MACROECONOMIC ADVISERS
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Macro Focus

June 26, 2018

Eurozone "super core" inflation: Up, up, and away?

The European Central Bank's (ECB) recent announcement of an end to net asset purchases partly reflects increased confidence that core inflation in the eurozone is going to pick up. We look at one of the measures of underlying price pressures that the ECB will monitor closely, the "super core" inflation rate.

Key Findings

- We replicate the European Central Bank's (ECB) methodology in creating a measure of core inflation in the eurozone that only includes Harmonised Index of Consumer Prices (HICP) items that are sensitive to changes in the output gap.
- The items included in our "super core" index account for around 40% of the HICP and are heavily weighted towards service-sector prices.
- The dominance of services results in higher inflation rates than for alternative core measures, although the differential has narrowed compared with the period before the global financial crisis.
- "Super core" inflation has been picking up gradually since late 2016 and an acceleration is likely given the outlook for compensation, productivity, and unit labour cost growth.
- Potential base effects related to a surge in tourism-related prices in Southern Europe in mid-2017 are a source of uncertainty for the second half of this year.

What is "super core" inflation?

In September 2014, the ECB outlined the rationale behind the creation of a narrower gauge of underlying inflation pressure in the eurozone in its Monthly Bulletin. The starting point was the historically strong relationship between changes in the eurozone output gap and turning points in core HICP inflation.

The ECB conducted a line-by-line regression analysis of all HICP items against a quarterly interpolation of the European Commission's estimate of the output gap. It determined that only a relatively small sub-set of HICP items had a statistically significant, and positive, relationship with the output gap; combined, and with their weightings scaled up to 100%, they constitute the "super core" index. Food and energy prices are excluded as they are heavily influenced by external factors. So too are certain goods prices that display some sensitivity to domestic economic developments but which also tend to have a high import content, like computers and other electronic items. Some services prices, such as healthcare, can also be relatively insensitive to output gap developments.

The historical inflation rate derived from the ECB's subgroup of HICP items had a correlation of 0.9 with the Commission's output gap, with the latter lagged by four quarters.

Why have we created our own index?

The ECB does not publish time series for its "super core" index or the inflation rate derived from it, nor has it published a list of the items included in the index. Occasionally, ECB officials make references to the "super core" rate and include it in their presentations, typically in a comparison with alternative measures of core inflation.

Still, by replicating the ECB's methodology, we have created our own "super core" index, the inflation rate

**We are pleased to provide this guest commentary authored by Ken Wattret, Chief European Economist, IHS Markit economics.*

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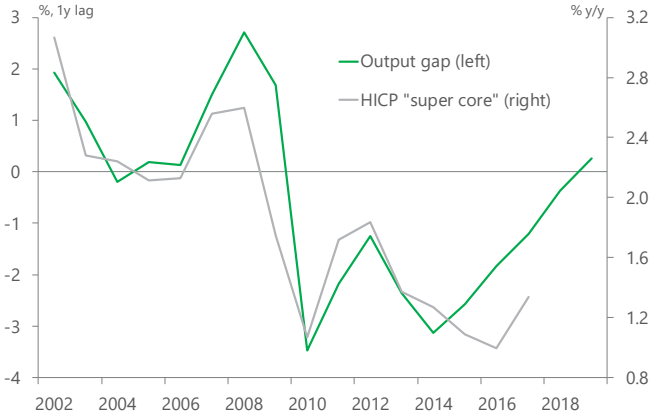
Chart 1: Eurozone output gap and "super core" inflation



Source: Eurostat, European Commission, IHS Markit

for which ought to be similar to the ECB's version. This allows us to gauge how it is evolving and the potential implications for monetary policy. We will update our "super core" measure following each monthly final HICP print from Eurostat.

For consistency reasons, we have also used the Commission's output gap estimates, interpolated on a quarterly basis (but we are also able to generate alternative "super core" measures based on our own in-house estimates of the output gap). Our version also has a high positive correlation with the output gap, which peaks when the latter is lagged by four quarters (see Chart 1).

How is it calculated?

In its September 2014 analysis, the ECB did not reveal which of the 72 items of the HICP excluding energy and food had been incorporated within its "super core" index or the split between services (39 of the 72 items in total) and non-energy industrial goods (the remaining 33). Subsequent comments by ECB officials on the issue have suggested that the number of items included has declined over time, implying that core eurozone inflation has become less domestically driven.

