

Box 3

NEW STANDARDS FOR HICP WEIGHTS

To accurately measure inflation, it is important that the HICP remains representative of consumption patterns. These patterns evolve over time in response to economic factors and changing preferences. The HICP reflects the structure of consumption via the sample of specific representative products, which is chosen for measuring price changes from month to month, and the weights that are assigned to individual product groups. While existing regulations already

Table A Changes in the weights used in national HICPs following the new Regulation

Country	Previous update frequency	Main changes
Germany	Every 5 years	Update every year and new data source (national accounts)
Ireland	Every 5 years	Update every year, data source to be changed to national accounts from 2013
Cyprus	Every year	Data source changed to national accounts
Luxembourg	Every year	Weighting reference period changed from three years ago to two years ago
Malta	Every 5 years	Update every year and new data source (national accounts)
Austria	Every 5 years	Update every year and new data source (national accounts)
Finland	Every 5 years	Update every year and new data source (national accounts)
All other euro area countries	Every year	No changes, all countries continue to use national accounts as primary source ¹⁾

Source: Eurostat.

1) Estonia, Spain and Portugal make use of the household budget surveys in addition to national accounts.

require HICP samples to be kept up to date, a new Regulation¹ came into force in January 2012 requiring a comprehensive update of weights on an annual basis. This box explains the new standards and reviews the implications of the changes in the new set of weights for 2012.

HICP weights should reflect the share of each product group in the final monetary consumption expenditure of households.² Over time, these expenditure shares can evolve owing to developments in both the prices and the quantities consumed of the various product groups. Relatively high price increases in a product group would mechanically result in a higher consumption share, but this effect is typically dampened as relative quantities are adjusted in response. Relative price increases in certain product groups, such as energy, where demand is less responsive to price changes may also lead to an adjustment in relative quantities for other product groups where demand is more price elastic. Consumption patterns may also react to income growth – whereas overall consumption should grow in proportion to income (assuming a stable savings rate), expenditure on some items (e.g. essentials such as food) may grow less than proportionally, leading to a reduced weight. Quantities may also be influenced by a wide variety of other factors, such as changes in preferences or technological advancements.

Some minimum standards for the quality of HICP weights were already in place before the new Regulation. These former standards required that weights reflect consumption patterns which are not more than seven years old and that large changes in expenditure shares which significantly impacted on total inflation be incorporated annually.³ The new Regulation requires a comprehensive annual update of weights that are representative of expenditure patterns in the previous calendar year. However, recognising that at the time that weights need to be finalised, detailed data on expenditure patterns in the previous year are often unavailable, the Regulation also permits the use of weights which are two years old. For components where important market developments are known to have taken place, national statistical institutes should nevertheless try to use alternative sources in order to update expenditure shares to the

1 Commission Regulation (EU) No 1114/2010 of 1 December 2010 laying down detailed rules for the implementation of Council Regulation (EC) No 2494/95 as regards minimum standards for the quality of HICP weightings and repealing Commission Regulation (EC) No 2454/97.

2 For more details, see <http://www.ecb.europa.eu/stats/prices/hicp/html/index.en.html>

3 Note that the updating of weights may refer to the updating of both price and quantity components, as in this box, or to the updating of only the price component. Price-updated weights, whereby the structure of consumption remains fixed, have always been required for the HICP as a consequence of the chain-linked index formula. Such weights, however, are a purely technical requirement that lead to results that are identical to those obtained from a fixed-base index. The main innovation of the new Regulation is that both the price and the quantity components must be comprehensively updated on an annual basis.

previous year. With a view to enhancing the comparability across countries, the Regulation also encourages the use of national accounts data rather than household budget surveys as the primary data source for HICP weights.

