



## **SEMINAR**

### **Inflation Measures: Too High - Too Low - Internationally Comparable? Paris, 21-22 June 2005**

#### **14. The HICP as an anchor for European consumer price statistics**

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**Seminar Session ‘How to preserve and establish credibility of the official CPI’**

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**The HICP as an anchor for European consumer price statistics**

*The paper reviews features of the Harmonised Index of Consumer Prices (HICP), which are considered crucial for ECB use and its credibility: i.e. a measure representing overall movement of consumer prices; comprehensive coverage of consumer expenditures; adjusted for changing quality characteristics; and particularly important, comparability. The HICP has achieved a high quality, but there are important fields for future work (quality adjustment, owner occupied housing). This is followed by a brief review of the main explanations put forward for differences between inflation perceptions and measurement and the process of euro changeover related research that was carried out after 2002. Factual information on the good statistical properties of consumer price indices may help to overcome these concerns only to a limited extent. However, the particular potential of the HICP should be exploited further in order to enhance credibility of official statistics: the harmonised European methodology is an asset that ensures and enforces accuracy, objectivity and independence of price statistics compilation. A cross-country comparison of CPI methodology shows that there are two main differences between HICP and some of the national CPIs (owner occupied housing and population coverage). Other differences are country-specific, not always easy to identify and explain, and have, with few exceptions, a small impact on the results. The public dissemination and transparency of European consumer price data could be improved if existing national CPI statistics and national HICP statistics were presented as two elements of one common price index system. This European system should leave room for national variants of consumer price indices that have as common reference point the HICP.*

## **I. The role of the HICP**

Widespread concerns about inflation call for a tool to accurately measure it and a consumer price index (CPI) fulfils this role. As such, it is a benchmark used in financial decisions or in contracts where changes in the price level have to be taken into account. The Harmonised Indices of Consumer Prices (HICPs) have been developed for the EU Member States, allowing the compilation of euro area and European Union aggregates.

Since 1998, the HICP has been used by the ECB as the reference indicator to monitor price stability in the euro area. The ECB aims at ensuring price stability, which it defined as a year-on-year increase in the HICP for the euro area of “below 2%”. The Governing Council of the ECB has also stated that it aims at keeping inflation below “but close to 2%”. This aim provides an adequate positive margin to avoid the risks of deflation. It also provides a sufficient margin to address the implications of inflation differentials across the euro area, so that individual countries may not have to structurally live with too low rates of inflation, or even deflation. Furthermore, it takes into account the possibility that the HICP slightly overstates the true rate of inflation as a result of a positive bias in the measurement of price changes.<sup>1</sup>

The HICP also plays a role in the official Convergence Reports by the ECB and the European Commission. According to the Maastricht Treaty, one of the criteria to guide decisions on which countries qualify for the adoption of the euro is that annual inflation must not exceed by more than 1.5 percentage points the HICP inflation rate of, at most, the three best-performing Member States. This criterion calls for a comparable price index for all EU countries. For non-euro area EU countries, the HICP is therefore a key indicator in assessing their suitability for adoption of the single currency.<sup>2</sup>

## **II. HICP development, framework, publication and use**

### ***Development***

Work on the HICP by Eurostat and National Statistical Institutes (NSIs) started in 1993 with the aim of providing comparable consumer price change measures for convergence assessment in view of the creation of the Economic and Monetary Union. In 1995, the Council regulation (EC) No 2494/95 concerning HICP (the 1995 Council Regulation) was adopted. Harmonisation and implementation work

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\* Contributions and comments to this document by Werner Bier, Gabriel Quirós, Veronique Genre, Martin Eiglsperger and Cristina Conflitti are gratefully acknowledged.

<sup>1</sup> European Central Bank, “The monetary policy of the ECB” (2004), page 51.

<sup>2</sup> See also the forthcoming article “The Harmonised Index of Consumer Prices: Concept, Properties and experience to date”, ECB Monthly Bulletin, July 2005.

continued thereafter, and was supported by three further Council and eight Commission Regulations. All of these were adopted between 1996 and 2001 and cover, in particular, the following aspects:<sup>3</sup>

- Coverage (household final monetary consumption expenditure (HFMCE))
- Geographic and population coverage
- Classification (COICOP)
- Minimum standards for quality adjustment, sampling and the coverage of new products
- Minimum standards for updating expenditure weights
- Standards for price measurement (e.g. sales prices, tariffs, insurance)
- Deadlines for releases and advanced release calendars
- Revision policy

The most recent initiatives by Eurostat concern improved standards for quality adjustment and sampling requirements for the HICP (e.g. for clothing and footwear and for books and CDs). In addition, work on harmonising price collection periods and the treatment of seasonal items is underway.

Overall, much progress has been made in particular between about 1996 and 2001. Since then, HICPs have been extended to all new Member States and the new Accession Countries. In recent years progress in harmonisation work has been somewhat slower than expected, in particular as regards the main priority areas, quality adjustment and sampling approaches as well as work on extending the coverage of the HICP to owner occupied housing.

