

GMV – Reverse-Engineering the Euro Zone NAIRU

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- In last week's **Global Macro Views** we flagged rising Euro zone deflation risk, ...
- because the weaker German outlook risks upsetting a delicate Euro zone balance, ...
- whereby higher German inflation has helped offset much lower periphery inflation.
- We today use Phillips curve estimations to dig further into low Euro zone inflation, ...
- where our estimates say the Euro zone could still be far away from full employment, ...
- with NAIRU perhaps far below consensus numbers, in line with our CANOO message.

We last week argued that Euro zone deflation risk is rising, because a weaker German outlook is upsetting a delicate balance in the Euro zone, whereby very low inflation on the periphery has been offset by higher inflation in Germany and its neighboring countries. Low inflation in the Euro zone is a persistent issue, one that is central to our [CANOO](#) campaign, which has emphasized still large amounts of slack as one reason why the ECB has struggled to [reflate](#) the currency union. We today expand on last week's piece, estimating a Phillips curve model for the Euro zone, building on the approach taken by the [ECB](#) this April. We estimate an augmented Phillips curve that links core inflation to the unemployment gap, a measure of labor market slack, controlling for oil price and exchange rate moves. We do this for the US and Euro zone, to highlight just how unique developments in the latter are. Our estimates suggest US NAIRU is just about right around 5 percent, while Euro zone NAIRU may be far below the 8 percent consensus. Euro zone labor market slack may therefore still be large, exacerbating deflation risk.

Exhibit 1. The US Phillips curve works well, ...

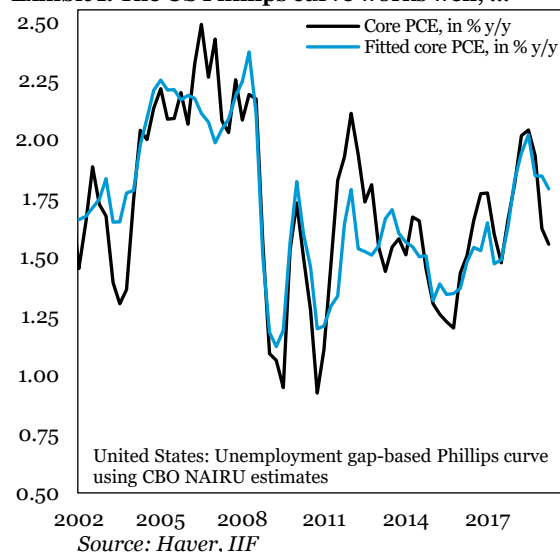
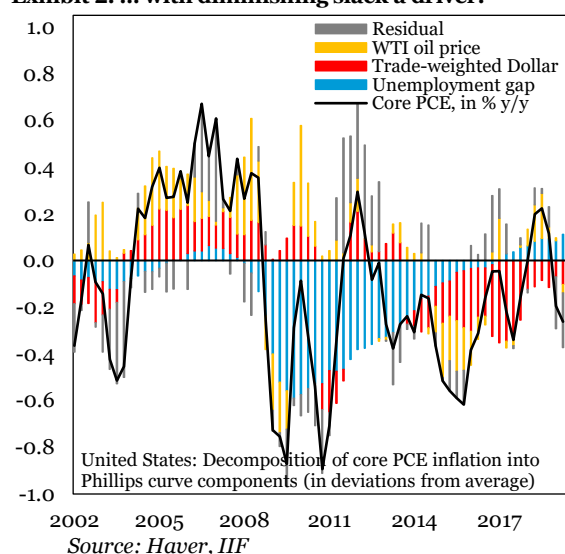
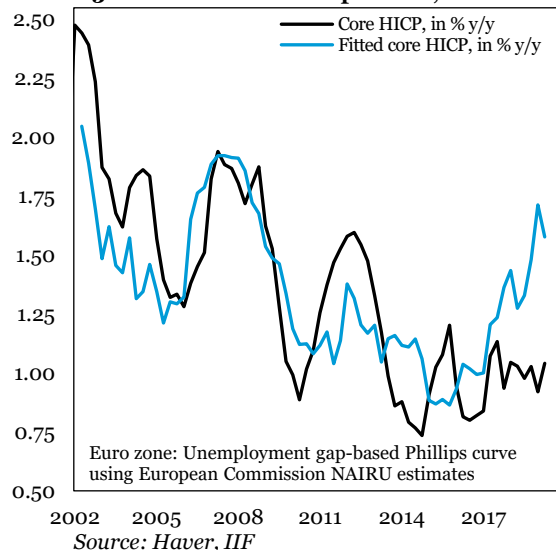
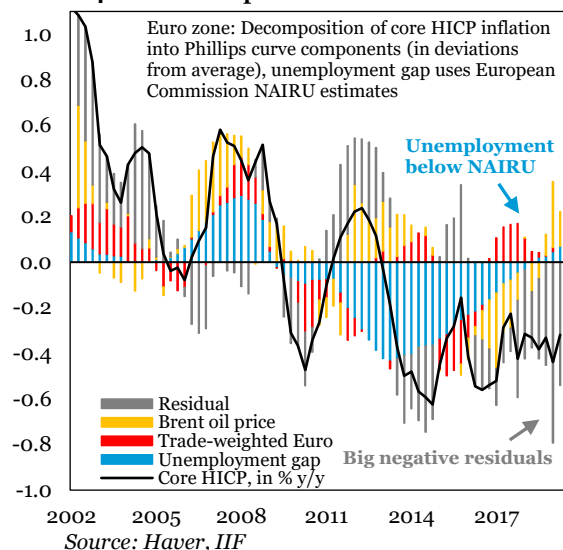


