

Box 5

RISK OF DEFLATION?

Overall annual HICP inflation in the euro area has declined significantly in recent years, from 3.0% in November 2011 to 0.5% in May 2014.¹ In an environment of subdued economic growth and weak money and credit creation, this decline has triggered discussions about the extent to which there is a risk of deflation in the euro area.

In this context, it is important to distinguish between the different definitions of the term deflation. Taking a very narrow definition, some observers speak of deflation when the annual rate of inflation has been negative for a period of one quarter. On this basis, the IMF recently estimated the risk of deflation in the euro area by the end of 2014 to be at about 20%.² However, such estimates are highly misleading, as they do not make a distinction between the nature of shocks driving inflation, or examine the persistency of price dynamics.

In a more meaningful broader perspective, it is preferable to take into account the nature of the shocks driving down inflation, the wider economic context and the behaviour of inflation expectations. Indeed, sustained negative rates of inflation are of concern if they create negative feedback loops with the real economy. For example, prolonged deflation raises the burden for debt servicing, and the reaction of banks, households and firms potentially creates additional negative feedback loops between the real economy and the price level.³

In assessing the risk of deflation, it is crucial to identify the nature and persistence of the determining factors and, in particular, to assess the degree to which inflation developments can be attributed to supply-side or demand-side forces. The overall price index may turn negative for a short period on the back of transitory supply-side shocks, such as commodity price movements. This occurred in the euro area and in other countries, for example, in 2009. However, a period of negative annual inflation does not in itself imply deflation, in a meaningful economic sense, unless the price declines become generalised and entrenched in inflation expectations.⁴ For instance, if longer-term inflation expectations remain stable, the ebbs and flows in commodity prices are bound to exert only transitory effects on inflation. Furthermore, it is crucial to disentangle the impact of supply-side shocks resulting from structural reforms, which may have implications for inflation developments over the policy-relevant horizon.⁵ While structural reforms may initially lead to downward pressures on inflation rates, reflecting also supply-side improvements in the economy, inflation can be expected to pick up over time as aggregate demand gradually recovers.

1 Based on Eurostat's flash estimate for May 2014.

2 *IMF World Economic Outlook*, April 2014, p.15.

3 For more on the debt deflation channel, see the box entitled "Financial stability challenges posed by very low rates of consumer price inflation", *Financial Stability Review*, ECB, May 2014.

4 A similar definition of deflation was presented in "*The Monetary Policy of the ECB*", ECB, Frankfurt am Main, 2011.

5 Annual inflation may temporarily turn negative as a result of cost-saving developments on the supply side. Examples include strong improvements in productivity not matched by proportional increases in wages, tariff cuts or terms of trade changes owing, for instance, to a fall in oil prices. See also the box entitled "The current period of disinflation in the euro area" *Monthly Bulletin*, ECB, March 2009.

Empirical criteria, which distinguish outright deflation from subdued price developments of a less malign nature, would include:

- a negative annual rate of consumer price inflation over a prolonged period;
- a negative rate of change in the prices of a broad set of items in the basket of goods and services;
- longer-term inflation expectations becoming unanchored and falling clearly below levels consistent with the central bank's definition of price stability;
- persistently very low or negative GDP growth rates and/or high and rising unemployment rates.

In the case of the euro area, one should not confuse relative price adjustments with overall changes in the price level: to speak meaningfully of deflation, the generalised and prolonged fall in the price level should be broadly based across countries. There is no risk of outright deflation as long as euro area HICP inflation is in line with price stability. Negative inflation rates in individual countries may, on occasion, be consistent with the normal functioning of a monetary union, as they help to restore competitiveness, i.e. they may be symptomatic of supply-side induced relative price adjustments.

Historical episodes of deflation

The historical perspective supports the notion that deflation should be viewed as a broad-based and protracted fall in the price level that becomes entrenched in inflation expectations, thereby reinforcing negative price tendencies.