### ***Framework***

The HICP was occasionally criticised for its conceptual framework, or rather for a perceived underdeveloped conceptual framework<sup>4</sup>. Indeed, the HICP literature does not refer to a fully comprehensive micro- or macroeconomic theory of inflation or household behaviour that is used as a theoretical reference. Whether or not this is an important issue for index compilation, and whether or not this is a realistic expectation from a statistical measure that needs to be developed, approved and implemented by 25 countries that have many different experiences, views and priorities should not be further discussed in this paper. Nevertheless, it is worth mentioning that Eurostat and Eurostat's Working Group has contributed significantly to the conceptual basis of the HICP. The discussion on the "fixed purposes" and "fixed consumption segments" index reflects this, and appears to be an appropriate description of a Laspeyres-type index that aims to be a representative measure of consumer expenditure.

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<sup>3</sup> All regulations, guidelines, a short user guide and additional information on the HICP can be found on the European Commission website (<http://forum.europa.eu.int/Public/irc/dsis/hiocp/library>).

<sup>4</sup> See for example Erwin Diewert, "Harmonized Indexes of Consumer Prices: Their conceptual foundations", Working Paper 130, European Central Bank, March 2002.

Reflecting its key role for measuring inflation and assessing price stability, the HICP aims to quantify developments in “*the prices of all goods and services available for purchase on the economic territory of the Member State for the purposes of satisfying the consumer needs*”<sup>5</sup>, thereby covering “household final monetary consumption expenditure”. Unlike some national CPIs, the HICP covers goods and services bought by households in a country, notwithstanding their nationality, residence, income or other socio-economic features. The HICP follows the *acquisition* concept, which can make a difference to indices following the *use* concept in particular for items which are consumed over long time periods (e.g. consumer durables and owned dwellings).

The borderline chosen for the HICP between government consumption expenditure and private household expenditure is in line with the European System of Accounts (ESA 95). Goods and services provided by government to individual households as social transfers in kind (e.g. health and education) are not included in the HICP, although they might eventually be (partly) financed indirectly by households, e.g. in the form of compulsory contributions to a public healthcare system. However, so-called “out-of-pocket” expenditure by households, including flat rates or price shares paid directly by a benefiting household for goods and services as transfers in kind, are included in the HICP. The treatment of these items considerably varies in national CPIs. Each approach has pros and cons.

Notwithstanding these specific issues, the HICP has many conceptual similarities to the national CPIs (for details see section IV). They include non-durable and durable goods as well as services, daily expenditure (e.g. the purchase of bread), regular expenditure (e.g. monthly rent payments) and infrequent expenditure (e.g. the purchase of a car). The prices are those purchase prices observed in outlets and include VAT and other indirect taxes, net of any general discounts. The HICP measures the average price changes for goods and services by comparing the reporting periods’ and a reference period’s expenditures for a representative basket. This basket and its expenditure shares are kept fixed over (at least) one year. This means that, during this period, the HICP development reflects price changes which are not affected by varying consumption patterns. To be representative of the most recent expenditure patterns of consumers, the expenditure shares are sufficiently frequently updated.

### ***Publication***

Currently, monthly HICPs are available for 29 European countries (EU-25, Bulgaria, Romania, Iceland and Norway). Since May 1998 the euro area HICP has been published monthly by Eurostat. Full results for the euro area HICP are published about 18 days after the reference month. In 2001 Eurostat published, for the first time, a flash estimate of the euro area HICP. This is currently based on the HICP estimates for Germany, Spain and Italy, and national information on the CPI for Belgium as well as early information on euro area energy price developments. This flash estimate is, in most cases, published on the last day of the reference month. The euro area HICP is the weighted average of the HICPs for the

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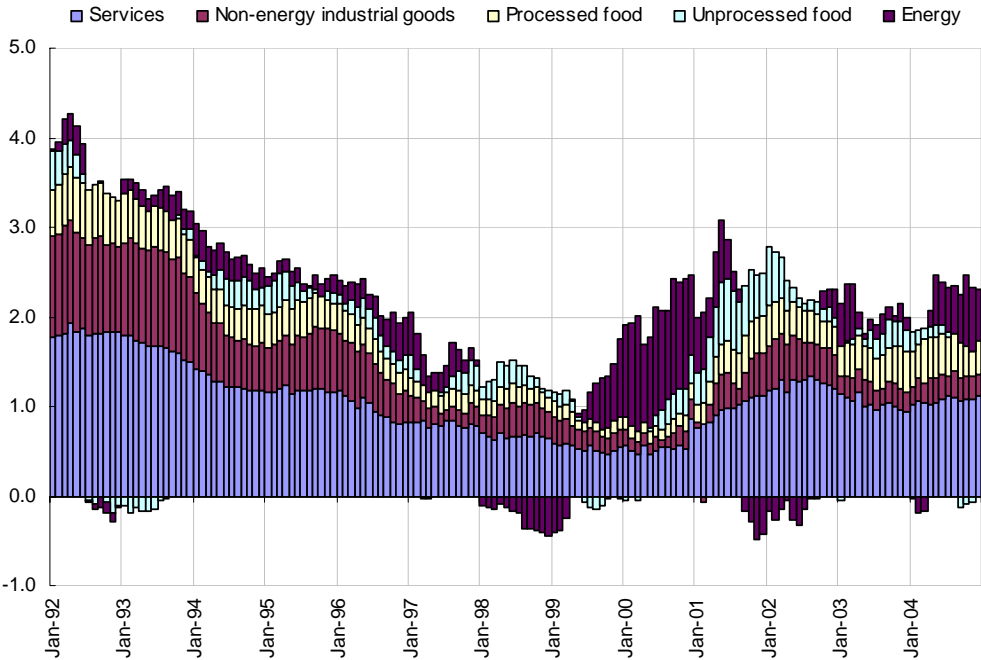
<sup>5</sup> Council Regulation (EC) No 2494/95, Article 3.

twelve countries of the euro area. The HICPs are published according to the COICOP/HICP classification. Additional aggregates of goods and services (i.e. processed and unprocessed food, energy) are also available. In total, a breakdown by about 160 categories is available for the European aggregates and for each of the 29 countries. In addition, The ECB compiles seasonally adjusted euro area HICPs.

