

# Core beliefs

## **Economist Insights**

The headlines may be stoking up fears of deflation in the US, yet core inflation is accelerating rapidly. The Fed's mandate is inflation and unemployment, and both look on track to meet their targets. Why then is the market so sceptical about the Fed's projection of three to four rate hikes in 2016? Is it just growth fears and low oil prices?



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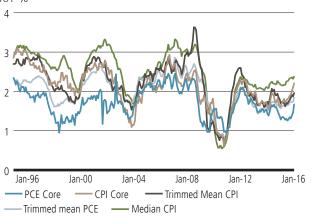
Amidst all the concerns about US growth and the risks from deflation, something rather surprising has been happening: core inflation in the US has been accelerating, and accelerating quite rapidly. This matters a lot. The Fed has a dual mandate, covering unemployment and inflation. This is a very different mandate from targeting growth and oil prices, yet the market seems to be behaving as if this is what the Fed mandate actually was.

Just to confuse everyone, there are two widely-used measures of core inflation in the US: one from the consumer price index (CPI) and one which is the deflator for personal consumption expenditures (PCE). The CPI is very familiar across countries, and core is calculated simply by removing the volatile energy and food components. The PCE deflator differs in a number of ways, but most importantly it takes into account month-to-month substitution effects as consumers buy less of products that have gone up in price. The differences mean that there is often a wedge between the two, with CPI core often being higher than PCE core.

The Fed prefers the PCE core measure, but at the moment it barely matters which you choose. Both have spiked up in recent months (chart 1). Some people might complain that stripping out food and energy is removing too many of the necessities of life. These components are removed because of their volatility (which is linked to their being necessities), but there are also other measures of underlying inflation that point the same way. The trimmed-mean PCE and CPI measures remove the most volatile elements (the top and bottom 8% of moves) whether that is food and energy or something else. The median CPI measures the movement of the price that is right in the middle of the distribution. These alternative measures all show an upward trend in underlying inflation as well.

#### Chart 1: The core of the matter

Measures of core inflation (ex-food and energy) or underlying inflation, YoY %



Source: BLS, BEA, Federal Reserve

The Fed's expectation for core PCE inflation by the end of this year is 1.6%, and the most recent number is already 1.7%. Their expectation for the unemployment rate is 4.7%, and it is already not far off at 4.9%. So the progress against the Fed's mandate looks pretty good, despite the market's reaction. In fact, they are not that far off the Fed's longer run expectations of 2% for core PCE and spot on their expectation for 4.9% for the unemployment rate.

If progress is already strong against the Fed's mandate, why is the market unwilling to accept that the Fed might hike rates in line with the Fed's projection of three to four more rate hikes this year? One reason could be that the market simply does not believe that core inflation is going to remain this high. There is no market for core PCE inflation, but there is a market for headline CPI inflation. The difference between nominal and inflation-linked bonds reveals market pricing of expected CPI inflation. But headline inflation includes that volatile energy and food component. There isn't much that we get from market pricing of food prices, but we can get an idea of market pricing of energy inflation from oil forwards. So by stripping that out the implied energy inflation (based on the difference between futures and prices one year earlier), we can get an approximation of implied CPI ex-energy (which will be close to core CPI).

Market pricing implies energy CPI falling almost 10% YoY until about August, but then it starts to move up towards zero before becoming positive next year (chart 2). The profile is noisy because of the base effects. Since market pricing for breakeven (headline) CPI is smooth, that means the implied profile for core CPI is very noisy as well. This noise itself is not important - what is important is the implication that CPI ex-energy is to fall from over 2% down to less than 1%, before finally stabilising next year at around 1.4%. This would be well below the Fed's target, especially since PCE tends to be below CPI.

#### Chart 2: Core disbelief

Implied market pricing of CPI inflation, YoY % at current YoY rate, % 2.5 15 10 2.0 5 1.5 0 1.0 -5 0.5 -10 0.0 -15 Jan-16 Apr-16 Jul-16 Oct-16 Jan-17 Apr-17 Jul-17 Oct-17 Implied CPI ex energy (lhs) Headline CPI based on breakevens (lhs) Energy CPI implied by futures (rhs)

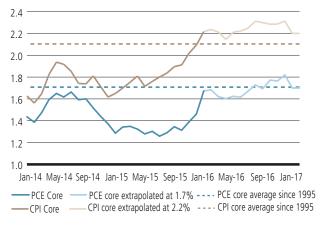
Source: Bloomberg Finance LP, UBS Asset Management

Is the market right, or is there a mis-pricing between the breakeven inflation markets and the energy markets (and hence perhaps an arbitrage opportunity)? There are good reasons to believe that rental inflation, which makes up the largest part of core inflation, is likely to continue rising as long as the labour market remains strong (see *Half Fed*, 21 December).

As irrational as it may seem, and as out of keeping with the efficient markets hypothesis, it sometimes looks like breakeven inflation markets are overly affected by oil price effects and suffer from base effect illusion. The base effects will kick in. For example, suppose that core PCE and core CPI inflation continue to grow at a monthly rate that when annualised is as fast as their most recent year-on-year reading. Both would see a YoY deceleration over the next few quarters as a higher base effect kicked in, but then pick up again (chart 3).

### Chart 3: Bumpy ride

Extrapolation of core PCE and CPI inflation YoY assuming monthly growth rate remains constant at current YoY rate, %



Source: BEA, BLS, UBS Asset Management

So there could easily be an illusion of slowing core inflation even if the monthly speed is just as fast. That could make the market reluctant to start pricing in more rate hikes until later in the year (unless the monthly speed increases). But the Fed, if they care about their mandate, may decide to take a more aggressive stance.

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