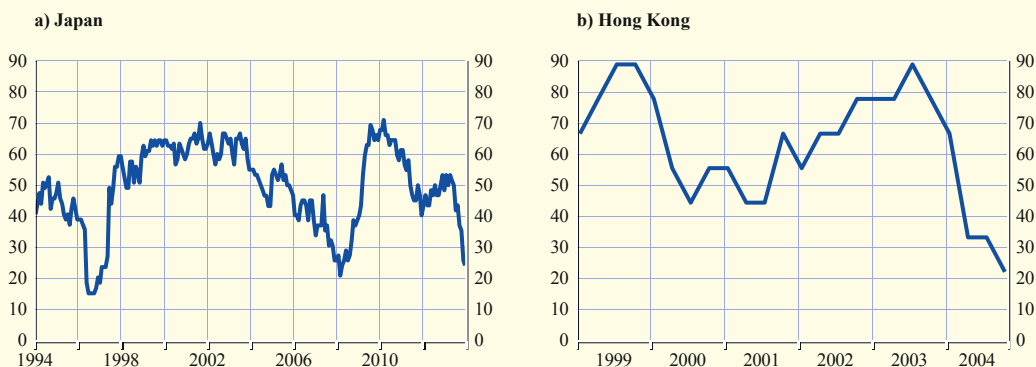
Since the 1950s, some advanced economies have experienced periods of negative annual inflation, including Canada, Hong Kong, Israel, Japan, Norway, Switzerland and the United States. However, these rarely turn into episodes of outright deflation, as many of these periods were short-lived, with rather benign effects on the real economy. In general, supply-side induced periods of negative inflation tended to have smaller economic costs, if any, compared with those that were mainly demand-side induced.

The periods of negative inflation in the United States, Canada and Norway in the late 1940s to mid-1950s, Israel in 2003 and 2004, and Switzerland in 2009 and end-2011 to mid-2013, can be seen as qualifying as deflationary only in a narrow technical sense. The decline in prices was concentrated on a low share of items and had no major impact on GDP growth or, where data are available, medium to long-term inflation expectations. While in recent years the case of Switzerland stands out in terms of persistently negative or zero inflation rates, the drivers of these price developments were due to external factors rather than weak domestic demand. Indeed, the Swiss economy grew at a robust pace during this period.

There are very few recent cases among advanced economies of outright deflation. The two most pronounced deflationary episodes since the end of the Second World War have been Japan (1995-2013) and Hong Kong (1999-2004). In both cases, deflation was prompted by an unwinding of inflated asset prices. Indeed, following unsustainable debt-financed booms, asset

Chart A Share of items with negative annual rate of inflation during the deflation episodes in Japan and Hong Kong

(as a percentage of total items)

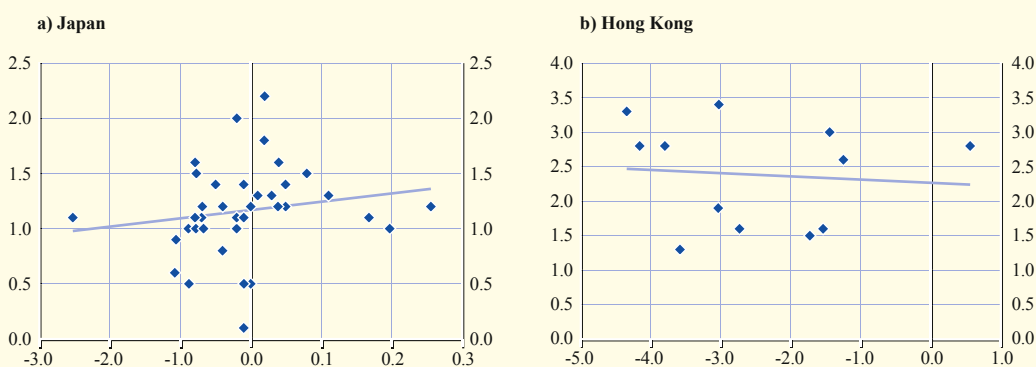


Sources: Japan's Ministry of Internal Affairs and Communications and ECB calculations.
Notes: The CPI is decomposed into 62 items. Monthly data.

Sources: Hong Kong's Census and Statistics Department and ECB calculations.
Notes: The CPI is decomposed into nine items. Quarterly data.

Chart B Long-term inflation expectations and actual inflation in Japan and Hong Kong

(year-on-year percentage changes; semi-annual data; x-axis = actual inflation; y-axis = long-term inflation expectations)



Sources: Consensus Economics, Japan's Ministry of Internal Affairs and Communications and ECB calculations.
Note: Data period is 1995-2013.

Sources: Consensus Economics, Hong Kong's Census and Statistics Department and ECB calculations.
Note: Data period is 1999-2004.

price busts – and the associated private and public sector balance sheet adjustments – can be a more important source of persistent deflation than conventional supply and demand shocks.⁶ In both episodes, deflation was broadly based, with continuously negative contributions from a large number of the underlying price components for goods and services (see Chart A). At the same time, both of these episodes of prolonged negative inflation rates were accompanied by stagnating economic activity. Furthermore, in the case of Japan, long-term inflation expectations suffered from some unanchoring, although they remained in positive territory (see Chart B). It is worth noting that Hong Kong is a small open economy and that Japan may serve as a more useful point of reference for other advanced economies.