*Use*

The ECB uses the HICP in its regular analyses and forecasting. In ECB publications the HICP is usually broken down into five main components (compiled from existing COICOP sub-indices, but grouped according to common product characteristics): unprocessed food, processed food, non-energy industrial goods, energy and services<sup>6</sup>. An example for the standard presentation of these components in the form of contributions to annual euro area HICP growth is shown in chart 1:

**Chart 1. Contributions to headline euro area HICP inflation (in percentage points of headline HICP)**



Source: Eurostat and ECB calculations.

In addition, the ECB uses for its analyses the full detail of the HICP publications, both at euro area level as well as at country level. Moreover, all item HICPs are employed for the convergence assessment of non-euro area countries and presented in the Convergence Reports.

<sup>6</sup> See for example ECB Monthly Bulletin, Euro area statistics, Table 5.1 “HICP, other prices and costs”.

### III. HICP and inflation perceptions

An issue that affects all official inflation measures throughout the euro area is that they have been in recent years not as undisputed as they deserve. In particular, there is a persistent positive difference between inflation perceptions and the official inflation figures after the euro changeover. While the gap has narrowed since 2002, there is still a considerable difference between the results provided by official statistics and by opinion surveys (see chart 2). From the ECB point of view, there is no reason to question the HICP's measurement of consumer price inflation either before or after the euro changeover. A number of arguments have been put forward to explain the overshooting of price perceptions in the aftermath of the cash changeover. These are, in particular<sup>7</sup>,

- a) the important role that frequently purchased items, which experienced above-average price increases in 2002, play in the inflation perception,
- b) the increased price awareness of consumers due to the cash changeover to the euro,
- c) the role of the negative a priori expectation that influenced the ex-post perceptions,
- d) the fact that national currencies (and the last known price in national currency) have remained the reference point for comparing new euro and previous national currency prices,
- e) the misinterpretation of the slowdown in real disposable income growth as mainly caused by a higher inflation,

Moreover, it should also be noted that opinion surveys by the European Commission in the new European Union Member States that are aiming to adopt the euro in the future indicate that changeover related price increases are already now a widespread concern<sup>8</sup>.

While the changeover period for the 12 current euro area countries came to an end, possible changeover effects for new Member States and the public perception of the euro introduction thus will remain an important issue. The best contribution statisticians and statistics can make to this process is to communicate to the public the features of official statistics, and the differences between measured inflation and public perceptions. Main users, such as central banks or research institutes may contribute by carrying out and publishing research on the changeover process, using for example micro data from consumer price statistics before and after the changeover. Indeed, Eurostat, several NSIs, national central banks (NCBs), the Commission and the ECB have in their respective fields of competence published results of changeover background material and studies<sup>9</sup>. These studies provided very interesting results;

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<sup>7</sup> For more details, see the boxes on euro area inflation perceptions in the July 2002, October 2003 and April 2005 ECB Monthly Bulletin.

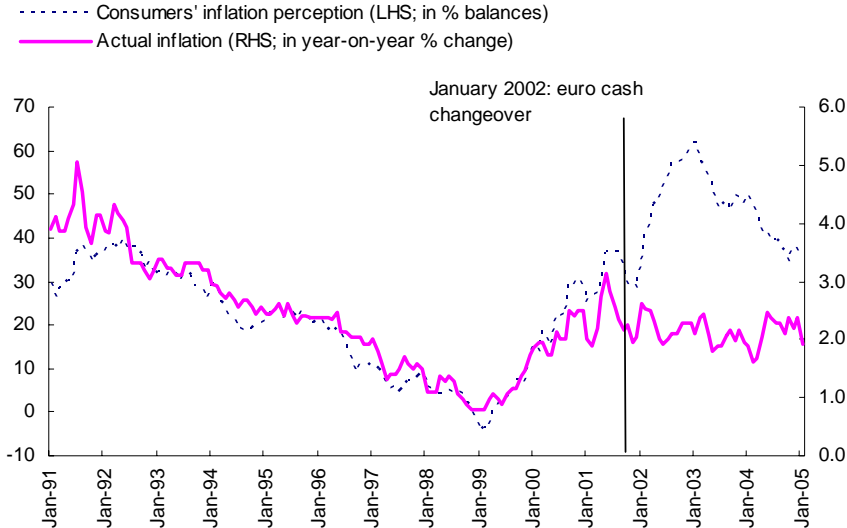
<sup>8</sup> See Joaquín Almunia, "The euro and the consumers: three years on", speech delivered at the conference "Consumers and the euro", 14 March 2005.