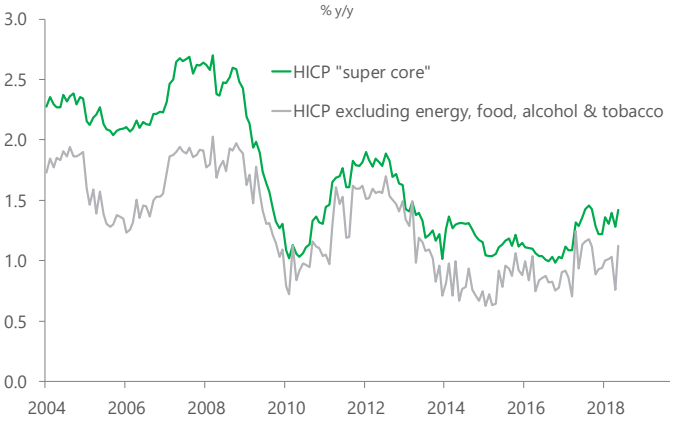
In our "super core" index, we include 33 of the 72 items. They account for a little over 42% of the total HICP weightings and around 60% of the HICP excluding energy and food prices. The split between services and core goods is about 75% to 25%, respectively. This compares with an equivalent split of 63% to 37% for Eurostat's HICP excluding energy, food, and alcohol and tobacco. One would expect a strong bias towards services prices as they tend to be more sensitive to domestic economic developments (and hence the output gap), with labour costs typically a more important determinant of prices of services than goods.

How important is the split between services and goods?

Our in-house "super core" inflation rate has historically been higher than the more familiar Eurostat core measure referenced above (see Chart 2). The relatively high weighting of services prices is a key reason for the positive differential, with services inflation typically running much higher than core goods inflation since the euro's inception (see Chart 3).

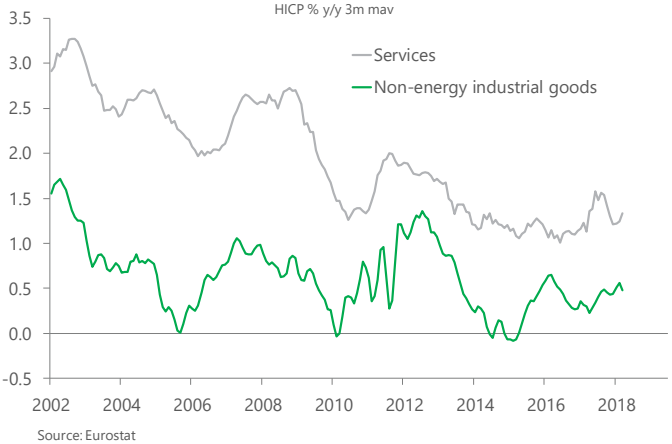
The differential was particularly elevated in the period before the global financial crisis, peaking at almost one

Chart 2: Alternative measures of core Eurozone inflation



Source: Eurostat, IHS Markit

Chart 3: Breakdown of core Eurozone inflation



Source: Eurostat

percentage point, due in part to the disinflationary effects on global goods prices of new, lower-cost producers like China. Although a positive differential is still evident, it is much smaller currently, at around 0.3 percentage point.

Why is "super core" inflation less volatile?

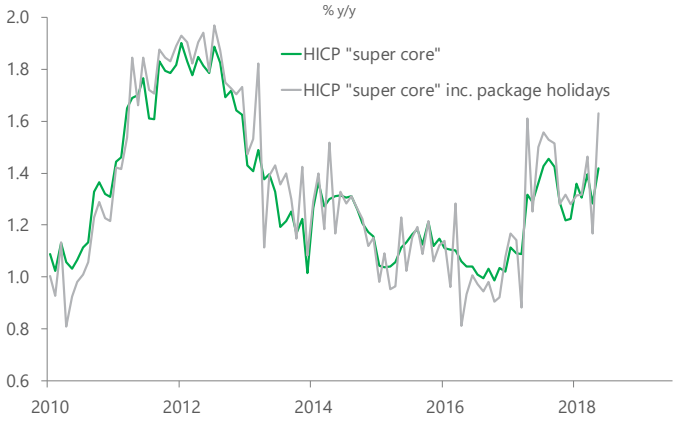
One of the advantages of the "super core" inflation rate is that it is less susceptible to swings in the more volatile HICP items, which can distort traditional measures of core HICP inflation at certain times of the year: during the spring, for example, when prices can be aggressively discounted ahead of new products being introduced, followed swiftly by sizeable price rises after their introduction, with the timing of Easter a regular distortion. Monitoring the "super core" rate can therefore help in identifying turning points and trends.

