Box 3

## CONSUMERS' INFLATION PERCEPTIONS: STILL AT ODDS WITH OFFICIAL STATISTICS?

Following the introduction of euro banknotes and coins in January 2002, the close link that previously existed between consumers' inflation perceptions and actual HICP inflation appears to have broken down (see Chart). Consumers' inflation perceptions are surveyed every month by the European Commission, which then provides a qualitative indicator. This indicator corresponds to the difference between the weighted proportion of respondents stating that consumer prices have risen over the last twelve months and the weighted proportion of respondents stating that prices have fallen or remained broadly unchanged over the same period. Hence, the indicator of perceived inflation takes the form of a balance statistic and only gives qualitative information on the perceptions of the directional change in inflation over the last twelve months. While no drastic movement in actual inflation was observed in early 2002, the

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qualitative indicator of perceived inflation increased dramatically and reached a peak in January 2003. Since then, inflation perceptions have moderated, gradually reducing the gap with actual price developments. In 2004, the downward adjustment in euro area inflation perceptions continued but there is still room for a further correction.

A number of arguments have been put forward to explain the discrepancy between inflation perceptions and actual inflation developments that occurred in the immediate aftermath of the cash changeover. In particular, the prices of several items, to which consumers may attach a higher weight than their actual share in the HICP because they are more frequently purchased

## Consumers' perceptions of past inflation and actual HICP inflation

(percentage balances; annual percentage changes)



Sources: European Commission and ECB calculations. Note: The latest observation for actual HICP inflation refers to Eurostat's flash estimate for March 2005. HICP backdata before 1990 are based on national CPI and are not fully comparable with HICP.

(e.g. food, energy), indeed rose more, in relative terms, at the time of the cash changeover. Although some of these price increases were unrelated to the introduction of the euro banknotes and coins, many consumers seem to have associated them with the changeover. In fact, Eurostat has estimated the impact of the cash changeover to lie between 0.12 and 0.29 percentage point of euro area HICP headline inflation in 2002.

In the latest European Commission survey on the general public and the euro, published in December 2004<sup>2</sup>, 95% of the euro area public thinks that the introduction of the euro encouraged price increases. This assessment is, remarkably, shared across gender, age, educational levels, social categories and geographical backgrounds.

Recent empirical studies have highlighted the role of psychological factors in explaining the discrepancy between consumers' inflation perceptions and actual inflation developments. These psychological factors include, in particular, the role of *a priori* expectations. For example, the firm conviction that prices would be raised or rounded up, to the consumers' disadvantage, seems to have had a sustained and significant influence on subsequent inflation perceptions.<sup>3</sup>

In addition, there is evidence that the public's slow adaptation to the euro may have played a role. Indeed, it has been shown that inflation perceptions seem to be affected by consumers' difficulty in adapting to the new currency.<sup>4</sup> One reason explaining the inertia in the correction of inflation perceptions might thus be that nearly half of the public in the euro area continues to report "a lot" or "some" difficulties in handling the euro, according to the December 2004 European Commission survey on the general public and the euro.

Finally, national currencies remain a strong point of reference for a large proportion of the euro area public. In the December 2004 European Commission survey, 25% of those surveyed

<sup>1</sup> For more details, see the Monthly Bulletin boxes on euro area inflation perceptions published in July 2002 and October 2003.

<sup>2</sup> European Commission (2004), "The euro, three years later", Flash Eurobarometer 165, December.

<sup>3</sup> Traut-Mattausch E., Schulz-Hardt S., Greitemeyer T. and Frey D. (2004), "Expectancy confirmation in spite of disconfirming evidence: the case of price increases due to the introduction of the euro", European Journal of Social Psychology, vol. 34, No. 6, pp. 739-760.

<sup>4</sup> Mastrobuoni G. (2004), "The effect of the euro-conversion on prices and price perceptions", CEPS Working Paper, No. 101, September.

reported that they mentally counted only in national currency during regular daily transactions and another 22% were thinking either in euro and/or in national currency. The proportion of people using national currency units as a reference increased dramatically for exceptional purchases, such as the purchase of a car or a house, with only 19% mentally counting only in euro during these exceptional purchases. There might thus remain a degree of confusion between a reference price level in national currency terms that has remained "frozen in time" in consumers' minds and the 12-month-before price reference in euro that consumers are supposed to recall when replying to inflation perception surveys.

## A closer look at euro area country developments

Consumers' inflation perceptions increased, albeit to varying extents, in all euro area countries at the time of the cash changeover (see Table). Since mid-2003, however, a clear downward trend in this indicator could be observed in Germany, Italy, Ireland and the Netherlands. To a lesser extent, inflation perceptions in Spain, Luxembourg and Portugal also decreased, while they remained broadly stable in Greece, France, Austria and Finland. An upward trend in inflation perceptions was only identified in Belgium. The tendency towards a downward adjustment in perceived inflation in most euro area countries may be explained by two factors. Firstly, in some cases, most notably in Italy, the Netherlands and Portugal, the downward adjustment in inflation perceptions coincided with a decrease in actual HICP inflation. Secondly, the downward adjustment in some countries seems to be a reaction to the large upward overshooting of perceived inflation in 2002 and 2003. In particular, this is likely to be behind the decline in perceived inflation in Germany over the last two years. However, despite the recent decrease in inflation perceptions in most euro area countries, it is noteworthy that the majority of consumers still have the impression that inflation is high compared with the proportion who thought so at the end of 2001. Only in the cases of Germany and the Netherlands is the level of the qualitative indicator of perceived inflation now lower than it was at the time of the introduction of euro banknotes and coins.

## Consumers' perceptions of past inflation across euro area countries

(percentage balances; seasonally adjusted)

	2001	2002	2003	2004	2004 Q1	2004 Q2	2004 Q3	2004 Q4	2004 Q4 minus 2001 Q4
Belgium	40	39	45	49	48	47	48	52	18
Germany	39	68	47	28	34	28	27	24	-16
Greece	28	36	67	67	67	67	68	67	49
Spain	31	44	59	54	59	54	52	53	28
France	21	43	45	47	52	46	46	43	16
Ireland	48	51	60	47	55	45	44	46	10
Italy	29	38	67	51	67	53	42	40	24
Luxembourg	-	35	39	39	42	38	38	40	-
The Netherlands	44	73	72	37	50	37	33	29	-15
Austria	16	30	37	39	42	41	36	38	27
Portugal	37	42	51	45	47	48	41	44	7
Finland	-13	0	-7	-8	-11	-9	-9	-5	11
Euro area	31	51	51	41	48	41	38	37	8

Sources: European Commission and ECB calculations.

Overall, notwithstanding the different patterns across countries, there would appear to be scope, at the euro area level, for further correction of the gap between inflation perceptions and actual inflation as time passes and the public continues to get used to the euro.