<sup>9</sup> See for example P. Del Giovane, R. Sabbatini, "L'introduzione dell'euro e la divergenza tra inflazione rilevata e percepita", Bank of Italy, December 2004; "The short-term impact on prices of the euro cash changeover", Banque de France Bulletin Digest, September 2002; and "Getting used to the euro", De Nederlandsche Bank Quarterly Bulletin, September 2002.

most of them concluded that the empirical evidence does not confirm the price perceptions reported by consumer surveys. In hindsight, a few observations on these studies are:

- though the euro introduction was a European task and challenge *par excellence*, research on changeover effects was in most cases done at the national level, using very different approaches and time ranges (the exception being the estimate published by Eurostat<sup>10</sup>);
- as a consequence, it is difficult to draw conclusions at the euro area level, and to identify common features across countries from these studies;
- studies often referred to national CPI data, and effects on national CPIs, rather than HICP;
- the level of detail published for the HICP has proved to be insufficient for the special analysis of the changeover effects of individual items, or small groups of items. Research done on HICP data therefore had to be carried out at rather aggregate level, thereby limiting the accuracy and usefulness of the results;
- the perhaps most interesting and adequate analysis was derived from studies using consumer price index micro data, since the micro data level corresponds best to the perceptions of consumers and media for price changes of individual consumption items. Access to CPI micro data was granted to national users by NSIs.

**Chart 2 Consumer inflation perceptions and actual inflation**



Sources: European Commission and ECB calculations.

The extent to which factual information provided by NSIs can counteract the effect of media reporting and anecdotal experience of households is likely to be limited. However, the questions addressed by

<sup>10</sup> Eurostat News release 69/2003, Annex: Euro changeover effects, 18 June 2003; [http://epp.eurostat.cec.eu.int/cache/ITY\\_PUBLIC/2-18062003-AP/EN/2-18062003-AP-EN.HTML](http://epp.eurostat.cec.eu.int/cache/ITY_PUBLIC/2-18062003-AP/EN/2-18062003-AP-EN.HTML)

media, consumer federations and consumers were similar across countries; the accuracy and credibility of consumer price statistics was questioned in a number of euro area countries. In retrospect, it therefore appears that explaining the reasons for the difference between perceived and actual inflation would benefit from a more pro-active communication effort at the European level, exploiting better the common statistical data sources that have been built up around the HICP (or as mentioned before e.g. in the case of micro-data, that need to be established around the HICP). In particular, if the accuracy of statistics and the independence of official statistics is questioned, the reference to and compliance with international statistical standards could play a supportive role in the communication strategy for price statistics. The harmonised European methodology is an asset that ensures and enforces accuracy, objectivity and independence of price statistics compilation. Examples in other statistical areas confirm this view; the SNA93/ESA95 national accounts standards and the verification of national accounts data by the European GNI committee is an often used argument for explaining and justifying national accounts concepts and results.<sup>11</sup> The internationally agreed (ILO) concepts for unemployment statistics have proven to be a successful instrument for explaining and justifying statistics (and statistical changes) on unemployment statistics (and the concern that these data are influenced by government interests)<sup>12</sup>.

#### **IV. European HICPs and CPIs - connected or disconnected?**

All 25 EU countries produce HICPs for “European purposes”. The main official purposes are the ECB’s monetary policy for the euro area and the measurement of convergence for all EU countries. In addition to these, HICPs are also used in contracts (such as for index linked bonds<sup>13</sup>). Furthermore, all EU countries continue to produce a separate national CPI for “national purposes”, including variants of these such as pensioner indices or CPIs with a limited product coverage. These national purposes are usually indexation, contracts, taxation or administrative measures, but also – like the HICP – a general macro-economic indicator of inflation used in the national policy discussion.

Analysts thus have quite a number of consumer price indices to choose from for each European Union country, which is both a favourable and challenging situation at the same time<sup>14</sup>. Since the HICP has achieved a satisfactory level of comparability, the ECB has been promoting the use of the HICP<sup>15</sup> and the development of one “system” of consumer price indices, that is anchored in the HICP, and from which national variants for specific national purposes may be derived as appropriate. This section reviews the present state of affairs, and the relation between national HICPs and CPIs in communication and use.

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<sup>11</sup> For example when communicating the conceptual changes in national accounts in the EU in 2005.

<sup>12</sup> For example “*improving international comparability*” was the main argument used when introducing new unemployment statistics based on ILO standards in Germany in 2005.

<sup>13</sup> See “Deriving long-term euro area inflation expectations from index-linked bonds issues by the French Treasury”, ECB Monthly Bulletin (Box 2, page 16), February 2002.

<sup>14</sup> See also H. Brünger, “Professional user requirements of statistical dissemination – Some comments” – 91<sup>st</sup> DGINS conference, Copenhagen, 26-27 May 2005.

<sup>15</sup> See for example the speech of Mr Eugenio Domingo Solans, a former member of the Executive Board of the ECB, at the ECB/CEPR conference “Issues in the measurement of price indices”, 16/17 November 2001.

