

# Focus on Economics

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## Is it really just the oil price? Some general observations on inflation in the euro area

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The very low inflation rates in the euro area are being attributed primarily to the fallen oil price. Although this is correct, it is not the full story. A trend of falling inflation rates has been evident of late, even after discounting the decline in energy prices. When inflation rates are too low, intervention by central banks, including the ECB, is generally necessary because too low inflation rates or even deflation are just as problematic for the overall economy as too high inflation rates.

In recent years, inflation has been influenced much more strongly by its fundamental determinants than by energy prices. The disastrous job market development and sluggish aggregate economic demand in the euro area have been the main factors. Inflation rates will not pick up again until relevant improvements are visible. There are early indications that this is occurring.

Securing price stability is a prominent function of economic policy in many economies. Across the globe, this is very often the sole or primary objective of central banks, including the ECB. It sends out a very strong signal because after all no other economic-policy objectives, such as ensuring full employment or the external equilibrium, are entrusted to separate institutions.<sup>1</sup> But why is price stability so important to an economy?

### Inflation creates costs, but so does deflation

Most people easily understand the costs of inflation, that is, the declining value of money over time. Purchasing power erodes, making it increasingly less at-

tractive to keep cash and non-interest-bearing deposits, even though these are indispensable for everyday payment transactions. Economic distortions, such as decreases in the signalling and guiding function of prices in markets, also represent costs that arise from inflation. An economy loses strength and its growth slows down under such conditions. Furthermore, unexpected inflation leads to redistribution, with debtors being the main winners and creditors the losers. The higher the rate of inflation, the higher all these costs. The costs of monetary depreciation come to light in a particularly drastic manner in a hyperinflationary environment, as was the case in Germany in the early 1920s.

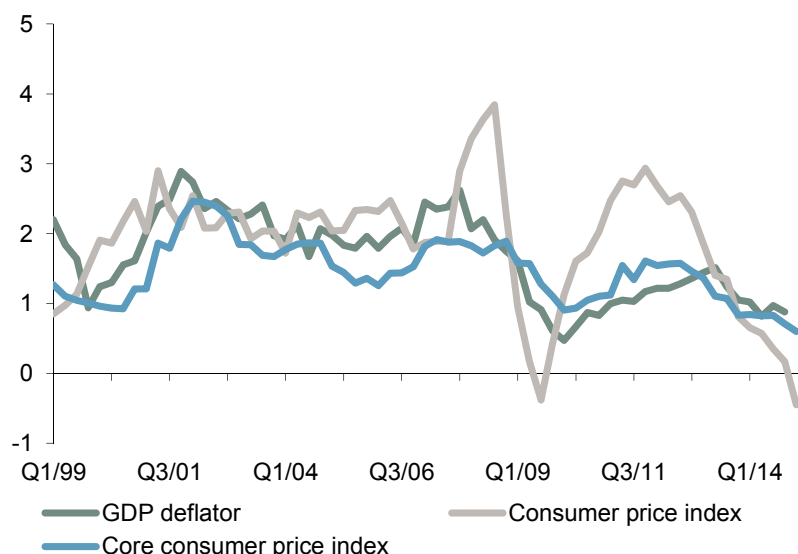
However, the goal of preserving price

stability also implies that prices should not drop over an extended period of time. If they do (across the whole economy and on a broad front), this is referred to as deflation. Deflation also creates costs, which is often less clear to private households as deflation increases the value of money over time. But this joy is short-lived because when prices drop, businesses suffer from decreasing revenues. Falling incomes reduce business prospects and, therefore, make companies less willing to invest. This impacts on the job market and the development of wages, eventually making households less willing to spend despite falling prices. The winner-loser equation in a deflationary environment is a mirror image of inflation – the losers are now the debtors while the creditors benefit. One example of a devastating deflationary phase is the Great Depression which began in 1929.

These dangers and experiences are the main reasons that the goal of safeguarding monetary stability attracts attention to a degree not known for other economic-policy objectives.

