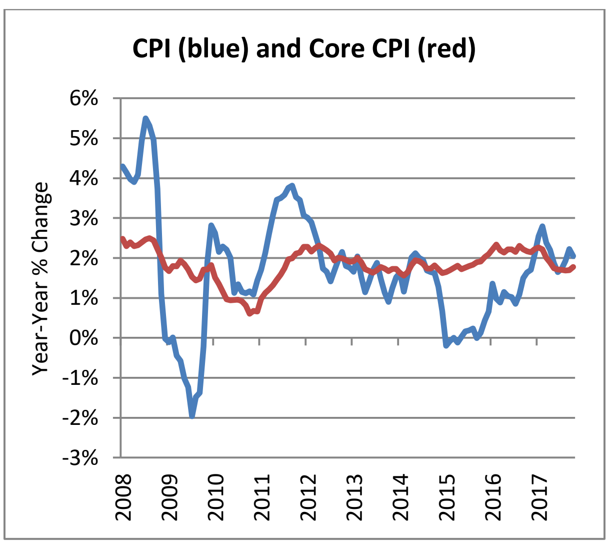
# SEG Brief: December 11, 2017

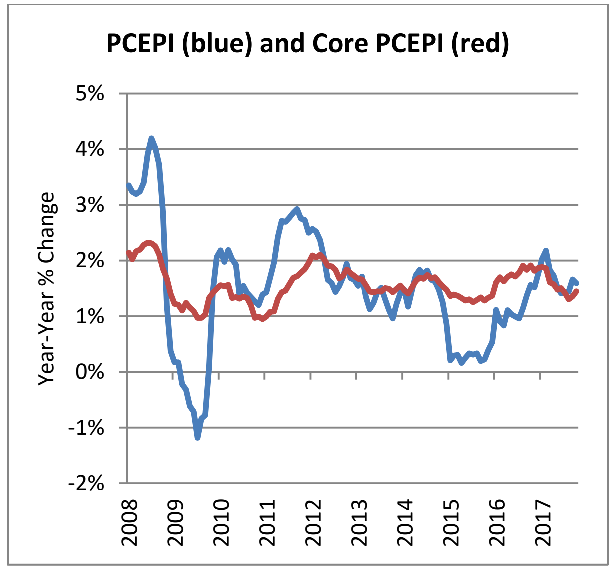
## Are Prices About to Jump?

Prices have remained remarkably tame over the past decade, and particularly so over the past several years. This is puzzling given the significant growth in the national debt and the drop in unemployment over this period.

There have been a few monthly jumps, but on a year-over-year basis the CPI (consumer price index) has only exceeded 2.5 percent 28 times since the beginning of 2008 and the PCEPI (personal consumption expenditure price index) has only done so 21 times (mostly during the recession or early in the recovery). Neither of the core measures (excluding food and energy) of these price indices has gone above 2.5 percent even once over this almost 10 year period. See the following charts.

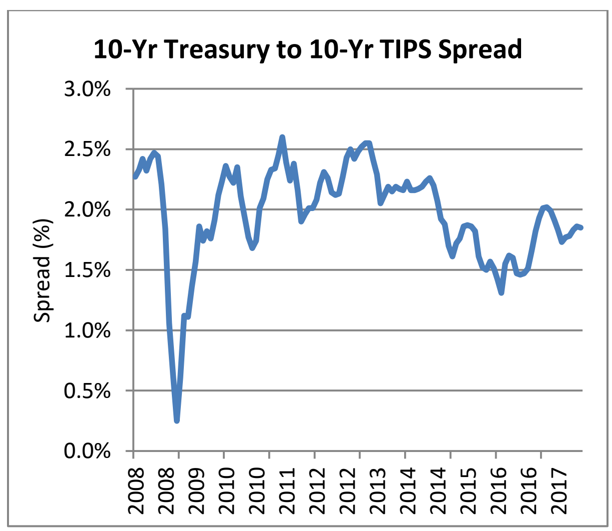
But assuming the tax legislation now in Congress (the Tax Cuts and Jobs Act) becomes law, what may be expected to happen? Also, what other forces may be pushing prices higher? Energy? Housing? Wages?