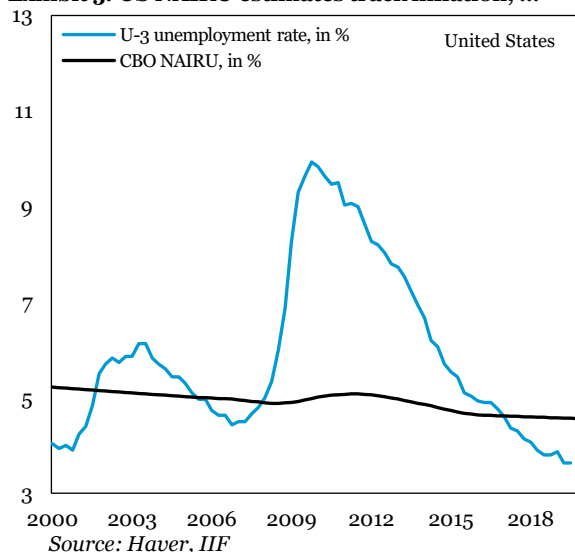
Exhibit 2. ... with diminishing slack a driver.



We estimate augmented Phillips curves for the US and Euro zone, using quarterly data from Q1 2000 to Q2 2019. Our specification links core inflation to unemployment gaps, controlling for moves in oil prices and exchange rates. For the United States, we use core PCE in year-over-year terms as our inflation metric and the CBO NAIRU estimate to calculate the unemployment gap, which is negative when unemployment falls below NAIRU. We use year-over-year changes in WTI oil prices and the broad, trade-weighted Dollar to control for commodity and currency moves. For the Euro zone, we use European Commission NAIRU estimates to calculate the unemployment gap and Brent oil prices plus the ECB's trade-weighted Euro as controls. Our US Phillips curve explains 75 percent of the variation in core inflation (Exhibit 1) and, more importantly, suggests a common-sense mapping into the various drivers (Exhibit 2). Most importantly, it says that gradually tightening labor markets – the 3.5 percent unemployment rate is well below the 4.6 NAIRU – have steadily contributed to rising core inflation (blue).

Exhibit 3. The Euro zone Phillips curve, ...**Exhibit 4. ... fails to explain low inflation.**

In contrast, our Euro zone Philips curve – much like ECB estimates earlier this year – predicts an inflation rise that failed to occur (Exhibit 3), even as the unemployment rate (7.4 percent) has fallen below NAIRU (7.9 percent). In the context of our model, this translates into rising negative residuals towards the end of the sample (Exhibit 4) and a deteriorating fit. If we use our unemployment gap coefficient to “close” these residuals, i.e. if we use the historical link between inflation and labor market slack to back out what NAIRU could be, it suggests a NAIRU that is 3 percentage points lower than the European Commission number, i.e. close to 5 percent. Our work suggests that the CBO NAIRU paints a relatively accurate picture of the US labor market, which may now be above full employment (Exhibit 5), while substantial slack may remain in the Euro zone (Exhibit 6), exacerbating deflation risk.

Exhibit 5. US NAIRU estimates track inflation, ...**Exhibit 6. ... while Euro zone ones do not.**