**Figure 1: Different inflation measures for the euro area**

Change year-on-year (per cent)\*

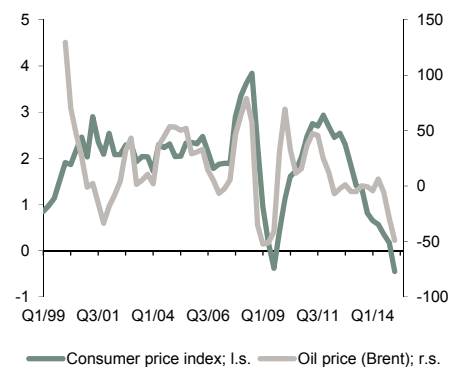


\* Values for Q1/2015: excluding March

Source: Feri

**Figure 2: Inflation and oil price (euro area)**

Change year-on-year (per cent)\*



\* Values for Q1/2015: excluding March for core inflation but up to and including 23<sup>rd</sup> March 2015 for oil price

Source: Feri, Bloomberg, own calculations

**Inflation and monetary policy**

Internationally, the measure accepted for a balanced inflation rate by the economy, the general public and central banks themselves has settled at around two per cent. This provides enough distance from deflation while preventing the costs of inflation from really being felt.<sup>2</sup> The inflation target set by the ECB is ‘close to but below two per cent’.

Central banks combat excessively high inflation rates with a restrictive monetary policy, usually by increasing key interest rates.<sup>3</sup> This typically works. Conversely, a central bank may fight deflation with an expansive monetary policy, in other words by lowering key interest rates, but this is far more challenging. The aim of lowering interest rates is to encourage additional borrowing but this is precisely what does not occur in a deflationary environment because, as mentioned above, debtors lose out when prices drop – their debt burden continues to grow in real terms. That provides no incentive to borrow more.

**Different inflation measures**

Changes in the consumer price index are the most common way to measure inflation. Central banks also use this. This view is very strongly based on the cost of living of private consumers. However, consumer prices do not fully reflect the price level of an economy. They do not include prices of capital goods such as machinery, for example, as these prices

are not relevant for private households. The more suitable measure is in fact the GDP deflator.<sup>4</sup> This inflation measure also includes energy prices but they have a much lower weight here than in the conventional consumer price index.

The development of inflation in the euro area since its creation (Figure 1) clearly shows strong variations in consumer price inflation during and after the financial and economic crisis. Some of these variations could be attributed to oil price fluctuations (Figure 2) but core inflation and GDP deflator rates have also pointed downwards (‘disinflation’) since early 2013. Compared with the years before the financial and economic crisis, the current inflation environment appears to be structurally weaker. That is a problem because it means that current inflation rates are far from the ECB’s target inflation, even when discounting energy price developments. What could be the reasons for this?

**The supply side: enterprises and labour providers**

A major factor that influences prices of goods and services is production costs. The largest shares of the cost structure of enterprises (in the manufacturing industry) are the costs of materials (roughly 60%) and of labour (around 20%). If an enterprise has to pay less for these input factors (or if the price increases are still very weak), then this is also reflected in the prices of its end products – unless the enterprise expands its profit margin in return. The more permanent the developments in production costs and the more intense the competition, however, the more likely it is that these cost developments will impact on the consumer price and not be (fully) offset by adjustments to the margins.

In this context part of the explanation for the low inflation rates is ultimately provided by the prices of resources and energy because they also play a crucial role in how the costs of materials develop. The rate of increase of the CRB commodity price index<sup>5</sup> dropped from its peak of 40% in early 2010 to -6% in January 2015. This also affects consumer prices, even with energy prices excluded.

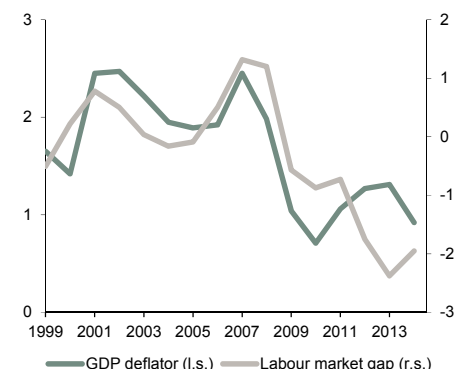
Another fundamental factor is the development of wages and salaries. This development in turn is determined by the situation on the labour market. When unemployment is low, workers can enforce higher wages or higher wage increases. Enterprises then pass these increased costs onto the final consumer in the form of higher prices of goods. When unemployment is high, the reverse applies in the same manner.

