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The Changing Dynamics of Eurozone Inflation

Since its inception, successive presidents of the European Central Bank (ECB) have used its Governing Council press conferences to remind fiscal partners of their responsibility to implement structural reforms. Although it is typically not the role of an independent central bank to advise the legislature on how to run government, synergies are to be had when fiscal, structural and monetary policies complement each other.

Before the outbreak of the European sovereign debt crisis, most eurozone governments were reluctant to reform. It took the loss of market access for Greece, Ireland and Portugal, which were provided bridging loans by official sector creditors conditional on implementing structural reforms, to change that. And the threat of losing market access also prompted Spain and Italy to take fiscal and structural reforms seriously.

Reforms to these countries' labour and product markets lowered nominal rigidities, while fiscal belt-tightening slowed economic growth. Paradoxically, this combination – less price-setting friction in labour and product markets and fiscal prudence – is making the ECB's job of achieving its inflation target more challenging. That is because, intuitively, more efficient markets and greater economic slack lower inflationary pressure.

Changes to the underlying structure of labour and product markets, and therefore how prices in these markets clear, are arguably key reasons why actual inflation in the eurozone has consistently undershot the ECB's forecast inflation in recent years. Econometricians call it a structural break in the data-generating process.

The workhorse model for forecasting inflation is the neo-Keynesian Phillips curve, which shows a historical inverse relationship between unemployment and inflation. The model specifies inflation as a function of inflation persistence, economic slack, inflation expectations and external price shocks: Past measures of inflation are used to capture inflation persistence; economic slack can be measured by the unemployment rate or output gap; inflation expectations can include market-based measures derived from inflation-linked securities or survey measures of expected inflation; and external price shocks might include commodity prices or the external value of the currency.

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More recently, lower commodity prices, particularly oil, and the past appreciation of the euro are two reasons why inflation has declined of late. While the relationship between inflation and oil or the euro has remained stable, this has probably not been the case with economic slack.

Europe's sovereign debt crisis and its governments' responses to it have changed the relationship between inflation and economic slack in a way that, in our view, is probably leading to inflation undershooting its forecasts. When looking to the future, therefore, this changing linkage means we need to treat inflation forecasts with caution.

To see why, we look at the relationship between inflation and its explanatory variables in the period from 1996 to 2008 before the outbreak of the global financial crisis and the period thereafter.

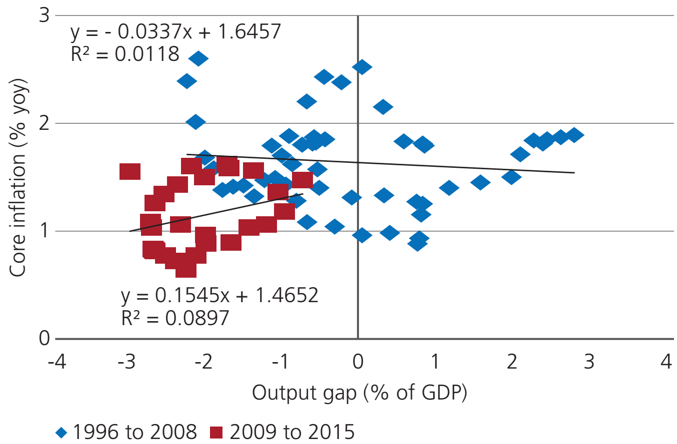
Economic slack

We can observe the changed relationship between inflation and economic slack in Figure 1, which measures the output gap on the horizontal axis and core consumer price inflation on the vertical axis. From 1996 to 2008, there was little relationship between the output gap, which measures the difference between actual and potential economic growth, and inflation. When actual growth is less than potential growth, the output gap is said to be negative and there is spare capacity in the economy. But that bore little relation to the rate of inflation back then.

Since 2009, however, this relationship has changed. A negative output gap is now associated with lower inflation. This increased sensitivity likely reflects both the scale of slack in the economy and possibly the structural reforms that have lowered frictions in setting prices of goods and services, such as labour.

