FOCUS · Beyond the unemployment rate

In 1958, economist William Phillips published the article that gave birth to the eponymous Phillips curve, the graphical representation of the inverse relationship between unemployment and inflation. However, while the euro area's unemployment rate has fallen sharply in the post-crisis years, this has not been accompanied by a significant upturn in inflation. Indeed, the curve seems to have flattened out (see the first chart). This Focus shows that one of the key factors behind the flattenning of the curve is that there is more slack in the labour market than as suggested by the unemployment rate.

The degree of slack can be measured in terms of the intensive and extensive margins. A company needing to increase capacity can act on the extensive margin, for instance by hiring a new employee. It can also act on the intensive margin, by offering its existing staff additional hours, thereby saving itself the costly process of recruitment. As a measure, the unemployment rate only relates to the extensive margin. To assess the degree of labour market slack taking both margins into account, the unemployment rate can be modified to create a new indicator, the underemployment rate. This is defined as the sum of the number of unemployed and part-time workers who would prefer to work longer hours out of the total labour force. As we can see from the second chart, the gap between euro area underemployment and unemployment rates has widened considerably in recent years.

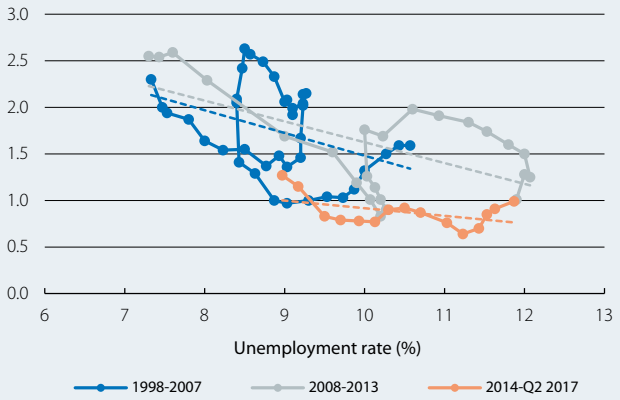
We can therefore generate another Phillips curve based on this new indicator. The third chart shows how the curve shifts to the right when the underemployment rate is used. Moreover, this shift increases for data from 2008 onwards. It can also be seen that, although there has been an erosion of labour market slack since 2014, it has yet to reach its pre-crisis levels. According to the new metric, it therefore seems too early to judge whether the curve has actually flattened out.

Finally, the participation rate is another key factor in analysing the labour market's degree of slack. The distinction between economically active and inactive people is often more blurred than may first appear in the official treatment of inactive people regarding the unemployment figure, when they are overlooked entirely. Like the unemployed, the economically inactive also exert a downward pressure on wage growth and therefore inflation.[1] This is because many of them may be willing to re-enter the labour market. This seems to have been the case for the euro area. While the participation rate among the working-age population already showed an upward trend in the years prior to the crisis, partly due to structural factors such as a later retirement age and the rise in female participation, the good job prospects in recent years have helped to maintain this trend.[2]

1. Blanchflower, D. G. and Posen, A. S. (2014), «Wages and Labor Market Slack: Making the Dual Mandate Operational», PIIE Working Paper.
2. The euro area participation rate increased by 2 pp between 2007 and Q2 2017, the equivalent of approximately 4.3 million people.

Phillips curve

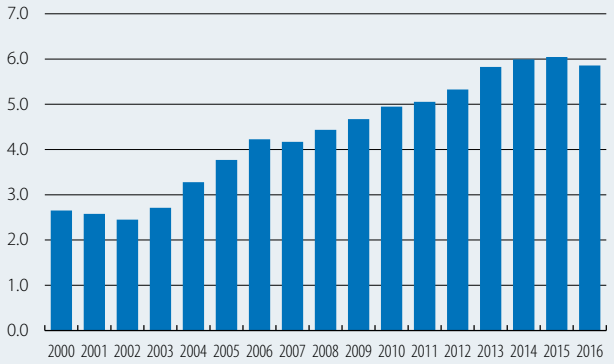
Core inflation (%)



Note: *The dotted lines represent the trend for the respective data set.*
Source: *CaixaBank Research, based on data from Eurostat.*

Underemployment

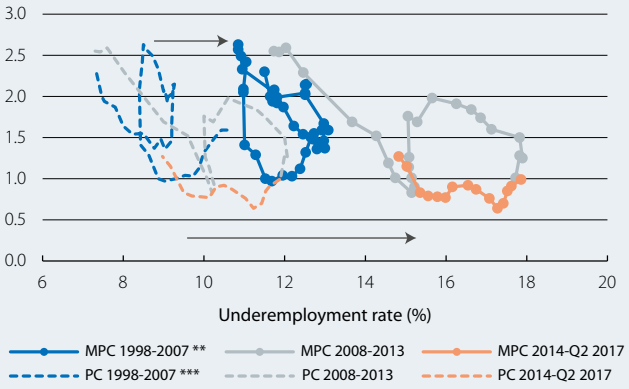
Difference compared with the unemployment rate (pp)



Note: *The underemployment rate is defined as the sum of the number of unemployed and part-time workers who would like to work longer hours out of the labour force.*
Source: *CaixaBank Research, based on data from Eurostat.*

Modified Phillips curve *

Core inflation (%)



Notes: ** The underemployment rate for the period Q1 1998-Q4 1999 has been calculated using the difference between the underemployment and unemployment rates in 2000. The underemployment rate between Q1 2017 and Q2 2017 uses the difference in 2016. ** MPC denotes the modified Phillips curve, which uses the underemployment rate to measure labour market saturation. *** PC denotes the Phillips curve, which uses the unemployment rate to measure labour market saturation.*
Source: *CaixaBank Research, based on data from Eurostat.*