Unemployment in the euro area increased almost continuously from 2008 to 2013 (taking a ‘breather’ between 2010 and mid-2011) and has only started to fall since mid-2013. What is decisive is that it has been consistently above the non-accelerating inflation rate of unemployment (NAIRU) since 2009.<sup>6</sup> So it is not surprising that upward wage pressure is lacking and, consequently, the inflation rate during this period has also fallen continuously (Figure 3).

This correlation is evident not only within the euro area as a whole but also with respect to the most important economies within the euro area. In France, Italy and Spain the difference between the NAIRU and the rate of unemployment (labour market gap) has been decreasing since 2007/2008 and has remained negative since 2009. In Germany the situation is somewhat different. Here the labour market has been very stable in recent years. Nonetheless, the labour market gap in Germany has also been negative since 2009 but not nearly as markedly and, in particular, not with such a clear

**Figure 3: Inflation and unemployment (euro area)**

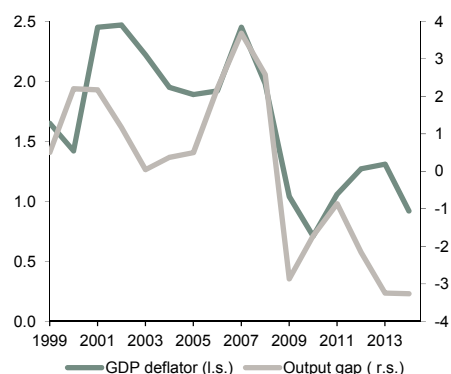
GDP deflator: variation on the previous year (per cent); labour market gap: NAIRU less unemployment rate (percentage points)



Source: Feri, OECD, own calculations

**Figure 4: Inflation and output gap (euro area)**

GDP deflator: Variation against previous year (per cent); output gap: potential GDP minus actual GDP in relation to potential GDP (per cent)



Source: Feri, OECD, own calculations

downward trend as in the other big economies. Consequently, the rate of inflation in Germany (measured by the GDP deflator) has developed more steadily than in the euro area overall (1.7% on average across 2014 against 0.9% in the whole euro area).

**The demand side: People always buy things – or do they?**

The production costs of a product are not the only factor influencing its price but they do form a lower limit. What price a manufacturer can ultimately achieve for a product essentially depends on the demand situation. If demand is low, prices tend to be low or even drop. Conversely, strong demand tends to generate high or rising prices.

How strongly the demand situation affects prices depends on an enterprise's production capacity. When it is fully exhausted, increasing demand can only be restrained by raising prices; in reverse, the more production falls below capacity, the more demand should be stimulated again through falling prices. On a macro-economic level, the degree of over-utilisation or under-utilisation of capacity shows whether the environment is inflationary or deflationary.<sup>7</sup>

The latter scenario clearly describes the situation in the euro area in recent years. According to the OECD, under-utilisation (the demand gap) in the euro area economy averaged almost 3.5% in 2014 – the highest ratio since the creation of the single currency area in 1999. In other

words, demand in the euro area in 2014 was the weakest ever. This is due to a number of reasons, in particular:

- The labour market situation: high unemployment affects prices not only on the supply side through stagnating or falling wages (as discussed above) but of course on the demand side as well. People who are unemployed demand less.
- Restrictive fiscal policy: Balancing national budgets in the euro area reduces demand in any case, regardless of how one assesses the individual measures. However, some of the budget cuts have been so drastic, particularly in the periphery countries, that withdrawal of demand by the government had immediate and clear second-round impacts on the private sector, particularly as a result of growing insecurity and increasingly bleak prospects.
- Investment weakness: Apart from cyclical influences, the importance of investment demand has dropped in recent years. The investment ratio (gross fixed capital formation to GDP) fell from more than 23% in 2007 to below 20% in 2014. Investments would have had to have been EUR 1.6 trillion higher (added up) to hold the investment ratio steady at 23% after 2007.

