Payden&Rygel

Economic Update

THOUGHTS FROM OUR ECONOMICS TEAM

APRIL 3, 2014

DOES WAGE GROWTH CAUSE INFLATION?

Separating correlation from causation is difficult, especially in the social sciences. Take two data sets: the number of police officers by city and each city's crime rate. Suppose cities with more crime also have more police officers. Armed with this data, we could build a model to predict the crime rate of a city based on the number of police officers. But should we conclude that police officers cause crime? Hardly. The model tells us only that a relationship exists between the data, not why the relationship exists. No matter how precisely our model fits historical data, without knowledge as to what causes crime, we cannot be sure the model tells us anything about the future.

Physical sciences circumnavigate the problem of correlation and causation with experiments. In a laboratory, scientists can run experiments, control variables and gauge results. In the social sciences experimentation with controlled variables is near impossible. Enlist more police officers and have them patrol the streets then see whether the crime rate rises or falls. But we can't isolate all the factors we want to consider nor can we "rerun" historical events with different policy decisions to judge alternative effects.

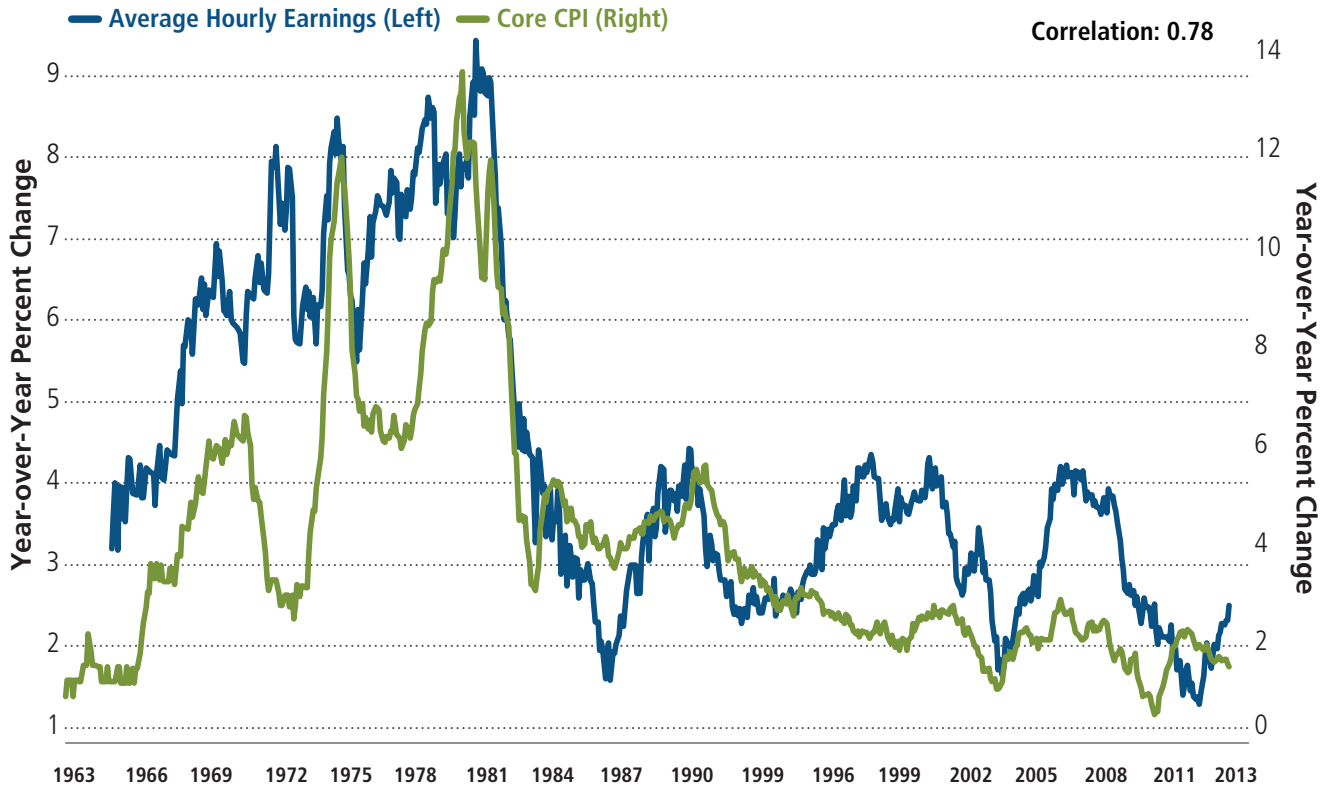
The Most Important Macro Question of 2014

With this preamble in mind, our focus now turns to the US labor market. We have championed the view that the most important macro question in 2014 would be how policymakers and investors interpret the fall in the official unemployment rate. Janet Yellen agrees. In a speech on March 31 she commented that "judging how much slack there is in the labor market is one of the most important questions that my Federal Reserve colleagues and I consider when making monetary policy decisions."

