors that have held up CPI over the last several months is the acceleration in food price growth, particularly meat prices. Prices for meats, poultry, fish and eggs were up 9.4% from last year in September, the fastest rate in a decade. The rise in meat prices largely reflects transitory factors including drought in the Southern U.S. that raised feedstock prices, as well as a disease affecting baby hogs that cut supply.

These supply pressures have come off the boil over the last two months. While this has yet to show up at the super market, wholesale prices for livestock have fallen over the last three months. There is typically a lag of a few months between wholesale and retail prices. The deceleration in livestock price growth in combination with falling prices for grains such as corn, wheat, and soya is likely to show up in a slower pace of food price inflation in the months ahead.

### A rising U.S. dollar is disinflationary

The impact of the U.S. dollar on inflation has

CHART 4: BROAD TRADE-WEIGHTED DOLLAR




Source: Federal Reserve Board. Forecast by TD Economics

been a subject of a broad array of economic research. In general, the consensus of this research is that the pass through of changes in the exchange rate to consumer prices is relatively small, but that if sustained, it increases over time as contracts are renegotiated. A rule of thumb estimate from the Federal Reserve is that a 10% change in the exchange rate could take about a quarter percentage point off the inflation rate.[1]

Since the end of June, the U.S. dollar has risen by roughly 7% against major currencies. This is in large part due to a divergence in economic growth among major global economies, with strengthening growth in America, weakness in Japan, the euro zone, and a slowdown in emerging market economies. As a result, even as the Federal Reserve tapers its asset purchase program, the European Central Bank and Bank of Japan are set to continue or expand their own programs. The bottom line is that a further appreciation in the U.S. dollar is likely, and the disinflationary impact should be expected to continue.

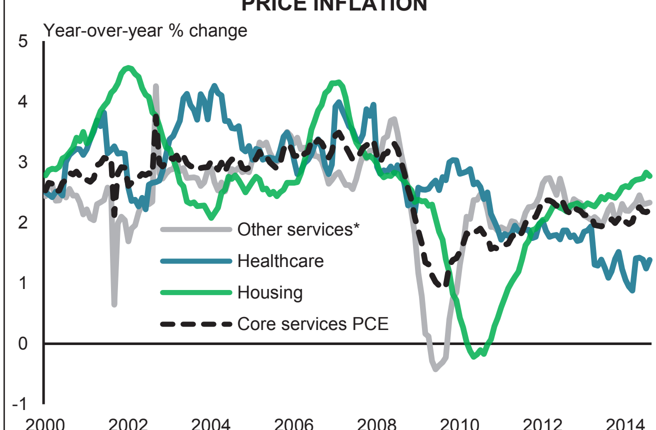
**Core inflation likely to prove steadier, but remain under 2.0%**

The Fed tends to look past changes in relative prices when thinking about inflation. As such, it focuses on core measures that exclude more volatile components such as food and energy. Core inflation has not seen the same downward pressure as the headline rate and is likely to prove steadier going forward. However, inflation will also be influenced by declining energy and food prices and a rising U.S. dollar. Whether measured by CPI or PCE, core inflation is likely to remain below 2.0% over the next year.

A factor that has maintained upward pressure on core CPI inflation is shelter costs. The most significant element of shelter costs is owner's equivalent rent (OER) – a measure that approximates how much a homeowner would have to pay to rent their home. OER tends to follow market rental values and so is influenced primarily by supply and demand trends within the for-rent market. Because the supply of new housing has been low over the past several years, vacancy rates have declined. This has kept upward pressure on rents, and so on shelter costs and ultimately inflation.

Somewhat counterintuitively, a strengthening housing market is precisely the cure for rising shelter costs. Stronger housing construction in addition to stabilization in the homeownership rate will alleviate the downward pressure on the rental vacancy rate. We are cautious about our outlook for the housing market given recent hiccups and signs that barriers to homeownership remain in place. However, over time, as supply picks up, market rents are likely to stabilize as the relative cost of owning versus renting becomes increasingly favorable. This will reduce its influence as a key inflationary source. While this may not take place over the next year, the Federal

CHART 5: CORE PCE* SERVICES PRICE INFLATION




*Personal consumption expenditures excluding energy services.
Source: Bureau of Economic Analysis

**Which inflation rate?**

The inflation rate most often reported in the press is the year-over-year percent change in the CPI. However, the Federal Reserve prefers to focus on the price index for PCE. The main reason for the Fed's preference for PCE inflation over CPI is that it allows for a constant change in the mix of goods and services consumed by households. As consumers tend to substitute away from more-expensive goods and services in favor of less expensive ones as their prices rise, this variability tends to result in a lower level of recorded inflation.