Therefore, given the trend in aggregate economic demand as well, the low rates of inflation in the euro area are hardly surprising. The correlation between the demand gap and inflation developments is relatively clear for the individual euro area economies as well, with no exception.

**The monetary side: does money really matter?**

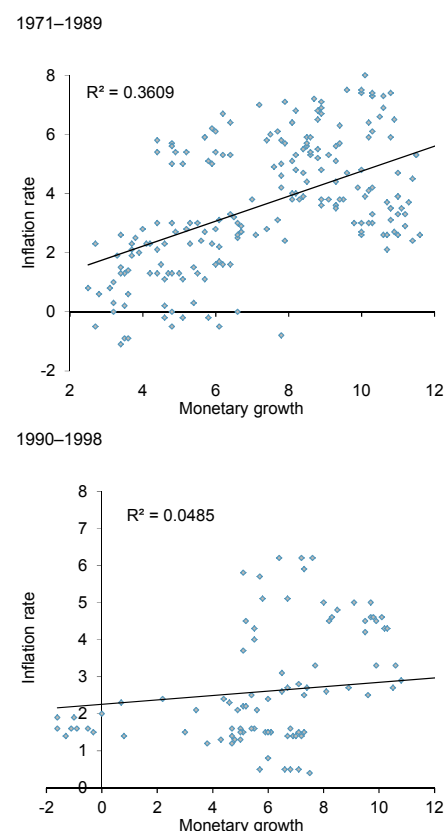
“Money matters” – that is the credo of all those who believe that money supply is the most important factor influencing inflation developments. Money supply is the sum of all financial tools that are employed for payment purposes. In addition to financial assets that can be directly used for payments (such as cash and giro deposits), these tools also include those that can be converted into means of payment relatively quickly (such as money market accounts or savings books). When a private household or an

enterprise has more cash available, it demands more goods. If the supply of goods remains the same, this demand drives inflation across the economy as a whole.

Many regard monetary developments as the most important long-term influence on inflation trends. This is also why central banks are entrusted with the mandate of safeguarding price stability. Central banks are precisely the institutions that determine the monetary conditions of an economy. Nonetheless, the link between money supply and inflation has weakened in the course of the last two and a half decades (Figure 5). The link between monetary growth and inflation in Germany (measured by the coefficient of determination,  $R^2$ ) has deteriorated significantly since the beginning of the 1990s ( $R^2$  approx. 5%) compared with the 1970s and 1980s ( $R^2$  approx. 35%).<sup>8</sup> Nonetheless, monetary dynamics, of course, have also decreased significantly since 2008, meaning they generally fit together with the weak inflation dynamics

**Figure 5: Monetary growth and inflation rate (Germany)**

Monetary growth rate (M3) year-on-year and inflation rate (each in per cent), and coefficient of determination



Source: Feri, own calculations

as well.

All things considered, the low rates of inflation in the euro area can be explained by the overall economic climate: record high unemployment, very weak private and public demand and, therefore, weak cyclical development.

### What is the outlook?

The future development of inflation rates in the euro area is determined by the outlook for the general influencing factors. In general, the overall economic conditions in the euro area are improving. Growth momentum will pick up again as private demand is gradually strengthening. Financing conditions are starting to improve, exemplified by narrowing lending rate differentials between the periphery countries and Germany. In addition, some euro area countries have slowed down the speed of fiscal consolidation, which is slightly reducing the intensity of restrictive impulses from the state sectors. This will also benefit the labour market in the euro area in the long term. High unemployment is still putting a major damper on overall economic demand, but the rate of unemployment in the euro area has already overcome its peak level. As the OECD anticipates the non-accelerating inflation rate of unemployment to remain constant in the years ahead, the tension on the labour market will subside slowly but gradually. This will strengthen consumer

demand and improve wage dynamics going forward. In addition, monetary policy by the ECB will remain very expansive.

Combined, these factors lead us to conclude that the rate of inflation, especially when calculated using the GDP deflator and core inflation, will remain low this year and in the coming year but will slowly rise. If the oil price remains steady for the rest of the year, its deflationary influence on the inflation rate will disappear towards the end of the year. This is also expressed by the capital market-based long-term inflation expectations, which have again started to rise since around the beginning of the year (Figure 6).