Since two camps seem to dominate the "slack" discussion, we suggested that wage growth data would cast the deciding vote. If the labor market truly is "tighter," wages should perk up. If tremendous "slack" remains then wage growth should remain subdued.

But that's where the discussion tends to end. Both groups accept that if wages accelerate, so too will inflation. The main source of disagreement between the competing views stems from a quibble over whether to include longer-term unemployed workers in measures of "slack." Not content to stop there, our purpose is to

MOVE TOGETHER: SINCE 1963, WAGES TRACK CORE CPI



Source: Payden Calculations, Bureau of Labor Statics

advance the debate one step beyond conventional discourse and ask: do increasing wages mean inflation will perk up? Does wage growth cause inflation?

As with our crime and police officers example, wage growth and inflation correlate well (see chart on previous page) over the last five decades. But, as researchers opine: "Wages and price changes are related, but the direction of causation isn't readily apparent." Since understanding the future trend of inflation is paramount in thinking about the Fed's reaction function, we approach the question in two ways: first by logic and second by empirics.

What Inflation Is—And Isn't

In terms of economic logic, by definition inflation is a "decrease in the purchasing power of money." That is why we care about inflation. It is a concern about the quality of our money (which also has a lot to do with the quantity of money, a point we've addressed elsewhere). What does our money afford us? What can we get for it?

We emphasize this precise definition of inflation as a change in money's purchasing power because not all changes in prices of goods or services have anything to do with "inflation." Investors habitually conflate price changes with inflation. The mistake causes investors to jump to rash conclusions about the general price level from, for example, milk prices observed in a grocery store. Supply and demand shifts may alter the price of one good, but will tell us very little about "inflation."

If more expensive milk isn't inflation, neither is a higher wage. Wages are the price of labor. In the case of the BLS report, they are the price of an hour's worth of labor. Many things can change the relative price of labor. Here's one: productivity. A more productive worker (one who produces more output per hour for an employer) may, in fact, command a higher wage. But this is not inflation. To the contrary, this is something we (investors) and central bankers ought to celebrate rather than fear.

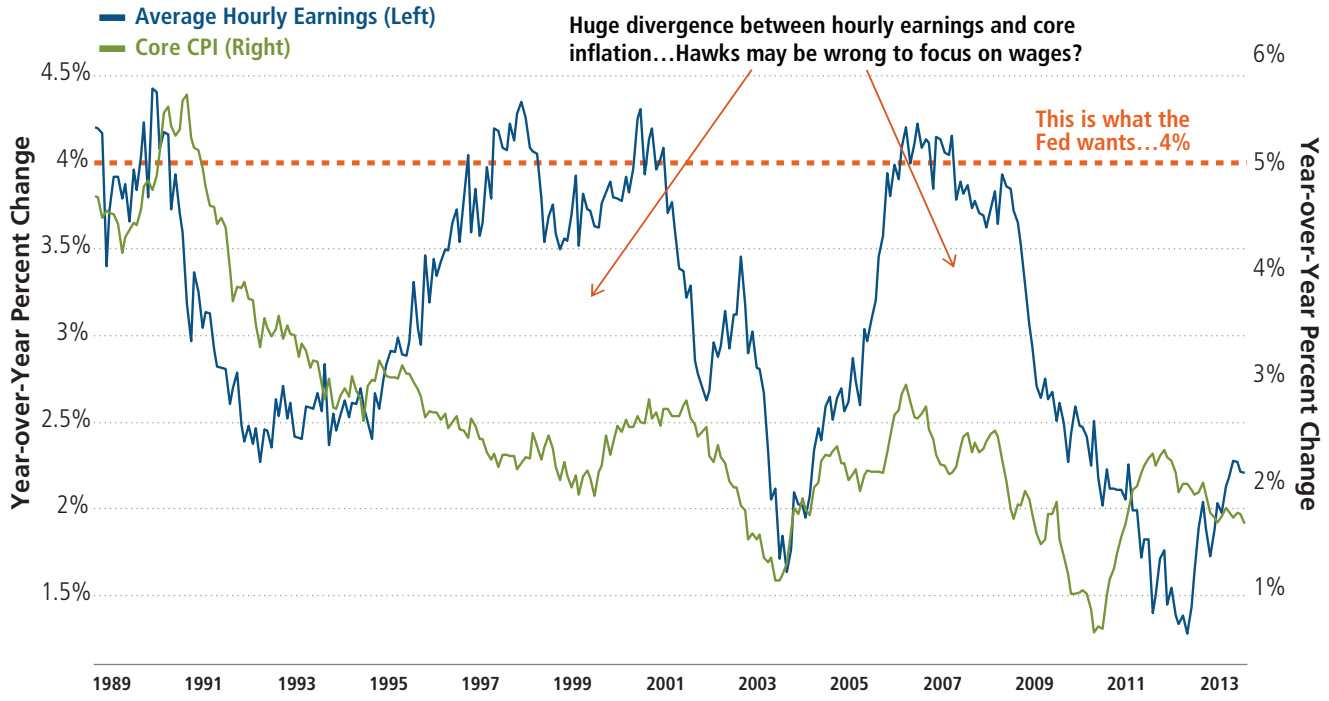
Similarly, if a company must pay higher wages to retain or add employees, consumer prices do not necessarily have to head higher. Instead, higher wages "squeeze" the company's bottom line, shaving off profits. Wages do not pass through to final product prices like the cost of crude oil does passes into gasoline prices. Also, stronger demand for products (based on a growing economy) could allow a company to raise product prices, and then offer employees higher wages, suggesting causation runs the opposite direction: inflation could cause higher wages!