As Chart 2 illustrates, Eurostat's measure of core inflation excluding energy, food, alcohol, and tobacco was exceptionally volatile this spring and last because of the timing of Easter. If we were to include package holiday prices in our "super core" index, the volatility of the inflation rate would increase markedly (see Chart 4).

Will "super core" inflation continue to rise?

HICP data for May showed the "super core" inflation rate rising to a little over 1.4%, its highest level for eight months. It has been trending upwards since late 2016, albeit at a relatively gradual pace, having bottomed out marginally below 1% in October that year.

Chart 4: Package holiday prices create huge volatility



Source: Eurostat, IHS Markit

The pick-up in the "super core" rate has been less pronounced and arrived somewhat later than one would typically have expected based on past relationships with the output gap, as Chart 1 highlights. There are various explanations for this, including a flattening of Phillips curves in the eurozone's member states due to a range of factors including increased globalisation, labour market reforms, and subdued inflation expectations.

The IMF's post-crisis analysis of the effect on inflation in developed economies of large, persistent output gaps is also relevant. The IMF defines "large" as an output gap of more than 1.5% of potential GDP and persistent for at least eight consecutive quarters. The eurozone surpassed both criteria by a considerable margin from 2010 onwards.

The IMF's analysis suggests that following a relatively mild recession, an economy's subsequent return to an above-potential growth rate can lead to "speed limit effects", pushing up pay growth and underlying inflation. However, following large, persistent output gap episodes, such effects typically do not materialise. Rather, core inflation rates only pick up significantly once output gaps have turned positive, which happens much later.

In the case of the eurozone, the economy returned to above-potential growth rates back in 2014 but the output gap is only expected to turn positive this year. Of course, there are some drawbacks with output gap analysis. Estimating potential growth is far from straightforward, particularly in the eurozone given the huge variations across member-state economies and structural changes in the aftermath of the crises from 2008 onwards. On the flip side, however, the view of many that structural changes to the global economy have led to permanently flatter Phillips curves might also be challenged. Such relationships could be nonlinear, with pay growth rising more quickly once spare capacity has been absorbed, particularly if headline inflation rates are persistently higher as a result of commodity price increases.

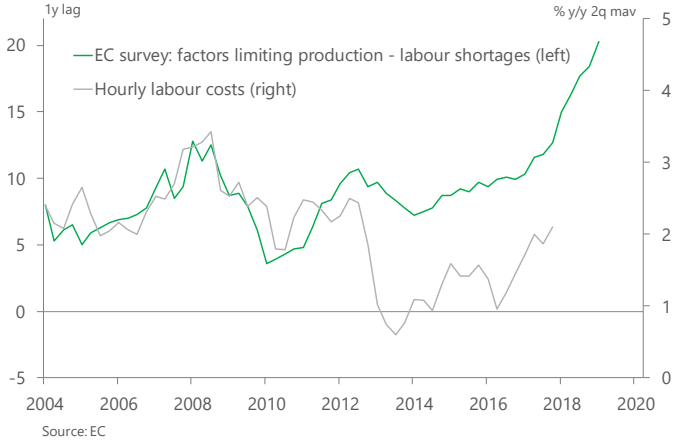
What about cost pressures?

We believe that a pick-up in core inflation is likely in the eurozone, given the prospect of rising unit labour cost growth. Upward momentum is increasingly evident across a range of measures of pay growth, albeit from low levels. In the eurozone service sector, for example, labour cost growth has been accelerating since 2016 and the unusually pronounced shortages of labour captured in survey data suggest that this upward trend will continue (see Chart 5). The picture is similar in the industrial sector data. Germany is predominantly behind this shift upwards and indicators of labour shortages there have surged to record highs across all key sectors. But in other member states too, labour shortages are also becoming more apparent.

The combination of higher compensation growth – standing at 1.9% year on year (y/y) in the first quarter of 2018, versus a low of 1.1% y/y in the second quarter of 2016 – and weaker economic growth dampening productivity (1.1% y/y in the first quarter of 2018, versus a cycle peak of 1.3% a quarter earlier) has already led to some acceleration in unit labour cost growth. Having been flat at 0.5% y/y in the fourth quarter of 2017, it picked up to 0.8% y/y in the first quarter of 2018. Although this is still a relatively low rate of increase compared with past expansions, both factors highlighted above will continue to lean upwards.