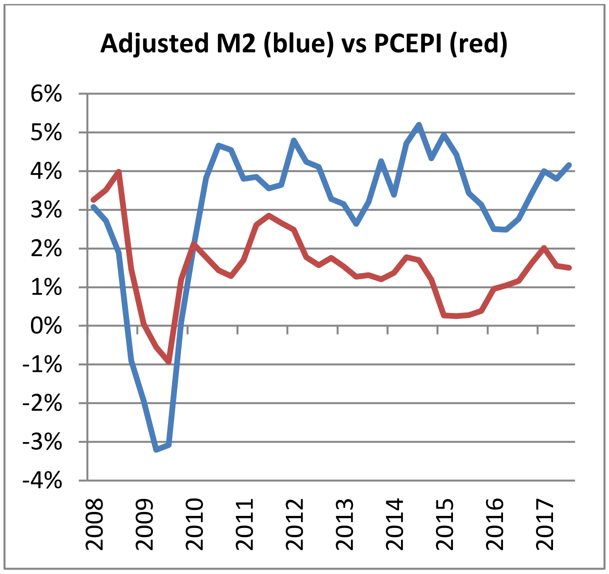




## Other Inflation Indicators

Before exploring what forces may push prices higher, there are a couple of other indicators that deserve a look. First, the spread between the yields for 10-year Treasury notes and 10-year Treasury Inflation-Indexed Securities (TIPS) indicates inflation expectations at least 5 years into the future. As the following chart shows, expectations represented by this indicator are for prices to continue to rise only modestly for the near-term future and expectations have declined from what they were five years ago.



A second indicator that merits review is the M2 money supply. To put money supply growth in the proper perspective requires an adjustment for the rate at which money turns over in the economy (its velocity). Since the beginning of 2008 the M2 velocity (the ratio of nominal GDP to the M2 money supply) has decreased from 1.94 to 1.43. Adjusting for this change in velocity, the following chart shows the year-over-year growth rates for the M2 money supply and for the PCEPI.




These two series show some correspondence, but it is far from perfect. The rates of change for the adjusted M2 series show greater variation since 2008 than does the PCEPI measure of inflation. Also, the average annual growth rate for the adjusted M2 money supply equaled 2.9% since 2008, while the annual growth rate for the PCEPI was only about half as large (1.5%). The somewhat higher growth rate for the money supply has clearly not driven inflation higher, at least so far. One possible explanation for the lack of an upward push on prices due to the faster growing money supply is that a considerable amount of U.S. dollars are held outside the country. By one estimate over 50 percent of U.S. currency is held outside the U.S. (Judson, 2012). The low amount of interest being paid on savings provides another explanation why so much cash is being held domestically.

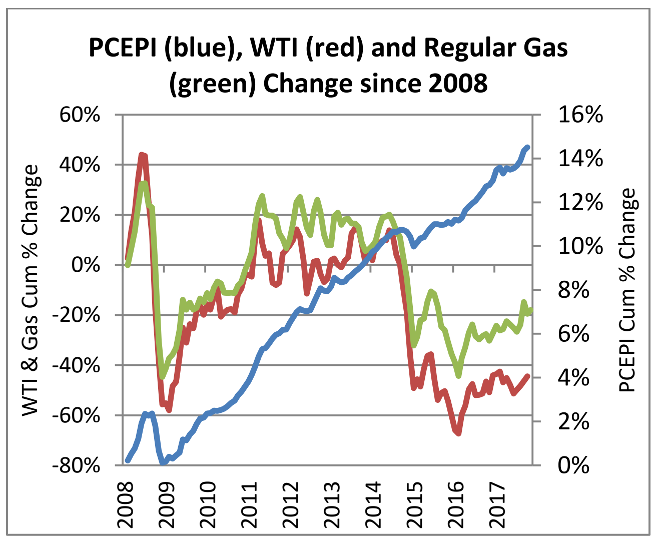
## Warning Signs?