What Story Do the Data Tell?

In terms of empirical evidence, making the case that increases in wages result in commensurate increases in inflation is not so easy either. Two recent historical experiences are worth noting. In the 1990s and the early 2000s, average hourly earnings climbed back above 4% year-over-year growth rates. In each episode, while wages rose, core measures of inflation remained subdued (see chart below). What's more, wages appear to follow rather than lead overall inflation, putting a dent in the argument for a causal chain leading the other direction.

Further to our point, it has become difficult to identify a strong relationship between measures of employment "slack" in the US economy and inflation. We investigated using various measures of slack, spanning from the official unemployment rate to gauges of shorter-term unemployment to gauges that capture longer-term unemployed. The result: the causal relationship between "slack" and inflation seems to have weakened (see, for example, chart on next page). The story cuts both ways, of course: in fact, the amount

DOES WAGE GROWTH CAUSE CONSUMER PRICE INFLATION? THE EVIDENCE FROM THE LAST 25 YEARS SUGGESTS, "NO"



Source: Payden Calculations, Bureau of Labor Statics

of "slack" conveys little information about future path of inflation. It is unfortunate that policymakers and investors depend on this framework when making decisions.

Stop Using The Phrase "Wage Inflation"!

The monthly nonfarm payroll employment reports now dominate the market's focus due to the importance of the labor market story. But the story-behind-the-story will be on page 37 not page 1, for therein waits the wage data. As the debate brews in Washington and on Wall Street, it's the wage data that will drive market and FOMC discussion.

However, regardless of the next nonfarm payroll print, suggestions that the FOMC would pivot on faster wage growth seem farfetched and, to quote Ms. Yellen, "tremendously premature." Instead, we think the FOMC would very much welcome this outcome rather than nip it in the bud. Further, our most important out of consensus view is that, indeed, wage growth may come (though the jury is still out!), but inflation (as gauged by the core PCE or core CPI) will not necessarily follow. Therefore, we do not expect the Fed to rush to "lift off" based on continued acceleration of wage growth.

Regardless of the Fed's reaction function, calling higher wages "wage inflation" is wrong. Inflation is a degradation in the purchasing power of money. Wage changes represent relative price shifts. Don't mistake the two. And if we're right to conclude that it won't drive up overall consumer price inflation, then higher wages mean better purchasing power: a positive sign for the US economy, consumers, credit-sensitive sectors and even the equity markets—not a bad omen for investors.