In practice, many countries were already compliant with the new tighter standards. Table A gives an overview of the seven euro area countries in which changes were implemented. In Germany, Ireland, Malta, Austria and Finland, the frequency of updating HICP weights has increased from every five years to every year. This also implies a harmonisation of the periods to which the weights refer. For example, the weights applied in 2011 under the former Regulation referred to consumption patterns in 2005 in Germany, but 2009 in France and Italy. As the economic cycle was at a different stage in 2005 compared with in 2009, these differences weakened the comparability of national HICPs. The new Regulation provides that, as from 2012, all countries' HICP weights shall refer to the consumption pattern of the preceding two years (i.e. 2012 weights refer to 2010 or 2011).⁴

Table B shows the euro area HICP weights for the main components for the years 2001, 2011 and 2012.⁵ With the exception of energy and industrial goods excluding energy, the new Regulation seems to have caused only minor changes in the weights between 2011 and 2012. This reflects the fact that the structure of the broad categories of household consumption evolves relatively slowly and that, for the majority of euro area countries, the change in the weights refers to a change in the consumption patterns over a single year, rather than several years as in the case of Germany, for example (since the 2011 weights were compiled according to the former Regulation).

By comparing the recent weights to those applied in 2001, the longer-term evolution in euro area consumption patterns becomes more evident. Table B decomposes these developments into price and quantity effects. In most cases a negative relationship exists between the two. In processed food, for example, relatively high price increases have been fully offset by lower relative quantities consumed (although in absolute terms quantities increased). The weight of industrial goods excluding energy declined by 3.1 percentage points between 2001 and 2012,

4 One exception is Ireland where the new Regulation will not be fully implemented until 2013. Weights for 2012 in Ireland refer to consumption patterns in the period 2009-10.

5 The year 2001 was chosen as a reference because the coverage of services was significantly extended in 2000 and weights for earlier periods are therefore not comparable with those thereafter.

Table B Euro area HICP weights for the main components

(percentages of overall HICP; percentage points; annual percentage changes)

Year	Total	Unprocessed food	Processed food	Industrial goods excluding energy	Energy	Services
2001	100	7.7	11.9	31.6	9.0	39.8
2011	100	7.4	11.9	28.9	10.4	41.4
2012	100	7.2	11.9	28.5	11.0	41.5
Change 2001-12		-0.5	0.0	-3.1	1.9	1.7
<i>of which:</i>						
Due to changes in relative prices		0.0	1.0	-3.8	2.3	0.4
Due to changes in relative quantities		-0.5	-1.0	0.6	-0.4	1.2
Memo: average annual HICP increase 2001-11	2.1	2.4	2.8	0.8	4.5	2.3

Sources: Eurostat and ECB calculations.

Notes: The price and quantity components are estimated assuming no changes in quantities below the four-digit level of the classification of individual consumption by purpose. Due to rounding, they may not add up to the overall change.

owing to the downward price trend which was partly offset by increases in relative quantities. By contrast, the weight of services increased, owing to the positive impact from both relative prices and relative quantities. The largest proportional change was observed in the weight of the energy component, which increased by 1.9 percentage point over the period. This mainly reflects the higher relative price increase, which was only to a small extent compensated by a decline in relative quantities.⁶

Aggregate developments in the weights mask a large number of, in some cases offsetting, changes at a more detailed level. For example, within the services component, the weight of telecommunication equipment and services increased from 2.5% to 3.0% as large increases in relative volumes more than offset declines in relative prices, while the weight of housing rents fell from 6.6% to 6.0%, owing to developments in both relative prices and volumes. Within the industrial goods excluding energy component, the weight of personal products increased from 1.5% to 1.7%, while the weight of motor cars fell from 4.5% to 3.6%, owing to declines in both relative prices and quantities.

By tightening the standards required for HICP weights, the new Regulation provides a more relevant and accurate measurement of inflation, which enhances both the comparability across Member States and the reliability of the HICP data. It therefore represents a welcome improvement in the quality of this important statistic.

⁶ For a further discussion on the role of the energy component in headline inflation over recent years, see the article entitled “The developments of prices and costs during and after the 2008-09 recession” in this issue of the Monthly Bulletin.