6 See also Bordo, M. and Filardo, A., "Deflation in a historical perspective", *Working Papers*, 186, BIS, 2005.

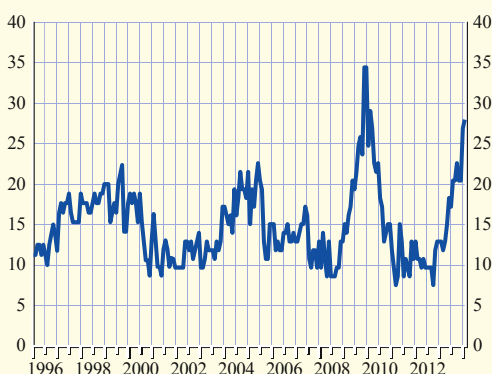
Is there a risk of deflation in the euro area?

The low inflation rates in the euro area are the result of a confluence of both supply and demand-side factors. Global supply-side factors, including a deceleration in energy and food prices, have played the most important role. The appreciation in the euro effective exchange rate has also contributed to the decline in inflation, amplifying the effect of commodity prices. Local factors, such as the impact of structural reforms in labour and product markets, have contributed to weakening price pressures as well. At the same time, demand-side factors have weighed on inflation, particularly in those countries where pre-crisis excesses are still unwinding. However, at the euro area aggregate level, the current situation does not suggest that an outright deflationary episode is imminent for the following reasons:

- the share of items with negative annual growth rates is not exceptionally high compared with earlier episodes of disinflation (see Chart C);
- there is no evidence of an unanchoring of medium to long-term inflation expectations. Both survey and market-based measures – bonds or swap contracts alike – have remained at levels consistent with the ECB’s inflation objective (see Chart D);⁷
- the latest Eurosystem staff macroeconomic projections for the euro area suggest that, although price pressures will remain subdued for a prolonged period, HICP inflation is projected to increase gradually;
- in addition, economic growth is projected to gradually pick up, while unemployment is falling slowly from high levels.⁸

Chart C Share of HICP items showing negative annual rate of change

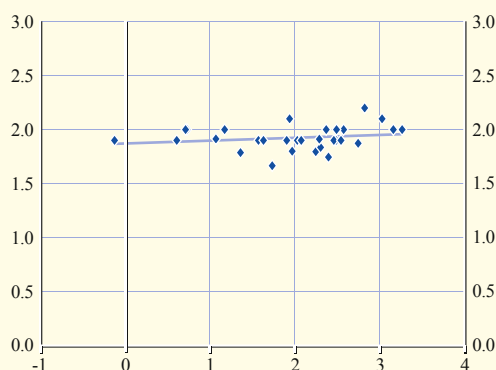
(as a percentage of total items)



Sources: Eurostat and ECB calculations.
Notes: Shares of 85 items with annual rates of change below zero (unweighted). The data are monthly and cover the period up to April 2014.

Chart D Long-term inflation expectations and actual inflation in the euro area

(year-on-year percentage changes)



Sources: Consensus Economics, Eurostat and ECB calculations.
Notes: The x-axis corresponds to year-on-year actual inflation and the y-axis to six to ten-year-ahead inflation expectations from Consensus Economics. Sample period is April 1999 to April 2014. Semi-annual data.

7 See also the box entitled “Results of the ECB Survey of Professional Forecasters for the second quarter of 2014”, *Monthly Bulletin*, ECB, May 2014.

8 See the article entitled “Eurosystem staff macroeconomic projections for the euro area”, *Monthly Bulletin*, June 2014.

While significant relative price adjustments are taking place in some euro area countries, it is highly unlikely that those processes will result in a downward deflationary spiral, as the competitiveness gains can already be seen as supporting exports.

Conclusion

The term deflation refers to a broad-based and lasting decline in prices, with negative effects on economic growth. In the euro area context, deflation risks must be analysed for the euro area as a whole, taking into consideration that, within a monetary union, negative inflation in individual countries may reflect relative price changes in order to regain competitiveness.

When compared with historical episodes of outright deflation in advanced economies, the risk of deflation in the euro area appears remote at the current juncture. In particular, there is no evidence of an emergence of sustained and generalised price declines, and medium to long-term expectations remain well anchored. In addition, the economic recovery is proceeding in the euro area, contributing to a gradual absorption of slack. Although the risk of outright deflation in the euro area can thus be considered to be, at present, remote, too prolonged periods of positive but low rates of inflation may, under certain circumstances, also be a source of concern requiring an appropriate policy response.