Are there warning signs that prices may begin to move higher?

**Energy**

As addressed in a prior analysis, energy exerts a strong influence on consumer prices. Even though energy purchases have accounted for only between 3.8% and 6.6% of consumer purchases since the beginning of 2008, energy price changes often account for 20 percent or more of overall price changes. Over the past ten years energy prices have moved about half the time with and half the time against overall price changes.

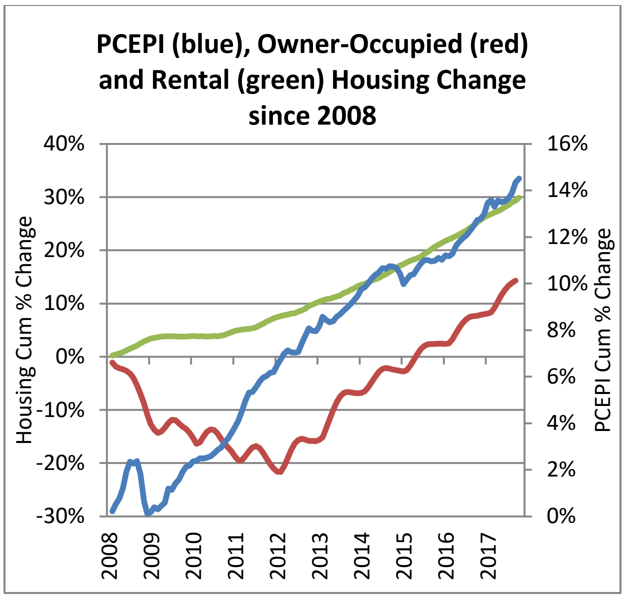
As the following chart shows, energy prices represented by both the WTI price of oil and the price of regular gasoline began moving sharply lower in October 2008 and the PCEPI experienced a sharp dip as well. The same relationship occurred again beginning in the middle of 2014.




Since the beginning of July the WTI price of oil has increased by almost 29 percent and the price of regular gasoline has increased by almost 13 percent. After being relatively flat during the first half of 2017 the PCEPI has begun to move higher since July. Because of the oil and gasoline prices showing a history of large price changes within a very short period of time and the corresponding oversize impact of energy prices on the PCEPI, it will not take much of a tightening of the oil supply to cause an acceleration in prices throughout the economy.

**Housing**

Since the beginning of 2008 housing has accounted for between 17.9 percent and 19.2 percent of consumer expenditures as measured by the PCEPI. The following chart shows the relative trajectories of the costs of owner-occupied and rental housing in comparison of the PCEPI over the past ten years.