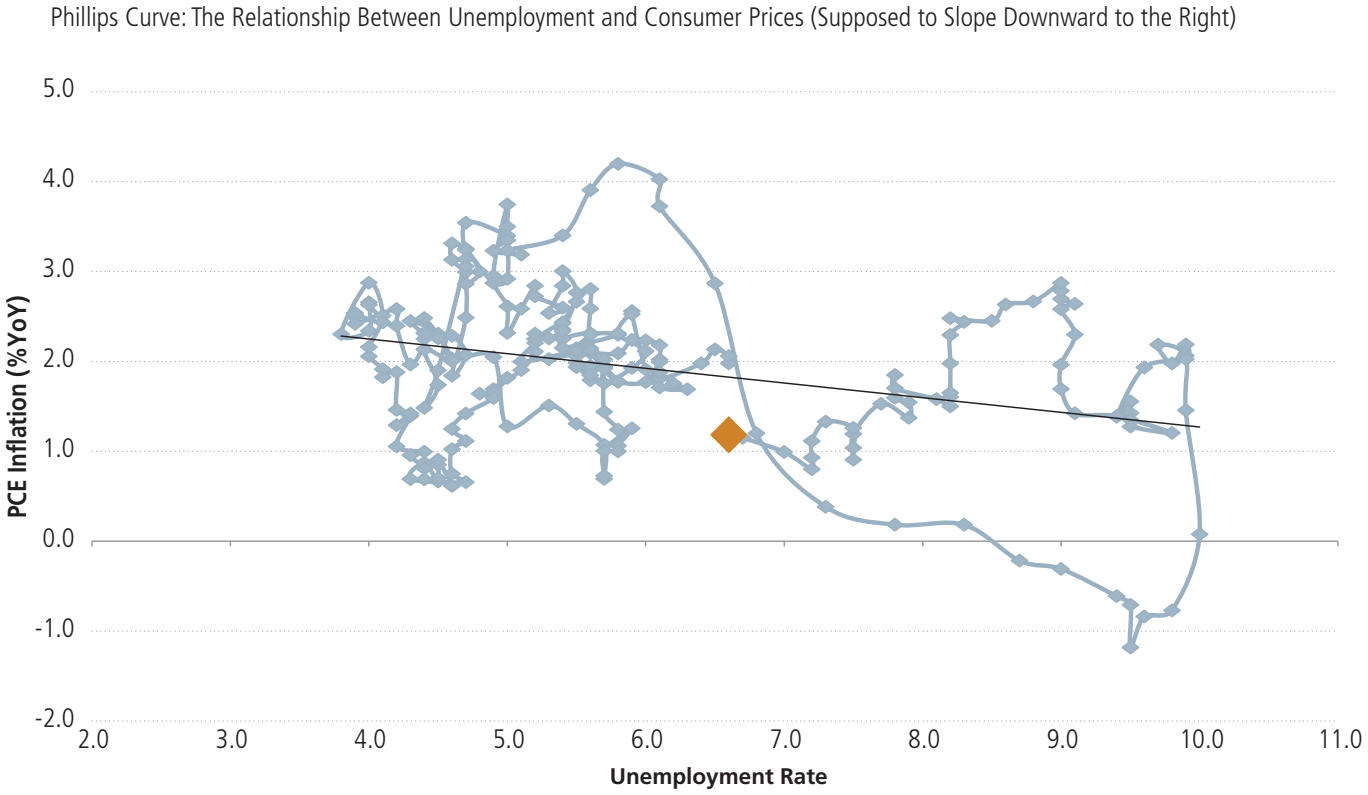
Notes:

Hal Varian. "Beyond Big Data." Working paper presented at the NABE Annual Meeting, September 10, 2013, San Francisco, CA.

Janet L. Yellen. "What the Federal Reserve Is Doing To Promote a Stronger Job Market." Remarks by Janet L. Yellen at the 2014 National Interagency Community Reinvestment Conference, Chicago, Illinois, March 31, 2014.

Gregory D. Hess and Mark F. Schweitzer. "Does Wage Inflation Cause Price Inflation?" Federal Reserve Bank of Cleveland. Policy Discussion Paper Number 10, April 2000.

THE "PHILLIPS CURVE": FLAT , IRRELEVANT OR BROKEN? UNEMPLOYMENT HAS FALLEN, BUT SO HAS INFLATION



The "Phillips Curve" is a representation of the relationship between unemployment and inflation (or "slack" in the economy and inflation. The problem: instead of a distinct relationship posited by theorists (e.g., higher unemployment = low inflation or more slack = low inflation), the curve is "flatter" or the relationship is weaker than previously thought.