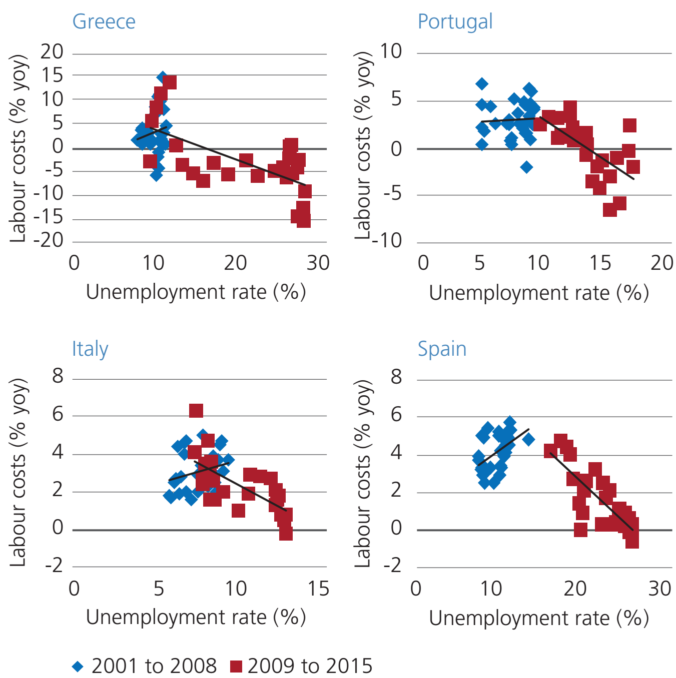
The same structural break can be observed in the slope of the Phillips curve. The slopes for Greece, Italy, Portugal and Spain until 2008 were mostly positive (meaning higher unemployment went hand-in-hand with higher inflation!) or they were flat, indicating the rate of unemployment bore little relationship to inflation, measured in Figure 2 by labour costs. Since 2009, however, unemployment has risen, the slopes of the Phillips curves for these countries have turned negative and they have become steeper. Higher unemployment now goes hand-in-hand with lower wage inflation.

FIGURE 1: EUROZONE OUTPUT GAP AND CORE CONSUMER PRICE INFLATION



Source: International Monetary Fund, Eurostat, PIMCO as of September 2015

FIGURE 2: LABOUR COST PHILLIPS CURVES: HIGHER UNEMPLOYMENT, LOWER INFLATION SINCE 2009



Source: Eurostat, PIMCO as of September 2015

The benefit of less nominal rigidity in an economy is that it elevates the role of the Phillips curve as the linchpin between monetary policy and inflation. A more sensitive relationship between inflation and economic slack and less friction in the price-setting process does two things:

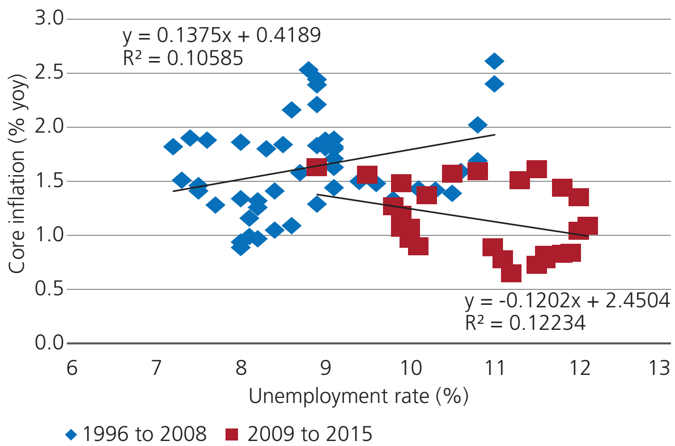
1) It lowers the amount by which unemployment needs to rise (or fall) to achieve a decline (or rise) in inflation.

2) It lowers the rate of unemployment below which wage pressures start to rise, otherwise known as the non-accelerating inflation rate of unemployment (or NAIRU).

