Analysis

Frequency of rising and falling prices in the euro area

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Euro area inflation accelerated notably in December 2016 and January 2017. This mainly reflected price increases caused by constraints in the supply of energy products and unprocessed food. In fact, the development of core inflation, excluding these items, still remained subdued. In addition, the rate of change in the prices of goods and services included in core inflation has remained slow. Sluggish core inflation and the rigidity of relative prices included therein suggest that euro area inflation is not picking up so as to exceed the price stability objective.



The elasticity of relative prices constitutes a key element of the dynamics of the economy. In an environment of low inflation, this is manifested in a decline in some nominal prices. If there is no downward elasticity in nominal prices, relative prices will become sticky and the functioning of the price mechanism will weaken. The euro area inflation target of almost 2%[1] leaves scope for

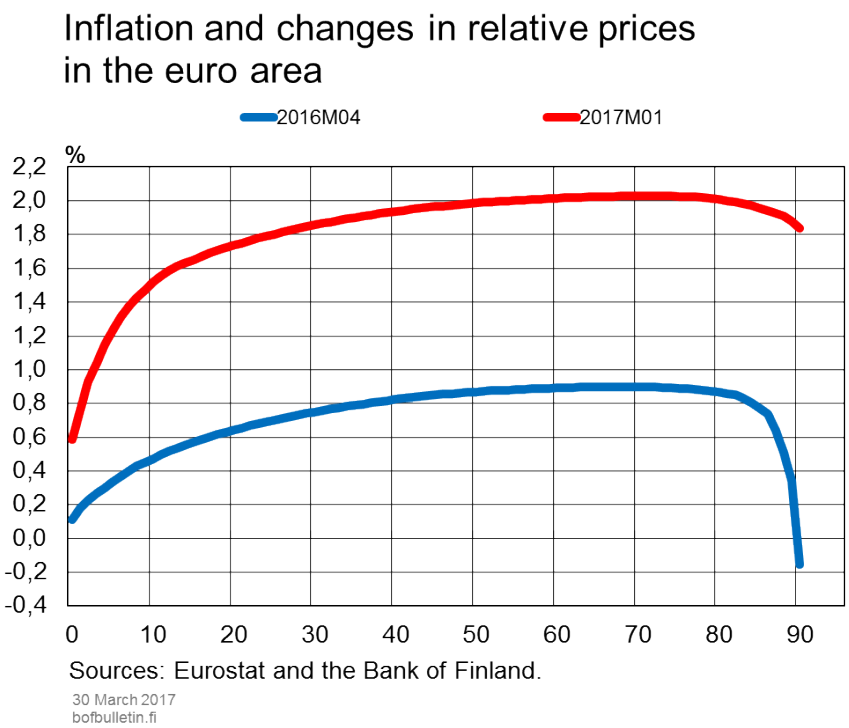
moderate changes in relative prices without any need for major declines in nominal prices.

In order to calibrate the appropriate monetary policy response, it is important to be able to assess how the causes of current and expected inflation are broken down into supply and demand factors. Factors relating to aggregate demand have an impact on the general price level or the rate of change therein. For example, fiscal and/or monetary accommodation boosts aggregate demand, which leads to a rise in the general price level, i.e. higher inflation.

Supply factors, in turn, are basically translated into changes in relative prices. A contraction in oil supply, for example, raises the price of oil, thus triggering a pick-up in inflation. The significance of such accelerating inflation stemming from a change in relative prices depends materially on whether it will lead to second-round effects via higher pay demands. In practice, supply and demand shocks affect each other, and it may be hard to distinguish between them in real time.

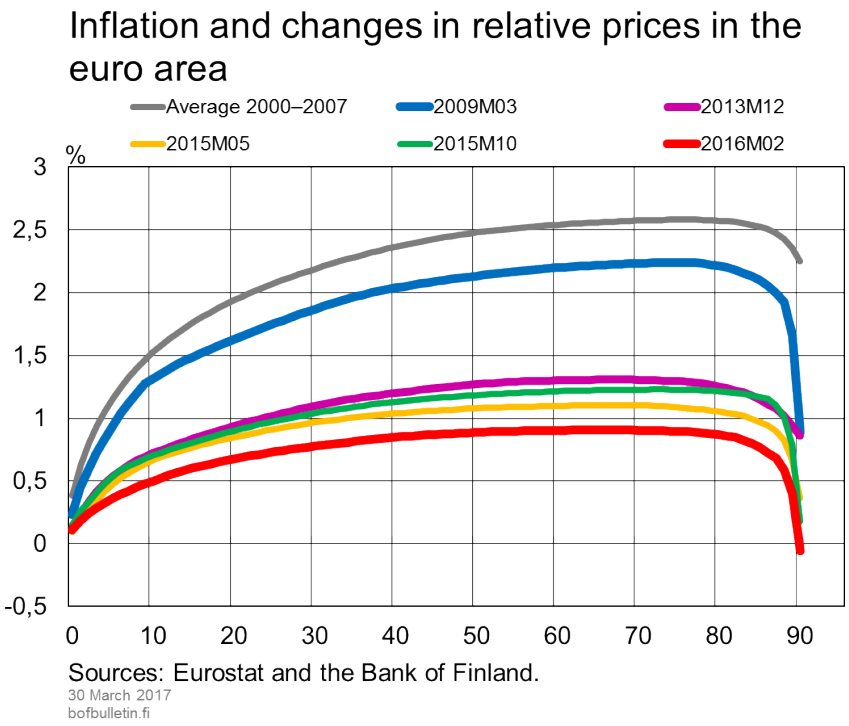
Low inflation does not automatically mean that relative prices are sticky. The same inflation rate may mask very different trends in relative prices. Euro area inflation at the initial stage of the financial crisis in March 2009 was broadly the same as at the turn of 2013–2014 (Chart 1). Despite this, differences in the rate of change in relative prices were very large. In March 2009, rising prices made a large contribution to inflation, and the slowing of inflation was due to declines in only some prices (mainly for energy products). In December 2013, the contribution of rising prices had diminished, and the frequency of declining prices was high. The functioning of the price mechanism had apparently weakened (Chart 1).[2]

Chart 1.