### *Publication of CPIs and HICPs*

Table 1 in the Annex provides a summary of the consumer price index publication practices. It can be seen that in all European Union countries the national definition CPI is the headline indicator in the national press releases. Nevertheless, the HICP is published in all twelve euro area countries except for Belgium and Luxembourg in the CPI press releases. With the exception of Belgium, the HICPs and the CPIs follow the same release calendar. In most cases only the overall HICP result is published in the press release and details are only available for the national CPI. In other EU countries, Estonia, Latvia, Lithuania, Poland, Slovenia and Slovakia do not include the HICP in the press release, although the latter provides additional information on the differences with the HICP on the NSI's website. A number of NSIs provide good documentation on the statistical differences between the HICP and the national CPI, or provide enough information for an expert user to derive the differences.

There are two special cases which deserve to be mentioned. Luxembourg published for some time the HICP as the only consumer inflation indicator in the country. Following the harmonisation of the geographical and population coverage in the HICP in 2000, it was decided to publish a national variant of the HICP (resident concept), which is more suitable for national purposes. The domestic concept used for the European HICP includes the expenditure on the national territory, regardless of the residence of the consumer and allows for the aggregation at the European level. The resident concept excludes the expenditure by cross-boarder shoppers (e.g. for fuel), which is particularly relevant in Luxembourg.

Furthermore, in the United Kingdom the ONS started at end-2003 to publish the HICP as the "UK CPI" together with the national Retail Price Index (RPI). At the same date the CPI has also become the national inflation target for the Bank of England.

### *Difference between national HICPs and national CPIs*

Using the available documentation on the IMF SDDS as well as NSIs websites two tables on the differences between national HICPs and national CPIs were constructed (cf. Annex, Table 2 and 3). Only those variables characterising consumer price indices were added to these tables that are typically important for the international comparability of consumer price indices. The tables show main deviations of national CPIs from HICP definitions.

First of all HICPs and national indices have in common the **basic price and expenditure data** used in the calculations. As a consequence, for each country the national CPI and HICP share the same **times of recording** as well as the methods for **quality adjustment**, the treatment of **seasonal items** and of **missing prices**. With the exception of Italy, all CPIs and HICPs also share the treatment of **reduced prices** in accordance with the HICP rules. Furthermore, NSIs apply the same timing and method of introduction of **new products** in the observed baskets. The **update interval of the expenditure weights** is also common to both indices (Greece is an exception). Although for HICP the detailed weights can be updated only every five years, an annual review of the weights is necessary, at least at an aggregate level, to keep them representative and important differences across countries exist. Moreover, the **Laspeyres**

**aggregation formula** is common to HICPs and CPIs, as to most CPIs in the world and all countries use comparable **elementary index formulae**.

Furthermore, the international **COICOP classification**, on which the COICOP/HICP is based, has become the standard classification used at the national level for CPIs in Europe. Nevertheless, the levels lower than the official COICOP 4-digit level are generally organised following specific national characteristics and provide more detailed sub-classes, which are not available for the HICPs.<sup>16</sup>

The major differences between the indices concern the geographical and population as well as the item coverage. In terms of **geographical and population coverage**, while the HICP follows the domestic concept, 15 of the national CPIs cover the expenditure of resident private households and do not include institutional households or foreign visitors. Besides, some of them include the expenditure of residents in foreign countries.

Moreover, some CPIs differ from HICPs in terms of **items coverage**. Most important is the coverage of estimates for **owner occupied housing** expenditure (following various different methods) in nine of the CPIs (Germany, Ireland, the Netherlands, Finland, Czech Republic, Denmark, Hungary, Slovak Republic and Sweden). The treatment of the owner occupied housing expenditure in the HICP is one of the outstanding issues on which Eurostat and the NSIs are currently working. Subject to the outcome of these studies, a decision will be taken on the inclusion of this component in the HICP.

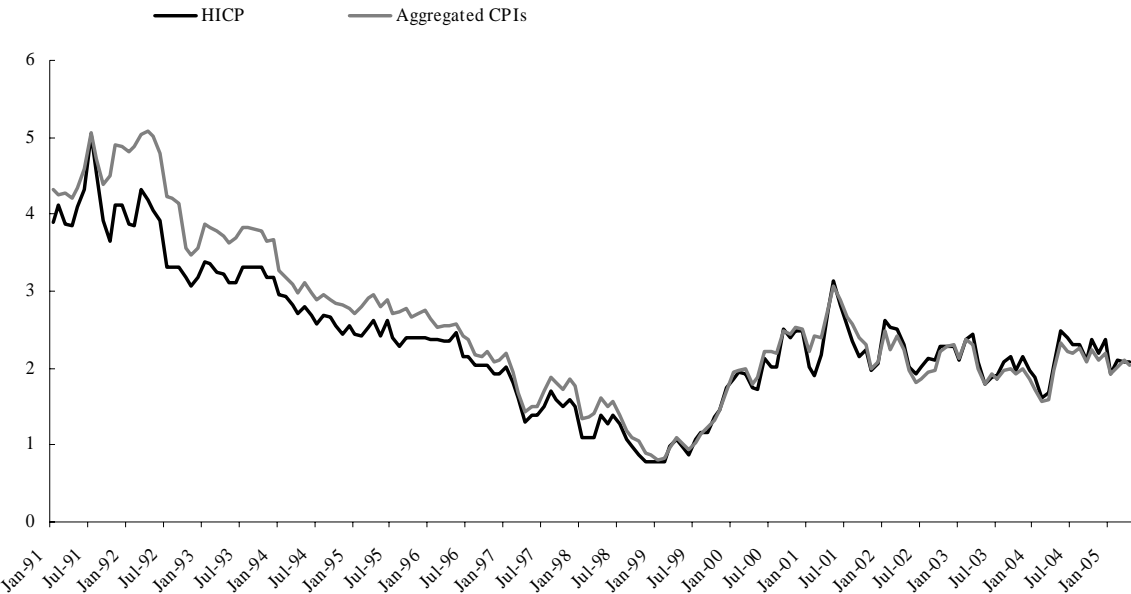
Besides these major differences, there are some other smaller differences in terms of coverage and in the treatment of **insurance and health**. The coverage of lotteries and games of chance are included in Germany, Italy and Poland. Consumption related taxes, subscription and membership fees for sports clubs and social clubs are included in the Dutch CPI, while some directly paid health items included in the HICP are excluded from the Dutch CPI. The motor vehicle taxes are included in the German CPI. In Sweden social protection items are excluded from the CPI. The gross concept is used for the expenditure shares in the compilation of the CPIs in Spain (i.e. insurance) and Italy (e.g. health).