For the euro area, however, high risks continue to exist which not only jeopardise the economic recovery but may even reverse it into a recession. These risks include, in particular, the problematic situation in Greece and the conflict with Russia. Both of these factors individually pose a considerable economic downward risk for the euro area should they intensify. If that should happen, inflation rates would also trend downward again.

### Conclusion

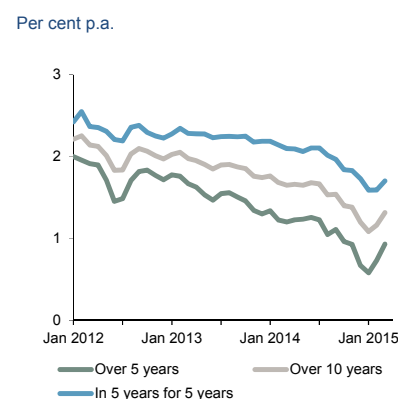
The euro area inflation rates, which have been (too) low for several months now, cannot be explained exclusively with the fallen oil price. Both the more comprehensive GDP deflator and the core infla-

tion rate have been trending downward since early 2013 and are now significantly below the once normal average level.

The main reason for the inflation environment in the euro area is the generally very weak euro area economy with its lagging demand and high unemployment. People in Germany sometimes lose sight of this reality because by and large the German economy, with its solid employment situation, is developing very well. In this sense, the expansive action being taken by the ECB is also justified from a pan-European perspective.

The recovery of the euro area's overall economy is in sight. This will also be clear in inflation rates but only slowly. ■

**Figure 6: Inflation expectations derived from the EUR interest rate swap market**



Source: Bloomberg

<sup>1</sup> Even so, the US Federal Reserve is committed not only to preserving monetary stability but also to the objective of achieving maximum employment.

<sup>2</sup> The circumstance that the targeted rate of roughly 2% maintains a sort of 'safety distance' between the target inflation rate and the zero line has various reasons. The most important ones are (1) errors of measurement that lead to an exaggeration of the official inflation rate and therefore prompt the assumption that the actual inflation is lower, (2) the average nature of inflation rates, which always implies significantly lower rates of inflation for individual regions or countries than the officially reported (average) rate and (3) the possibility of granting nominal wage increases that do not necessarily reflect real growth. However, it is always possible to put forward counterarguments against these reasons, cf. Rohde, A. (2014), Unkonventionelle Maßnahmen der Geldpolitik: Eine kritische Beurteilung (*Non-conventional measures of monetary policy: a critical assessment*), in: Tartu University, Technical University of Tallinn and others (editor), Discussions on Estonian Economic Policy: Aktuelle wirtschaftspolitische Probleme in der Europäischen Union (*Discussions on Estonian Economic Policy: current economic policy problems in the European Union*), No. 2/2014, Berlin, Tallinn, Pages 111-130.

<sup>3</sup> In addition to the key rate, central banks of course have other tools for implementing restrictive or expansive monetary policy. Nevertheless, although other tools have recently become increasingly important, interest-rate policy continues to be paramount.

<sup>4</sup> The GDP deflator is a price index that represents the difference between nominal and real GDP. Moreover, 'core indexes' are of great significance for measuring inflation. They are inflation measures adjusted for very volatile components, especially food and energy prices.

<sup>5</sup> Commodity Research Bureau, All Commodities Spot Index

<sup>6</sup> The *non-accelerating inflation rate of unemployment* (NAIRU) is the (estimated) rate of unemployment that is compatible with a steady rate of inflation. If the actual rate of unemployment falls below the NAIRU, wage increases are likely to be enforced that cause the rate of inflation to rise. If the rate of unemployment exceeds the NAIRU, this tends to have the effect of reducing the inflation rate. Accordingly, the difference between the NAIRU and the actual rate of unemployment is a measure for the tension existing on the labour market and, thus, for inflationary or deflationary strain.

<sup>7</sup> Over-utilisation or under-utilisation of capacity is expressed by the difference between actual GDP and potential GDP, shown as a ratio of this difference to potential GDP.

<sup>8</sup> When we compare data calculated for the period from 1980 to 1998, this also applies to the euro area after 1999.