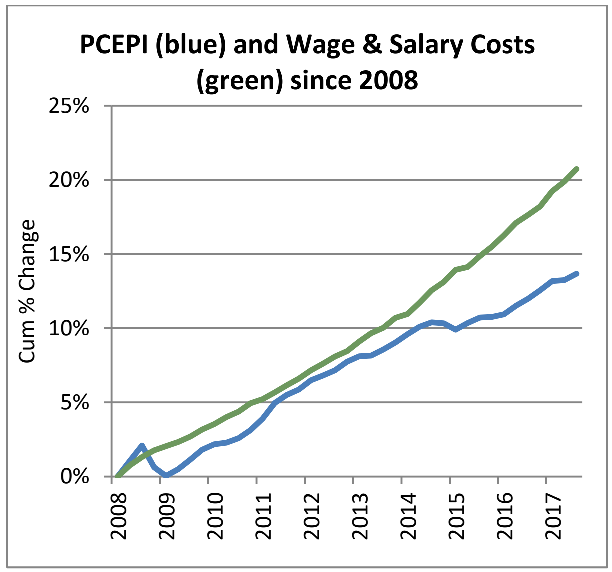


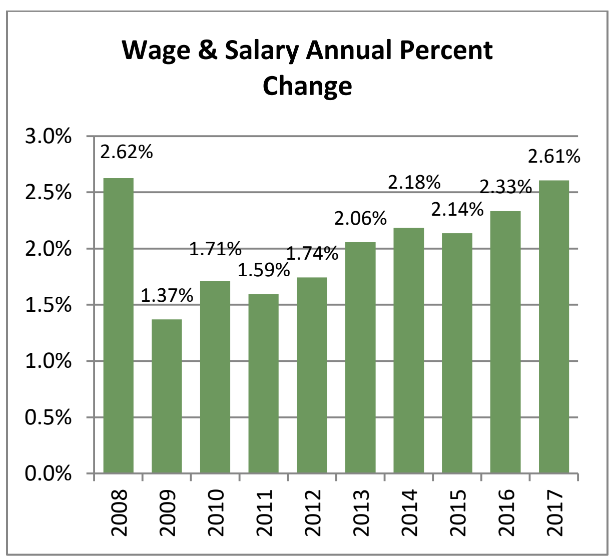

Not so surprisingly, the cost of rental housing never declined during or after the recession, although from the beginning of 2009 through the middle of 2011 the cost grew only slightly. Again, not surprisingly, the cost of owner-occupied housing fell by over 20 percent from the beginning of 2008 through early 2012.

Since January 2014 both the costs of owner-occupied and rental housing have been increasing at a substantially higher rate than has the overall PCEPI. From January 2014 through September 2017 (the most current data) the cost of owner occupied housing increased by 22.6 percent and the cost of rental housing increased by 13.9 percent, both of which are considerably higher than the 4.2 percent increase in the PCEPI. Low housing inventories in many areas of the country will likely continue to push home prices and rental rates higher.

**Labor Costs**

At least so far, labor costs are not exerting much upward pressure on prices. However, as shown below, wage and salary growth has outpaced consumer costs as measured by the PCEPI since the last quarter of 2008. From the middle of 2011 to the middle of 2014 the rate of change for wages and salaries was only slightly higher than for consumer prices, but since then the gap between the growth rates has been widening.



The previous chart shows that wage and salary compensation has been rising at an increasing rate since the end of the last recession, but the annual rate of increase remains modest. During 2016, wages and salaries increased by 0.72 percentage point more than the PCEPI, but during the first three quarters of 2017 the difference shrank to 0.31 percentage point.

A New York Times article by Neil Irwin (May 2017) indicated that given the low rates of inflation and productivity growth wage increases have been higher than should be expected. There certainly has been a showdown in productivity growth since the last recession. From 2008Q1 through 2017Q3 year-over-year productivity growth has averaged only 1.6 percent. From 2000Q1 through 2007Q4 the average growth rate equaled 3.0 percent and during the 1990s it equaled 3.7 percent. Conventional wisdom is that wage growth has been held back by poor productivity growth, but Irwin suggests just possibly causality goes in the opposite direction, namely low wage growth leads to low productivity growth. Whatever? This is an issue for another day.

## So, What Can We Conclude?

Energy and housing costs certainly merit close monitoring. As has clearly been shown, it does not take a large imbalance between oil supply and demand to move prices in a large way and for these movements to occur within a very short period of time. Changes in housing prices are more glacial and housing markets are less interconnected than are energy markets. (That certainly was not the case in the last recession, but that involved the financial side of housing, which was highly concentrated; not the real side of housing, which depends on individual housing decisions made by millions of people in thousands of cities across the country.)

As to labor costs, movements here will also likely be incremental. One reason labor costs are not likely to show a large jump any time soon is the small number of workers represented by unions. As of 2016, only 12.0 percent of U.S. workers were represented by unions. This is only about half the share of 30 years ago. So, most wage and salary adjustments are the result of individual company decisions rather than on an industry-wide basis.

Other factors holding down wage and salary increases include the continued threat of offshoring and probably even more importantly the increased automation of both manufacturing and service jobs.

So, there are signs that inflation may be moving toward the Fed's 2 percent target and could even overshoot that target. Energy and housing costs are likely to provide some of the push in this direction, but employment costs likely will not be much of a factor.

Finally, federal tax legislation and the resulting significant growth of the national debt remains a big wild card. Once the smoke clears on this legislation we will revisit this topic.

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