Overall, the conclusion from this overview is that there is one very **substantial difference between HICPs and (nine) national CPIs**, and that is the **treatment of owner occupied housing**. In particular for small countries (e.g. Luxembourg) the choice of the domestic concept for the HICP versus the resident concept for some CPIs may also be important. There are some further, country-specific differences, but these are less significant. The HICP development has brought together the experts on prices statistics in the European Union and often led to changes in the compilation of the national CPIs along with the development of the comparable HICP measures. It comes therefore at no surprise that the HICPs and the national CPIs have “converged” and share many common features. This is also reflected in the results (see Chart 3).

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<sup>16</sup> Eurostat is currently studying in a task force the harmonisation of the 5- and 6-digits COICOP/HICP classification.

**Chart 3 HICP and aggregated CPIs for the euro area (annual percentage changes)**



Sources: Eurostat, national data and ECB calculations.

The following table provides a summary of the information explained above on the differences between national HICPs and national CPIs. In 2004, the difference in the inflation rates for these indicators is between 0.0 and 0.3 percentage point across all 25 Member States. More important differences in the inflation rates of CPIs and HICPs exist for Luxembourg and Sweden.

**Table 1. Comparison between national HICPs and CPIs**

	2004 annual growth rate			Minor/Major conceptual difference CPI relative to HICP
	HICP (%)	CPI (%)	Diff. (p.p.)	
<b>Euro area</b>				
BE	1.9	2.1	-0.2	Minor: resident households
DE	1.8	1.7	+0.1	Major: Owner occupied housing and car tax included
GR	3.0	2.9	+0.1	Minor: visitors and collective households excluded
ES	3.1	3.0	+0.1	Minor: resident households; treatment of insurance and second hand cars
FR	2.3	2.1	+0.2	Minor: private hospital services excluded
IE	2.3	2.2	+0.1	Major: Owner occupied housing included
IT	2.3	2.2	+0.1	Minor: lotteries and gambling included; treatment of sales prices and insurance
LU	3.2	2.2	+1.0	Minor: CPI=HICP variant for resident households
NL	1.4	1.2	+0.2	Major: Owner occupied housing included, health excluded
AT	2.0	2.1	-0.1	Minor: house construction material included
PT	2.5	2.4	+0.1	Minor: resident households
FI	0.1	0.2	-0.1	Major: Owner occupied housing included
<b>Other EU</b>				
CZ	2.6	2.8	-0.2	Major: Resident households except instit. households; owner occupied housing included
DK	0.9	1.2	-0.3	Major: Owner occupied housing included
EE	3.0	3.0	0.0	Minor: resident households except institutional households
CY	1.9	2.2	-0.3	[no information]
LV	6.2	6.2	0.0	Minor: resident households except institutional households
LT	1.1	1.2	-0.1	Minor: resident households except institutional households
HU	6.8	6.8	0.0	Major: Owner occupied housing included
MT	2.7	2.8	-0.1	[no information]
PL	3.6	3.5	+0.1	Minor: resident households except institutional households; games of chance included
SI	3.6	3.6	0.0	Minor: resident households
SK	7.4	7.5	-0.1	Major: Owner occupied housing included
SE	1.0	0.4	+0.6	Major: Owner occupied housing included; treatment of social services
UK	1.3	1.3	0.0	HICP=CPI

Sources: Eurostat, National Statistical Institutes, IMF and ECB calculations.

### *Towards a system of European HICPs and CPIs*

Overall, national releases of consumer price statistics now provide considerable information on HICPs, and some of them clearly explain the difference between CPIs and HICPs. Moreover, “convergence” of national CPI methods towards HICP concepts has taken place at the national level during the last ten years. Nevertheless, using all standard sources of information (NSI press releases, websites, IMF SDDS, Eurostat), it is still difficult to find information on conceptual differences between national CPIs and

HICPs for a number of European Union countries, and the reasons for this. Taking into account the results of the comparison in the previous section it appears that this situation could be greatly simplified and transparency improved if existing national CPI statistics and national HICP statistics would be presented as two elements of one common price index system. It is important to underline that this future European system should leave room for national variants of consumer price indices. It is not the objective to produce one and only one number per country; the objective is to ensure that the links and differences between alternative measures are understood, and that measures differ only if this is necessary and justified by the purpose it is made for, and that the common reference point for all measures of consumer price inflation is the HICP. This would improve transparency, and reduce information costs for users, and possibly, efficiency losses when the “wrong” index is chosen for a certain use.