An examination of recent euro area inflation and changes in relative prices, i.e. during the course of 2016 and early 2017 (Chart 2), reveals that, along with accelerating inflation, the proportion of rising prices and their contributions have grown between April 2016 and January 2017. Meanwhile, the proportion and contributions of falling prices have diminished considerably.

Chart 2.



As late as April 2016, the contribution of rising prices to inflation was in the region of 0.9 of a percentage point (the peak of the curve), and at the same time declining prices and their contributions were considerable (the falling part of the curve). In January 2017, the contribution of rising prices had increased to about 2.0 percentage points, while the proportion and contribution of falling prices had contracted markedly.

The difference between these two points in time is largely accounted for by the price increase in January 2017 resulting from constraints in the supply of energy products and unprocessed food: in the case of energy products by oil producers' willingness to regulate output volumes, and in the case of unprocessed food by weather conditions restricting agricultural and horticultural production.

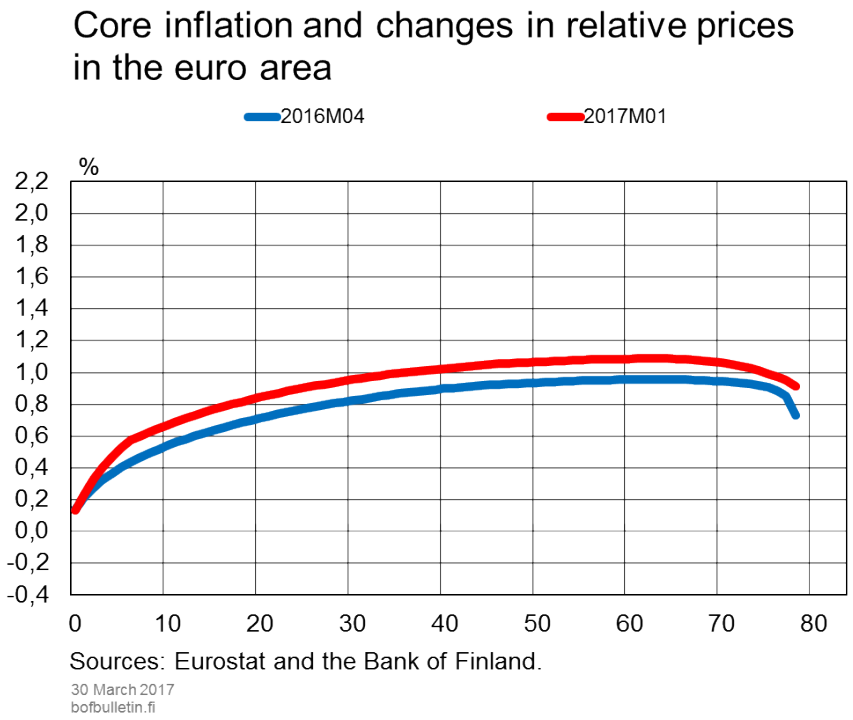
Core inflation (Harmonised Index of Consumer Prices, HICP excl. energy and unprocessed food), however, continued its very subdued trend in December and January. In addition, the rate of change in the relative prices of goods and services included in core inflation has remained slow.

The proportion and inflation contributions of rising prices remained almost unchanged in 2016 and in January 2017 (Chart 3). In April 2016, the contribution of rising prices was about 1.0 percentage point and in January 2017 about 1.1 percentage points. The proportion and contributions of falling prices also remained practically unchanged. In April 2016, their

contribution to inflation was about -0.2 of a percentage point and in January 2017 also about -0.2 of a percentage point.

Sluggish core inflation and the rigidity of relative prices suggest that euro area inflation is not picking up so as to exceed the objective for an extended period of time.

Chart 3.



Notes

1. The Eurosystem aims at annual inflation, measured in terms of the Harmonised Index of Consumer Prices, of below, but close to, 2%. ↑
2. The curves presented in the chart include information on changes in the prices of 91 goods in the consumer price index during the past 12 months and the weights assigned to these goods. Each curve was obtained by placing the contributions to inflation (= the product of price change and weight) of individual goods in order of magnitude and calculating from these a cumulative sum. In other words, the component whose price change makes the largest positive contribution to the rise in the price index is placed first on the left. To this is added the second largest positive contribution. This will be continued until the area of declining prices is reached. At first, the component having the smallest downward impact on the rise of the price index is added to the cumulative sum. This will be continued until, finally, the largest negative contribution is added to the sum. The cumulative sum of contributions thus organised will end up with a figure that equals the rate of change of the total consumer price index. With the contributions of the components of the consumer ↑

price index thus placed in order of magnitude and their cumulative sum calculated, we can draw a curve that simultaneously provides both an overall picture of the frequency of rising and falling prices and the rate of change in the total price index.

Keywords

change in relative prices, inflation, price stability