There are other differences between the indexes as well. The weights in CPI are determined by a survey of households and include only items that households purchase directly. PCE on the other hand includes items that are purchased on behalf of households, such as healthcare purchased by non-profit organizations. Finally, while the CPI is a point-in-time survey, the PCE is subject to revision as more data becomes available.

Reserve is likely to anticipate this as a limiting factor on future price growth.

While shelter is a major component of the CPI basket, at over 30%, it represents only 15% of PCE. This explains some of the underperformance of core PCE inflation relative to CPI over the past year. The other factor contributing to the divergence is greater disinflation in medical care, much of which is out of the scope of the CPI. The outlook for medical care inflation is uncertain, but recent research points to it having some staying power. Morever, the series shows a considerable degree of persistence, implying that the recent trend is unlikely to reverse quickly.

As long as shelter costs continue to rise above the rate of overall inflation and medical costs below it, this will continue to support a lower rate of PCE inflation relative to CPI. As PCE is the metric watched by the Fed, this continued underperformance is important. (For more on the difference between CPI and PCE inflation, please see the textbox above).

Aside from these idiosyncratic factors, core inflation is likely to be influenced by the improvement in the labor market. As labor market slack is absorbed, wages are likely to rise. Over time, this will exert upward pressure on firm input costs and as businesses attempt to maintain profit margins, it will eventually trickle into broad consumer prices. That being said, the impact on inflation of an eventual rise in wages will be lagged, and is unlikely to occur swiftly enough to reverse the downward trend in core inflation over the next several quarters.

**Inflation expectations are falling**

The Fed will tolerate a decline in inflation if it feels it is transitory, but it will not ignore signs that expectations for future inflation are also beginning to drop. Empirical studies of inflation in the aftermath of the financial crisis suggest that the key reason for the relative stability in observed inflation, in spite of the substantial rise in unemployment, was the relative stability in inflation expectations.

There is no perfect measure of inflation expectations, but one potentially concerning sign is that the spread between Treasury inflation protected securities (TIPS) and nominal Treasury securities – one measure of the bond market's expectations for future inflation – have been falling rapidly over the last several weeks. Since late July, the spread between five-year Treasury bonds and five year TIPS has fallen over 60 basis points, hitting its lowest level since August of 2010. The spread between ten-year maturities has fallen by a smaller, but still potentially concerning 40 basis points.

Should the trend of falling inflation expectations continue, it could represent a downside risk to the inflation outlook, and one that the Federal Reserve is unlikely to ignore. Past rounds of quantitative easing

**CHART 6: MARKET-BASED INFLATION EXPECTATIONS**


Source: Federal Reserve Board / Haver Analytics.

coincided with these measures hitting levels that are almost identical to those reached over the past three months.

We do not expect the Fed to engage in another round of quantitative easing. Inflation expectations will, in all likelihood, stabilize alongside a strengthening U.S. economy. However, in order to reinforce expectations, it would not be surprising to see the Fed take a more dovish tack, perhaps even tying its forward guidance more explicitly to the outlook for inflation.

### Bottom line

A number of factors have led inflation to turn southward over recent months. Given recent movements in commodity prices and the U.S. dollar, this downward thrust to inflation is likely to continue. Even assuming that price growth on a month-over-month basis returns to around 2.0% (annualized) over the next several months, the commonly reported year-over-year measure is likely to continue to drift downward, as a result of the drop in energy prices. While core measures will remain higher, they are likely to remain below 2.0% over the next twelve months.

The timing of the likely trough in inflation will have important ramifications for monetary policy. It is likely to come mid-2015, just when conditions in the labor market may be leading the Federal Reserve to contemplate raising interest rates off the zero-lower bound floor. With headline inflation moving closer in the direction of 1%, it is hard to make the case for urgency in tightening monetary policy.

While price growth is likely to remain low over the next two years, deflation is unlikely. The continued improvement in the labor market is likely to put upward pressure on wages, eventually tugging it upward. As some of the factors that have pushed down prices fall out of the annual calculation, the rate is likely to move closer to 2.0% by the end of next year, giving support to the Fed to begin tightening monetary policy.

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### End Notes

1 Mishkin, Frederic S. "Exchange Rate Pass-Through and Monetary Policy." Speech delivered to the Norges Bank Conference on Monetary Policy, Oslo, Norway, March 7, 2008. http://www.federalreserve.gov/newsevents/speech/mishkin20080307a.htm