It seems likely that – sooner or later – more European Union countries will move towards integrating HICP and CPI production and publication. Nevertheless, there would be advantages for producers of price statistics to actively steer this process, in order to make sure that specific national requirements are considered. There would be advantages for users, because these developments can be taken into account for decisions about CPI measures used in contracts and for indexation.

The following points illustrate the possible steps forward:

- The **first stage** in the process of systematisation could be the compilation of an **inventory of all existing CPIs** based on the HICPs as the reference index to which all other CPIs can be related with clarity and order. Metadata would show the differences between all the indices. This inventory should be regarded as a goal in its own right and is currently lacking. It would enable users to see clearly what the differences are between the manifold CPIs, variants, and HICPs – in terms both of methods and of results.
- In the **second stage CPIs and variants could be classified** according to type or purpose, and graded, country by country, according to the degree of closeness to HICP methodology. Since the grading would not be statutory, it ought to be possible for the national experts, in discussion together, to reach conclusions without too much debate. It would also mean that there need be no argument over whether some CPI variants are “better” or “worse” than others: the question is an objective one: how close are they to HICP methodology and how comparable are they among each other?
- The **third stage** would concentrate on the **alignment of CPIs to the HICP**, where feasible. This would be particularly suited for those countries whose CPI uses a methodology closely similar to the HICP, and hence have similar results to the HICP. Countries might need to continue compiling special variants of these indices for different policy purposes (e.g. existing national legislation requiring certain types of CPIs), and this may justify more substantial differences to the HICP methods. However, the use of these indices would be facilitated if the point of departure is the HICP concept, and deviations from it are explained and can be quantified.

- At the same time, the current set of HICPs might have to be broadened in order to be able to serve various user purposes, at the European and national level. This suggests that the headline HICPs are supplemented with a set of **supplementary measures**. These are, for example:
  - HICP covering estimates for owner occupied housing
  - HICPs for the domestic and resident concept
  - HICP adjusted for changes in indirect taxes
  - HICPs of more experimental nature, e.g. HICPs that use alternative concepts for the prices of items supplied as transfers in kind (health and education); these experimental price indices would also support the longer-term development work on consumer price indices.
- Finally, within this systematic presentation of consumer price indices, further desirable improvements concern the dissemination of accessible and standardised documentation and joint release and revision calendars as well as in presentational terms more aligned press releases. Furthermore, as the discussion on euro changeover effects has shown, a European access to consumer price index micro-data for research purposes would be a desirable improvement and could supplement the existing national practices for micro-data access.

## Annex

**Table 1. HICP Press Release Information**

Euro area	HICP included in Press Release	NSI Headline Indicator	HICP-CPI differences explained <sup>1</sup>	Other	Other EU	HICP included in Press Release	NSI Headline Indicator	HICP-CPI differences explained	Other
BE	-	CPI	-	Reference to HICP via Eurostat link	CZ	✓	CPI	✓	Detailed methodological information in press release
DE	✓	CPI	✓		DK	✓	CPI	✓	
GR	✓	CPI	✓	Detailed methodological information and CPI comparison in press release	EE	-	CPI	-	
ES	✓	CPI	✓		CY	✓	CPI	-	Separate HICP press release published one week after CPI
FR	✓	CPI	-		LV	-	CPI	-	
IE	✓	CPI	✓	Detailed methodological information in press release	LT	-	CPI	-	
IT	✓	CPI	✓	Methodological information and CPI comparison with press release	HU	✓	CPI	✓	
LU	-	CPI (= variation of HICP)	✓		MT	✓	RPI	✓	Detailed explanatory notes in press release
NL	✓	CPI	-		PL	-	CPI	-	
AT	✓	CPI	-		SI	-	CPI	-	
PT	✓	CPI	-		SK	-	CPI	✓	
FI	✓	CPI	-		SE	✓	CPI	✓	
					UK	✓	CPI (= HICP), RPI	✓	Detailed methodological information in press release

Sources: National Statistical Institutes

<sup>1</sup> In either the Press Release or related publications on the website of National Statistical Institutes (NSIs).