That is the good news. While recent labour market reforms suggest that NAIRU might have fallen, the bad news is that we can observe neither NAIRU nor the output gap in real time. While we can only estimate these concepts in real time, we can observe that the eurozone's unemployment rate is 11%, labour costs are growing by 2%, core inflation is 0.9% and headline inflation is -0.1% (Eurostat, as of October 2015). High unemployment and low rates of wage and consumer price inflation support the lower NAIRU argument and suggest the negative output gap is large.

Together, they point to little inflationary pressure in the eurozone and suggest unemployment would have to fall a lot before wage and consumer price inflation emerge. We can observe the same structural break in the core inflation Phillips curve for the eurozone (see Figure 3), which measures unemployment on the horizontal axis and consumer price inflation (excluding energy and food) on the vertical axis. At present, the ECB assumes unemployment will fall to 10.1% by 2017 and, conditional on that plus other assumptions about the euro and commodity prices, it projects inflation will rise to 1.7% by 2017.

FIGURE 3: EUROZONE CORE INFLATION PHILLIPS CURVE



Source: Eurostat, PIMCO as of September 2015

We think this forecast is too optimistic. Looking at the period since 2009, the negatively sloped Phillips curve (even steeper in Southern Europe), the likelihood that NAIRU has fallen and the initial conditions of high unemployment and low inflation, all cast doubt on achieving 1.7% inflation by 2017.

Based on the Phillips curve relationship as shown in Figure 3, unemployment might have to fall closer to 8% to get inflation up to 1.7%, a point I raised in my 16 October blog post, "Searching for Inflation." Alternatively, if unemployment turned out to be 10% in 2017 as the ECB assumes, the Phillips curve relationship suggests inflation might be lower, somewhere in the range of 1% to 1.5%.

Lower inflation forecasts, more monetary easing

In our view, the ECB's current monetary easing will likely need to become more stimulative to move inflation closer to its operational target. We share the Governing Council's concerns that, as it noted in September, there are "downside risks" to the current Eurosystem staff inflation projections. That said, we think the Governing Council will further revise down the current 2017 inflation forecast toward 1.5% at its upcoming December meeting.

Eurozone inflation has been below the ECB's target since 2013 and continues to decline. Were the ECB to forecast two more years (2016 and 2017) of below-target inflation, it would risk entrenching inflation expectations too far below target, like in Japan. To avoid such a scenario, we believe the ECB will need to show inflation returning to target and to be credible in achieving that forecast, it would have to be fortified by additional stimulus.

We think the Governing Council will likely announce additional stimulus at its 3 December 2015 meeting and that this will take the form of increasing the quantity of monthly bond purchases from the current €60 billion to about €70 billion–€80 billion per month. The longer the ECB delays implementing additional easing, the more likely it will also have to extend purchasing assets beyond its current self-imposed end date of September 2016.

ECB President Mario Draghi indicated the Governing Council discussed the possibility of cutting the Deposit Facility interest rate, currently -0.2%, at its meeting this month. Because asset purchases exogenously raise the quantity of base money and eurozone banks – as well as some non-bank financial institutions – ultimately have no choice but to hold base money or its substitutes – we think it makes little sense for the ECB to simultaneously tax excess reserves with negative rates.

We think much of the demand for base money and substitutes is price in-elastic, owing, for example, to regulation. So cutting policy rates below -0.2% might not achieve the desired increase in the velocity of base money and could raise the risk of the money market dis-functioning. If the ECB lowers rates further, we think a small token cut would make sense, for example, by cutting all policy rates by five basis points so that the Main Refinancing is 0% and the Deposit Facility and Marginal Lending Facility rates are symmetrical around that at -0.25% and 0.25%, respectively.

The changing dynamics of inflation in the eurozone and the ECB's response to it are set to keep the yield curve low and steep. Excess liquidity will be supportive of higher-yielding corporate and peripheral government bonds and stocks, and it will temper the structural support to the euro provided by the eurozone's €300 billion annual current account surplus.

While monetary stimulus is necessary for the eurozone to avoid experiencing Japan's lowflation, it is a blunt tool and probably not sufficient. In our view, it would help if President Draghi's fiscal partners would do more than just listen to the central bank's advice on how to sustainably boost long-term growth.

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