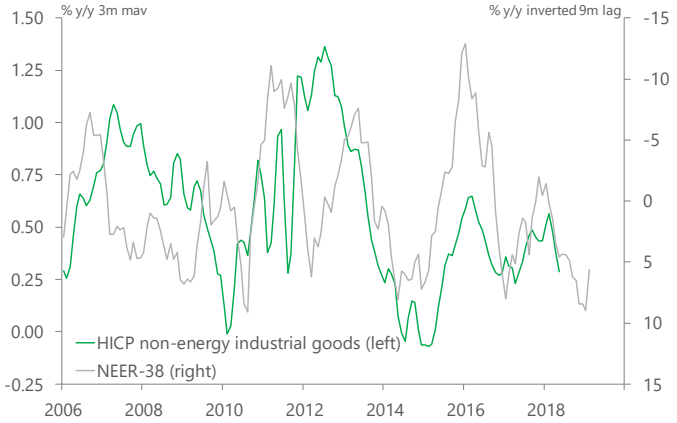
This is already factored into the ECB's staff projections, which were updated in June. They assume that unit labour cost growth will come in at 1.5% y/y this year on average, before accelerating to 1.8% y/y in 2020. The

Chart 5: Eurozone labour shortages and costs (service sector)



Source: EC

Chart 6: Euro dampens Eurozone core goods inflation



Source: Eurostat, ECB

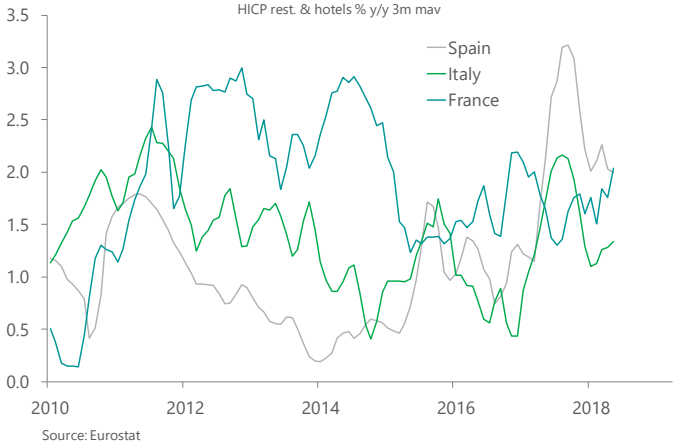
projection for 2020 looks a little ambitious in our view, but an acceleration in unit labour cost growth to around 1.5% is feasible later this year and into next given the moderation of economic growth we expect, and the impact on productivity, coupled with the lagged passthrough of tighter labour market conditions into compensation growth.

In turn, higher unit labour cost growth will feed through into higher prices, particularly for services. Given the relatively high weighting of services, "super core" inflation ought to pick up more quickly than traditional measures of core inflation. Low rates of core goods inflation, reflecting the lagged effects of prior currency appreciation (see Chart 6), will continue to dampen the latter. What the ECB really wants to see is evidence that the absorption of slack is passing through into domestically driven inflation, and the "super core" rate will be a key gauge in this regard.

What led to the "hump" in services inflation in mid-2017?

Although we believe that the upward trend in services inflation will become increasingly apparent, base effects could complicate developments over the coming months. This is because the HICP inflation rates for tourism-related services such as restaurants and hotels shot up in Southern Europe during mid-2017 (see Chart 7). This effect is captured in the short-lived "hump" in the "super core" and services inflation rates in mid-2017, shown in Charts 2 and 3.

Chart 7: Eurozone services inflation boost in summer 2017



Source: Eurostat

Unless last summer's price rises are repeated, y/y inflation rates in the sectors affected will decelerate sharply in the corresponding period of this year (with the period from June to August particularly important).

Whether last summer's price increases represent a change in the pattern of pricing behaviour that will persist, or whether they were a one-off catch-up due to a temporary surge in demand, is difficult to ascertain. The magnitude of the acceleration in Spain would seem to support the latter explanation. So too the weakness in the French services data over the same period, which might be indicative of a substitution effect as tourists opted to go elsewhere, perhaps due to security concerns. That said, as Chart 7 shows, the y/y inflation rates for tourism-related services subsequently fell back relatively swiftly during the later part of the year, so it could still reflect a shift in the pattern of price changes.

This will be a key area of the HICP breakdown to monitor in the immediate period ahead. Still, the medium-term prospects for underlying inflation will be much more important to the monetary policy outlook and the evolution of the "super core" inflation rate will have a key role to play in the ECB's assessment.

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