**Table 2. HICP-CPI comparison (euro area countries)**

	HICP	CPI - Major difference to HICP											
		Euro Area											
		BE	DE	GR	ES	FR	IE	IT	LU	NL	AT	PT	FI
<b>Definition</b>	Measure of the average price changes of goods and services available for purchase on the economic territory of the Member State for the purposes of directly satisfying consumer needs	Measure of the change in the retail price of a fixed set of goods and services used by households, residing in the national territory	Measure of average change in the prices for all goods and services purchased by households for consumption purposes	Measure of change in the general level of prices for a given quantitative and qualitative composition of goods and services purchased by the contemporary household	Measure of the evolution in the overall prices of goods and services consumed by the population living in family dwellings in Spain	Measure of the average change in prices of household consumer goods between two given periods, at constant level of quality	Measures the change in the average level of prices paid for consumer goods and services by all private households in the country	Measure of temporal change in the prices of the basket of goods and services destined to final private consumption	n.a.	Measure of price change for goods and services acquired by households for consumption purposes	Measure of price change for the most important product offers in fixed product categories for the general population relating to the whole territory	Measure of pure price change in fixed-market basket of constant quantity and quality for the general population	Index to measure the monthly variation in the price of a constant basket of goods and services
<b>Geographic and population coverage</b>	All households on the territory of the Member State	Resident population		Collective households and foreign visitors excluded	Resident households		Collective households and foreign visitors excluded		Resident population	Resident population (expenditure abroad included)		Resident population	
<b>Item coverage</b>	Private consumption except owner occupied housing, gambling, lottery and life insurance		Owner occupied housing, lotteries and motor vehicle taxes included		Different treatment of insurance and purchase of second hand cars	Hospital services excluded	Owner occupied housing included	Lotteries and gambling included. Full and gross prices used in all cases (i.e. sales prices, insurance)		Owner occupied housing, consumption related taxes and subscription and membership fees for sports clubs, social clubs included. Excluded some costs paid for health care	House construction commodities included		Owner occupied housing included
<b>Formula</b>	Laspeyres												
<b>Weight update interval</b>	Annual review, (at least 5 years)		5 years	5-6 years	5 years; annual revision for certain components	Annual	5 years	Annual	Annual	5 years (plans to move to yearly updates)	5 years	Annual	5 years
<b>Elementary Aggregate formula</b>	Ratio of geometric or arithmetic mean												
<b>Classification</b>	COICOP/HICP:	Revised COICOP	COICOP	COICOP	COICOP	COICOP	COICOP	COICOP	COICOP/HICP	COICOP	COICOP	COICOP	COICOP
<b>Level of detail</b>	94 classes/160 sub-indices	137 items	750 goods and services	8-digit breakdown, 725 products	117 sub-classes, 484 items	159 groups of products, 303 sub-groups	613 item headings	207 categories, 107 classes		259 sub-indices	812 representative items	812 items (8-digit)	n.a.

Sources: IMF website- DSBB Key statistical concepts and National Statistical Institutes

n.a.: no information available

**Table 3. HICP-CPI comparison (other EU countries)**

	HICP	CPI - Major difference to HICP												
		Other EU											SE	UK
		CZ	DK	EE	CY	LV	LT	HU	MT	PL	SI	SK		
<b>Definition</b>	Measure of the average price changes of goods and services available for purchase on the economic territory of the Member State for the purposes of directly satisfying consumer needs	Measure of the pure price change in a fixed market basket of goods and services of constant quality bought by households	Measure of the changing cost to the consumers of buying a fixed basket of goods and services in different periods	Average measure of change in prices of goods and services bought for the purpose of consumption by Estonian households	n.a.	Measure of the development in the general level of price of goods and services represented by a fixed market basket of consumption items bought by Latvian households	Measure of the average change in price level for consumer goods and services purchased and paid for and used by households to satisfy their needs, over a certain time period.	Average measure of change in prices of goods and services bought for the purpose of consumption by household in Hungary	Measure of the relative change in the level prices paid for a specific basket of goods and services by an average household	Average measure of change in the price of goods and services bought for consumption purposes by resident households	Measure of the monthly changes in the level of retail prices of goods and services that individual residential households purchase for final consumption	Average measure of change in prices of goods and services bought for the purpose of consumption by the vast majority of households in the Slovak Republic	Average change in price of goods and services available for private consumption in the economic territory of Sweden	Measure of average change in the prices of consumer goods and services in the UK
<b>Geographic and population coverage</b>	All households on the territory of the Member State	Resident population, institutional household excluded		Resident population, institutional household excluded	n.a.	Resident population, institutional household excluded	Resident population, institutional and non resident household excluded	Resident population, institutional household excluded	Only private households	Resident population, institutional and visitor households excluded	Resident population	90% private households (institutional households included)	Resident population	
<b>Item coverage</b>	Private consumption except owner occupied housing, gambling, lottery and life insurance	Owner occupied housing included	Owner occupied housing included		n.a.			Owner occupied housing included		Games of chance included		Owner occupied housing included	Owner occupied housing included; Child care and care of the elderly, fees for hospitals, life insurance excluded	
<b>Formula</b>	Laspeyres				n.a.									
<b>Weight update interval</b>	At least 5 yearly, annual review	5 years; ad-hoc redistribution of weight may take place at the 7-digit level of classification	4-5 years	Annual	n.a.	Annual	Annual	Annual	Fixed weight, revised in rare and exceptional circumstances	Annual	Annual	Annual	Annual	Annual
<b>Elementary Aggregate formula</b>	Ratio of geometric or arithmetic mean				n.a.									
<b>Classification</b>	COICOP/HICP	COICOP	COICOP	COICOP	n.a.	COICOP	COICOP	COICOP	COICOP	COICOP	COICOP	COICOP	COICOP	COICOP
<b>Level of detail</b>	94 classes/160 sub-indices	105 classes, 790 representative items	n.a.	509 items	n.a.	423 items	811 items	900 items	97 categories of items	301 elementary groups	634 representative goods and services	101 classes	350 sub-groups	650 items

Sources: IMF website- DSBB Key statistical concepts and National Statistical Institutes

n.a.: no information available